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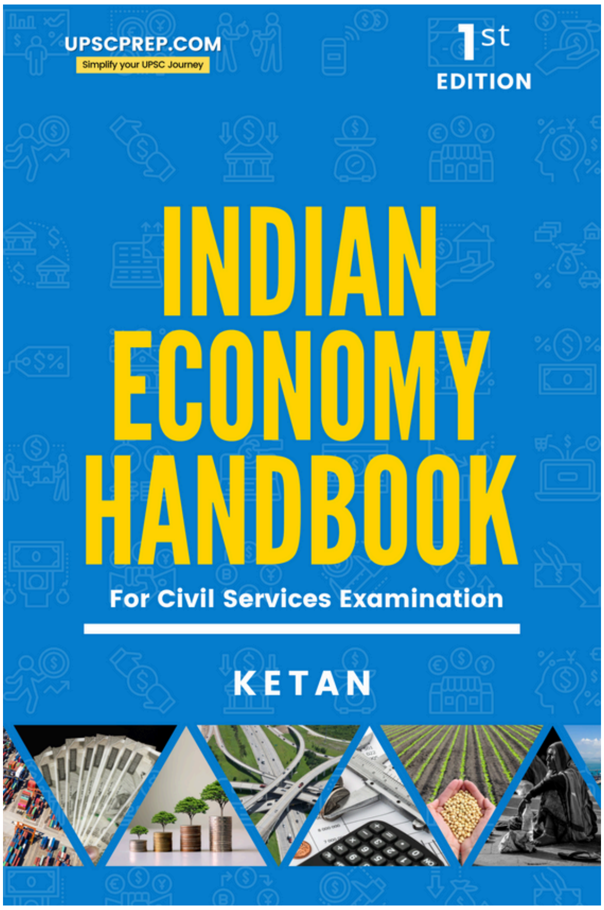

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CHAPTER 1

UNDERSTANDING INDIA'S GDP

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Chapter 1
Understanding India's GDP

We already know,

GDP = Consumption(C) + Investment(I) + Government Spending(G) + Net Exports(X-M)

Shift from Consumption to Investment-Driven Growth

One significant transformation seen in many successful economies is the shift from consumption-driven growth to investment-driven growth.

To understand how this happens, let's think about the behavior of households.

As people earn more, they don't spend all of their additional income. Instead, they save a portion of it. This behavior changes as income levels increase:

- **For a low-income household:** Suppose a household earns ₹10,000 per month. Most of this income is likely spent on essentials like food, rent, and utilities, leaving little room for savings. If their income increases by ₹1,000, they might spend ₹800 on better food, clothing, or small luxuries, saving only ₹200.
- **For a high-income household:** Now, consider a household earning ₹1,00,000 per month. Their basic needs are already met, so they are more likely to save a significant part of any additional income. If their income increases by ₹10,000, they might spend ₹2,000 and save ₹8,000.

As household incomes increase, overall consumption rises, but the proportion of income saved typically increases as well.

What Happens to These Savings?

Savings play a critical role in fueling economic growth. They are channeled into investments through financial institutions like banks and markets. For example:

- When households deposit money into savings accounts or fixed deposits, banks use this money to lend to businesses for projects like building factories or expanding production.
- Households can invest in mutual funds, stocks, or bonds, which provide companies with funds to finance infrastructure projects, technological innovations, or renewable energy plants.

Interconnection between Consumption, Investment and Savings Rate

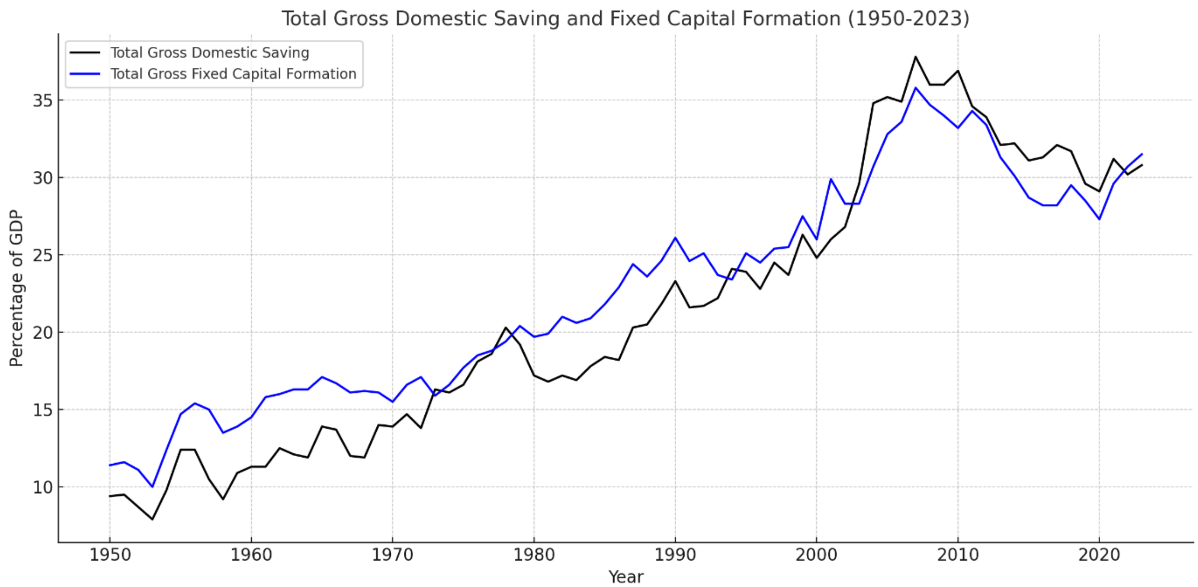
- Investment Drives Consumption: Increased investment in infrastructure and industrial projects creates jobs and raises incomes, boosting household consumption (PFCE).
- Consumption Influences Investment: Higher household consumption drives demand for goods and services, encouraging businesses to invest in expanding their capacity (GFCF).
- Savings and Investment: A higher savings rate provides the necessary funds for investment. When households save more, banks and financial institutions have more resources to lend to businesses for investment in capital goods.
- Economic Growth: Balanced growth in both Consumption and Investment ensures robust and sustainable economic development. Investment leads to production capacity expansion, while consumption drives demand.
- Government Policies: Fiscal policies aimed at stimulating investment (GFCF) often include measures that boost consumption (PFCE), such as tax cuts or subsidies, while also promoting savings. Increased government capital expenditure (CAPEX) can also lead to 'crowding in' of private investment.

If consumption as a share of GDP declines, but government spending and net exports remain steady, the additional savings lead to a rise in investment. This higher investment becomes the driving force of economic growth. This is the foundation of the shift from consumption to investment-driven growth.

The table below provides the trends in Gross Domestic Saving and Gross Fixed Capital Formation over the decades:

Year	Gross Domestic Saving	Gross Fixed Capital Formation
1950-51	9.4%	11.4%
1960-61	11.3%	14.5%
1970-71	13.9%	15.5%
1980-81	17.2%	19.7%
1990-91	23.3%	26.1%
2000-01	24.8%	26%
2010-11	36.9%	33.2%
2020-21	29.1%	27.3%
2022-23(1st RE)	30.2%	30.7%

Source: Economic Survey 2023-24 Statistical Appendix



The graph indicates a general trend of increasing savings and investment rates over the years, reflecting India's economic maturation and shifts in financial behavior. However, the 2008 financial crisis notably disrupted this trend as reduced incomes led to lower savings and decreased consumer spending, which in turn stifled business investment due to tighter credit conditions and diminished demand.

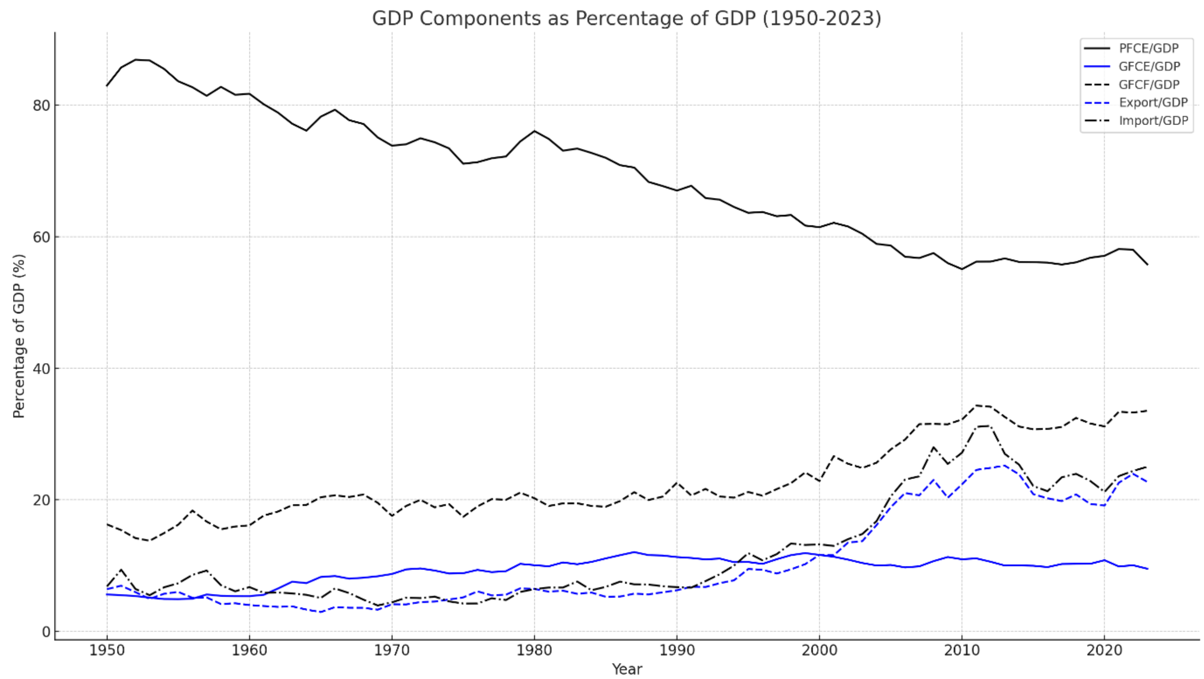
The table below provides trends in Private Consumption (PFCE), Government Spending (GFCE), Investment (GFCF), Exports (X), and Imports (M), tracking how each factor has contributed to overall GDP over the decades.

Components of Gross Domestic Product at Constant Prices

	Private consumption	Government Spending	Investment	Export	Import	GDP (Rs Crore)
Year	PFCE	GFCE	GFCF	X	M	GDP
1950-51	83%	5.6%	16.3%	6.4%	6.8%	496848
1960-61	81.7%	5.3%	16.1%	4%	6.7%	737044
1970-71	73.8%	8.7%	17.5%	4.1%	4.4%	1089226
1980-81	76%	10%	20.2%	6.4%	6.4%	1464394
1990-91	67%	11.3%	22.6%	6.2%	6.7%	2514549
2000-01	61.5%	11.6%	22.8%	11.6%	13.2%	4326736
2010-11	55%	11%	32.2%	22.4%	27.2%	8301235
2020-21	57.1%	10.8%	31.2%	19.1%	21.2%	13694869

2023-24 (PE)	55.8%	9.5%	33.5%	22.7%	25%	17381722

Source: Economic Survey 2023-24 Statistical Appendix



Analysis of GDP Components

As you can observe from the graph, the trends in GDP components reveal significant economic shifts over the decades:

1. Private Final Consumption Expenditure (PFCE) has consistently been the largest component of GDP, reflecting the dominance of household consumption in the Indian economy.
2. Government Final Consumption Expenditure (GFCE) has remained relatively stable with a slight upward trend. This increase reflects enhanced government spending on public services and infrastructure, especially during periods of economic crises.
3. Gross Fixed Capital Formation (GFCF) experienced a significant rise, particularly after the 1991 economic reforms, driven by industrial expansion, infrastructure development, and increased private investments. However, in the last decade, its share of GDP has either stabilized or slightly declined. This trend can be attributed to challenges such as reduced private sector investments following the 2008 global recession, the burden of non-performing assets (NPAs) in the banking sector, and heightened global economic uncertainty, all of which have dampened growth in capital formation.

4. Exports and imports experienced significant growth starting in the 1990s, coinciding with India's economic liberalization. It reflects increased integration into global markets.
5. Periodic fluctuations, such as the dip in certain components during the 2008 financial crisis or the COVID-19 pandemic, underscore the influence of global and domestic events on economic activity.
6. Overall, the graph highlights the evolving structure of the Indian economy, which remains largely consumption-driven, however, the role of investment and trade is steadily increasing.

Factors driving Consumption in India

- Rising Middle Class: India's GDP growth has been robust, leading to a rise in household incomes. As a result, a larger segment of the population is moving into the middle class, with more disposable income available for consumption.
- Urbanization: As more people migrate to urban areas, there is a shift in consumption patterns, with greater demand for goods and services.
- Youthful Demographics: India has a large and young population with a median age of around 28 years. This youthful demographic is more inclined towards consumption, especially on items such as technology, entertainment, and discretionary goods.
- Improved Access to Credit: The government's push for financial inclusion, along with the rise of fintech and digital banking, has made it easier for individuals to access credit. With more consumers having access to loans, personal consumption, especially for high-ticket items like homes, cars etc has increased.
  Also the availability of easier and cheaper credit, such as through EMI options, has spurred consumption in various sectors like home appliances and electronics.
- Technological Advancements: The rapid growth of e-commerce platforms and online marketplaces has made goods more accessible across India, including rural areas. With the increased penetration of smartphones and internet access, more consumers are shopping online.
- Digital Payment Systems: Increased use of digital payment methods, like UPI and mobile wallets, has streamlined transactions and encouraged consumer spending.
- Government Schemes: Government programs such as Pradhan Mantri Jan Dhan Yojana, Ujjwala Yojana, and PMGDISHA, along with subsidies on food, LPG, and fertilizers, have directly increased purchasing power, especially in rural areas.
- Direct Benefit Transfers (DBT): The implementation of DBT for subsidies and welfare programs has ensured that financial support reaches the intended beneficiaries more effectively, thus stimulating demand in lower-income segments.
- Change in Consumer Preferences: Over time, consumers have begun shifting toward premium products, such as organic foods, branded clothing, luxury cars, and premium electronics. This trend, which is visible especially in the upper-middle-class and higher-income segments.
- Social Media Influence: Social media platforms have played a pivotal role in shaping consumption behavior by influencing lifestyle choices, product preferences, and encouraging a trend-driven, aspirational culture.

Factors driving Investment in India

- Increase in Savings: A higher savings rate allows for greater capital accumulation, which can be channeled into investments. Indian households traditionally have a strong savings culture, driven by both cultural tendencies and the lack of a strong social safety net. A significant portion of savings in India has historically been directed into physical assets like gold, real estate, and agricultural land.
  The increase in disposable incomes, especially in the middle class, has enabled households to save more. Also, in recent years, there has been a shift in household savings from physical assets to financial savings. Increased financial literacy, better access to formal financial institutions, and government initiatives promoting savings schemes (like the Public Provident Fund (PPF), National Pension Scheme (NPS), and mutual funds) have led to an increased flow of savings into the financial system, enabling these savings to be utilized for investments.
- Stable Macroeconomic Environment: India's relatively stable currency and fiscal policies have improved investor confidence, making the country an attractive destination for both domestic and foreign capital.
- Government Capital Expenditure: The Indian government has significantly increased its investment in infrastructure, including roads, railways, ports, and airports.

  Programs like "Make in India," "Smart Cities Mission," and "Atmanirbhar Bharat" have increased public investment in infrastructure and manufacturing, thus boosting private investment as well (Crowding in).

  The government has increasingly turned to PPP models to boost investment in critical infrastructure, leveraging private capital.

- Foreign Direct Investment (FDI): India has progressively liberalized its FDI norms in sectors such as retail, defense, civil aviation, and insurance, making the country an attractive destination for foreign investment.

  As India integrates further into global supply chains, foreign investors are setting up manufacturing units in India, contributing significantly to the investment in the economy.

- Improved Ease of Doing Business: The Indian government has implemented several key reforms to improve the ease of doing business, including reducing red tape, simplifying business registration processes, and enhancing the insolvency framework. These changes have made India a more attractive destination for both domestic and foreign investment.
  - **Tax Reforms**: The introduction of the Goods and Services Tax (GST) and the reduction in corporate tax rates have helped create a more efficient and predictable tax environment, which encourages investment.
  - **Insolvency and Bankruptcy Code (IBC)**: The introduction of IBC has provided investors with a clearer framework for resolving insolvencies, thereby enhancing investor confidence.
- Access to Capital: Financial inclusion efforts, like the Pradhan Mantri Jan Dhan Yojana and the push towards digitized banking, have improved access to capital for businesses, especially small and medium-sized enterprises (SMEs).
- Rising Domestic Demand: The rise of the middle class, higher disposable incomes, and increased demand for infrastructure, technology, and consumer goods have attracted investment.

- Labor and Land Reforms: The government's push for labor and land reforms aims to streamline processes and reduce bottlenecks that often deter investment. These reforms focus on simplifying labor laws, making land acquisition easier, and improving worker rights while increasing flexibility for businesses.
- Investment in Human Capital: Investment in education, skill development, and vocational training has increased to improve the employability of India's workforce. These investments are crucial for attracting foreign investment and enhancing domestic productivity.
- Green Investment: The push towards renewable energy and sustainability has led to increased investments in green technologies, including solar, wind, and electric vehicle manufacturing.

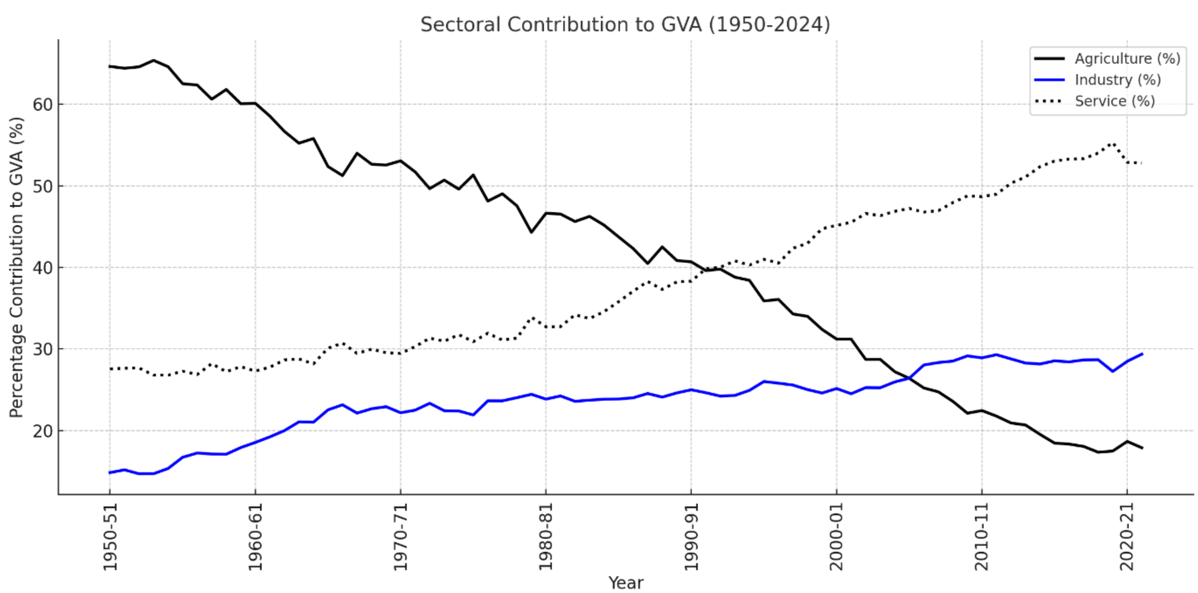
Sectoral Contributions in the Indian Economy

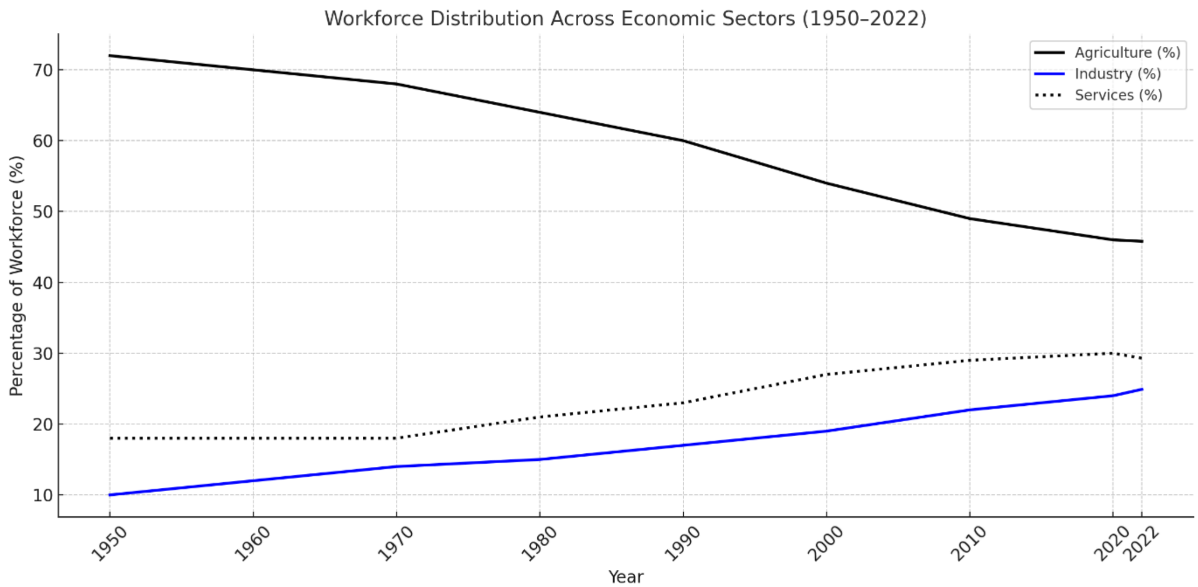
The following table provides a historical breakdown of the contributions of agriculture, industry and services, highlighting the evolving structure of the Indian economy over several decades:

	Sector wise Real GVA contribution			**Percent distribution of workers**		
Year	**Agriculture (%)**	**Industry (%)**	**Services (%)**	**% Workforce in Agriculture**	**% Workforce in Industry**	**% Workforce in Services**
1950-51	64.6%	14.8%	27.5%	~72	~11	~17
1960-61	60.1%	18.5%	27.3%	~70	~12	~19
1970-71	53%	22.2%	29.4%	~72	~11	~17
1980-81	46.6%	23.8%	32.7%	~68	~13	~19
1990-91	40.7%	25%	38.3%	~64	~16	~20
2000-01	31.2%	25.1%	45.2%	~58	~18	~24
2010-11	22.4%	29%	48.7%	~49	~24	~27
2020-21	18.6%	29.3%	52.3%	46.5%	23.9%	29.6%
2021-22	17.9%	29.3%	52.8%	45.5%	24.9%	29.6%

	Sector wise Real GVA contribution			Percent distribution of workers		
Year	Agriculture (%)	Industry (%)	Services (%)	% Workforce in Agriculture	% Workforce in Industry	% Workforce in Services
2022-23	17.5%	28.1%	54.4%	45.8%	25.2%	28.9%
2023-24	16.6%	28.7%	54.7%	46.1%	24.1%	29.7%

Source: Economic Survey 2023-24 Statistical Appendix (Sector wise Real GVA contribution); Periodic Labour Force Survey (PLFS), NSO, MoSPI (Percent distribution of workers for period 2020-21 onwards); Data before 2020-21 for Percent distribution of workers are approximations from internet sources.





Economic development in nations typically follows a transformational path from agriculture to industry and then to services. In the initial stages, agriculture dominates because it is fundamental to sustenance and relatively easy to enter with low levels of technology. As a nation develops, industrial activities become vital due to their potential for higher productivity and employment generation. Eventually, as the economy matures further, the services sector takes precedence, offering more specialized and high-value economic activities.

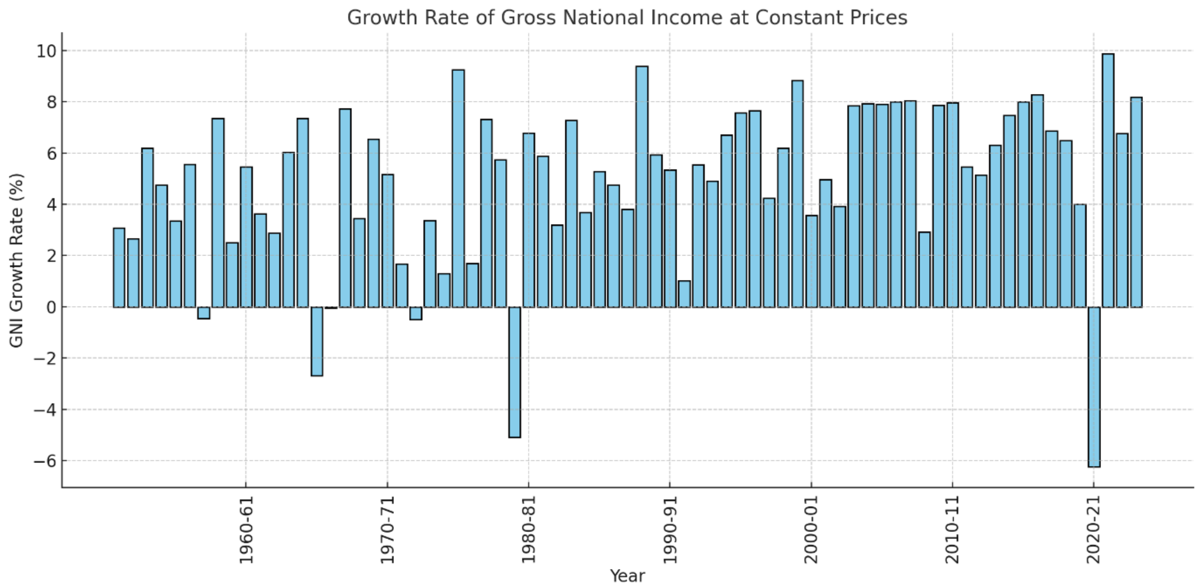
Agriculture: At the time of independence, agriculture was the dominant sector of the Indian economy, engaging over 70% of the population and contributing around 50% to the GDP. Over the decades, despite an increase in absolute terms, agriculture's share in GDP has diminished to about 15%, although it still employs a significant 43% of the workforce. This discrepancy between GDP contribution and employment highlights issues like low agricultural productivity and widespread disguised unemployment.

Industry: India's post-independence industrial strategy was characterized by protectionism and a focus on heavy industries under state control, aimed at achieving self-reliance. However, this led to inefficiencies and a stagnation in the growth of the sector. The liberalization reforms in 1991 marked a crucial turning point, leading to increased foreign investment and a gradual rise in industrial output. Despite these improvements, the sector's growth has been hampered by continued regulatory complexities, infrastructural deficits, and rigid labour laws. This has led to a trend toward capital-intensive rather than labor-intensive manufacturing processes. These factors have restricted the sector's potential to become the dominant force in the economy, especially compared to countries like China, where targeted policies have successfully turned the nation into a global manufacturing hub. Efforts are needed to boost manufacturing and create jobs, particularly for semi-skilled and unskilled labor moving out from Agriculture.

Services: The services sector has been the most dynamic in terms of growth, especially after the economic liberalization of the early 1990s. Today, it accounts for around 60% of India's GDP. The rapid development of IT and IT-enabled services has positioned India as a key player in the global services market. Cities such as Bangalore and Hyderabad are now recognized as major tech centers, drawing both domestic and international investment. The sector's growth has been supported by a large, skilled, English-speaking workforce adept in technology and modern business practices. However, sustaining this momentum will require continued investments in human capital development to keep pace with global technological advancements.

Overall, services have been the most productive sector, with the highest GDP contribution per worker. However, the sector is concentrated in urban areas, and rural inclusion remains limited.

Growth Rate of the Indian Economy



Pre-1991: Growth was modest, averaging around 3-4% annually, often referred to as the "Hindu Rate of Growth”. Significant fluctuations were observed due to reliance on agriculture and monsoon patterns. Droughts or weak monsoons led to sharp declines in growth. The government tightly controlled industrial production, leading to inefficiencies and a lack of competition. The Indo-China War (1962), Indo-Pak Wars (1965, 1971), and the oil shocks of the 1970s severely impacted the economy.

Post-1991: Following the 1991 economic reforms, growth rates accelerated significantly, often exceeding 6-8% annually. Liberalization, Privatization, and Globalization (LPG) dismantled the License Raj. Foreign Direct Investment (FDI) was encouraged, spurring industrial and service sector growth. IT and software services emerged as significant contributors to GDP growth.

The COVID-19 pandemic caused a sharp contraction in 2020. Post-COVID, India's economy rebounded with strong government spending, private consumption and investment, and a booming digital ecosystem.

Performance of Indian Economy in current financial year (FY 2024-2025)

Aspect	Performance/Indicator	Analysis
GDP Growth	Real GDP grew by 6.4% in FY25	Supported by agriculture and services, with stable private consumption. Challenged by weak global demand affecting manufacturing.
Sectoral Contribution	Agriculture: 3.8% growth, Industry: 6.2% growth, Services: 7.2% growth	Agriculture rebounded strongly; industry saw moderate growth with robust construction and utilities; services remained strong driven by financial and real estate services.
Inflation	Headline CPI inflation: 4.9%	Lower than last year due to a decrease in core inflation, despite volatile food prices.
Public Investment	Government capital expenditure increased moderately	Driven by focused spending in critical sectors post-elections, reflecting a strategic increase in infrastructural investments.
Private Investment	Stable with positive expectations	Supported by policy incentives and improvements in demand, particularly in consumer confidence and order books translating into investments.
Trade Balance	Trade deficit persisted but mitigated by services trade surplus	Merchandise trade faced challenges, but robust services exports and remittances helped maintain a balanced external sector.
Employment	Mixed trends with sectoral variations	Agriculture and services sectors showed employment growth, but manufacturing faced slowdowns affecting overall employment stability.
Banking & Credit	Credit growth remained healthy	Continued support from government schemes and solid banking sector performance contributing to economic stability.
Investment Climate	Attractive despite global uncertainties	Sustained by policy reforms, healthy investment inflows in sectors like renewable energy, and stable FDI.

India as the Fastest-Growing Large Economy

India has emerged as the fastest-growing large economies globally. Despite global challenges such as the COVID-19 pandemic and geopolitical tensions, India has maintained its economic momentum, becoming a bright spot in an otherwise slowing global economy.

India outpaces most large economies, including China, which has seen a gradual decline in growth due to aging demographics and a cooling property market. India's youthful population and increasing domestic consumption remain key drivers.

While India's nominal GDP is smaller than the US and China, its high growth rate indicates significant potential to bridge the gap over time.

Indian Economy in comparison to Major Economies of the World

While most advanced economies are grappling with economic slowdowns, high inflation, and aging populations, the Indian economy stands out as the fastest-growing large economy.

The relative size of an economy can be measured from two different perspectives: one using the market exchange rates for converting the domestic currency, and the other using the purchasing power parity (PPP) conversion rate. In terms of market exchange rates, India's GDP surpassed that of the United Kingdom in FY 2022, ranking it as the fifth-largest economy globally. Moreover, projections indicate that by FY 28, the Indian economy will surpass both Japan and Germany, positioning it as the third-largest economy. At this juncture, the U.S. economy would still be nearly six times the size of India's.

When viewed in PPP terms, which reflect the real purchasing power of the domestic currency within the economy, India is already the third-largest economy, ahead of both Japan and Germany.

Size of the Economy as Measured by Nominal GDP

Country	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
In US$ trillion							
US	25.46	26.85	27.74	28.77	29.90	31.09	32.35
China	18.10	19.37	20.88	22.41	24.04	25.72	27.49
Japan	4.23	4.41	4.53	4.73	4.92	5.08	5.34
Germany	4.08	4.31	4.45	4.64	4.82	4.95	5.04
India	3.39	3.74	4.06	4.40	4.77	5.15	5.58
UK	3.07	3.16	3.38	3.57	3.79	4.02	4.25

In PPP International Dollar Trillion

Country	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
China	30.22	33.01	35.26	37.39	39.60	41.78	44.03
US	25.46	26.85	27.74	28.77	29.90	31.09	32.35
India	11.86	13.03	14.17	15.33	16.56	17.88	19.31
Japan	6.14	6.46	6.67	6.83	7.00	7.15	7.31
Germany	5.35	5.55	5.73	5.96	6.18	6.37	6.57
UK	3.71	3.85	3.97	4.13	4.29	4.45	4.60

Source: IMF World Economic Outlook (April 2023). Data pertains to fiscal year. For example, 2022 implies 2022-23 and so on.

Note: IMF's April 2025 World Economic Outlook projects that in nominal GDP terms, India's economy will total about $4.19 trillion in 2025, just ahead of Japan's projected $4.186 trillion, making India the 4th largest globally.

Is it already officially #4?

Not quite yet. These are projections for FY 2025-26 (ending March 2026):

- India's current official standing is the 5th largest (India is still trailing Japan)
- Experts stress that India will become #4 by the end of 2025, once full annual data is in.

Vision of Viksit Bharat

As India approaches its 100th year of independence in 2047, it is working towards a big goal of becoming "Viksit Bharat" or Developed India. To successfully realize this vision, there are several key areas that need careful attention and action.

Demographic Dividend: India's demographic dividend is poised to be a major driver of its economic growth in the coming decades. With projections indicating that by the 2030s, 68.9% of India's population will be within the working-age group, the country is set to have one of the youngest and largest workforces in the world. This shift presents a unique advantage as every sixth working person globally is expected to be Indian.

The International Monetary Fund (IMF) has noted that effectively leveraging this demographic advantage could significantly boost India's GDP by adding about 2% per year to its GDP growth over the next two decades.

Skilling: Skilling is pivotal, particularly given the country's demographic dividend. Partnerships with private sector entities are crucial in this regard. As announced by the government, Companies, especially those within the top 500 in India, should be encouraged to provide internships and on-the-job training.

Artificial Intelligence (AI): Artificial Intelligence (AI) is set to be a transformative force in India's economic strategy, projected to contribute approximately US$ 1 trillion to the economy by 2035. This impact stems from the integration of AI across various sectors, such as healthcare, agriculture, manufacturing, and financial services. The emphasis on AI also signifies a broader shift towards high-tech, knowledge-based industries, which are critical for sustaining long-term economic growth and competitiveness.

Saving: High savings rates are crucial for a nation's development, as they provide the necessary capital for investments across different sectors. In India, as the country leverages its demographic dividend, the potential for increased savings is substantial. This boost in savings is expected to be driven by a larger, younger workforce entering the economy. With more people earning and saving, the country can fund development projects without over-relying on foreign capital, ensuring sustainable economic growth.

Productivity: More focus is required towards lowering the Incremental Capital Output Ratio (ICOR), which measures the amount of capital needed to produce one unit of output. Historically, India's ICOR has averaged around 5.0, indicating a higher use of capital for each unit of output. The aim is to improve

this ratio to the neighborhood of 3, similar to that observed in more developed economies, which signifies greater efficiency and productivity of capital.
By boosting productivity, India can achieve faster economic growth with less capital, enhance its competitiveness on a global scale, and generate more wealth with the same or fewer resources.

Infrastructure Development: Infrastructure development is a foundational element of India's strategy to achieve the Vision of Viksit Bharat by 2047. Recognizing the limitations of solely relying on public funding, there has been a strategic shift towards involving the private sector more centrally in financing projects.

MSMEs: Micro, Small, and Medium Enterprises (MSMEs) contribute nearly 30% to the nation's GDP and playing a crucial role in employment generation. As India progresses towards its vision for 2047, enhancing the productivity and sustainability of MSMEs is a priority. The emergence of FinTechs and Non-Banking Financial Companies (NBFCs) has transformed the lending landscape, making capital more accessible to smaller businesses, which often struggle to secure funding from traditional banks. Moreover, policies are being tailored to address the unique challenges faced by MSMEs, including streamlining regulatory procedures, providing tax incentives, and offering technical assistance to help these enterprises scale up and become more competitive globally.

Climate: India is deeply committed to integrating sustainability into its development agenda. The country has outlined ambitious climate initiatives, including the National Green Hydrogen Mission.
India's commitment to achieving net-zero emissions by 2070 underscores the importance of sustainable development in its economic planning. Investments required to meet these goals are substantial, with an estimated ₹30 lakh crore needed over the next decade.
The financing of these climate initiatives will increasingly involve innovative financial instruments such as sovereign green bonds and attracting globally mobile environment, sustainability, and governance (ESG) funds. Moreover, the inclusion of renewable energy sectors under priority sector lending (PSL) guidelines and the facilitation of 100% Foreign Direct Investment (FDI) in green projects underpin these efforts.

Digitalisation: Digitalisation is a key to enhance economic efficiency, increase transparency, and expand access to public and financial services.
The success of the Unified Payments Interface (UPI) exemplifies India's potential in digital financial services. This digital platform's rapid adoption underscores the scalability and impact of digital solutions in a diverse country like India.
Further, the development of a Central Bank Digital Currency (CBDC), known as the Digital Rupee (e₹), is anticipated to further transform the financial landscape. Digital technologies are also being leveraged to bridge the rural-urban divide. Digital inclusion is crucial for balanced regional development and supports the government's efforts to create a more equitable society.

By effectively harnessing these strategic areas, India aims to achieve sustainable growth that is inclusive and resilient, positioning itself as a leader in the global economy. The journey towards Viksit Bharat is not just about economic growth but also about improving the quality of life for every citizen and creating a model for other nations to follow in achieving sustainable and inclusive development.

This visionary approach, if successfully executed, will indeed make the 21st century 'India's century'.

Practice Questions

1. India's economic growth rate has been robust in recent years. Compare India's GDP growth with other major economies, and discuss the implications of India's position in the global economic order.
2. Discuss the key factors that have driven private consumption growth in India. How sustainable is this consumption-driven growth model in the long run?
3. Analyze the role of savings and investment in driving India's economic growth. How have changes in savings behavior impacted investment trends in India over the decades?
4. The Vision of Viksit Bharat aims to make India a developed nation by 2047. What are the key challenges and opportunities in realizing this vision?
5. Critically examine the trends in sectoral contributions to India's GDP. How has the shift in contributions of agriculture, industry and services influenced employment patterns and economic growth?

CHAPTER 2

INDIA'S INCLUSIVE GROWTH

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Chapter 2
India's Inclusive Growth

The idea of inclusive growth—where development benefits all sections of society—has long been a part of cultural and philosophical traditions worldwide.

Vasudhaiva Kutumbakam: The Sanskrit phrase Vasudhaiva Kutumbakam, meaning "the world is one family," comes from the Maha Upanishad. This concept promotes the idea that societies should function as inclusive communities, ensuring that no one is left behind.

Ubuntu: The African philosophy of Ubuntu, which translates to "I am because we are," embodies the spirit of shared humanity. It suggests that an individual's well-being is inherently linked to the well-being of society as a whole.

Xiaokang: In Chinese tradition, the concept of Xiaokang (小康) refers to a society where prosperity is widespread and not limited to the elite. The concept of Xiaokang dates back to Confucian thought and has been revived in modern times to describe a stage of economic development where people enjoy a comfortable standard of living.

The words of Confucius (551–479 BC), one of China's greatest thinkers and social philosophers, echo this sentiment:

"In a country well-governed, poverty is something to be ashamed of. In a country badly governed, wealth is something to be ashamed of."

Theoretical Approaches to Achieving Inclusive Growth

Concept of inclusive growth has been approached from various theoretical perspectives, each offering unique insights into how economic policies can be structured to promote widespread prosperity.

Classical and Neoclassical Growth Theory

The foundations of Classical Growth Theory were laid by Adam Smith in his seminal work, "The Wealth of Nations," where he discusses the concept of the "invisible hand"—the idea that individual self-interest in a free-market economy leads to economic benefits for all. Further, Neoclassical Growth Theory introduces the significance of technological progress and knowledge in driving economic growth.

According to Classical and Neoclassical theories, inclusive growth can be promoted through laissez-faire policies — a policy of minimal governmental interference in economic affairs. The laissez-faire approach suggests that minimal regulation allows businesses to operate efficiently, fostering innovation and competition. For instance, as seen in the rapid development of the tech industry in places like Silicon Valley. The expectation is that as businesses thrive in a free-market environment, the economic pie grows larger and the benefits "trickle down" to different segments of society through job creation and higher wages.

Criticisms: Critics argue that these theories underestimate the necessity of direct government intervention in preventing market failures and addressing income inequality. The assumption that benefits automatically trickle down to all layers of society often does not hold true in practice, leading to increased wealth concentration at the top without adequate improvement in the economic conditions of lower-income groups.

Keynesian Theory/Welfare State Model

John Maynard Keynes argued that during economic downturns, governments should increase spending and intervention to stabilize the economy and maintain employment levels. This theory was a departure from the traditional thought that markets would naturally adjust themselves. This laid the foundational principles of what would become known as the Welfare State.

Keynesian economics supports the idea that government can play a positive role in ensuring economic stability and growth by managing demand. This is done through government spending on public services and infrastructure, which not only creates jobs but also stimulates further economic activity. A historical example of Keynesian economics in practice is the New Deal programs implemented by the U.S. during the Great Depression, which helped to mitigate the economic crisis by boosting employment and infrastructure development. Similarly, welfare policies like unemployment benefits and social security play crucial roles in supporting the economically vulnerable by stabilizing their income, which helps maintain consumption levels across the economy, contributing to overall economic stability.

Criticisms: Critics argue that these approaches can lead to a dependency on government support, which may discourage individuals from seeking employment or becoming economically self-sufficient, potentially leading to economic inefficiencies. Additionally, there are concerns about the long-term fiscal sustainability of extensive welfare programs.

Human Development Approach

Amartya Sen, greatly advanced the Human Development approach through his book, "Development as Freedom." In this work, Sen argues that economic development should be assessed by the enhancements it brings to human life and freedom, rather than just by traditional measures like income growth. This idea was also developed by Mahbub ul Haq, who introduced the Human Development Index (HDI). The HDI is now a globally recognized tool that measures a country's average achievements in three basic aspects of human development: health, education, and income.

The Human Development approach asserts that inclusive growth is reached through policies that expand people's freedoms and capabilities. For example, initiatives like India's Midday Meal Scheme exemplify how access to free nutritious school lunches can enhance children's physical health and cognitive capabilities, leading to better educational outcomes and higher future earnings potential. This approach prioritizes investments in health, education, and social protections as foundational to enabling individuals to contribute to and benefit from economic growth.

Criticisms: Despite its widespread acceptance, the Human Development approach has been criticized for its broad focus, which some argue may divert attention from necessary economic growth, which is also vital for sustainable development.

Institutional Approach

Daron Acemoglu and James Robinson, who jointly received the 2024 Nobel Economics Prize for their contribution in comparative studies of prosperity between nations, in their book "Why Nations Fail," argue that 'inclusive' institutions are crucial for achieving broad-based growth and prosperity.

They suggest that inclusive growth can be fostered through the development and reinforcement of institutions that promote fairness and provide equal opportunities. For example, the establishment of strong legal systems that enforce contracts and property rights uniformly can help create an environment where businesses of all sizes can thrive. Effective governance and anti-corruption measures ensure that economic gains are not monopolized by the elite, thus allowing more equitable distribution of resources. For instance, countries like Denmark and New Zealand are often cited as examples where strong institutions contribute to high levels of economic equality and overall prosperity.

Criticisms: Critics argue that this approach may oversimplify the complex nature of societal development and ignore other influential factors such as culture and politics. Moreover, transforming institutions can be a long and challenging process fraught with resistance from established interests that benefit from the status quo.

Sustainable Growth/Green Growth Model

Sustainable growth/Green growth strategies aim to synchronize economic expansion with ecological sustainability, ensuring that the development of today does not compromise the needs of future generations. This approach includes promoting sectors such as renewable energy — solar, wind, and hydroelectric power — which not only contribute to mitigating climate change by reducing the carbon footprint but also create employment opportunities. Moreover, sustainable agriculture practices can enhance food security and boost income in rural communities by using methods that are less harmful to the environment and more resilient to climate change, such as crop rotation and organic farming.

These efforts align with the Sustainable Development Goals (SDGs), a universal call to action by the United Nations to protect the planet and ensure prosperity for all. Engaging in international agreements like the Paris Agreement also commits countries to reducing their carbon emissions and transitioning towards sustainable economies.

Criticisms: Critics argue that the transition to a green economy might slow down economic growth due to the high initial costs of renewable technologies and the restructuring of existing industries. There is also skepticism about whether these technologies can fully meet current and future energy demands without compromising economic development goals.

India's Inclusive Growth Strategy

India’s journey toward becoming a 'Viksit Bharat' (Developed India) by 2047 is guided by the vision of "Sabka Saath, Sabka Vikas" (Together with all, Development for all). It balances individual rights and community responsibilities as reflected in the Constitution.

Pillar 1: Dynamic Market Economy

India recognizes the critical role of the Market Economy in driving economic progress.

Key Aspects

1. *Private Sector as the Driver of Growth*: India promotes private enterprise as the main engine of economic growth.
2. *Government as an Enabler*: Adhering to the principle of "Minimum government, maximum governance," the government's role is to act as an enabler rather than a controller. By creating policies that simplify business operations, reducing bureaucratic barriers, and providing essential infrastructure, the state sets the stage for businesses to thrive.
3. *Support for the Private Sector*:
   - Reduction in corporate tax rates to boost profitability and encourage reinvestment.

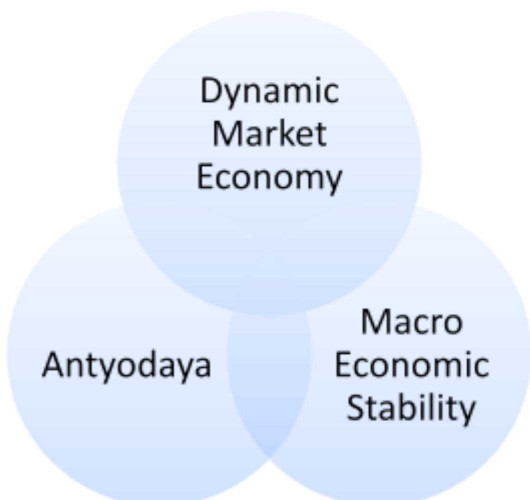
- Simplification of the Goods and Services Tax (GST) to enhance compliance and ease of doing business.
- Initiatives like 'Make in India' aimed at boosting manufacturing and attracting foreign direct investment.
- Development of infrastructure through public-private partnerships (PPPs).

Pillar 2: Antyodaya

Antyodaya or upliftment of the last person is central to India's inclusive growth, ensuring that the fruits of economic growth reach the poorest and most vulnerable sections of society first. This approach aligns with Mahatma Gandhi’s principle of prioritizing the welfare of the weakest.

Key Aspects

1. *Saturation Approach*: The government adopts a saturation approach to welfare programs, which guarantees that every eligible individual receives the benefits without discrimination.
2. Special attention is given to tailoring social schemes that address the specific needs of marginalized communities, including women, the elderly, disabled individuals, and economically disadvantaged groups.



Pillar 3: Macro Economic Stability

India focuses on maintaining a robust economic environment through effective management of the country’s fiscal and monetary policies.

Key Aspects

1. *Fiscal Prudence*: Implementation of the Fiscal Responsibility and Budget Management (FRBM) Act to ensure responsible government spending. This is critical to avoid excessive debt accumulation while still stimulating economic growth.
2. *Monetary Policy Management*: The Reserve Bank of India uses flexible inflation targeting to keep price levels stable, which is crucial for providing a predictable business environment.
3. *Capital Expenditure*: A significant portion of government expenditure is allocated towards capital investments in infrastructure, healthcare, and education, which are vital for long-term development.
4. *Trade Policy*: The strategy includes pragmatic trade policies such as Atma Nirbhar Bharat (Self-reliant India) which encourages self-sufficiency and reduces dependency on foreign imports, while also engaging in Free Trade Agreements (FTAs) to enhance market access for Indian goods.
5. *Adaptation to Global Economic Conditions*: This flexibility is crucial in managing unforeseen global challenges effectively, such as financial crises or pandemics.

6. The government's response to the COVID-19 crisis with fiscal stimulus packages aimed at supporting small businesses and vulnerable populations underlines the adaptability and resilience of India's economic policies.

India's Ranking in Global Indices

Global Multidimensional Poverty Index (MPI)

Organization: United Nations Development Programme (UNDP)

Criteria: The MPI assesses poverty through ten indicators grouped under three dimensions: health (nutrition and child mortality), education (years of schooling and school attendance), and standard of living (electricity, drinking water, sanitation, housing, cooking fuel, and asset ownership).

India has made commendable strides in reducing multidimensional poverty, with the incidence of poverty declining from 55.1% in 2005-06 to 16.4% in 2019-21. However, with 234 million citizens still living in multidimensional poverty, India has the highest absolute number of people living under such conditions globally.

The MPI report emphasizes that, globally, children are disproportionately affected by poverty, with over half of the impoverished population being under 18 years old. This demographic trend is also evident in India, where addressing the needs of a young population is critical for breaking the cycle of poverty.

Global Hunger Index (GHI) 2024

Organization: Jointly published by European NGOs of Concern Worldwide and Welthungerhilfe

Criteria: The GHI uses four component indicators to measure hunger: undernourishment, child wasting, child stunting, and child mortality.

India's Rank: 105th out of 127 countries

India's score of 27.3 on the Global Hunger Index 2024 places it in the 'serious' category of hunger levels. Despite some improvements over the years, the challenges of malnutrition and food insecurity persist, with India lagging behind many of its South Asian neighbors like Sri Lanka, Nepal, and Bangladesh. However, it ranks above Pakistan and Afghanistan.

The 2024 report highlights critical issues:

- *Child Malnutrition*: India has the highest rate of child wasting globally at 18.7%, indicating acute undernutrition. Additionally, 35.5% of children under five are stunted, reflecting chronic nutritional deficiencies.
- *Undernourishment*: About 13.7% of the population is undernourished, which, while slightly improved from previous years, still represents a significant challenge.
- *Child Mortality*: The under-five mortality rate stands at 2.9%, showing some progress but underscoring ongoing vulnerabilities among children.

The GHI report suggests that while India has made strides in reducing child mortality and improving some nutritional indicators since 2000, the rates of wasting and stunting remain alarmingly high, highlighting the need for targeted interventions to address these issues.

Global Gender Gap Index 2024

Organization: World Economic Forum (WEF)

Criteria: The index measures gender gaps across four key dimensions: economic participation and opportunity, educational attainment, health and survival, and political empowerment.

India's Rank: 129th out of 146 countries

India's ranking of 129th in the 2024 Global Gender Gap Index highlights significant challenges in closing gender disparities.

- *Economic Participation and Opportunity*: India ranks 142nd in this category, with women earning significantly less than men and facing substantial barriers in senior and professional roles. This indicates persistent economic disparities despite improvements in workforce participation.
- *Educational Attainment*: India shows relatively better performance in educational attainment, with a significant proportion of gender parity in enrollments at various education levels. However, it ranks 112th, suggesting that there are still notable gaps, especially in higher education and literacy rates.
- *Health and Survival*: India's ranks 142nd in this category. This score points to persistent health disparities that affect women disproportionately in terms of life expectancy and access to healthcare services.
- *Political Empowerment*: India has made some progress in political empowerment, ranking 65th globally. However, women's representation in parliament and other political positions remains low.

World Happiness Report 2024

Organization: United Nations Sustainable Development Solutions Network

Criteria: The report assesses global well-being and contentment by analyzing factors such as income, social support, health, freedom, generosity, and absence of corruption.

India's Rank: 126 out of 143 countries

The top rankings continue to be dominated by Nordic countries, with Finland claiming the title of the happiest country for the seventh consecutive year. Meanwhile, Afghanistan remains at the bottom of the list.

The report suggests that older Indian adults generally report higher life satisfaction, particularly those who are married and educated. However, the happiness levels among younger Indians are concerning, as they lag behind compared to their global counterparts.

The 2024 report underscores the importance of addressing factors such as social support systems, healthcare, and corruption to improve the overall happiness of a nation's citizens.

Human Development Index (HDI) 2023-24

Organization: United Nations Development Programme (UNDP)

Criteria: The HDI measures countries based on average achievements in three key areas of human development: life expectancy, education level (both mean and expected years of schooling), and Gross National Income (GNI) per capita.

India's Rank: 134 out of 193 countries

India's performance on the 2023-24 Human Development Index reflects a medium level of human development, with the country showing notable progress in several key areas over the years:

1. *Health*: There's been a consistent rise in life expectancy over the years, a clear indicator of improving health conditions and medical facilities.
2. *Education*: India has seen substantial growth in educational attainment, with increases in both expected years of schooling and mean years of schooling.
3. *Income*: The Gross National Income (GNI) per capita has also seen an upward trajectory, highlighting economic growth and improved living standards for the population.

Despite these advancements, India still faces challenges. The country has one of the largest gender gaps in labor force participation, indicating significant inequality in employment opportunities between men and women.

India, like many other nations, is still dealing with the repercussions of global challenges like the COVID-19 pandemic which has impacted its progress towards achieving very high human development by the 2030 Sustainable Development Goals (SDGs) deadline.

India's renewed focus on digital infrastructure and women-led development could play crucial roles in unlocking further socio-economic progress, paving the way for a more equitable future.

Climate Change Performance Index (CCPI) 2024

Organization: Published by Germanwatch, the NewClimate Institute, and the Climate Action Network International.

Criteria: The CCPI evaluates countries based on their performance in four key categories: Greenhouse Gas Emissions, Renewable Energy, Energy Use, and Climate Policy.

India's Rank: 7th out of 63 countries

India's rank in the 2024 Climate Change Performance Index marks a slight improvement, moving up from 8th position in the previous year. This advancement reflects India's ongoing efforts and achievements in climate change mitigation:

- *Emissions and Energy Use*: India's performance is particularly notable in terms of Greenhouse Gas Emissions and Energy Use, where it demonstrates efficiency and a lower per capita impact compared to other large economies.
- *Renewable Energy and Climate Policy*: Despite progress, India faces challenges in these areas, particularly renewable energy deployment and the formulation of robust climate policies.
- Globally, no country achieved a "very high" rating in the index, underscoring the global challenge of meeting Paris Agreement goals. India's position is relatively strong, especially when compared to other G20 nations, many of which ranked lower due to less effective climate strategies.
- India's ranking reflects its strategic initiatives like the National Solar Mission and other national policies aimed at reducing dependency on fossil fuels and enhancing renewable energy capacity.

Gender Inequality Index (GII) 2024

Organization: United Nations Development Programme (UNDP)

Criteria: The GII measures gender disparities across three dimensions: reproductive health, empowerment, and the labor market.

India's Rank: 108 out of 193 countries

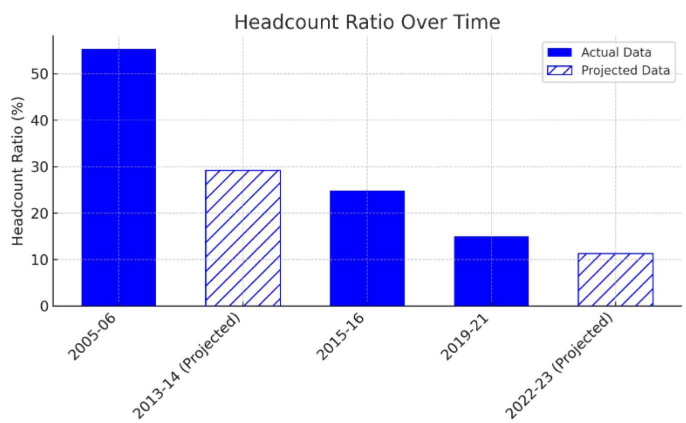
India's ranking of 108 in the 2024 Gender Inequality Index marks a notable improvement, climbing 14 ranks from its previous position at 122. This advancement suggests progress in addressing gender disparities across key dimensions:

- *Reproductive Health*: India has made strides in improving healthcare access and services aimed at women.
- *Empowerment*: There has been a significant focus on increasing female participation in education and politics.
- *Labor Market*: Despite improvements, the labor market still shows substantial gender inequality.

Poverty and Inequality in India

Multidimensional Poverty in India

Poverty measurement in India has traditionally relied on income and consumption-based metrics. However, these approaches failed to capture deprivations beyond economic factors, leading to the adoption of the Multidimensional Poverty Index (MPI), which measures poverty across health, education, and standard of living.

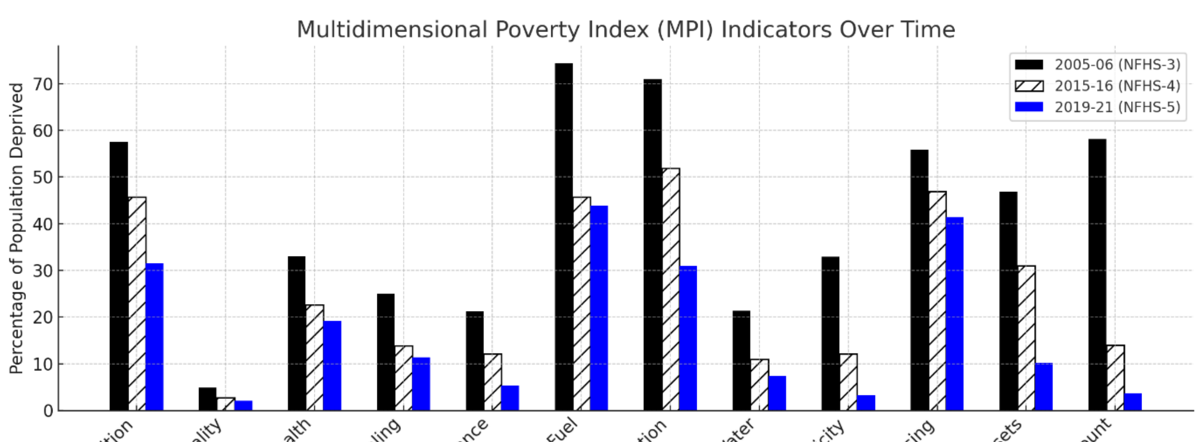


Over the past two decades, India has witnessed a substantial reduction in multidimensional poverty, driven by economic growth, targeted welfare policies, and improved access to essential services.

Progress Over the Years: The National Family Health Surveys (NFHS) serve as the primary data source for computing MPI. The estimates for different survey rounds are summarized below:

NFHS Year	*Headcount Ratio (H) – % of Population Poor*	*Intensity (A) – Average Deprivation Score*	*MPI Value (H × A)*
2005-06	55.34%	54.96%	0.304
2015-16	24.85%	47.14%	0.117
2019-21	14.96%	44.39%	0.066
2022-23 (Projected)	11.28%	~42%	~0.047

Key Findings for 2022-23 Projections



- 24.82 crore people estimated to have exited poverty since 2013-14.
- Faster decline in rural areas.
- All 12 MPI indicators show improvement, with the biggest gains in sanitation and cooking fuel access.

With sustained efforts, India is on track to achieve single-digit poverty levels by 2025 and realize the vision of Viksit Bharat @2047.

Challenges and Future Outlook

Persistent Disparities across States and Regions

- Interstate inequality narrowing but still significant.
- States that were historically the poorest (Bihar, UP, MP, Odisha) have shown faster reductions.
- However, southern and western states (Kerala, Tamil Nadu, Maharashtra, Gujarat) have already reached near-zero MPI levels, highlighting developmental gaps.

Challenges in Urban Poverty Reduction

- Informal sector workers and migrant laborers in urban areas continue to face income insecurity.
- Rising cost of living in cities pushes vulnerable groups back into poverty cycles.
- Urban slums still lack proper housing, sanitation, and water access.
- The impact of COVID-19 was disproportionately felt in urban areas, causing temporary setbacks in poverty reduction.

Data Gaps in MPI Estimation

- National MPI relies on NFHS data, which is collected every 4-5 years.
- No real-time poverty tracking mechanism exists.
- Lack of disaggregated data on poverty among marginalized groups like tribals, minorities, and women.
- Real-time poverty monitoring through digital surveys, Aadhaar-linked databases, and AI-based analytics can improve targeting of welfare schemes.

Household Consumption Expenditure Survey (HCES) 2023-24

Household consumption expenditure provides insights into income distribution, poverty levels, and consumption patterns. The Ministry of Statistics and Programme Implementation (MoSPI) conducted the Household Consumption Expenditure Survey (HCES) 2023-24, covering 2,61,953 households across India.

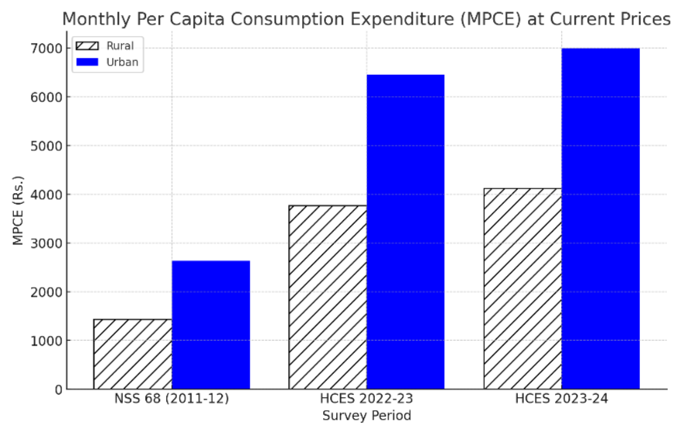
Key Findings of HCES 2023-24

Monthly Per Capita Consumption Expenditure (MPCE): The MPCE estimates provide a measure of household expenditure at both current and 2011-12 prices. The survey revealed the following trends:

Survey Period	Rural MPCE (Current Prices)	Urban MPCE (Current Prices)	Rural MPCE (2011-12 Prices)	Urban MPCE (2011-12 Prices)
HCES 2023-24	Rs. 4,122	Rs. 6,996	Rs. 2,079	Rs. 3,632
HCES 2022-23	Rs. 3,773	Rs. 6,459	Rs. 2,008	Rs. 3,510
NSS 68 (2011-12)	Rs. 1,430	Rs. 2,630	Rs. 1,430	Rs. 2,630

Observations:

- The MPCE increased by 9% in rural areas and 8% in urban areas from 2022-23.
- The urban-rural expenditure gap narrowed further, indicating improved rural purchasing power.
- The highest MPCE was recorded in Sikkim (Rural: Rs. 9,377, Urban: Rs. 13,927), while Chhattisgarh had the lowest MPCE (Rural: Rs. 2,739, Urban: Rs. 4,927).



Expenditure Distribution by Fractile Class

The inequality in expenditure across income groups is evident when analyzing the fractile classes.

Fractile Class	Rural MPCE (Rs.)	Urban MPCE (Rs.)
Bottom 5%	1,677	2,376
Top 5%	10,137	20,310

Observations:

- The top 5% of urban households spent almost double that of rural households in the same category.
- MPCE growth was highest among the bottom 5% of rural and urban populations, indicating improved affordability.

Composition of Household Expenditure

Consumption expenditure is classified into food and non-food categories.

Category	Rural Share (%)	Urban Share (%)
Food	47	40
Non-Food	53	60
Major Non-Food Items	Clothing, conveyance, entertainment	Rent, durable goods, miscellaneous

Trends in Consumption:

- Non-food expenditure dominates in both rural and urban India, with a share of 53% and 60%, respectively.
- Rent accounts for 7% of urban household expenditure, reflecting urban cost pressures.

Consumption Inequality

The Gini coefficient, a measure of income inequality, showed a declining trend:

Year	Rural Gini Coefficient	Urban Gini Coefficient
2022-23	0.266	0.314
2023-24	0.237	0.284

Key Takeaway: Consumption inequality declined in both rural and urban areas.

The HCES 2023-24 survey highlights significant changes in India's consumption patterns, with a narrowing urban-rural gap, increased rural spending, and reduced inequality. While non-food expenses dominate household budgets, food expenditure trends emphasize the need for continued agricultural and price stability policies.

Oxfam India's 2023 Report titled 'Survival of the Richest: The India Story'

India's wealth disparity is stark, with a small fraction of the population holding a disproportionate share of the wealth. The data highlights the extreme inequality:

Wealth Distribution in India

Wealth Group	Share of Total Wealth (%)
Top 1%	40.6
Bottom 50%	3.0

The number of billionaires in India rose from 102 in 2020 to 166 in 2022, indicating a consolidation of wealth at the top. Simultaneously, India remains home to the world's highest number of poor people, totaling 228.9 million.

Taxation: A Tool for Equity?

The regressive nature of indirect taxes like the GST disproportionately impacts the poor. A detailed breakdown of how income groups are affected by taxation provides a clearer picture:

(Using the 68th round report of the National Sample Survey Organization (NSSO) on "Household Consumption of Various Goods and Services in India 2011-12", Oxfam India looked at the expenditure that the bottom 50 per cent, middle 40 per cent and top 10 per cent incur on various food and non-food items in a 30-day period.)

Percentage of Income Spent on Tax on food and non-food items

Income Group	Urban (%)	Rural (%)	All-India (%)
Bottom 50%	5.02	8.5	6.7
Middle 40%	2.65	4.03	3.3
Top 10%	0.33	0.49	0.4

Share in Total Tax on food and non-food items of Different Income Groups

Income Group	Urban (%)	Rural (%)	All-India (%)
Bottom 50%	62.7	65.3	64.3
Middle 40%	33.1	30.9	31.8
Top 10%	4.2	3.8	3.9

A little less than two-third of the total GST is coming from the bottom 50 per cent, as per estimates, one-third from middle 40 per cent and only three to four per cent from the top 10 per cent.

Impact of Inflation on Inequality: Inflation increases financial strain on vulnerable populations, particularly in rural areas, where inflation rates are consistently higher compared to urban settings. In rural regions, where a significant portion of income is spent on food, higher food prices increases financial strain, limiting expenditure on essentials like healthcare and education.

Policy Recommendations: Proposed measures in Oxfam India's 2023 Report titled 'Survival of the Richest: The India Story' include imposing a wealth tax on the richest 1%, reducing GST on essential commodities, and enhancing public expenditure on health and education.

Sustainable Development Goals (SDGs)

What is SDGs?

The SDGs are a set of 17 interconnected goals developed by the United Nations (UN) to address critical global challenges. They aim to achieve a sustainable future for all by the year 2030. These goals encompass social, economic, and environmental dimensions of sustainable development.

How Did the SDGs Come About?

The SDGs were adopted in 2015 as part of the 2030 Agenda for Sustainable Development during the UN Sustainable Development Summit. The journey to the SDGs began with the Millennium Development Goals (MDGs) set in 2000, which focused on poverty reduction and basic human development. As the MDGs reached their deadline in 2015, it became evident that a more comprehensive set of goals was needed to address the interconnected challenges of our globalized world. This led to the formulation of the SDGs, which are broader in scope and designed to be more inclusive.

Principles of the SDGs

The SDGs are built upon several core principles that guide their implementation globally:

1. *Universality*: The SDGs are designed for all countries—developed and developing alike. They recognize that sustainability challenges are not limited to low-income nations but are relevant across all geographies.
2. *Inclusivity*: The SDGs emphasize on inclusive philosophy of 'Leave No One Behind' (LNOB). It ensures everyone can benefit from sustainable development, regardless of gender, race, age, or economic status.
3. *Integrated Approach*: The goals acknowledge that sustainable development is interconnected. Progress in one goal is linked to others, such as how clean energy (SDG 7) impacts climate action (SDG 13) and decent work (SDG 8).
4. *Environmental Sustainability*: The SDGs recognize the importance of preserving natural resources and mitigating environmental degradation. They acknowledge that human well-being is tied to the health of the planet.
5. *Collaborative Partnerships*: The SDGs promote a collaborative approach involving governments, private sectors, civil society, and individuals.
6. *Measurable Outcomes and Accountability*: The SDGs are accompanied by indicators to track progress. Each country is encouraged to monitor and report its achievements, challenges, and gaps, fostering accountability and ensuring continuous improvement.

India's Approach to Achieving Sustainable Development Goals (SDGs)

India, with its vast population of nearly 1.4 billion, faces distinct challenges in pursuing the Sustainable Development Goals (SDGs). The NITI Aayog, as India's leading policy think tank, plays a crucial role in orchestrating the national effort towards these goals by aligning policies at national, state, and local levels with sustainable development objectives.

Here are the key strategies India employs to achieve the SDGs:

1. *Competitive and Cooperative Federalism*: Competitive federalism fosters innovation and efficiency by encouraging states to outperform each other, while cooperative federalism ensures resource sharing, collective problem-solving, and the convergence of policies across different levels of government.
2. *SDG India Index*: This index, developed by NITI Aayog, tracks the progress of states and union territories in achieving the SDGs.
3. *Data and Knowledge-Driven Decision-Making*: India enhances its monitoring and accountability mechanisms by utilizing technology, analytics, and real-time data tracking.
4. *Jan Bhagidari*: Citizens are engaged in the governance process via public feedback mechanisms, surveys, and digital platforms such as MyGov India. At the local level, Gram Sabhas (village assemblies) provide a vital platform for community data collection and issue identification.
5. *SDG Localization*: Recognizing India's diverse geographical, demographic, and economic landscapes, SDG localization is essential. This process translates global and national targets into actionable strategies at the grassroots, with active involvement from state governments, district administrations, and village governance structures, ensuring a bottom-up implementation approach. Programs like the Aspirational Districts Programme (ADP) and Aspirational Blocks Programme (ABP) exemplify successful SDG localization strategies.

6. *Whole-of-Government and Whole-of-Society Approaches*:
    - Whole-of-Government Approach: SDG implementation spans various departments and ministries, fostering cross-sector collaboration to design and implement comprehensive SDG-aligned programs.
    - Whole-of-Society Approach: Recognizes the importance of engaging civil society, private sector stakeholders, and citizen groups in SDG efforts.
7. *SDG Financing*:
    - *Public Finance*: The government incorporates SDG-linked frameworks in national and state budgets to ensure fiscal policies support sustainability objectives.
    - *Private Sector Investments*: Corporate Social Responsibility (CSR) mandates require companies to invest in social development, aligning their CSR efforts with SDG targets.
    - *International Finance*: India attracts sustainable foreign direct investment and engages in global partnerships to secure financial support for its climate action, health, and education initiatives.
    - *UNFCCC and Climate Finance*: India advocates for climate finance under the United Nations Framework Convention on Climate Change (UNFCCC). As a developing country, India has called for higher financial commitments from developed nations under the principle of Common but Differentiated Responsibilities (CBDR).
8. *South-South Cooperation*: India actively promotes cooperation with other nations of the Global South, enhancing its development partnerships and supporting SDG projects through initiatives like the India-UN Partnership Fund.

Sustainable Development Report 2024

India is ranked 109th out of 193 countries with an SDG Index score of 63.99, according to the Sustainable Development Report 2024.

SDG	*Performance*	*Progress and Challenges*
SDG 1: No Poverty	Progress	Significant strides in poverty alleviation with low poverty ratios.

SDG	*Performance*	*Progress and Challenges*
SDG 2: Zero Hunger	Challenges	High prevalence of undernourishment and stunting among children.
SDG 3: Good Health and Well-Being	Mixed Performance	Mixed results with high maternal and neonatal mortality rates but good vaccination coverage.
SDG 4: Quality Education	Progress	High enrollment and literacy rates, challenges in higher education quality.
SDG 5: Gender Equality	Challenges	Low female labor force participation and political representation.
SDG 6: Clean Water and Sanitation	Mixed Performance	High access to drinking water, but low wastewater treatment.
SDG 7: Affordable and Clean Energy	Progress	High access to electricity and clean cooking technologies, renewable energy share needs improvement.
SDG 8: Decent Work and Economic Growth	Challenges	Negative GDP growth and high rates of modern slavery.
SDG 9: Industry, Innovation, and Infrastructure	Mixed Performance	Strong mobile broadband access, moderate logistics performance.
SDG 10: Reduced Inequalities	Challenges	Persistent income inequality indicated by high Gini and Palma ratios.
SDG 11: Sustainable Cities and Communities	Challenges	High proportions of urban populations in slums and poor air quality.
SDG 12: Responsible Consumption and Production	Challenges	High production-based pollution and low waste recycling rates.
SDG 13: Climate Action	Mixed Performance	Moderate CO2 emissions per capita, challenges in reducing greenhouse gases.
SDG 14: Life Below Water	Challenges	Low protection in marine biodiversity and sustainable fishing practices.
SDG 15: Life on Land	Challenges	Limited protection in terrestrial and freshwater biodiversity sites.
SDG 16: Peace, Justice, and Strong Institutions	Mixed Performance	Moderate success in crime control, challenges in judiciary effectiveness and corruption.
SDG 17: Partnerships for the Goals	Challenges	Low government spending on health and education, need for stronger international support.

Practice Questions

1. What is the significance of the 'Antyodaya' principle in India's inclusive growth strategy? Discuss how this principle aligns with India's socio-economic development goals.
2. Examine the role of the private sector in the economic development of India. What are the challenges faced by the private sector in fostering inclusive growth?
3. Evaluate the significance of the 'Sustainable Development Goals' (SDGs) in India's socio-economic policies. What strategies have been adopted by India to achieve these goals?
4. Poverty is a multi-dimensional phenomenon. How does the Multidimensional Poverty Index (MPI) measure poverty? Discuss the implications of MPI for poverty alleviation policies in India.
5. How does the government of India balance the objectives of growth and sustainability in its policy framework? Discuss the relevance of green growth models for India's future development.
6. What is the role of inclusive institutions in fostering sustainable development in India? How do they contribute to reducing economic disparities?

CHAPTER 3

MONEY & INFLATION

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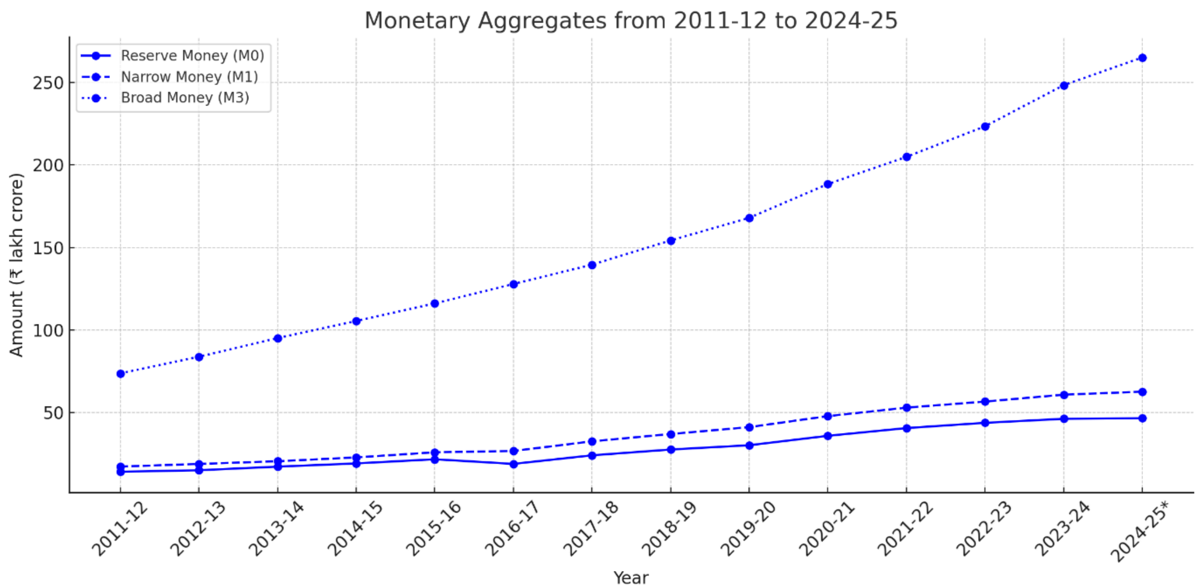
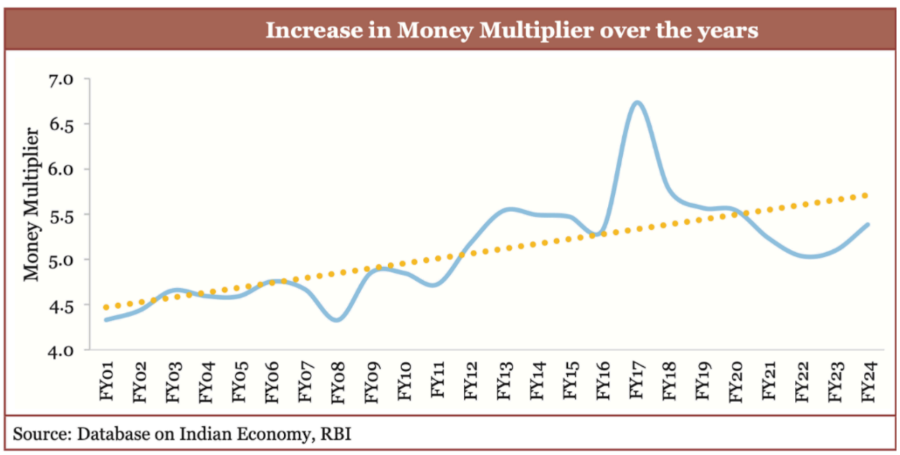
Chapter 3
Money and Inflation

Money Supply trends in India



Understanding the Money Multiplier

As we already know, the Money Multiplier (MM) is defined as the ratio of Money Supply to Reserve Money. Specifically, the Reserve Bank of India (RBI) calculates the Money Multiplier using the Broad Money (M3) measure of money supply, expressed as:



MM = Broad Money (M3)/ Reserve Money (M0)

A higher Money Multiplier is desirable because it indicates that banks can lend out a larger portion of their deposits. This leads to an increased money supply within the economy, which can potentially stimulate economic growth by facilitating more loans for investments and consumption. However, if the money supply expands too rapidly due to a very high Money Multiplier, it can lead to inflation.

Factors Influencing the Money Multiplier

The Money Multiplier (MM) is affected by two key factors:

1. Cash held by individuals and businesses
    - More cash in hand means less money in banks, leading to a lower MM.
    - This is because cash held outside the banking system reduces the ability of banks to create money through lending.
2. Reserves held by banks with the central bank (CRR - Cash Reserve Ratio)
    - Banks must hold a portion of their deposits as reserves with the RBI.
    - Higher CRR → Lower MM (less money available for lending).
    - If CRR is lowered, banks can lend more, increasing the MM.

India's MM has been on a rising trend due to digitalization, financial inclusion, and a stable banking system:

- Government has made significant efforts to promote financial inclusion (e.g., Jan Dhan Yojana).
- Less cash dependency and higher bank deposits → More money in the banking system → Higher MM.
- Digital banking and UPI adoption have reduced the need for cash transactions.

Exception 1: Money Multiplier Increase during Demonetization (2016-17)

Demonetization, announced on November 8, 2016, led to the withdrawal of ₹500 and ₹1,000 notes, which accounted for nearly 86% of the total currency in circulation at that time.

- Most of the demonetized cash was deposited into bank accounts. Since M3 includes bank deposits, this led to an artificial boost in M3.
- Since people were unable to withdraw cash freely, the amount of physical currency in the system (M0) shrank significantly.
- The government placed strict withdrawal limits, which forced people to shift toward digital payments and banking transactions.
- This increase in MM was not due to economic growth, but because of a structural shift in liquidity distribution.
- As cash availability normalized, people withdrew money, and MM adjusted to a more realistic level.

Exception 2: COVID-19 & Temporary Money Multiplier Drop in 2020-21

During the pandemic, the MM declined, because:

- Economic uncertainty led to higher cash withdrawals.
- People held onto cash, fearing income loss or banking instability.
- Banks also became more cautious in lending, which reduced M3 growth.

Post-FY22, MM has resumed its upward trajectory

- As economic stability returned, cash holdings reduced, and bank deposits increased.
- Liquidity generation improved, allowing banks to expand credit and boost M3 growth.

Inflation

Global Inflation Trends

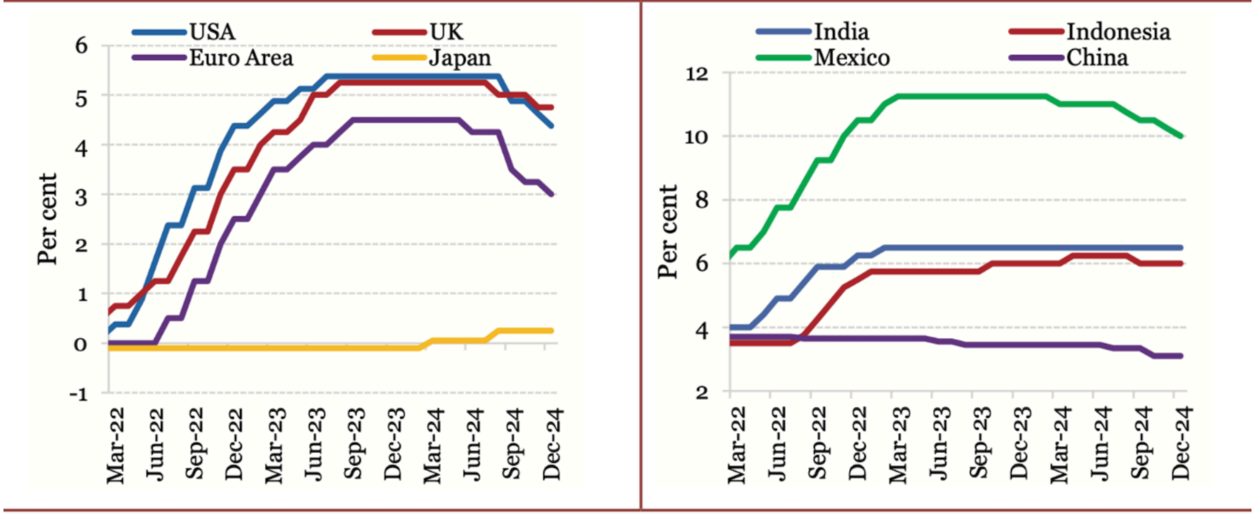
After a relatively stable period, global inflation has been highly volatile over the past few years. The pandemic initially caused a sharp decline in inflation in early 2020 due to collapsed demand and falling oil prices. However, as demand rebounded after lockdown eased, inflation started to rise sharply. Russia Ukraine war further worsened the situation. In July 2022, global inflation reached its highest level since the mid-1990s. Despite a subsequent decline, it remains well above the pre-pandemic average.

Drivers of global inflation

Demand Side Factors

Synchronized Monetary Tightening: Central banks worldwide responded to the rising inflation with synchronized interest rate hikes. This monetary tightening was aimed at curbing inflation by cooling down overheated economies.

Policy rates in advanced economies | **Policy rates in emerging market economies**



Source: Bank for International Settlements (BIS)

Supply Side Factors

Geopolitical Conflicts

1. Russia-Ukraine Conflict: The conflict between Russia and Ukraine has led to significant disruptions in the global supply of natural gas and crude oil, commodities for which Russia is a major global supplier. The reduction in these supplies has driven up energy prices worldwide. Additionally, both Russia and Ukraine are significant exporters of wheat and other agricultural products. The conflict has disrupted agricultural exports, leading to increases in global food prices.

   The international response, including economic sanctions against Russia by the US, EU, and other nations, has exacerbated the situation by curtailing trade further, leading to higher commodity prices.

2. Middle East Tensions: The Middle East, being one of the largest oil-producing regions, frequently experiences geopolitical tensions that threaten the global oil supply. Conflicts or tensions, such as those involving Iran or the ongoing situations in Syria and Yemen, can lead to fears of supply disruptions. For instance, the Strait of Hormuz, a critical choke point for global oil shipments, has been a focal point of regional tensions, with any blockade or disruption here potentially affecting 20% of global oil supplies.

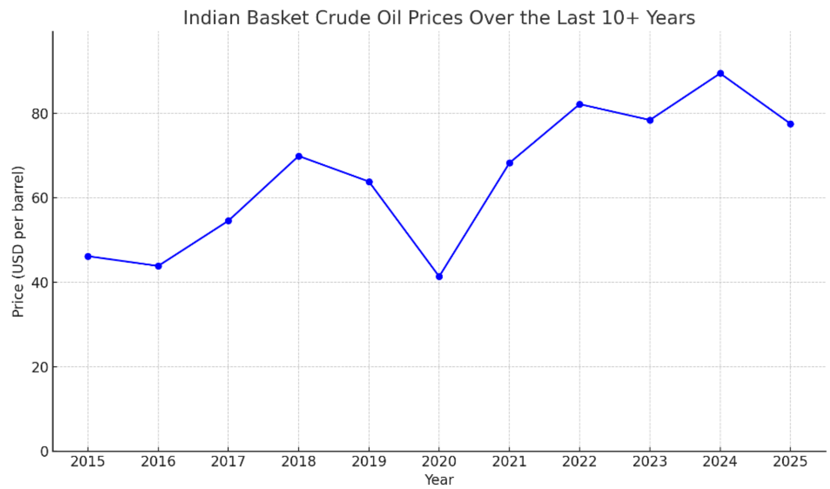
Supply Chain Disruptions

1. Red Sea and Houthi Rebel Attacks: The Red Sea is a crucial route for global trade, especially for oil shipments from the Middle East to Europe and the Americas. Attacks by Houthi rebels in this region have threatened the security of this vital passage, leading to increased

insurance costs and shipping delays. Such disruptions can lead to rerouting of ships around the Cape of Good Hope, which is a longer and more expensive route.

2. Panama Canal: The Panama Canal is another critical choke point for global trade, facilitating the passage of goods between the Pacific and Atlantic oceans. Extreme weather conditions, such as droughts, can affect the operation of the canal's lock systems, leading to delays. For instance, droughts can reduce the water levels necessary for the operation of the locks, limiting the number of ships that can pass through the canal.

Oil Prices

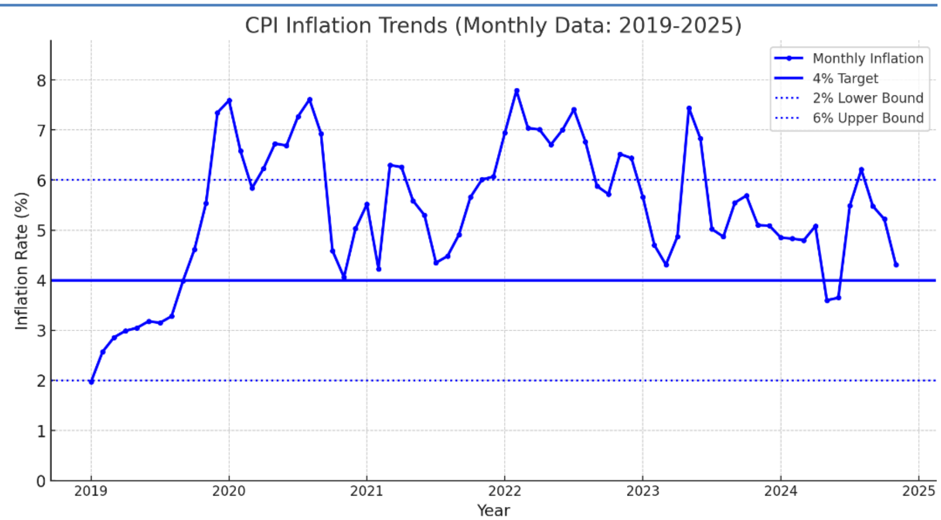


Initially, the global outbreak of COVID-19 led to an unprecedented collapse in oil prices due to a drastic drop in demand as countries worldwide imposed lockdowns.

As economies began to recover and demand picked up, oil prices rebounded sharply. This recovery was compounded by supply chain disruptions and production cuts from oil-producing nations, which were slow to bring their full production capacity back online.

More recently, oil prices have been influenced by extended production cuts by OPEC and associated countries, along with geopolitical tensions in key oil-producing regions like the Middle East. The ongoing conflict in Ukraine and sanctions on Russia have also played a significant role in keeping prices elevated. However, advancements in green energy and diversification of energy sources are beginning to moderate these price increases.

Domestic Inflation trends



As the pandemic spread globally in early 2020, India witnessed significant economic disruptions that led to a sharp rise in inflation. Supply chain interruptions, coupled with panic buying, significantly affected the availability and prices of essential goods.

A significant external factor influencing India's inflation has been the volatile oil prices in the international market. The situation was further complicated by geopolitical tensions, notably the Russia-Ukraine conflict that began in early 2022. This conflict led to a global surge in energy prices, impacting oil-dependent economies like India.

In the recent years, inflation in India has demonstrated a declining trend. The RBI's successive rate hikes played a crucial role in tempering inflation expectations and stabilizing consumer prices.

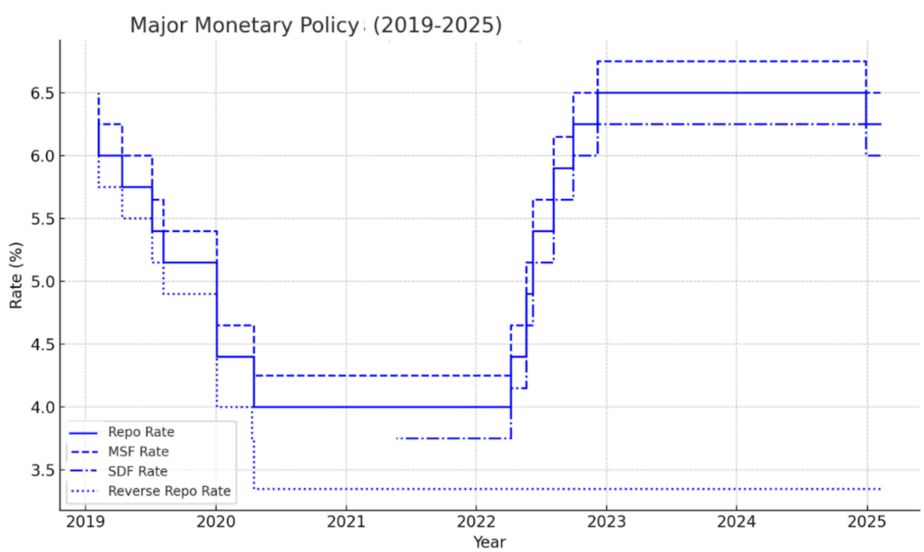
As India moves forward, the trajectory of inflation will continue to depend on a mixture of domestic policies and global economic conditions. The RBI's challenge will be to maintain a delicate balance between fostering economic growth and controlling inflation within its target range.

Factors influencing Domestic Inflation

RBI's Monetary Policy

Accommodative Stance: Initially during the COVID-19 pandemic, economic activity plummeted due to nationwide lockdowns. In response, the RBI reduced the repo rate from 5.15% in early 2020 to 4% by May 2020. This stance was adopted to support the economy amid severe disruptions by making borrowing cheaper and encouraging spending and investment.

Withdrawal of Accommodation: As the economy started to recover post pandemic, inflationary pressures began to rise. Inflation was worsened due to Russia Ukraine war. By 2022, RBI began increasing the repo rate in response to persistent high inflation, reaching up to 6.5% by mid-2022. This shift aimed to temper inflationary expectations by tightening monetary conditions.

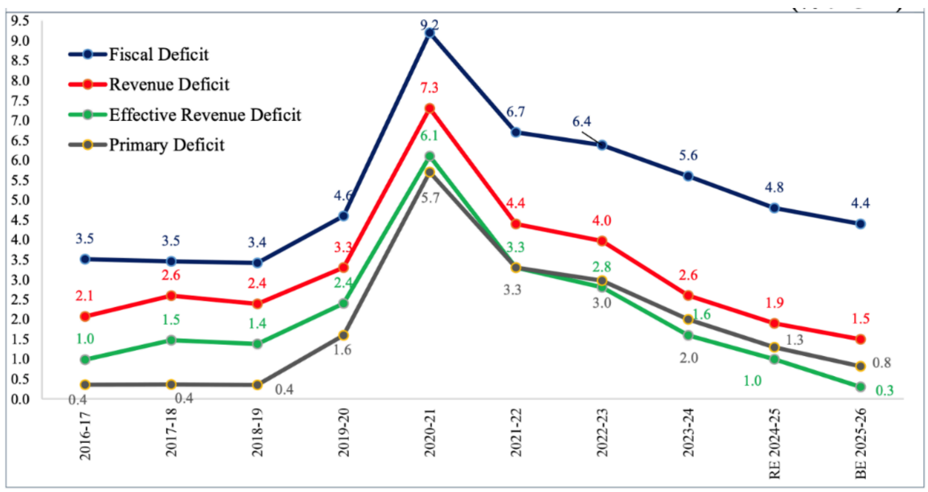


Neutral Stance: With inflation beginning to moderate and growth remaining below potential, the RBI shifted to a neutral stance in 2024 to maintain balanced monetary policy flexibility.

In February 2025, the RBI cut the repo rate by 25 basis points to 6.25%, and reduced the CRR by 50 basis points to 4% in December 2024 to ensure adequate liquidity. The neutral stance allows the RBI the flexibility to either increase or decrease rates in response to inflation and growth dynamics, aiming to stabilize both without overly prioritizing one over the other.

Government of India's Fiscal policy

In response to the economic disruption caused by the pandemic, the Indian government implemented substantial fiscal stimulus measures, including the Atma Nirbhar Bharat package. This package aimed to boost economic activity through various means such as collateral-free loans for MSMEs, tax reliefs, and increased spending on infrastructure which in turn increased liquidity in the economy and had an inflationary impact due to increased consumer spending and investment. The extensive fiscal measures led to a sharp increase in the fiscal deficit, which rose to 9.2% of GDP in 2020-21.



Fiscal Consolidation: Recognizing the need to sustain fiscal health, the government outlined a gradual path towards fiscal consolidation, aiming to reduce the fiscal deficit to 4.5% of GDP by 2025-26. This approach aims to balance the need for economic stimulation with the necessity of maintaining macroeconomic stability and keeping inflation in check.

Global supply chain disruptions

Global supply chain disruptions, which began with the onset of the COVID-19 pandemic, was worsened due to various geopolitical conflicts. It has significantly impacted various sectors in India, leading to inflationary pressures.

Automotive Sector: The automotive industry faced significant challenges due to a global shortage of semiconductors, critical for modern vehicles. Major car manufacturers like Maruti Suzuki and Hyundai encountered production delays due to the lack of these components, leading to increased prices and longer wait times for consumers.

Electronics and Appliances: Similarly, the electronics market, which relies heavily on imported components such as chips and displays, saw price increases across a range of products. As companies reported having to adjust prices to offset the increased costs of components, impacting consumer electronics like smartphones, laptops, and household appliances.

Pharmaceuticals: The pharmaceutical industry in India, which depends on imports of active pharmaceutical ingredients (APIs) from countries such as China, experienced increased production costs. This disruption led to higher prices for generic drugs.

Food Inflation

Food items, constituting about two-fifths of the Consumer Price Index (CPI) in India, play a significant role in shaping the inflationary trends observed across the country.

Recent observations indicate that although food inflation contributes majorly to headline inflation, it is primarily driven by a few specific items. For instance, vegetables and pulses, which collectively hold a total weightage of 8.42% in the CPI basket, accounted for a substantial 32.3% of the overall inflation in FY25 (April to December). This disproportionate impact highlights the volatility and the significant influence that specific food items can have on the total inflation dynamics.

Causes of food inflation in India

Supply Chain Disruptions: One of the primary drivers of food inflation in India has been significant supply chain disruptions. These disruptions are often precipitated by extreme weather conditions such as monsoons, cyclones, and unseasonal rainfall, which not only affect crop yields but also hinder transportation and logistics. For example, monsoon-induced disruptions have particularly impacted the production and distribution of key vegetables like onions and tomatoes, leading to periodic spikes in their prices.

Global Commodity Prices: India's food inflation is also sensitive to changes in global commodity prices. As a major importer of edible oils and pulses, fluctuations in international market prices can directly influence domestic food prices.

Consumer Demand: The consumer demand in India, particularly for staple vegetables and pulses, remains robust. As the population grows and urbanization increases, the demand for these food items continues to rise, often outpacing the growth in production. This demand-supply mismatch is a crucial factor driving food inflation.

Climate Change: Climate change has led to an increased frequency and intensity of extreme weather events such as cyclones, heavy rains, floods, thunderstorms, hailstorms, and droughts. These events directly affect agricultural productivity by damaging crops at critical growth stages, reducing yields, and causing fluctuations in supply.

The Indian agricultural calendar is heavily dependent on the monsoon season. Climate change has been altering monsoon patterns, leading to either excessive rainfall or prolonged dry spells. Both scenarios are detrimental to agriculture.

Rising temperatures and more frequent heatwaves can stress crops, particularly those sensitive to temperature changes such as wheat, rice, and various vegetables. Heat stress can reduce the growth period of crops, diminish yields, and degrade the quality of produce. There has been an increase in the number of heatwave days from 5% in previous years to 18% during 2022-2024.

Tomato

Tomatoes are a significant contributor to food inflation in India due to their essential role in Indian cuisine.

Factors impacting the pricing and production of tomatoes:

Production Cycles and Climatic Dependence: Tomatoes have short crop cycles and are highly perishable, making their production and pricing particularly sensitive to climatic conditions. They are primarily cultivated during two main periods: the Kharif and Rabi seasons. The majority of tomato production—over 65 percent—occurs during the Rabi season. This seasonal dependence makes tomato supplies vulnerable to disruptions caused by climatic anomalies such as unseasonal rains or temperature fluctuations, which can drastically affect yields.

Regional Concentration of Production: Tomato production in India is concentrated in a few states, including Andhra Pradesh, Karnataka, Madhya Pradesh, Gujarat, and Odisha. This geographical concentration increases the risk of supply shortages if these areas face adverse weather conditions.

Supply Chain Vulnerabilities: Due to their perishable nature, tomatoes require rapid transportation and efficient logistics to reach markets before spoilage. Disruptions in the supply chain, such as transportation delays, lack of cold storage facilities, or logistical inefficiencies, can lead to significant wastage and reduced market availability. Uneven monsoon-induced supply disruptions in certain regions have led to price pressures, particularly affecting tomatoes.

Price Sensitivity: Tomatoes are highly price-sensitive due to their staple status in Indian diets. Even small fluctuations in supply can lead to large swings in prices, impacting both consumers and producers. The high visibility of tomato prices in retail markets also means that price increases can contribute disproportionately to public perceptions of inflation, influencing consumer confidence and spending behavior.

Onion

As a staple ingredient in Indian cooking, fluctuations in onion prices can have a profound effect on both household budgets and overall inflation.

Factors influencing onion prices:

Seasonal Production: Onions in India are grown primarily during two seasons: the Kharif and Rabi seasons. About 70% of onion production occurs during the Rabi season, with the harvested crop typically stored and used until the next harvesting season. This seasonal nature of production means that any disruption in the Rabi harvest can lead to prolonged periods of supply shortage and high prices until the next harvest cycle.

Storage and Shelf Life: Onions have a relatively long shelf life compared to other vegetables like tomatoes, which allows for storage over several months. However, storage conditions need to be ideal, and failures in storage management can lead to significant losses.

Climatic Vulnerabilities: Similar to tomatoes, onions are also vulnerable to climatic changes and extreme weather events. Excessive rainfall, droughts, or unseasonal weather can damage crops, reduce yields, and affect the quality of the onions.

Price Volatility: Onion prices are notoriously volatile, often causing significant headline inflation. This volatility is driven by both supply-side issues (like crop yields and storage losses) and demand-side pressures. Onions are a basic necessity in Indian households, and any perceived shortage can lead to panic buying, further driving up prices.

Regional Production Concentrations: Onion production in India is concentrated in a few states like Maharashtra, Madhya Pradesh, Karnataka, and Gujarat. Any production issues in these states, such as pest attacks, diseases, or adverse weather, can significantly impact the national supply and price stability.

Market Dynamics of Tomato and Onion Production in India

Overall production of Tomatoes and Onions exceeds consumption. For tomatoes, the production is majorly concentrated in the Rabi season, accounting for over 65% of its total production. Onions also follow a similar pattern, with around 70% of their production occurring in the Rabi season.

Despite the surplus in production over consumption, there are significant challenges related to post-harvest losses and the seasonality of production. These factors contribute to price volatility and periodic shortages mainly during lean season.

Limited Import Options: India's position as a major producer of both onions and tomatoes limits the feasibility of importing these vegetables to manage domestic shortages. The perishable nature of tomatoes and the significant production volumes of onions mean that importing from international markets is not a practical or cost-effective solution for short-term supply gaps. Moreover, the global production of onions is concentrated such that India and China together account for half of total global production, further limiting the options for imports during periods of domestic shortfall.

Pulses

Tur dal experienced severe price pressures as a result of deficient production in the years 2022-23 and 2023-24. The production of pulses, especially tur dal, has seen a significant decline due to irregular monsoons and insufficient rainfall, which are crucial for pulse cultivation. This high inflation rate impacts consumers significantly, since pulses are a staple food item but have been given limited coverage in the public distribution system.

To address the shortfall in domestic production and mitigate price volatility, the government has taken various measures such as easing imports and imposing stock limits. Specifically, significant amounts of tur dal were imported from countries like Mozambique, Tanzania, Malawi, and Myanmar.

National Food Security Mission-Pulses: The government's continued focus under the National Food Security Mission-Pulses aims to increase the production of tur dal. By expanding cultivation areas and enhancing productivity, the mission seeks to reduce India's reliance on imports and stabilize tur dal prices domestically.

Government Initiatives to Control Food Inflation

The government of India has implemented several strategic measures to manage and control food inflation, especially concerning essential commodities like pulses, vegetables, and cereals.

- *Stock Limits*: The government has imposed stock limits on essential commodities such as tur dal and desi chana to prevent hoarding and stabilize market prices.
- *Duty-Free Imports*: To supplement domestic supplies and ensure market stability, duty-free imports of certain pulses have been allowed, facilitating easier access to global markets without the burden of additional tariffs.
- *Buffer Stocks*: Particularly for onions, the government has established buffer stocks to manage supply fluctuations during price spikes, ensuring a steady availability in the market.
- *Price Stabilisation Fund*: This fund has been effectively utilized to mitigate price volatility, especially for essential vegetables like onions and tomatoes, providing a financial buffer to support market interventions.
- *Subsidized Sale*: Essential food items such as onions and tomatoes have been sold at subsidized rates during periods of high inflation, providing relief to consumers and helping to control retail price spikes.
- *Export Duties*: Introduction of export duties, like the 20% duty on onions in September 2024, has been crucial to maintaining domestic supply levels by discouraging large-scale exports during supply shortages.
- *Open Market Sale Scheme (OMSS):* This scheme has been used to offload wheat and rice from the central pool, reducing price pressures on these staple cereals and ensuring their affordability in the open market.
- *Bharat Brand:* The government promotes the sale of essential pulses under the 'Bharat' brand to enhance their affordability and availability, ensuring that these vital nutrients reach a broader segment of the population.

Recommendations for Future

1. *Development of Climate-Resilient Crop Varieties*: This could enhance yield and reduce crop damage. Expanding the area under pulse cultivation in rice-fallow regions is suggested as a means to increase pulse production domestically.
2. *Strengthening Extension Services*: Promoting extension activities to educate farmers on best practices and the use of high-yield and disease-resistant seed varieties is essential.
3. *Enhancing Data Collection and Monitoring Systems*: High-frequency price monitoring data collected by various agencies should be linked and analyzed to monitor price build-up from the farm gate to the final consumer, allowing for timely policy interventions.

Practice Questions

1. Critically analyze the relationship between money supply and inflation in the economy. In what ways do changes in the Money Multiplier influence inflationary trends?
2. Evaluate the impact of global geopolitical events on inflation in India. What measures should India adopt to mitigate their effects on domestic inflation?
3. Discuss the role of fiscal and monetary policies in controlling inflation in India. How effective have these policies been in stabilizing prices, particularly in the post-COVID-19 period?
4. Food inflation has emerged as a significant challenge in India. Examine the primary drivers of food inflation and suggest comprehensive policy measures that can be implemented to address this issue.

CHAPTER 4

RBI'S MONETARY POLICY

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Chapter 4
RBI's Monetary Policy

Tracking RBI's Monetary Policy

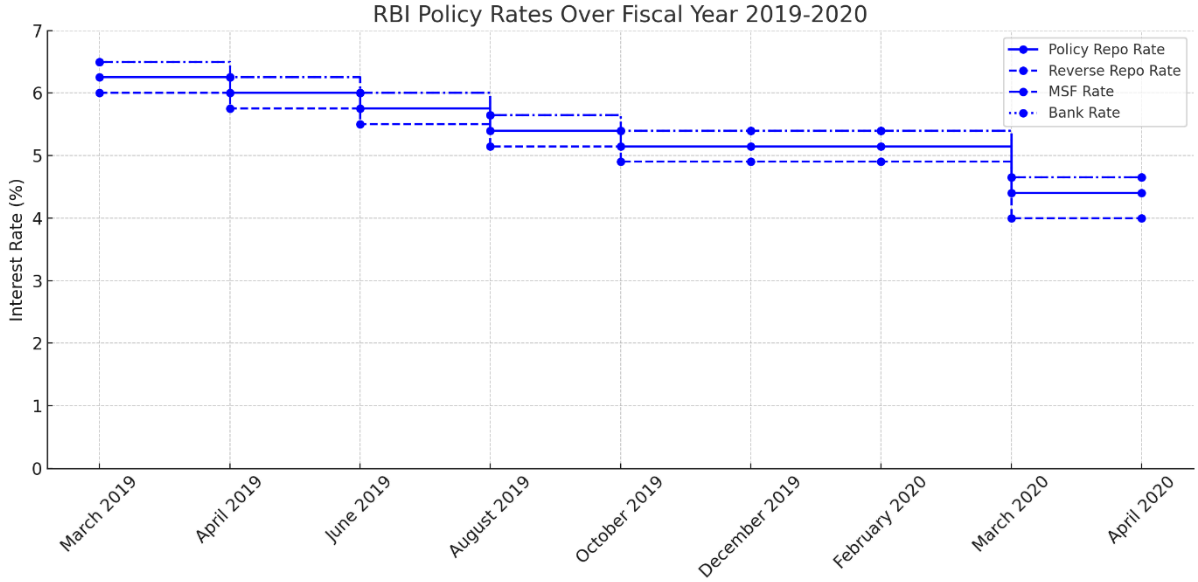
Note: While UPSC may not directly ask questions about past monetary policy decisions, understanding them is important for grasping RBI's current approach to managing inflation, growth, and financial stability.

FY 2019-2020

Factors Influencing Monetary Policy Decisions

1. *Economic Slowdown*: A gradual decline in GDP growth was observed due to weak consumer demand and stagnant private investment.
2. *Global Uncertainty*: Ongoing trade tensions and geopolitical issues, including Brexit and US-China trade disputes, impacted global and domestic markets.
3. *Inflation Control*: Inflation remained within the target range for most of the year, providing the RBI with the flexibility to reduce interest rates to support economic growth.
4. *COVID-19 Pandemic*: The outbreak of the pandemic necessitated urgent and significant policy responses to mitigate economic disruptions and ensure liquidity in the financial system.

Key Decisions



Date	Policy Repo Rate	Reverse Repo Rate	Marginal Standing Facility (MSF) Rate	Bank Rate	Stance
April 2019	6.00%	5.75%	6.25%	6.25%	Neutral
June 2019	5.75%	5.50%	6.00%	6.00%	Accommodative
August 2019	5.40%	5.15%	5.65%	5.65%	Accommodative
October 2019	5.15%	4.90%	5.40%	5.40%	Accommodative
December 2019	5.15%	4.90%	5.40%	5.40%	Accommodative
February 2020	5.15%	4.90%	5.40%	5.40%	Accommodative
March 2020	4.40%	4.00%	4.65%	4.65%	Accommodative

Analysis

The RBI's monetary policy throughout the fiscal year was largely centered around stimulating economic growth amidst a global and domestic slowdown. The decision to progressively reduce the repo rate from 6.00% in April 2019 to 4.40% by March 2020 was aimed at lowering borrowing costs and encouraging investment and consumption.

The shift from a neutral to an accommodative stance in June 2019 demonstrated the RBI's commitment to support the economy against the backdrop of low inflation and slowing growth. The continued accommodative stance throughout the year and into the onset of the pandemic in March 2020 was pivotal in ensuring financial stability and addressing liquidity concerns when economic activities were severely impacted by global lockdowns.

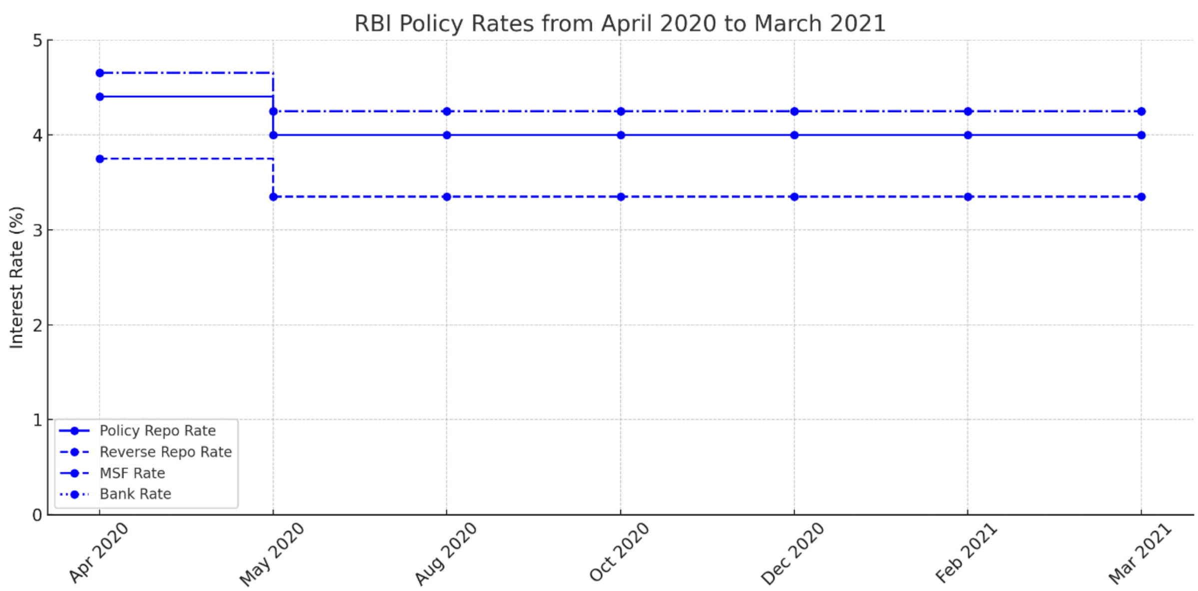
Date	Policy Repo Rate	Reverse Repo Rate	MSF Rate	Bank Rate	Policy Stance
May 22, 2020	4.00%	3.35%	4.25%	4.25%	Accommodative
August 6, 2020	4.00%	3.35%	4.25%	4.25%	Accommodative
October 9, 2020	4.00%	3.35%	4.25%	4.25%	Accommodative
December 4, 2020	4.00%	3.35%	4.25%	4.25%	Accommodative
February 5, 2021	4.00%	3.35%	4.25%	4.25%	Accommodative

FY 2020-21

Factors Influencing Monetary Policy Decisions

1. *Global Economy*: The global economy continued to experience significant disruptions due to COVID-19, with major economies undergoing contractions and financial markets facing high volatility.
2. *Domestic Economy*: The Indian economy was severely impacted by nationwide lockdowns, leading to steep contractions in consumer demand and industrial activity. However, agriculture showed resilience.
3. *Inflation Trends*: Inflation was a major concern, with fluctuations driven primarily by food prices due to supply chain disruptions, and changes in fuel prices.

Key Decisions



Analysis

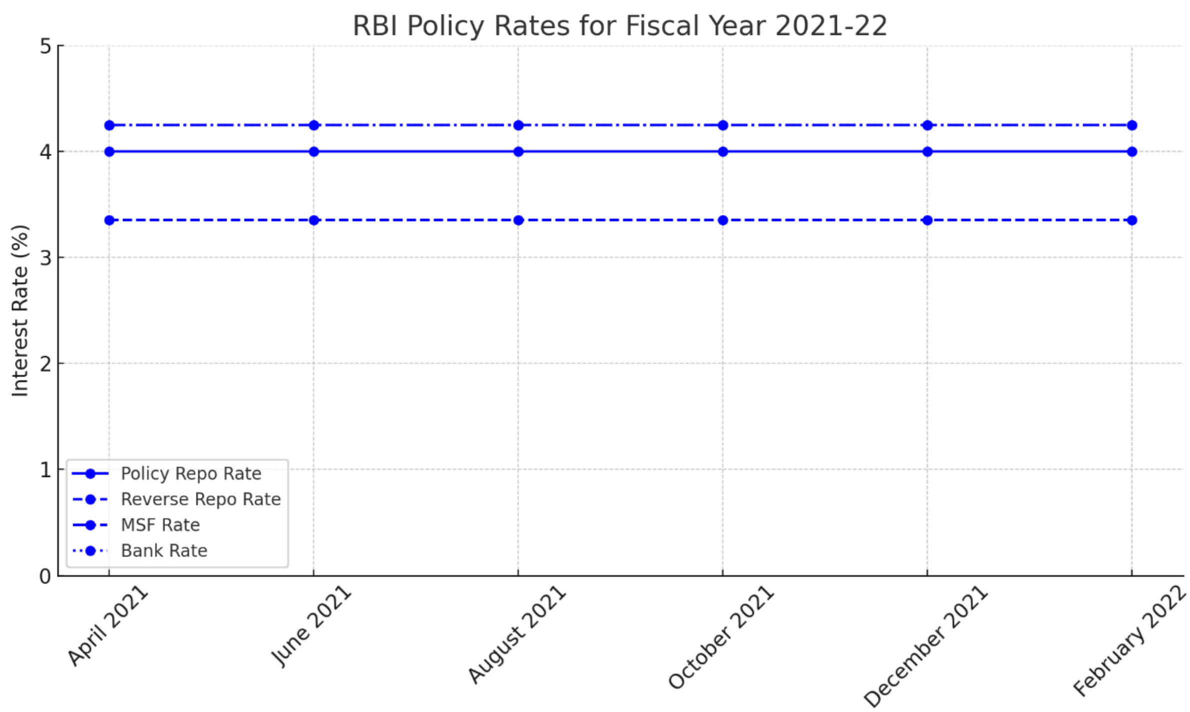
The RBI's monetary policy throughout fiscal year 2020-21 was characterized by a consistent effort to support economic recovery amidst a challenging environment caused by the COVID-19 pandemic. The key interest rates were kept unchanged after a reduction in May 2020, maintaining an accommodative stance to facilitate borrowing and stimulate growth.

FY 2021-22

Factors Influencing Monetary Policy Decisions

1. *Global Economy*: The global economic recovery was uneven, with advanced economies (AEs) showing stronger recovery due to large-scale fiscal stimulus and rapid vaccination rollouts. Emerging market economies (EMEs) faced challenges due to new COVID-19 variants and slower vaccination progress.
2. *Domestic Economy*: India's economic activity showed signs of recovery with improvements in manufacturing and services sectors. However, the second wave of COVID-19 led to localized lockdowns, impacting consumer demand and industrial production.
3. *Inflation Trends*: Inflation was a major concern, with fluctuations primarily driven by food and fuel prices.

Key Decisions



Date	Policy Repo Rate	Reverse Repo Rate	MSF Rate	Bank Rate	Policy Stance
April 2021	4.00%	3.35%	4.25%	4.25%	Accommodative
June 2021	4.00%	3.35%	4.25%	4.25%	Accommodative
August 2021	4.00%	3.35%	4.25%	4.25%	Accommodative
October 2021	4.00%	3.35%	4.25%	4.25%	Accommodative
December 2021	4.00%	3.35%	4.25%	4.25%	Accommodative
February 2022	4.00%	3.35%	4.25%	4.25%	Accommodative

Analysis

The RBI maintained an accommodative stance throughout the fiscal year to support economic recovery amid the COVID-19 pandemic. The consistent policy repo rate at 4.00% and other measures aimed at boosting liquidity reflected the central bank's commitment to fostering a stable economic environment.

FY 2022-23

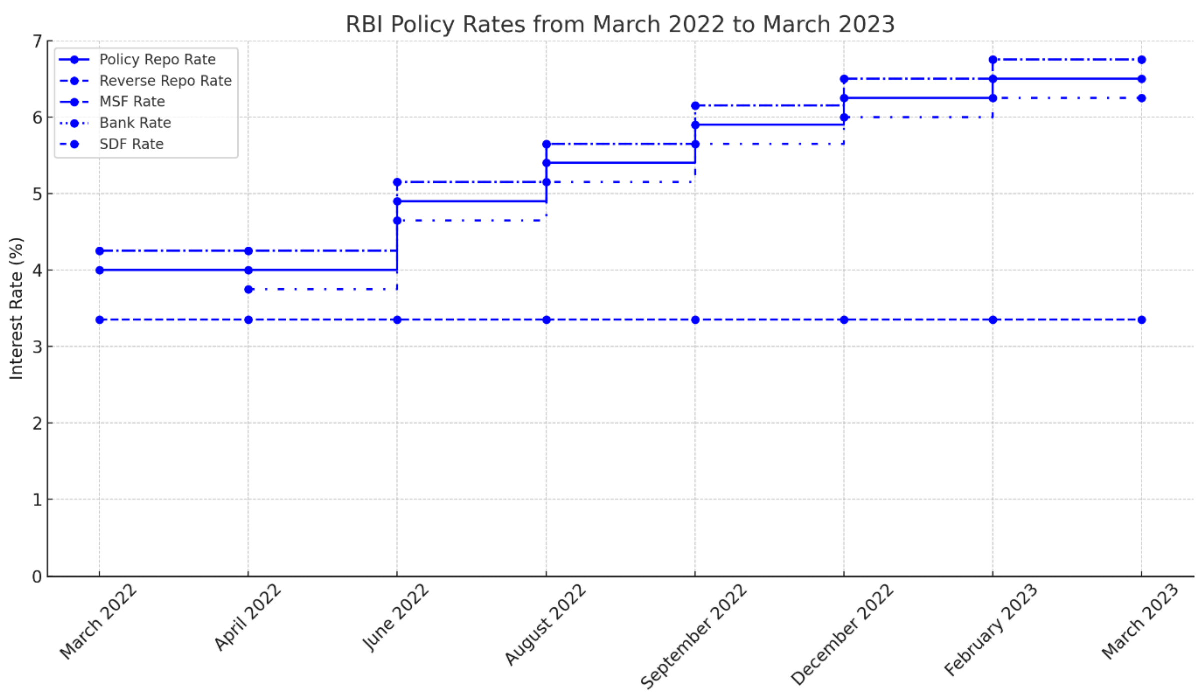
Factors Influencing Monetary Policy Decisions

1. *Global Economy*: Throughout 2022-23, the global economic landscape was marked by high inflation, aggressive monetary tightening by central banks worldwide, and geopolitical tensions, notably the conflict in Ukraine.
2. *Domestic Economy*: India's economic recovery displayed resilience despite external adversities. Real GDP growth was robust, supported by both urban and rural demand. However, the economy faced headwinds from elevated global commodity prices, which contributed to domestic inflation, particularly in food and fuel sectors.
3. *Inflation Trends*: Inflation was a significant concern, with headline CPI frequently breaching the RBI's upper tolerance limit. Food inflation was notably volatile, driven by prices of cereals, vegetables, and protein-based items.

Introduction of the Standing Deposit Facility (SDF): The Standing Deposit Facility was introduced as an additional tool for absorbing liquidity. This measure was intended to provide the RBI with greater flexibility in managing banking system liquidity without the need for providing collateral, thereby helping in better control of the money supply.

Key Decisions

Date	Policy Repo Rate	Reverse Repo Rate	MSF Rate	Bank Rate	SDF Rate	Policy Stance
April 2022	4.00%	3.35%	4.25%	4.25%	3.75%	Accommodative
June 2022	4.90%	3.35%	5.15%	5.15%	4.65%	Withdrawal of Accommodation
August 2022	5.40%	3.35%	5.65%	5.65%	5.15%	Withdrawal of Accommodation
September 2022	5.90%	3.35%	6.15%	6.15%	5.65%	Withdrawal of Accommodation
December 2022	6.25%	3.35%	6.50%	6.50%	6.00%	Withdrawal of Accommodation
February 2023	6.50%	3.35%	6.75%	6.75%	6.25%	Withdrawal of Accommodation



Analysis

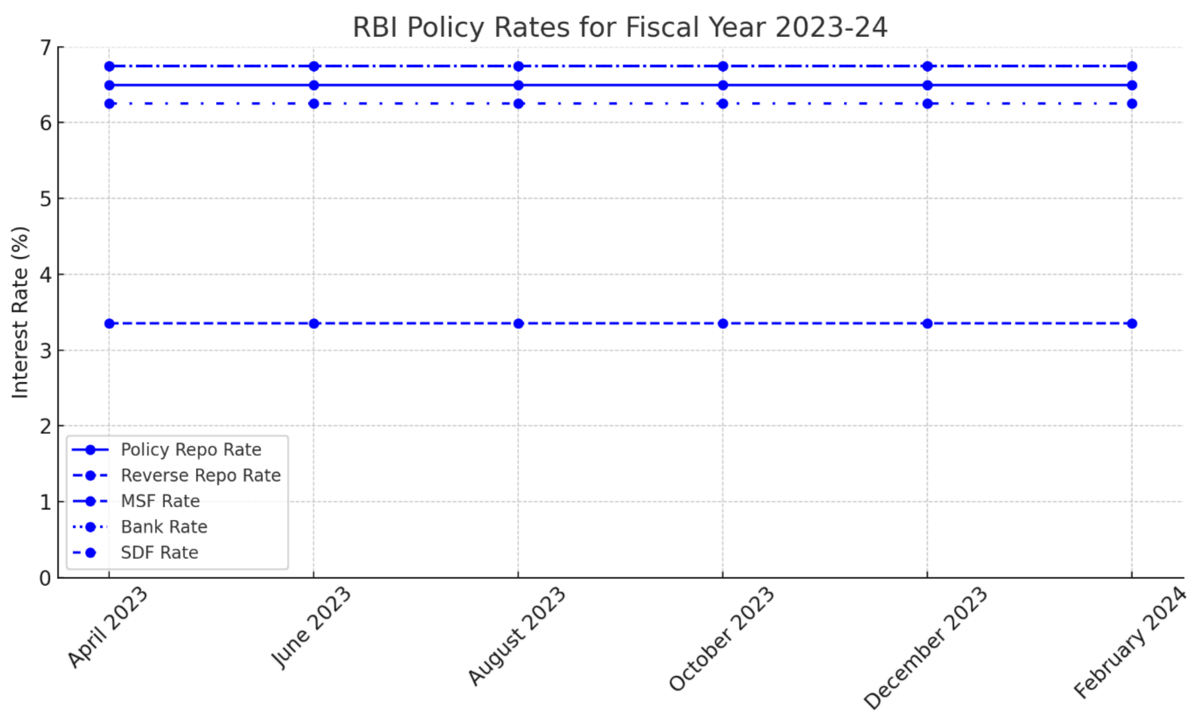
The RBI's policy trajectory during fiscal year 2022-23 was characterized by a gradual but steady tightening of monetary policy rates in response to persistent inflationary pressures. The shift from an accommodative stance to a focus on the withdrawal of accommodation reflected the central bank's balancing act between supporting economic growth and containing inflation within its target range.

FY 2023-24

Analysis of Factors Influencing Monetary Policy Decisions

1. *Global Economy*: The global economy experienced varied growth rates across different regions, with persistent inflation concerns. Geopolitical tensions and banking sector stress in some advanced economies contributed to heightened market volatility.
2. *Domestic Economy*: India's GDP growth was robust, supported by strong investment and private consumption. The economy showed resilience despite external challenges.
3. *Inflation Trends*: Consumer Price Index (CPI) inflation experienced fluctuations but generally remained above the RBI's target. Food and fuel prices were major contributors to inflation.

Key Decisions



Date	Policy Repo Rate	Reverse Repo Rate	MSF Rate	Bank Rate	SDF Rate	Policy Stance
April, 2023	6.50%	3.35%	6.75%	6.75%	6.25%	Withdrawal of Accommodation
June, 2023	6.50%	3.35%	6.75%	6.75%	6.25%	Withdrawal of Accommodation

Date	Policy Repo Rate	Reverse Repo Rate	MSF Rate	Bank Rate	SDF Rate	Policy Stance
August, 2023	6.50%	3.35%	6.75%	6.75%	6.25%	Withdrawal of Accommodation
October, 2023	6.50%	3.35%	6.75%	6.75%	6.25%	Withdrawal of Accommodation
December, 2023	6.50%	3.35%	6.75%	6.75%	6.25%	Withdrawal of Accommodation
February, 2024	6.50%	3.35%	6.75%	6.75%	6.25%	Withdrawal of Accommodation

Analysis

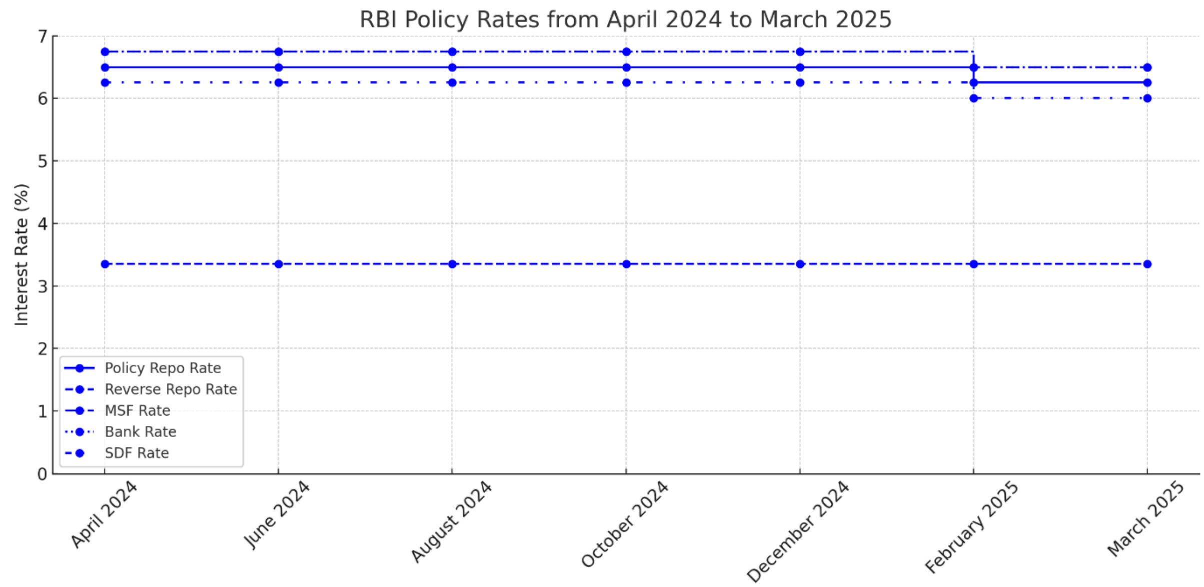
The policy repo rate was kept unchanged at 6.50% throughout the year, reflecting the central bank's approach to carefully manage economic recovery amid inflationary pressures. The RBI’s focus on withdrawal of accommodation was aimed at normalizing policy after the pandemic-induced stimulus while ensuring that inflation progressively aligns with the target.

FY 2024-25

Factors Influencing Monetary Policy Decisions

1. *Global Economy*: The global economic outlook showed resilience, though with some moderation in pace. Central banks across major economies diverged in their monetary policies due to varying inflation rates, contributing to financial market volatility.
2. *Domestic Economy*: India witnessed robust GDP growth, supported by a recovery in the agriculture sector due to favorable monsoon conditions.
3. *Inflation Trends*: Inflation presented a complex picture, with headline CPI inflation showing a moderation trend yet experiencing fluctuations due to volatile food prices, especially prices of vegetables and pulses, remained elevated, affecting the overall inflation trajectory.

Key Decisions



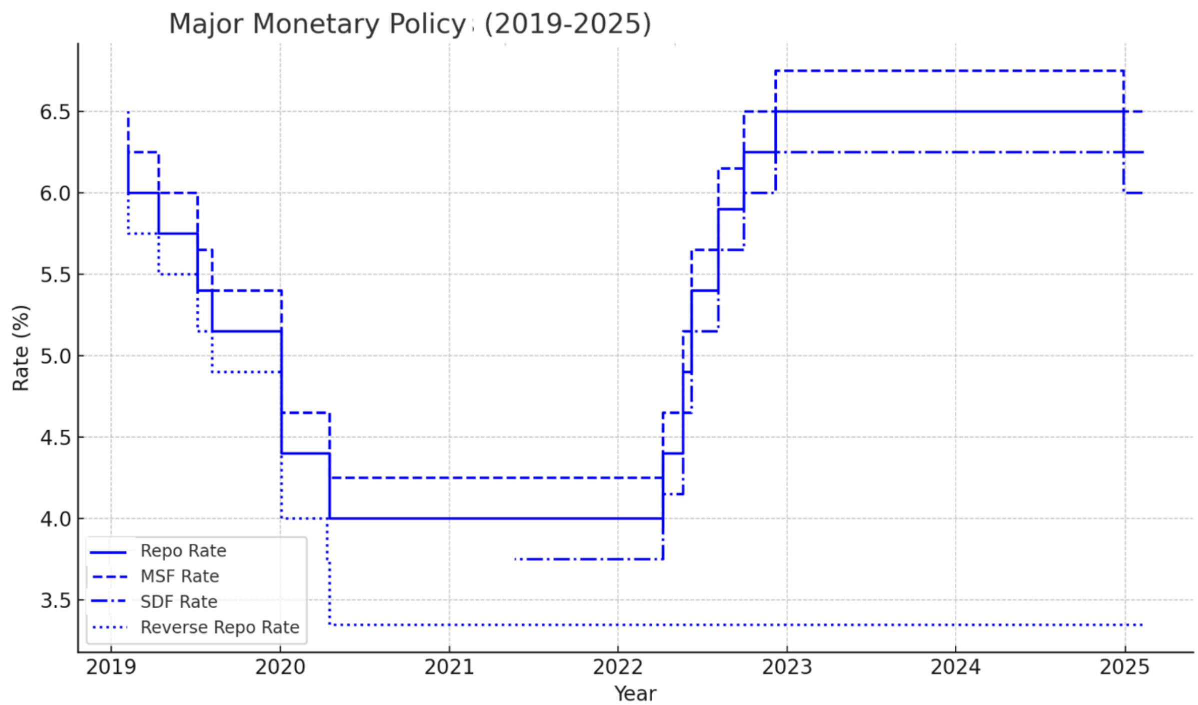
Date	Policy Repo Rate	Reverse Repo Rate	MSF Rate	Bank Rate	SDF Rate	Policy Stance
April, 2024	6.50%	3.35%	6.75%	6.75%	6.25%	Withdrawal of Accommodation
June, 2024	6.50%	3.35%	6.75%	6.75%	6.25%	Withdrawal of Accommodation
August, 2024	6.50%	3.35%	6.75%	6.75%	6.25%	Withdrawal of Accommodation
October, 2024	6.50%	3.35%	6.75%	6.75%	6.25%	Neutral
December, 2024	6.50%	3.35%	6.75%	6.75%	6.25%	Neutral
February, 2025	6.25%	3.35%	6.50%	6.50%	6.00%	Neutral

Analysis

Initially, the policy stance focused on gradual withdrawal of accommodation to counter inflationary pressures. However, as the year progressed and the inflation trajectory showed signs of aligning closer to the target, the stance shifted to neutral. This change provided the RBI with greater flexibility to address any unforeseen economic fluctuations.

The eventual rate cut in February 2025 was a strategic move to bolster economic growth amid moderating inflation, reflecting the RBI's responsive approach to dynamic economic conditions.

Overview of Monetary Policy Decisions since 2019



FY 2025-26

Factors Influencing Monetary Policy Decisions

1. **Global Economy**: The global economic outlook has remained uncertain, despite some optimism around trade negotiations and temporary tariff relief. However, global growth projections continue to be revised downwards by multilateral agencies. Financial market volatility has subsided, with a recovery in equity markets and a softening of the dollar index and crude oil prices. Despite this, geopolitical tensions and trade uncertainties continue to pose risks.
2. **Domestic Economy**: India's GDP growth is projected at 6.5% for FY 2025-26, driven by private consumption, increasing fixed capital formation, and sustained rural demand. The services sector remains a strong contributor to growth. While agricultural prospects are positive due to a forecasted above-normal monsoon and record wheat production, global trade uncertainties and domestic weather-related disruptions remain potential threats to growth.
3. **Inflation Trends**: CPI inflation continued to decline, reaching a six-year low of 3.2% in April 2025. This was driven mainly by food inflation, which experienced its sixth

consecutive monthly decline. Core inflation remained stable despite upward pressure from gold prices. The outlook for food inflation has turned positive, with record wheat and pulse production expected. The inflation trajectory remains closely tied to the monsoon and global commodity prices.

Key Decisions

Date	Policy Repo Rate	Reverse Repo Rate	MSF Rate	Bank Rate	SDF Rate	Policy Stance
April 2025	6.00%	3.35%	6.25%	6.25%	5.75%	Accommodative
June 2025	5.50%	3.35%	5.75%	5.75%	5.25%	Neutral
August 2025						
Oct 2025						
Dec 2025						
Feb 2025						

Analysis

1. **Monetary Policy Stance**: In April 2025, the RBI reduced the policy repo rate by 25 basis points to 6.00%, adopting an accommodative stance to stimulate growth amid favorable inflation trends. However, by June 2025, the policy stance shifted to neutral, reflecting a cautious approach as the global economic uncertainty persisted. This change indicates the RBI's concern about potential global disruptions and the need to balance growth support with inflation control.
2. **Interest Rate Cuts**: The 25 basis point cut in April 2025 and a further 50 basis point reduction in June 2025 brought the policy repo rate to 5.50%. These cuts were aimed at providing continued support for domestic consumption and investment amid a softening inflationary environment. The aggressive rate cuts were intended to frontload monetary easing in response to the evolving growth-inflation dynamics.
3. **Inflation Projections**: The inflation outlook for FY 2025-26 is projected at 3.7%, with Q1 expected at 2.9%, rising to 4.4% in Q4. This reflects a positive outlook on food inflation, supported by higher agricultural production. However, the risks associated with global

commodity prices and weather-related disruptions remain, warranting cautious optimism.

4. **Growth vs. Inflation Balance:** The policy decisions emphasize supporting growth while ensuring inflation remains within the RBI's target range of 4%. The gradual easing of the repo rate reflects the RBI's focus on boosting economic activity, especially in the face of external uncertainties and the need for domestic consumption to drive recovery.

Who can avail the Liquidity Adjustment Facility (LAF) window of RBI

The Reserve Bank of India's LAF is designed to regulate liquidity in the banking system, particularly by allowing banks to manage daily liquidity mismatches. Here are the entities eligible for the LAF:

Scheduled Commercial Banks: Scheduled commercial banks are the primary participants in the LAF. This category includes public sector banks, private sector banks, foreign banks, small finance banks, and payments banks.

- *Scheduled Urban Cooperative Banks (UCBs)*: In 2014, the LAF was extended to include UCBs, provided they met specific criteria like being enabled with Core Banking Solution (CBS) and maintaining a Capital to Risk-Weighted Assets Ratio (CRAR) of at least 9%.
- *State Cooperative Banks (StCBs)*: In 2018, StCBs were also included under similar conditions to UCBs.
- *Regional Rural Banks (RRBs)*: In 2020, RRBs were added to the eligibility list, with requirements such as implementation of CBS and maintaining a minimum CRAR of 9%. This inclusion aimed to support liquidity management in rural banking sectors.

The RBI maintains positive and negative lists to manage LAF participation:

- *Positive List*: Banks that meet the eligibility criteria and are authorized to participate in the LAF.
- *Negative List*: Banks that do not meet these criteria and are thus barred from participating.

Primary Dealers: In addition to banks, Primary Dealers (PDs) also participate in the LAF.

Role and Functions of Primary Dealers:

1. *Market Making*: PDs commit to buying and selling government securities throughout the trading session. For instance, if a PD lists a buy and sell quote for a 10-year government bond, it ensures that other market participants can execute their trades at these prices, thus maintaining liquidity. This continuous availability of quotes helps in preventing wide swings in prices and ensures that buyers and sellers can find a counterparty at any given time during market hours.
2. *Underwriting*: During government securities auctions, PDs guarantee the purchase of a specified portion of the securities on offer, thereby ensuring that the government's borrowing program is fully subscribed. For example, if the government issues bonds worth ₹10,000 crore and the auction receives bids for only ₹9,000 crore, PDs will absorb the

remaining ₹1,000 crore. This underwriting commitment mitigates the risk of insufficient funds being raised from the auctions.

3. *Participation in RBI Operations*: PDs actively participate in open market operations (OMOs) and other RBI liquidity management operations such as repos and reverse repos.

List of primary dealers (PDs) in India

Standalone Primary Dealers	**Bank Primary Dealers**
Goldman Sachs (India) Capital Markets Pvt. Ltd.	Axis Bank Ltd.
ICICI Securities Primary Dealership Limited	Bank of America
Morgan Stanley India Primary Dealer Pvt. Ltd.	Bank of Baroda
Nomura Fixed Income Securities Pvt. Ltd.	Canara Bank
PNB Gilts Ltd.	Citibank N.A
SBI DFHI Ltd.	Deutsche Bank AG
STCI Primary Dealer Limited	HDFC Bank Ltd.
	HSBC (Hongkong and Shanghai Banking Corporation Ltd.)
	IDBI Bank Ltd.
	J.P. Morgan Chase Bank N.A
	Kotak Mahindra Bank Ltd.
	Standard Chartered Bank
	Union Bank of India
	Yes Bank Limited

These entities are licensed by the Reserve Bank of India to deal in government securities.

RBI's Special Policy Measures and Initiatives

Operation Twist

Operation Twist is a monetary policy tool used by central banks to influence long-term interest rates by simultaneously:

- Buying long-term bonds (e.g., 10-year government securities).
- Selling short-term bonds (e.g., 1-year or 2-year securities).

The goal is to lower long-term interest rates (making loans cheaper for businesses and individuals), without significantly affecting short-term rates.

In December 2019, RBI conducted India's first Operation Twist:

- RBI purchased ₹10,000 crore of 10-year government bonds.
- RBI simultaneously sold ₹10,000 crore of 1-year bonds.

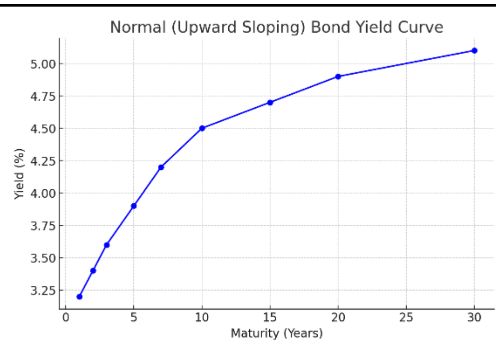
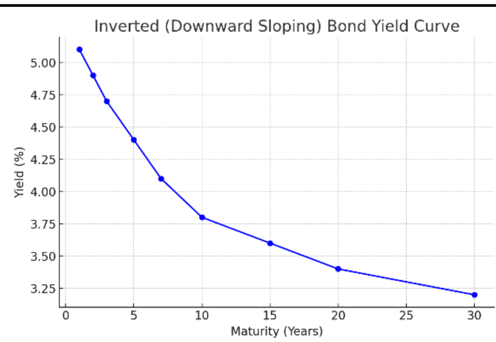
Impact: Before Operation Twist, the 10-year government bond yield was around 6.75%. After the operation, it dropped to around 6.50%, lowering the government's long-term borrowing costs and reducing interest rates on business loans and home loans.

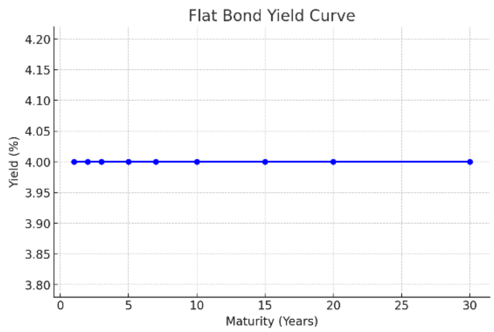
What is the Bond Yield Curve?

To understand Operation Twist clearly, let's first understand the concept of the bond yield curve:

- Bond yield is the return an investor earns from holding a bond.
- The yield curve plots interest rates (yields) on government bonds with different maturities on a graph.

There are three common shapes of yield curves:

Type of Yield Curve	Shape	What It Indicates
Normal Curve		In a growing economy, businesses expand, wages rise, and demand for credit increases, leading to higher interest rates. Investors demand higher yields on long-term bonds to compensate for this risk.
Inverted Curve		If investors expect a slowdown, they believe central banks will cut interest rates in the future to support growth. Investors shift money into long-term bonds for stability, pushing long-term bond prices up and their yields down.

Type of Yield Curve	Shape	What It Indicates
Flat Curve		Mixed signals in the economy make investors hesitant about whether rates will rise or fall. Investors don't strongly favor short-term or long-term bonds, so yields stay close together.

Example: In normal conditions, you might earn:

- 1-year bond: 5% interest rate
- 5-year bond: 6% interest rate
- 10-year bond: 7% interest rate

This reflects an expectation that the economy and inflation will grow over time.

The yield curve is vital for several reasons:

- *Economic Indicator*: An inverted yield curve (short-term rates higher than long-term rates) often predicts recessions. For example, in 2019, the U.S. yield curve inverted briefly, which many saw as a sign of an impending slowdown.
- *Borrowing Costs*: It influences borrowing costs for businesses and households.
- *Investment Decisions*: Investors use it to decide whether to invest short-term or long-term.

How Does Operation Twist Work?

Let's break down the process:

Step 1: RBI announces Operation Twist.

- Buys ₹10,000 crore worth of 10-year bonds.
- Sells ₹10,000 crore worth of 1-year bonds.

Step 2: Effect on the bond market.

- Long-term bond prices rise (due to RBI's buying), so yields (interest rates) fall.
- Short-term bond prices fall (due to RBI's selling), raising yields.

Bond Type	Before Operation Twist	After Operation Twist
1-Year Bond Yield	5.0%	5.2% (higher)

Bond Type	Before Operation Twist	After Operation Twist
10-Year Bond Yield	7.0%	6.5% (lower)

Why Use Operation Twist?

The RBI might implement Operation Twist to achieve several goals:

- *Lower Long-term Interest Rates:* Businesses planning big projects (like building factories, roads, and power plants) borrow for 10-15 years. Lowering long-term rates directly encourages these projects.
- *Improve Monetary Transmission*: Often, RBI cuts the repo rate, but banks don't immediately lower loan rates. Operation Twist directly affects long-term bond yields, forcing banks to reduce long-term loan rates faster.
- *Manage Inflation Expectations*: It helps control long-term inflation expectations by managing interest rates directly without further cutting the policy (repo) rate.

Operation Twist Compared with Other Monetary Policies

Monetary Tool	Short-term Rates	Long-term Rates	Main Purpose
Repo Rate Cut	Decrease	Decrease	Stimulate overall economic growth
Operation Twist	Increase	Decrease	Lower long-term rates to encourage long-term investment
Quantitative Easing (QE)	Decrease	Decrease	Increase liquidity broadly in financial markets

Operation Twist is a powerful tool because it lets central banks directly influence long-term borrowing costs without changing the primary policy rates (like the repo rate). By altering the yield curve, it can stimulate economic growth, encourage long-term investments, and help manage inflation—all essential for a healthy economy.

Long-Term Repo Operations (LTRO)

LTRO allows banks to borrow funds from RBI at the repo rate for a longer duration (usually 1 year or 3 years) by pledging government securities as collateral.

How LTRO Works?

1. RBI announces an LTRO auction where banks submit bids for the amount they need.
2. RBI lends money at the repo rate, which is lower than market borrowing rates.
3. Banks use the borrowed funds for lending to businesses and consumers.
4. Banks repay the borrowed amount after the agreed term (1 year or 3 years).

Why Did RBI Introduce LTRO?

LTRO was introduced in February 2020 to:

- Reduce borrowing costs for banks → Since LTRO provides funds at the repo rate, it lowers the cost of funds for banks.
- Encourage lending to businesses and individuals → Banks can use low-cost funds to offer cheaper loans.
- Improve monetary policy transmission – Banks often delay passing on repo rate cuts to borrowers. With LTRO, banks get low-cost funds directly from RBI, encouraging them to reduce lending rates for businesses and consumers.

Variants of LTRO

Targeted Long-Term Repo Operations (TLTRO): Introduced in March 2020, TLTRO ensures that liquidity reaches specific sectors.

Key Feature: Banks borrowing under TLTRO must invest the funds in corporate bonds, NBFCs, or MSMEs to boost economic growth.

Why It Was Needed?

- During the COVID-19 pandemic, certain sectors (like small businesses and NBFCs) faced liquidity shortages.
- TLTRO forced banks to directly fund these sectors, preventing an economic slowdown.

On-Tap TLTRO: Introduced in October 2020, it allows banks to borrow funds whenever needed, instead of waiting for RBI to conduct auctions. Focuses on providing funds to stressed sectors like MSMEs, tourism, and healthcare

Special Long-Term Repo Operations (SLTRO): SLTRO is a variation of LTRO, specifically designed to help small finance banks (SFBs). Banks must lend these funds to small borrowers (MSMEs, rural businesses, etc.).

Why Was SLTRO Introduced?

- Small finance banks mainly serve small businesses, microfinance institutions (MFIs), and rural customers.
- Due to COVID-19, these banks faced liquidity issues.
- RBI launched SLTRO in May 2021 to provide them with three-year funds at the repo rate.

Feature	LTRO	TLTRO	On-Tap TLTRO	SLTRO
Purpose	Provide long-term liquidity to banks	Direct liquidity to specific sectors (corporate bonds, NBFCs, MSMEs)	Provide liquidity on demand to specific sectors like MSMEs, healthcare, tourism	Help small finance banks lend to small businesses
Tenure	1 year / 3 years	1 year / 3 years	Up to 3 years	3 years
Interest Rate	Repo Rate	Repo Rate	Repo Rate	Repo Rate
Collateral	Government securities	Government securities	Government securities	Government securities
Who Can Borrow?	Commercial banks	Commercial banks	Commercial banks	Small finance banks (SFBs)
Who Benefits?	General borrowers (cheaper loans)	MSMEs, NBFCs, Corporates	MSMEs, healthcare, agriculture, tourism	Small businesses, rural borrowers
Special Feature	Provides general liquidity to banks	Funds must be invested in corporate bonds & NBFCs	Banks can borrow anytime instead of waiting for auctions	Supports small finance banks to increase rural credit

Special Liquidity Facility (SLF)

Special Liquidity Facility (SLF) is a temporary emergency liquidity support tool used by the Reserve Bank of India (RBI) to provide short-term funds to banks and financial institutions during periods of financial stress or crisis.

How Does SLF Work?

1. RBI provides liquidity to banks and financial institutions through repo transactions (short-term borrowing against collateral).
2. Institutions pledge government securities or high-quality assets to borrow funds.
3. Funds are repaid after a short period, usually overnight to a few months.

Types of Special Liquidity Facilities

Special Liquidity Facility for Mutual Funds (SLF-MF)

- Introduced in April 2020 during the COVID-19 crisis.
- RBI provided ₹50,000 crore to banks to support mutual funds facing liquidity stress.
- Prevented mass investor withdrawals and panic in the mutual fund industry.

Special Liquidity Facility for NABARD, SIDBI, NHB (SLF for Development Banks)

- Introduced in April 2020 to support rural and small business lending.
- RBI provided ₹75,000 crore in liquidity to these financial institutions:
  - NABARD – To support agriculture and rural finance.
  - SIDBI – To provide credit to MSMEs (Micro, Small & Medium Enterprises).
  - NHB – To fund housing finance companies and the real estate sector.

SLF ensures that financial markets remain stable, banks continue lending, and economic growth is not disrupted during crises.

Government Securities Acquisition Programme (G-SAP)

The Government Securities Acquisition Programme (G-SAP) was introduced by the Reserve Bank of India (RBI) in April 2021 as a structured way to manage bond yields and ensure adequate liquidity in the financial system. Under this program, RBI commits to purchasing government securities (G-Secs) from the open market to control interest rates and support economic growth.

Why Was G-SAP Introduced?

Before G-SAP, RBI used Open Market Operations (OMO) to buy and sell government bonds. However, OMO was done on a case-by-case basis, creating uncertainty in the bond market.

To reduce market volatility and ensure predictable liquidity, RBI introduced G-SAP, a structured way to manage bond purchases.

How Does G-SAP Work?

1. RBI announces a fixed amount of bond purchases for a specific period (e.g., ₹1 lakh crore in Q1 FY22).
2. RBI buys government securities (G-Secs) from the secondary market (banks, mutual funds, financial institutions).
3. This increases demand for bonds, reducing their yields (interest rates).
4. Lower bond yields lead to lower borrowing costs for businesses.
5. As liquidity increases, banks lend more to businesses and consumers, boosting the economy.

G-SAP 1.0 (April 2021 – June 2021)

- RBI announced ₹1 lakh crore worth of bond purchases in Q1 FY22.
- Helped stabilize bond yields and kept borrowing costs low.

G-SAP 2.0 (July 2021 – September 2021)

- RBI continued buying more bonds in Q2 FY22.
- Focused on maintaining liquidity and price stability.

After G-SAP 2.0, RBI stopped announcing new G-SAP programs as the market stabilized.

G-SAP vs. Open Market Operations (OMO)

Feature	G-SAP	Open Market Operations (OMO)
Type	Pre-announced bond purchases	Discretionary bond purchases
Purpose	Stabilizing bond yields & liquidity	Managing short-term liquidity
Market Impact	More predictable	Less predictable
Frequency	Announced in advance (structured)	Done as needed (ad-hoc basis)

Incremental Cash Reserve Ratio (I-CRR)

Incremental Cash Reserve Ratio (I-CRR) is a temporary liquidity management tool used by the Reserve Bank of India (RBI) to absorb excess liquidity from the banking system. It requires banks to hold additional reserves with RBI on the increase in their Net Demand and Time Liabilities (NDTL) during a specific period.

Why Was I-CRR Introduced?

- When there is too much money (excess liquidity) in the banking system, it can lead to higher inflation and excessive lending.
- RBI introduced I-CRR in August 2023 to absorb surplus liquidity that entered the system due to Withdrawal of ₹2,000 denomination notes, which increased deposits in banks.
- I-CRR temporarily absorbs excess money, preventing inflationary pressures.

How Does I-CRR Work?

1. RBI mandates banks to maintain additional reserves (I-CRR) on the increase in their deposits (NDTL) for a specific period.
2. Banks cannot use this money for lending or investments, reducing excess liquidity.
3. Once the liquidity stabilizes, RBI releases the I-CRR funds gradually to avoid market disruption.

Example:

- Suppose a bank's deposits increase by ₹10,000 crore due to the withdrawal of ₹2,000 notes.
- RBI imposes I-CRR of 10% on this increase.
- The bank must hold ₹1,000 crore with RBI instead of lending it.
- Over time, RBI releases these funds back to banks once excess liquidity is absorbed.

I-CRR vs. Regular CRR

Feature	I-CRR (Incremental CRR)	Regular CRR (Cash Reserve Ratio)
Purpose	Temporary liquidity absorption	Permanent requirement for liquidity management
Applies To	Increase in deposits during a specific period	Total Net Demand and Time Liabilities (NDTL)
Duration	Short-term, phased withdrawal	Ongoing, as per RBI regulations
Impact on Lending	Temporary restriction on new deposits	Long-term influence on credit supply

RBI Reforms to ensure better Monetary Policy transmission

How Do Banks Determine Interest Rates?

Banks in India decide the interest rates on loans based on guidelines set by the Reserve Bank of India (RBI). Over the years, different methods have been used, and some have been replaced with more efficient systems.

Currently, banks use External Benchmark-Based Lending Rates (EBLR) to determine interest rates. However, older systems like MCLR (Marginal Cost of Funds-Based Lending Rate)/ Base Rate/ Prime Lending Rate (PLR) still apply to some loans.

Prime Lending Rate (PLR) - Before 2010

- PLR or Benchmark Prime Lending Rate (BPLR) was the rate at which banks lent to their best customers (the most creditworthy borrowers).
- The problem? Banks had too much control and charged different rates unfairly.
- Status: Discontinued in 2010.

Base Rate System - 2010 to 2016

- RBI introduced the Base Rate to make interest rates fairer.
- Base Rate was the minimum rate below which banks could not lend.

- The issue? Banks did not pass on RBI's rate cuts quickly to customers.
- Status: Replaced by MCLR in 2016.

Marginal Cost of Funds-Based Lending Rate (MCLR) - 2016 to Present

How it works?

- Banks set interest rates based on their cost of borrowing (deposits, bonds, etc.).
- If RBI reduces its Repo Rate, banks should lower MCLR and reduce loan rates.

Problems with MCLR:

- Banks did not pass rate cuts quickly to customers.
- Different banks have different MCLR, making the system less transparent.

Status: Still used for older loans, but new loans have moved to EBLR. If you took a home loan between 2016-2019, your loan is still linked to MCLR.

External Benchmark-Based Lending Rate (EBLR) - 2019 to Present (Most Common Today)

How it works?

Instead of using internal calculations (like MCLR), banks now link interest rates to an external benchmark such as:

- Repo Rate (set by RBI)
- Treasury Bill Yield (government securities)
- Other market-based rates

If RBI reduces the Repo Rate, banks must pass on the benefit to customers quickly.

Why is EBLR better?

- More transparent - All banks follow the same external benchmark.
- Faster rate changes - If RBI cuts rates, banks must immediately lower loan rates.

Status: In effect since October 2019

All new floating-rate retail loans (home loans, auto loans, personal loans) must be linked to EBLR.

Which Formula is used for Your Loan?

Loan Type	Taken Before 2010	2010 - 2016	2016 - 2019	After Oct 2019
Home Loan	PLR	Base Rate	MCLR	EBLR
Personal Loan	PLR	Base Rate	MCLR	EBLR

Loan Type	Taken Before 2010	2010 - 2016	2016 - 2019	After Oct 2019
Business Loan	PLR	Base Rate	MCLR	EBLR
Auto Loan	PLR	Base Rate	MCLR	EBLR

- If you took a loan before 2019, it is likely linked to MCLR or Base Rate.
- If you took a loan after 2019, it is linked to EBLR.
- You can switch from MCLR to EBLR by requesting your bank (some fees may apply).
- Fixed-rate loans are not affected by RBI rate changes.

MCLR vs. EBLR

Feature	MCLR	EBLR
Linked To	Internal cost of funds	External benchmark (e.g., RBI Repo Rate)
Responsiveness to RBI Rate Changes	Moderate	High (Immediate)
Transparency	Lower (bank-controlled)	Higher (directly linked to an external rate)

CHAPTER 5

UNION BUDGET 2025-26

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Chapter 5
Union Budget 2025-26

The Union Budget is more than just an annual financial statement, it is a reflection of the government's economic priorities, a response to prevailing challenges, and a roadmap for the future. Understanding the budget requires a close examination of both the global and domestic conditions, as they set the stage for the government's fiscal policy. This chapter will first explore the broader economic context before diving into the specific provisions of the Union Budget 2025-26.

Global Headwinds

The global economy in 2024 exhibited a mixed performance, with regional variations in growth, inflation, and monetary policy responses. While global economic growth remained steady at around 3.3% in 2023, forecasts for 2024 and 2025 suggest modest growth of 3.2% and 3.3%, respectively. However, several challenges pose risks to this trajectory.

1. *Geopolitical Tensions and Trade Disruptions*: The Russia-Ukraine conflict and the Israel-Hamas war have contributed to regional instability, impacting global trade flows and energy security. Additionally, heightened cyberattacks have introduced new economic vulnerabilities. The redirection of global trade routes, such as disruptions in the Suez Canal leading to increased shipping costs, has further complicated supply chain dynamics.
2. *Weakness in Global Manufacturing*: A slowdown in global manufacturing, particularly in Europe and parts of Asia, has been observed. While the services sector has shown resilience, the contraction in manufacturing is a concern for trade-dependent economies.
3. *Inflationary Pressures and Policy Uncertainty*: While inflation has generally trended downward due to tighter monetary policies, disruptions in global shipping and energy markets continue to exert price pressures. The divergence in monetary policy stances across economies adds uncertainty to interest rate trajectories, affecting global financial stability.
4. *Financial Market Volatility*: The uncertainty surrounding monetary easing policies by major central banks, especially in the U.S. and the Eurozone, has resulted in volatility in financial markets. This has implications for global investment flows. In periods of uncertainty, investors tend to shift capital towards safe-haven assets like U.S. Treasuries, gold, and the U.S. dollar, leading to capital outflows from emerging markets. As a result, emerging market currencies may depreciate, creating financial instability in these economies.
5. *Climate-Related Shocks and Commodity Price Volatility*: Climate events have impacted agricultural production, causing fluctuations in commodity prices. While a moderate decline in commodity prices is projected for 2025-26, the risk price increases due to geopolitical tensions or supply chain disruptions remains a concern.

Domestic Headwinds

Despite India's strong macroeconomic stability, the GDP growth rate witnessed a sharper than expected drop from 8.2% in FY24 to an estimated 6.4% in FY25, with certain domestic challenges posing risks to sustained economic expansion.

1. *Consumption*: Private Final Consumption Expenditure (PFCE), which accounts for a significant share of GDP, has shown mixed trends. While rural demand has rebounded due to strong agricultural output, urban consumption has exhibited signs of moderation. Passenger vehicle sales growth has slowed, and urban FMCG sales have remained subdued. Broader consumption trends indicate cautious spending behavior, influenced by factors such as wage stagnation and inflationary pressures.
2. *Investment and Private Sector Capex*: While public investment in infrastructure has been robust, the private sector's capital expenditure recovery has been slower than anticipated. This slowdown can be attributed to global uncertainties, which have dampened investor confidence, and high borrowing costs, which have made long-term investments less attractive.
3. *Manufacturing Sector*: The Indian manufacturing sector has faced pressures due to weak global demand and domestic seasonal conditions. Export-driven industries, particularly in manufacturing, have seen reduced order inflows due to trade policy changes in major economies and slower global economic activity.
4. *Inflation*: Though inflation has moderated, food price volatility remains a challenge, driven by supply chain disruptions and climate-related events. The persistence of high food inflation affects consumer spending patterns, especially in rural areas, where purchasing power is sensitive to agricultural performance.
5. *Employment and Wage Growth*: Employment and wage growth in certain segments remain uneven. Corporate wage pick-up has been slow, and any delay in wage growth recovery could impact consumer confidence and spending.

Expectations from the Government before the Budget

As India navigates both global and domestic headwinds, proactive policy measures from the government will be crucial in sustaining economic momentum and mitigating risks. The following areas are expected to receive policy attention to support growth and stability:

1. *Building Fiscal Buffers*: In an uncertain global environment, maintaining fiscal buffers will be essential to respond to potential economic shocks. Continuing on the path of fiscal consolidation, reducing the fiscal deficit, lowering the debt-to-GDP ratio, and ensuring prudent fiscal management will provide the flexibility needed to counter unforeseen crises.
2. *Boosting Private Sector Investment*: While public sector capital expenditure has remained strong, the government is expected to introduce incentives and policy reforms to stimulate private investment. Deregulation and simplification of business procedures will be key to attracting both domestic and foreign investment.
3. *Enhancing Consumption and Demand*: Given the mixed trends in private consumption, particularly the slowdown in urban demand, the government may focus on income-boosting measures, such as tax relief for the middle class.

4. *Containing Inflation*: Although inflation has moderated, food price volatility remains a concern. Steps to improve agricultural productivity and resilience against climate-related shocks, including investments in irrigation and Agri infrastructure is required.
5. *Strengthening the Manufacturing and Export Sector*: Given the weak global demand and policy-driven trade disruptions, the government may introduce targeted export incentives and industrial support measures. Expanding free trade agreements (FTAs) and improving trade logistics could also help mitigate external risks and support export growth.
6. *Stabilizing Financial Markets and Exchange Rates*: Amid global monetary policy uncertainty, the government and the Reserve Bank of India (RBI) will need to ensure financial market stability. This may require intervention by RBI in the Forex Market.
7. *Structural Reforms for Long-Term Growth*: To improve India's global competitiveness, structural reforms in land, labor, and regulatory policies are expected to be prioritized. Expanding digital infrastructure and fostering innovation-driven growth through investments in technology and research and development (R&D) will be essential for sustaining long-term economic expansion.

Theme of the Union Budget 2025-26

Vision of Viksit Bharat: The Union Budget 2025-26 envisions a future state of 'Viksit Bharat'a developed India by 2047. This vision is encapsulated in six definitive goals:

1. Zero-poverty;
2. 100% good quality school education;
3. Access to high-quality, affordable, and comprehensive healthcare;
4. 100% skilled labour with meaningful employment;
5. 70% women in economic activities; and
6. Farmers making our country the 'food basket of the world'.

The budget draws inspiration from the words of the great Telugu poet, Gurajada Appa Rao: "Desamante Matti Kaadoi, Desamante Manushuloi" which translates to "A country is not just its soil, a country is its people." This quote underscores the budget's human-centric approach, placing people at the forefront of national development policies.

Garib, Youth, Annadata, and Nari: The budget identifies four key demographic segments as the focus of its developmental initiatives:

Demographic Segment	Importance
Garib (The Poor)	Achieving SDG Goal 1, which aims to eradicate poverty in all forms by 2030, is essential for building an inclusive society. As per NITI Aayog's National Multidimensional Poverty Index (NMPI), India has registered a significant decline in multidimensional poverty from 29.17% in 2013-14 to 11.28% in 2022-23 i.e. nearly 25 crore people has escaped multidimensional poverty in last 9 years. Despite this progress, India's still remains home to largest number of poor people in the world in absolute terms.
Youth	The youth of India hold the key to its future economic prosperity. With a median age of 28.4 years, India is poised to benefit from its Demographic Dividend, which can accelerate economic growth if leveraged properly. The Economic Survey 2024-25

Demographic Segment	Importance
	highlights that India will need to create 78.5 lakh new non-farm jobs annually until 2030 to accommodate the growing workforce.
Annadata (Farmers)	Agriculture remains a cornerstone of India's economy, employing about 46.1% of the population and accounting for around 16% of GDP. Prioritizing agricultural productivity is not only about improving rural incomes; it's also about ensuring national food security.
Nari (Women)	Enhancing female participation in the workforce is not just about achieving gender equality; it's about unlocking the Gender Dividend that can propel economic growth. With a female labor force participation rate of 47.1% as per PLFS 2023-24, there is considerable room for improvement. The vision outlined in the Budget to increase this rate to 70% by 2047 underlines the importance of policies and programs that support women's education, skill development, and employment opportunities.

Four Engines of Growth: To drive the envisioned development, the budget outlines four powerful engines of growth:

Engine of Growth	Significance
Agriculture	Generates about 16% of India's total GDP and employs over 46% of the workforce. Agriculture remains one of the most crucial sectors of the economy.
MSMEs	Contributes about 30% to the GDP. Manufacturing MSMEs comprises around 41% of manufacturing output. Share of Export of MSME related products in All India Export is around 45%. Total employment reported by the MSMEs on Udyam Registration Portal and Udyam Assist Platform is about 20.5 crore, highlighting its role in employment generation.
Investment	• **Investing in People**: In 2025, India's public expenditure on education was estimated to be around 4.6% of GDP, which is below the 6% of GDP recommended by the National Education Policy (NEP) 2020. Similarly, in 2025, India's public expenditure on health was estimated to be around 2% of GDP, which is below 2.5% of GDP recommended by the National Health Policy (2017). • **Investing in the Economy**: Infrastructure investment has multiplier effects, enhancing potential GDP, job creation, crowd-in private investments and provide a cushion against global headwinds. • **Investing in Innovation**: India's R&D spending is around 0.7% of GDP, lower than the world average. Most of the developed countries spend more than 2% of their GDP on R&D.

Engine of Growth	Significance
Exports	India's exports account for about 22.6% of GDP, whereas India's imports account for about 25% of GDP in 2023-24. Enhancing export capabilities can help balance trade deficits.

Reforms as the Fuel: Reforms are described as the fuel that powers these engines. The budget proposes transformative reforms across diverse sectors including taxation, power, urban development, mining, financial services, and regulatory frameworks to facilitate a smoother journey towards development.

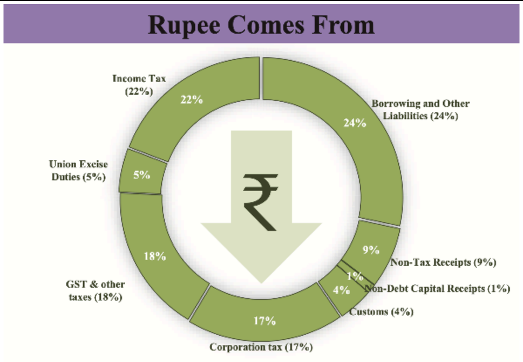
Inclusivity as the Guiding Spirit: The budget reaffirms the commitment to inclusive growth that leaves no one behind, ensuring that the fruits of progress are equitably shared among all strata of society.

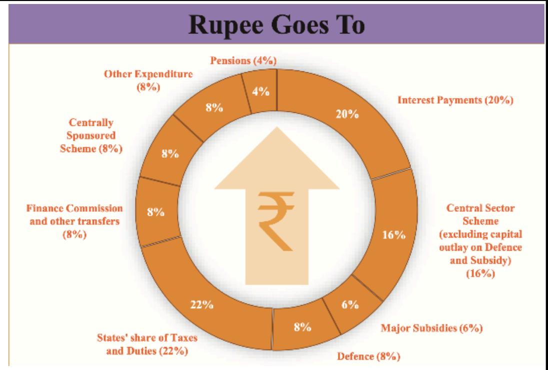
Viksit Bharat as the Destination: This vision encapsulates a future where India is a fully developed nation on every front, setting a global benchmark in sustainable and inclusive development.

This budget theme thus forms a blueprint for India's path forward, aligning economic strategies with the broader societal goals.

Budget Outlay for Fiscal Year 2025-26

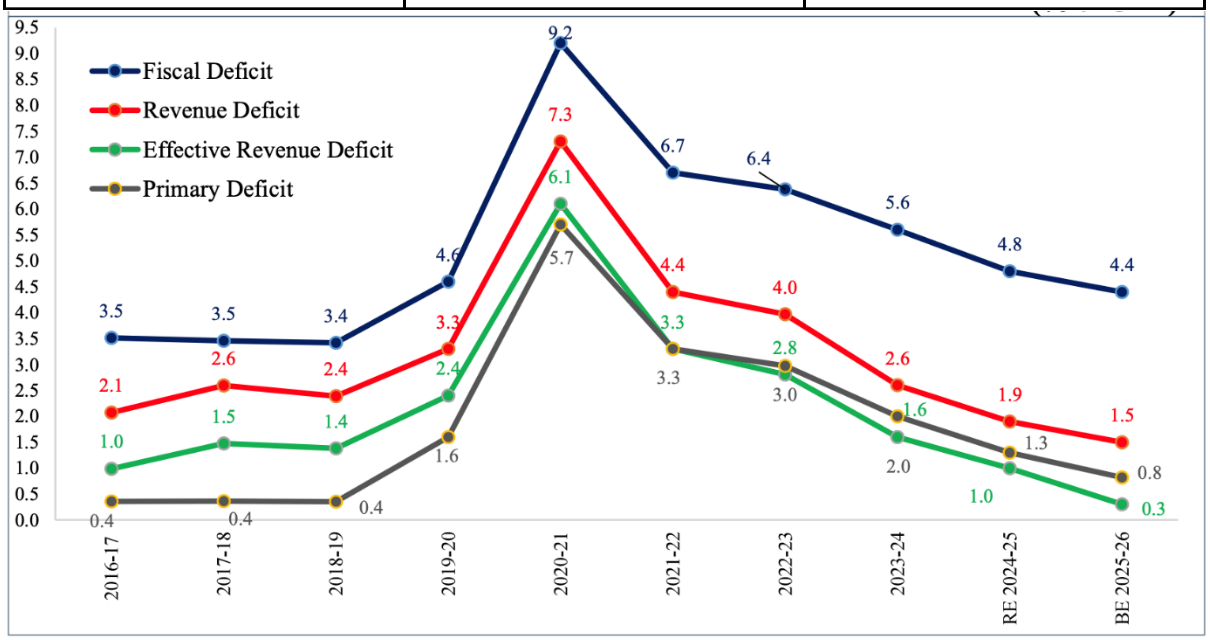
<table>
<tr><td colspan="6">Budget Size - 50.65 (All figures in lakh crores)</td></tr>
<tr><td colspan="4">Total Receipts- 50.65</td><td colspan="2">Total Expenditure- 50.65</td></tr>
<tr><td colspan="2">Revenue Receipts- 34.20</td><td colspan="2">Capital Receipts- 16.45</td><td>Revenue Expenditure- 39.44</td><td>Capital Expenditure- 11.21</td></tr>
<tr><td>Tax Revenue(Net to Centre)- 28.37</td><td>Non Tax Revenue- 5.83</td><td>Debt Capital Receipts- 15.69</td><td>Non-Debt Capital Receipts- 0.76</td><td></td><td></td></tr>
<tr><td></td><td></td><td>Borrowings & Other liabilities– 15.69</td><td>Recovery of Loans- 0.29
Other Receipts- 0.47</td><td>Interest Payments- 12.76
Grants in Aid for creation of Capital Assets- 4.27</td><td></td></tr>
</table>





Deficits

Type of Deficit	Formula	% of GDP
Fiscal Deficit	Total Expenditure – Total Receipts (Excluding Borrowings)= 15.69	4.4%
Revenue Deficit	Revenue Expenditure – Revenue Receipts (39.44 -34.20)= 5.24	1.5%
Effective Revenue Deficit	Revenue Deficit – Grants for creation of Capital Assets (5.24 – 4.27)= 0.97	0.3%
Primary Deficit	Fiscal Deficit – Interest Payments (15.69 – 12.76)= 2.93	0.8%



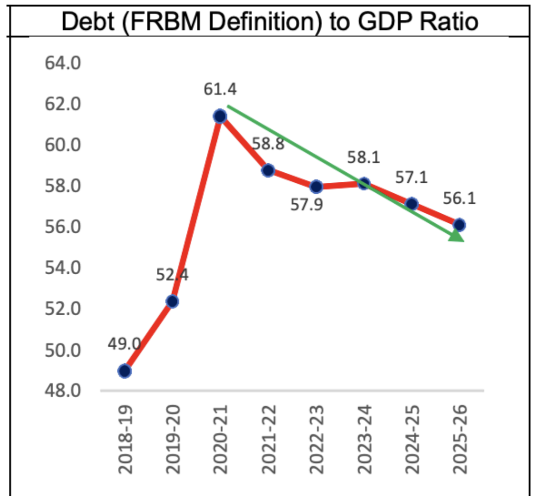
Debt to GDP Ratio

Year	Centre Debt-to-GDP Ratio
2024-25	57.1%
2025-26	56.1%

Fiscal Consolidation

Fiscal consolidation refers to the strategic efforts undertaken by governments to reduce fiscal deficits and control public debt while ensuring economic stability and growth.

India formally embraced a rules-based fiscal framework with the enactment of the Fiscal Responsibility and Budget Management (FRBM) Act, 2003.



Challenges and the Post-Pandemic Fiscal Strategy: The outbreak of COVID-19 in 2020 led to an unprecedented fiscal shock. The Indian government had to implement a massive stimulus package to revive economic growth and safeguard livelihoods. This resulted in a fiscal deficit surge to 9.2% of GDP in FY 2020-21, well beyond the limits prescribed by the FRBM Act.

In response, the Union Budget 2021-22 laid out a revised fiscal consolidation roadmap, aiming to bring the fiscal deficit below 4.5% of GDP by FY 2025-26. This approach marked a shift from rigid numerical fiscal targets toward a more flexible fiscal consolidation path, allowing for better responsiveness to economic uncertainties.

Fiscal Consolidation Path: FY 2026-27 to FY 2030-31: Building on the fiscal trajectory set in 2021, the Indian government has reaffirmed its commitment to a sustainable fiscal path. The Budget Speech for FY 2024-25 emphasized maintaining the fiscal deficit at levels that ensure a declining debt-to-GDP ratio from FY 2026-27 onward. This policy shift aligns with global best practices, prioritizing debt sustainability over rigid deficit targets.

Key elements of the fiscal consolidation strategy for the coming years include:

1. *Shift to debt-to-GDP ratio as the Fiscal Anchor* – Until now, Fiscal Deficit was the operational target. Now, rather than fixing fiscal deficit targets, the government will set them such that they bring down the Debt-GDP ratio. The government aims to bring the debt-to-GDP ratio to 50% ± 1% by March 2031, ensuring long-term fiscal stability.

2. *Transparent Fiscal Management* – A focus on enhanced disclosure of off-budget borrowings to improve fiscal transparency.

3. *Operational Flexibility* – Moving away from rigid deficit targets toward responsive fiscal policies that balance growth and fiscal prudence.

By adopting a growth-aligned fiscal consolidation strategy, India seeks to create fiscal space for development while ensuring macroeconomic stability.

Four Engines of Growth

First engine of growth (Agriculture)

Key Announcement	Description	Impact Assessment
Prime Minister Dhan-Dhaanya Krishi Yojana	Covers 100 low-productivity districts; aims to improve agricultural productivity and credit access.	Expected to benefit 1.7 crore farmers, enhance yield, and strengthen rural credit.
Rural Prosperity and Resilience Program	Multi-sectoral initiative to generate rural employment and reduce migration necessity.	Reduces underemployment in agriculture and boosts rural economic activities.
Mission for Aatmanirbharta in Pulses	6-year program to increase self-sufficiency in Tur, Urad, and Masoor pulses.	Expected to reduce dependence on imports, ensure better price realization for farmers.
Comprehensive Program for Vegetables & Fruits	Promotes production, supply chain efficiency, and remunerative prices for farmers.	Improves nutrition security, stabilizes prices, and enhances farmer incomes.
Makhana Board in Bihar	Supports production, processing, and value addition of Makhana.	Boosts employment in Bihar, integrates farmers into value chains.
National Mission on High Yielding Seeds	Focuses on research, pest-resistant and climate-resilient seeds.	Increases agricultural resilience, reduces yield losses due to climate change.
Fisheries Development (High Seas & EEZ)	Promotes sustainable fisheries, focusing on Andaman & Nicobar and Lakshadweep.	Enhances marine economy, improves export competitiveness of seafood.
Mission for Cotton Productivity	5-year mission to improve cotton yield and sustainability.	Supports textile sector growth, enhances farmers' incomes.
Enhanced Credit through Kisan Credit Card (KCC)	Loan limit under Modified Interest Subvention Scheme increased from ₹3 lakh to ₹5 lakh.	Provides better credit access, reduces dependency on informal lending.
Urea Plant in Assam	New plant with a capacity of 12.7 lakh metric tons annually.	Reduces urea imports, strengthens agricultural input supply.
India Post for Rural Economy	India Post to act as a catalyst for rural financial inclusion and logistics.	Enhances financial inclusion and boosts rural e-commerce opportunities.

Second engine of growth (MSMEs)

Key Announcement	Description	Impact Assessment
Revision in Classification Criteria for MSMEs	Investment and turnover limits for MSME classification increased to 2.5x and 2x, respectively.	Encourages MSMEs to scale up operations, promotes competitiveness.
Enhanced Credit Guarantee for MSMEs	Credit guarantee cover increased from ₹5 crore to ₹10 crore for MSMEs.	Increases access to credit, facilitates ₹1.5 lakh crore additional lending over 5 years.
Credit Guarantee for Startups	Guarantee cover raised from ₹10 crore to ₹20 crore for startups.	Boosts funding for emerging businesses, supports growth in 27 key sectors.
Credit Cards for Micro Enterprises	Customized ₹5 lakh credit cards for micro enterprises registered on Udyam portal.	Expands credit access for 10 lakh micro businesses, improving cash flow.
Fund of Funds for Startups	New Fund of Funds with a ₹10,000 crore allocation for startups.	Encourages venture capital and private investment, catalyzing innovation.
Scheme for First-Time Entrepreneurs	Loans up to ₹2 crore for 5 lakh women, SC/ST entrepreneurs over 5 years.	Supports socially disadvantaged entrepreneurs, increases business ownership.
Focus Product Scheme for Footwear & Leather	Policy support for design, machinery, and manufacturing in the leather sector.	Generates 22 lakh jobs, creates ₹4 lakh crore turnover and ₹1.1 lakh crore in exports.
Toy Manufacturing Promotion Scheme	Develops toy clusters, skills, and production capacity for global markets.	Positions India as a global toy hub, increases employment and exports.
Support for Food Processing Industry	Establishment of National Institute of Food Technology in Bihar.	Enhances food processing capabilities, benefits farmers and MSMEs in food industries.
National Manufacturing Mission	Policy framework to support small, medium, and large industries in Make in India.	Strengthens domestic supply chains, reduces dependency on imports.
Clean Tech Manufacturing Initiative	Support for solar PV cells, EV batteries, electrolyzers, wind turbines, and grid-scale storage.	Enhances green technology sector, attracts investment in sustainable industries.

Third engine of growth (Investment)

Investing in People

Key Announcement	Description	Impact Assessment
Saksham Anganwadi & Poshan 2.0	Enhanced nutrition support for 8 crore children, 1 crore pregnant & lactating mothers.	Improves child health, reduces malnutrition, and enhances learning outcomes.
50,000 Atal Tinkering Labs in Schools	Labs to promote STEM education, innovation, and scientific thinking.	Develops problem-solving skills, prepares students for tech-driven jobs.
Broadband for Schools & Primary Health Centers	BharatNet project to provide internet access in government schools & rural health centers.	Expands e-learning, improves digital inclusion, and enables telemedicine.
Bharatiya Bhasha Pustak Scheme	Digital books in Indian languages for school and higher education.	Enhances regional language education, improves learning accessibility.
National Centres of Excellence for Skilling	Establishing 5 skill centers with global expertise to train youth in high-demand skills.	Increases employment potential, supports industry-ready workforce.
Expansion of IIT Capacity	Infrastructure expansion in 5 IITs + IIT Patna to add 6,500 new seats.	Strengthens technical education, improves India's R&D ecosystem.
Centre of Excellence in AI for Education	₹500 crore investment in AI-driven learning and adaptive education technologies.	Promotes AI-driven innovation, personalizes student learning experiences.
Expansion of Medical Education	Adding 10,000 new medical seats in 2025-26, with a goal of 75,000 seats in 5 years.	Increases doctor availability, strengthens public healthcare system.
Daycare Cancer Centres in District Hospitals	200 centers to be set up in 2025-26, expanding to all districts over 3 years.	Improves rural access to cancer treatment, reduces treatment costs.
Urban Livelihood Program for Informal Workers	New scheme for socio-economic upliftment of informal urban workers.	Enhances income security, supports employment stability.
PM SVANidhi Expansion	Enhanced loan limits up to ₹30,000 for street vendors, linked with UPI credit cards.	Increases financial inclusion, supports business sustainability.
Social Security for Gig Workers	Identity cards, registration on e-Shram portal, healthcare under PM Jan Arogya Yojana.	Benefits 1 crore gig workers, improves social protection.

Investing in the Economy

Key Announcement	Description	Impact Assessment
Public-Private Partnership (PPP) in Infrastructure	Ministries to launch 3-year pipeline of PPP projects, states encouraged to participate.	Attracts private capital, accelerates infrastructure development.
₹1.5 lakh crore Interest-Free Loans to States	50-year interest-free capital expenditure loans for infrastructure & reform-linked projects.	Boosts state-level infrastructure, supports reform implementation.
Asset Monetization Plan 2025-30	Monetization of ₹10 lakh crore worth of government assets to fund new projects.	Generates liquidity, enables public investment without increasing debt.
Extension of Jal Jeevan Mission to 2028	Mission extended to achieve 100% rural tap water coverage with a focus on quality.	Improves public health, enhances quality of life in rural areas.
Urban Challenge Fund – ₹1 lakh crore	Supports ‘Cities as Growth Hubs’, creative redevelopment, water, and sanitation.	Strengthens urban infrastructure, improves quality of urban life.
Power Sector Reforms & Incentives	States to receive 0.5% additional borrowing capacity for improving power distribution.	Encourages efficient energy distribution, reduces power losses.
Nuclear Energy Mission for 100 GW by 2047	₹20,000 crore R&D fund for Small Modular Reactors (SMRs) and clean nuclear power.	Expands clean energy capacity, enhances energy security.
Shipbuilding Policy & Maritime Development Fund	₹25,000 crore fund to support domestic shipbuilding and port development.	Reduces dependence on foreign-built vessels, boosts blue economy.
UDAN Expansion for Regional Air Connectivity	New UDAN scheme to connect 120 more airports, targeting 4 crore passengers.	Enhances regional connectivity, supports tourism & business travel.
Greenfield Airports in Bihar	Development of new airports in Bihar, apart from expansion in Patna & Bihta.	Strengthens regional connectivity, fosters economic growth.
Mining Sector Reforms & State Mining Index	New framework for critical mineral recovery, tailings processing, and best practices.	Boosts domestic mineral production, supports green industries.
SWAMIH Fund 2 – ₹15,000 crore	Blended finance fund for the completion of 1 lakh stalled housing units.	Revives housing sector, benefits middle-class homebuyers.

Investing in Innovation

Key Announcement	Description	Impact Assessment
₹20,000 crore R&D Investment in Deep Tech & Innovation	Private-sector-led research initiative to boost deep tech startups.	Strengthens cutting-edge R&D, positions India as a global tech leader.
Deep Tech Fund of Funds	Government-backed fund to support next-gen startups in AI & automation.	Enhances startup ecosystem, encourages high-tech entrepreneurship.
PM Research Fellowship – 10,000 Fellowships	Funding for researchers in IITs, IISc, and top institutions.	Fosters high-impact research, attracts top talent to academia.
Gene Bank for Crop Germplasm	Second National Gene Bank to store 10 lakh crop germplasm lines.	Secures food and nutritional security, preserves agro-biodiversity.
National Geospatial Mission	Developing geospatial infrastructure & data for planning & governance.	Modernizes land records, urban planning, infrastructure design.
Gyan Bharatam Mission – Manuscript Conservation	Digitization and preservation of 1 crore historical manuscripts.	Protects India's cultural knowledge, promotes academic research.

4th Engine of Growth (Exports)

Key Announcement	Description	Impact Assessment
Export Promotion Mission	Coordinated effort by Commerce, MSME, and Finance Ministries to boost exports.	Facilitates export diversification, supports MSMEs in global markets.
BharatTradeNet – Digital Public Infrastructure for Trade	Unified trade documentation & financing platform, aligned with global practices.	Reduces trade costs, improves ease of doing exports, attracts FDI.
Support for Integration with Global Supply Chains	Domestic capacity-building for sectors crucial to global supply chains.	Positions India as a reliable supplier, enhances manufacturing exports.
National Framework for Global Capability Centers (GCCs)	Guidance for states to promote GCCs in tier-2 cities.	Boosts IT services exports, creates high-skilled employment.
Warehousing Facility for Air Cargo	Upgraded cold storage & cargo warehousing for high-value perishables.	Improves logistics efficiency, supports agri and pharma exports.
Performance-linked Incentives for Tourism Exports	Incentives for states to improve tourist destinations, marketing & facilities.	Increases tourism earnings, generates employment in hospitality sector.

Key Announcement	Description	Impact Assessment
Visa Fee Waivers & E-Visa Expansion	Streamlined e-visa processes and fee waivers for select tourist groups.	Encourages higher international tourist arrivals, boosts tourism GDP.
Medical Tourism & Heal in India Initiative	Partnership with the private sector to attract foreign patients.	Strengthens India's position as a global healthcare hub, boosts hospital revenues.
Export Credit & Cross-Border Factoring Support for MSMEs	Easier access to export credit and payment guarantees for MSMEs.	Expands small business exports, reduces financial risks.

Reforms as the Fuel

Key Announcement	Description	Impact Assessment
New Income Tax Bill	Simplification of tax laws, reducing complexity and litigation.	Enhances taxpayer compliance, improves ease of doing business.
FDI in Insurance – Raised to 100%	Allows 100% Foreign Direct Investment (FDI) in insurance with conditions.	Attracts global insurers, strengthens competition and consumer benefits.
Investment Friendliness Index of States	Competitive ranking for states based on ease of doing business reforms.	Encourages state-level reforms, attracts domestic & foreign investment.
High-Level Committee for Regulatory Reforms	Review of all non-financial sector regulations, licenses & permissions.	Reduces bureaucratic red tape, accelerates business approvals.
KYC Simplification & Revamped Central KYC Registry	Streamlined Know Your Customer (KYC) process for individuals & businesses.	Enhances financial access, reduces compliance burdens.
Partial Credit Enhancement Facility for Bonds	NaBFID to provide credit enhancement for infrastructure bonds.	Boosts bond market liquidity, improves funding for infrastructure projects.
Financial Stability & Development Council (FSDC) Review	Evaluation of current financial regulations & responsiveness.	Strengthens financial stability, ensures regulatory flexibility.
Jan Vishwas Bill 2.0 – Further Decriminalization of Laws	Removes criminal penalties from 100+ business regulations.	Reduces legal risks for businesses, fosters entrepreneurial confidence.
Bilateral Investment Treaty (BIT) Revamp	Modernizing India's BIT framework to encourage long-term FDI.	Increases investor confidence, expands cross-border investments.

Indirect Tax Reforms

Key Announcement	Description	Impact Assessment
Customs Duty Rationalization	Removal of seven tariff rates, streamlining to eight major slabs.	Simplifies trade & import duties, reduces classification issues.
Relief on Import of Life-Saving Drugs & Medicines	36 new life-saving drugs added to full exemption list from BCD.	Reduces healthcare costs, improves accessibility of critical medicines.
Duty Reduction on Critical Minerals & Components	Zero BCD on cobalt, lithium-ion battery scrap, & other critical minerals.	Supports domestic manufacturing, boosts green energy transition.
Boost to Textile & Footwear Sectors	Higher duty on knitted fabrics, exemptions on shuttle-less looms.	Encourages domestic textile production, promotes job creation.
Electronics Manufacturing Incentives	BCD on Open Cell panels reduced to 5%, higher duty on finished TVs.	Boosts Make in India for electronics, supports TV panel assembly.
Telecom Equipment Duty Reduction	Lower BCD on Carrier-Grade Ethernet Switches from 20% to 10%.	Reduces telecom infrastructure costs, supports 5G rollout.
Shipping & Shipbuilding Sector Support	10-year exemption on raw materials for shipbuilding & shipbreaking.	Promotes domestic shipbuilding, enhances maritime economy.
GST Reforms – Compliance Simplification	Extended time limits for provisional assessment & refunds.	Improves ease of doing business, reduces litigation & tax disputes.
Export Duty Changes for Leather & Handicrafts	Zero export duty on crust leather to boost small tanner exports.	Encourages leather exports, supports artisan businesses.
Trade Facilitation for MSMEs	Voluntary compliance scheme for customs duties with no penalties.	Encourages honest self-disclosures, reduces trade compliance burdens.
Maritime & Logistics Incentives	Customs duty cut on warehousing & cargo infrastructure.	Strengthens India's export logistics, lowers supply chain costs.

Direct Tax Reforms

Key Announcement	Description	Impact Assessment
New Personal Income Tax Slabs	Revised tax structure under new regime with increased tax-free limit.	Reduces tax burden on middle-class, boosts household savings & consumption.
No Income Tax up to ₹12 Lakh	Zero tax liability for salaried individuals earning up to ₹12.75 lakh.	Increases disposable income, enhances consumer spending & investment.

Key Announcement	Description	Impact Assessment
Higher Standard Deduction – ₹75,000	Increased deduction for salaried individuals.	Provides additional tax relief, benefits salaried taxpayers.
Rationalization of TDS & TCS	Simplified TDS/TCS structure, higher thresholds for tax deduction.	Reduces compliance burden, improves ease of doing business.
Doubling of Tax-Free Interest for Senior Citizens	Tax-free interest income limit increased from ₹50,000 to ₹1 lakh.	Encourages savings, provides financial security to senior citizens.
Higher Exemption on Rental Income	TDS threshold for rent increased from ₹2.4 lakh to ₹6 lakh per year.	Benefits small landlords, encourages real estate investments.
TCS on Remittances – Relaxed Rules	Threshold for tax collection on foreign remittances raised to ₹10 lakh.	Provides ease in sending money abroad, benefits students & travelers.
Vivad Se Vishwas 2.0 – Tax Dispute Resolution	Extension of tax dispute resolution scheme to reduce litigation.	Encourages voluntary compliance, clears pending tax cases.
Extended Tax Benefits for Startups	Tax exemptions extended for startups incorporated until 2030.	Supports startup ecosystem, fosters innovation & entrepreneurship.
Safe Harbor Rules for International Transactions	Expansion of safe harbor rules for transfer pricing disputes.	Reduces tax disputes, enhances India's attractiveness for foreign investments.
Tax Certainty for Sovereign & Pension Funds	Extension of tax-free investments in infrastructure projects till 2030.	Encourages long-term investments, boosts infrastructure funding.
Tonnage Tax Scheme for Inland Waterways	Inland vessels eligible for tonnage tax regime (previously for sea vessels).	Promotes river-based logistics, reduces transport costs.

Analysis of the Union Budget 2025-26

The Union Budget 2025-26 is designed as a delicate balancing act amid economic uncertainties. With global geopolitical tensions, supply chain disruptions, and inflationary pressures, India must navigate these challenges while ensuring domestic economic resilience.

Building Fiscal Buffers: Maintaining fiscal buffers is critical to shield the economy from unforeseen economic shocks. The budget addresses this by:

- **Prioritizing fiscal consolidation**, reducing the fiscal deficit from 4.8% in FY25 to 4.4% in FY26, aiming for a long-term sustainable path.
- **Debt Management Strategy**: Setting a goal for gradual reduction in the debt-to-GDP ratio to 50% ± 1% by March 2031, to maintain fiscal sustainability and investor confidence.

Increasing Consumption and Demand: Private consumption is a key growth driver, but urban demand has shown signs of slowing down. The budget introduces multiple measures to stimulate consumer spending:

- **Income Tax Reforms**: The income tax exemption limit is increased to ₹12 lakh under the new regime, putting more money in the hands of the middle class to boost spending.
- **Support for MSMEs**: Enhanced incentives for MSMEs will lead to higher employment and income generation.
- **Rural and Social Schemes**: Increased allocations to PM-KISAN, MGNREGA, and housing schemes will support rural consumption.

Boosting Private Investment: While public sector capex has remained strong, reviving private sector investment is crucial for sustained growth. Key measures include:

- **Tax Reforms for Businesses**: Simplification of corporate tax structures and reduced compliance burden to incentivize investments.
- **FDI in Insurance**: Raising Foreign Direct Investment (FDI) limits in insurance to 100% aims to attract global capital.
- **Ease of Doing Business**: Further simplification of business regulations, deregulation of industries, and digitization of approvals to accelerate private sector growth.

Public investment remains a priority, with a significant allocation towards infrastructure projects, particularly in transport, energy, and logistics to enhance long-term productivity.

Strengthening Exports and Manufacturing: With global demand slowing down and policy-driven trade disruptions, the government is focusing on:

- **Export Incentives**: Targeted measures to boost export competitiveness, especially in high-growth sectors like electronics, pharmaceuticals, and renewable energy.
- **Free Trade Agreements (FTAs):** Expansion of FTAs with key trade partners to diversify export markets and reduce dependence on a few economies.
- **Manufacturing Push**: Strengthening the Production-Linked Incentive (PLI) schemes to enhance domestic manufacturing capabilities, particularly in semiconductors, EVs, and defense production.

Containing Inflation: While overall inflation has moderated, food price volatility remains a concern. The budget introduces:

- **Agriculture Measures**:
  - Launch of the Prime Minister Dhan-Dhaanya Krishi Yojana to improve farm productivity and resilience against climate shocks.
  - Increased investment in irrigation, cold storage, and Agri-logistics to reduce post-harvest losses.
- **Close coordination between the government and RBI** to will ensure inflation remains within the target range while supporting economic growth.

Structural Reforms for Long-Term Sustainable Growth: The budget lays a strong foundation for long-term economic expansion through:

- **Simplification of Taxation**: Introduction of a new income tax bill to create a stable, predictable, and investor-friendly tax regime.

- **Investment in Digital and Physical Infrastructure**:
  - Expansion of digital public infrastructure e.g. BharatTradeNet to enhance productivity.
  - Large-scale infrastructure projects in railways, highways, and renewable energy to drive future growth.
- **Skill Development and R&D**: Increased allocation to education, skilling, and research and development (R&D) to foster innovation-driven economic growth.

Practice Questions

1. Analyze the overall fiscal policy approach in the Union Budget 2025-26. How well do the proposed measures balance the goals of fiscal consolidation and economic growth?
2. In what ways does the Union Budget 2025-26 address the challenges posed by global economic uncertainties? Discuss the budgetary measures aimed at mitigating these risks.
3. Discuss the key objectives of the Union Budget 2025-26 in terms of boosting domestic consumption and investment. How does the budget propose to stimulate demand and attract investment?
4. Examine the Union Budget 2025-26 in the context of the government’s vision of 'Viksit Bharat'. What are the key elements of the budget that align with the goal of achieving a developed India by 2047?

CHAPTER 6

INDIA'S TAX SYSTEM

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Chapter 6

India's Tax System

India's 3 Tier Tax Structure

Central Tax	
Direct tax	**Indirect tax**
1. Income Tax 2. Corporate Tax 3. Capital Gains Tax 4. Securities Transaction Tax	1. Goods and Services Tax (CGST + IGST) 2. Customs Duty 3. Central Excise Duty
State Tax	
Direct tax	**Indirect tax**
1. Professional Tax	1. State Goods and Services Tax (SGST) 2. State Excise Duty 3. Stamp Duty 4. Vehicle Tax (Road Tax) 5. Betting and Gambling Tax etc.
Local Bodies tax	
Direct tax	**Indirect tax**
1. Property Tax	1. Water Tax 2. Sewerage Tax 3. Advertisement Tax etc.

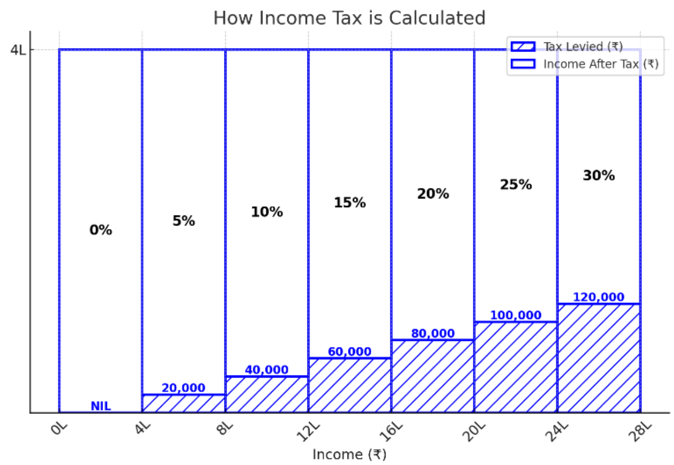
💡 Tip: Even though UPSC never directly asks tax rates, knowing them helps you understand government priorities, fiscal policy stance, and enriches your overall understanding. However, do not mug up the rates.

Income Tax Rates

The budget for fiscal year 2025-26 introduced significant reforms to India's income tax structure, aimed at reducing the tax burden on middle and lower-income groups while simplifying the overall tax compliance process.

The revised income tax slabs under the new regime are as follows:

Income Range (₹)	Tax Rate (%)
Up to 4,00,000	0
4,00,001 to 8,00,000	5
8,00,001 to 12,00,000	10
12,00,001 to 16,00,000	15
16,00,001 to 20,00,000	20
20,00,001 to 24,00,000	25
Above 24,00,000	30



Rebate Under Section 87A of Income Tax Act 1961: Section 87A offers a rebate on tax payable for individuals with a net taxable income below a certain threshold. The primary goal of this rebate is to reduce the tax burden on individuals in the lower income bracket, effectively bringing their tax liability down to zero if they meet certain conditions. The maximum rebate amount has been increased to ₹60,000, allowing individuals earning up to ₹12 lakh to have zero tax liability.

Marginal Relief: Marginal relief is provided to prevent a sudden increase in tax due that could result from a small increase in income pushing a taxpayer into a higher tax bracket. For example, if a person earns ₹12,10,000, without marginal relief, the tax could disproportionately jump. With marginal relief, the tax on the additional ₹10,000 over ₹12 lakh is limited, ensuring that the taxpayer does not face an unfair tax burden.

Total Income (₹)	Tax Without Marginal Relief (₹)	Tax With Marginal Relief (₹)
12,00,000	0 (Individual qualifies for the rebate under Section 87A for incomes up to ₹12 lakh, thus the tax liability is zero.)	0
12,10,000	61,500	10,000

Standard Deduction: The standard deduction has been increased to ₹75,000 for salaried employees and pensioners. This adjustment is aimed at compensating for work-related expenses not reimbursed by employers, thereby reducing the taxable income and ultimately lowering the overall tax burden for individuals.

Corporate tax rates

Category	Basic Tax Rate (%)	Conditions
Domestic Companies (Turnover ≤ INR 4 billion)	25%	Applicable to companies with turnover not exceeding INR 4 billion to support SME growth.
Other Domestic Companies	30%	Standard rate for larger enterprises that do not qualify under the SME category.
Foreign Companies (with Permanent Establishment in India)	35%	Ensuring taxation on all India-sourced income.
New Manufacturing Domestic Companies	15%	Encourages new manufacturing setups by offering a significantly reduced rate. This rate is part of the government's broader initiative to boost the manufacturing sector under the "Make in India" campaign. The company must be incorporated on or after October 1, 2019 and the company must commence manufacturing or production on or before March 31, 2024.
Certain Existing Domestic Companies opting for Concessional Tax Regime	22%	Available to existing companies that choose to forgo certain deductions and incentives for a reduced rate, simplifying the tax process and lowering the liability under specific compliance conditions.

Capital Gains Tax Rates

Long Term Capital Gains

Asset Type	Holding Period	LTCG Tax Rate	Conditions
Listed Equity Shares, Equity Mutual Funds	Long-term (>1 year)	12.5%	On gains exceeding ₹1.25 lakhs

Asset Type	Holding Period	LTCG Tax Rate	Conditions
Unlisted Shares	Long-term (>24 months)	20% with indexation	Indexation is a tax adjustment technique used to increase the purchase cost of an investment by accounting for inflation. This adjusted cost, when subtracted from the sale price, typically reduces the taxable capital gain. For example, if you bought real estate for ₹50,00,000 in 2010 and sold it for ₹1,50,00,000 in 2025, using the Cost Inflation Index to adjust for inflation over these 15 years would lower your taxable profit, thus reducing your tax liability. This method ensures that taxes are levied more fairly by considering the effect of inflation on the cost of the asset.
Real Estate	Long-term (>24 months)	20% with indexation or 12.5% without indexation	

Short-Term Capital Gains:

Asset Type	Holding Period	STCG Tax Rate	Conditions
Listed Equity Shares, Equity Mutual Funds	Less than 1 year	20%	
Unlisted Shares	Less than 24 months	According to individual's tax slab	Taxed as regular income
Real Estate	Less than 24 months	According to individual's tax slab	Taxed as regular income

Securities Transaction Tax (STT) rates

Transaction Type	STT Rate	Applicable To
Equity Shares (Delivery-based)	0.1%	Both buy and sell sides
Equity Shares (Intraday)	0.025%	Sell side only
Equity Futures	0.01%	Sell side only
Options on Equity (Premium)	0.05%	Sell side only
Options on Equity (Exercise)	0.125%	Purchase side only
Sale of Equity Shares or Units (Non-delivery)	0.025%	Sell side only

Goods and Services Tax (GST) rates

GST Rate	Category	Examples
0%	Essential Goods and Services	Fresh fruits, vegetables, milk, eggs, unpackaged cereals, fresh meat, sanitary napkins, educational services, certain healthcare services
5%	Basic Necessities	Packaged food items, footwear (below ₹1000), apparel (below ₹1000), coal, LPG, household necessities like kerosene, and processed spices, uncooked popcorn
12%	Standard Rate Goods and Services	Mobile phones, business class air travel, frozen meat products, sewing machines, man-made yarns, handicrafts, butter, cheese, spectacles, indoor game products like playing cards, salted popcorn
18%	Commonly Used Goods and Services	Electronic goods (like refrigerators, washing machines), cosmetics, commercial real estate rentals, telecom services, IT services, outdoor catering, branded garments, financial services, caramel coated popcorn
28%	Luxury and Sin Goods	Aerated beverages, luxury cars, tobacco products, molasses, high-end motorcycles, yachts, personal aircraft, dishwashers, air conditioners, big-screen TVs, online gaming, casino and horse racing.

- Salted popcorn is taxed at a lower rate of 12% because it's considered a basic snack food, whereas caramel-coated popcorn, having a higher sugar and luxury connotation, is taxed at 18%.
- Classified as a luxury or entertainment service, online gaming, including both skill-based and chance-based games, is subject to the highest GST slab at 28%, reflecting its non-essential nature and alignment with other entertainment services.

Custom Duty Rates

Type of Custom Duty	Rate	When Applicable
Basic Customs Duty (BCD)	0% to 100%	Levied on all imported goods based on the type of product, origin, and material. Certain items like lifesaving drugs may be exempt.
Countervailing Duty (CVD)	0% to 12%	Applied to offset subsidies received by products in their origin country to level the playing field.
Special Additional Duty (SAD)	4%	Imposed on imported goods to equate them with local goods subject to sales tax.
Safeguard Duty	By notification	Protects domestic industries from a surge in imports that could damage local producers.
Anti-dumping Duty	By notification	Counters below-cost imports harmful to local industries.
Customs Handling Fee	1%	Charged on all imports in addition to other duties for handling.

Excise Duty Rates

Central Excise Duty

Central Excise Duty is levied by the Central Government on goods manufactured or produced within India.

Goods Category	Excise Duty Rate	Remarks
Tobacco Products	Varies	Includes cigarettes, cigars, and other tobacco items.
Petroleum Products	Varies	Includes petrol, diesel, and Aviation Turbine Fuel.
Motor Vehicles	Varies	Especially on luxury vehicles.
Electronics and Consumer Goods	Varies	Applicable on specific luxury or high-end goods.

State Excise Duty

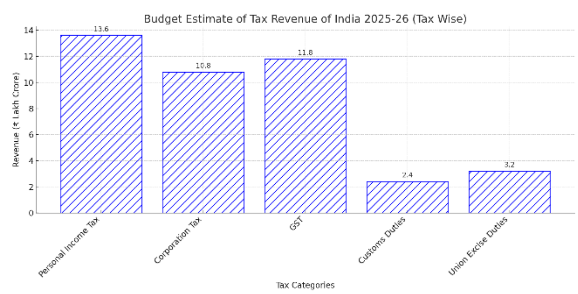
State Excise Duty is levied by the State Governments primarily on the manufacture and sale of alcohol and alcoholic products.

Goods Category	Excise Duty Rate	Remarks
Alcoholic Beverages	Varies by state	Includes spirits, beer, and wines.
Narcotics	Varies by state	Such as opium, which may be legally regulated in some states.

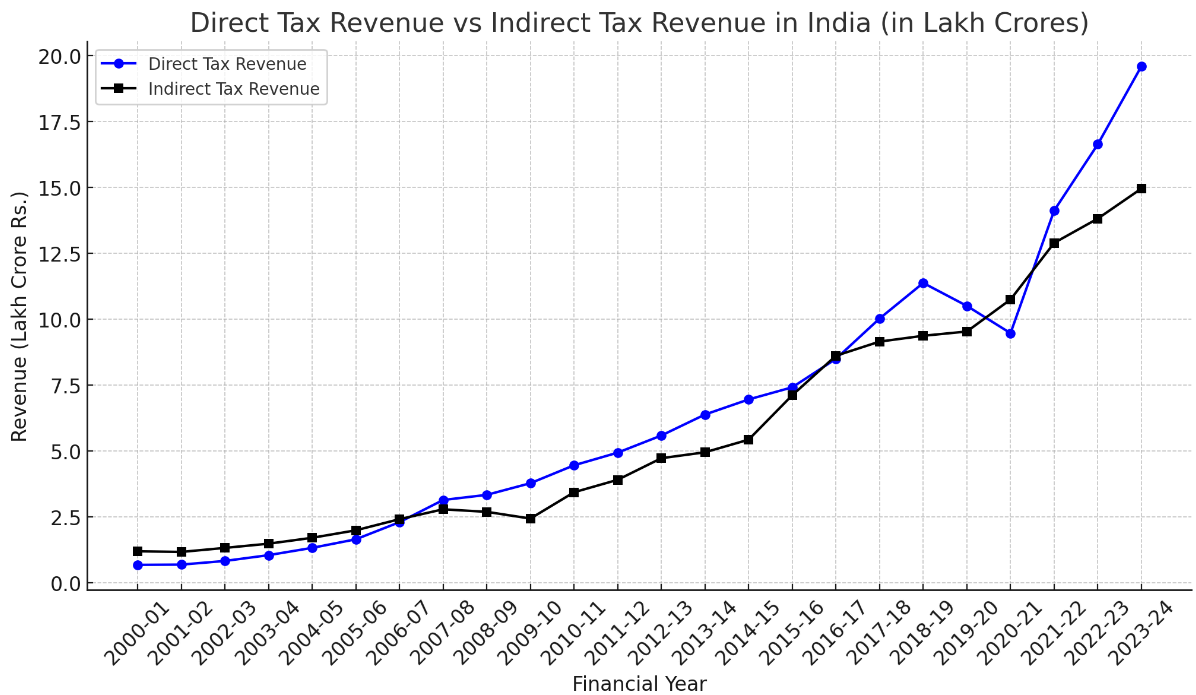
Tax Revenue Trends

Budget Estimates for 2025-26

Tax Category	Budget Estimate (₹ Lakh Crore)
Goods and Services Tax (GST)	11.8
Corporation Tax	10.8
Personal Income Tax	13.6
Customs Duties	2.4
Union Excise Duties	3.2



Share of Direct Taxes and Indirect Taxes in Total Tax Revenue


Direct Tax Revenue vs Indirect Tax Revenue in India (in Lakh Crores)
Direct Tax Revenue
Indirect Tax Revenue
Revenue (Lakh Crore Rs.)
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
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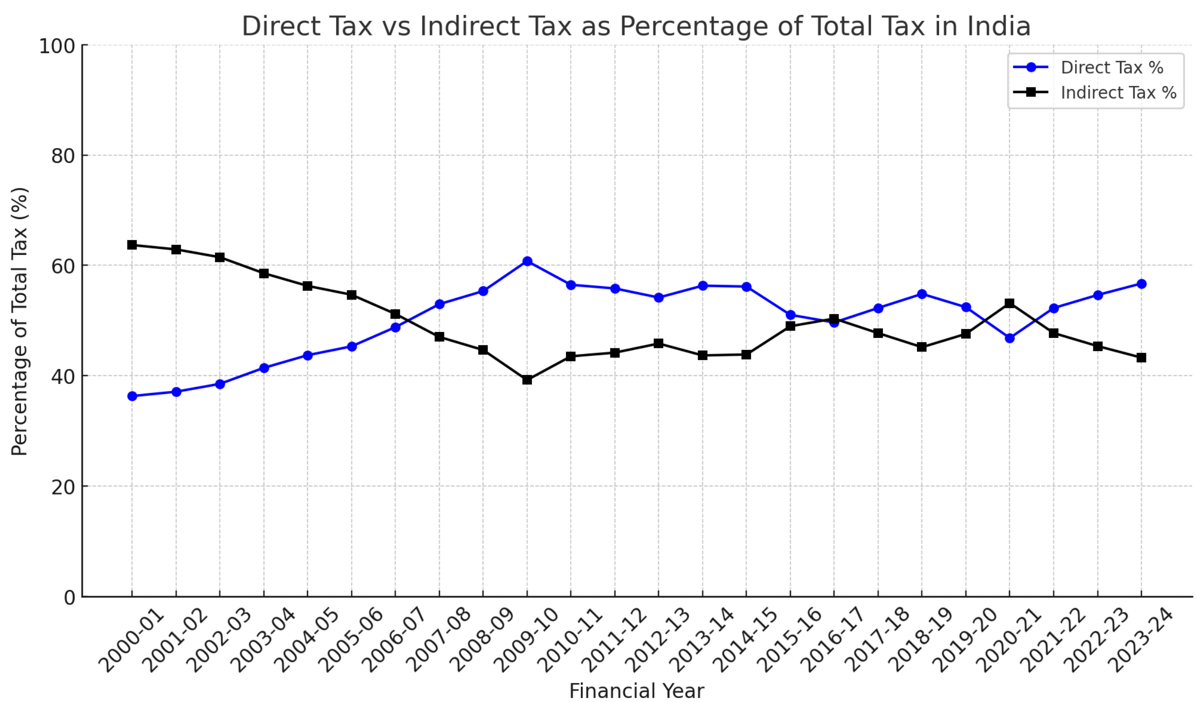
2022-23
2023-24
Financial Year


Direct Tax vs Indirect Tax as Percentage of Total Tax in India
Direct Tax %
Indirect Tax %
Percentage of Total Tax (%)
0
20
40
60
80
100
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
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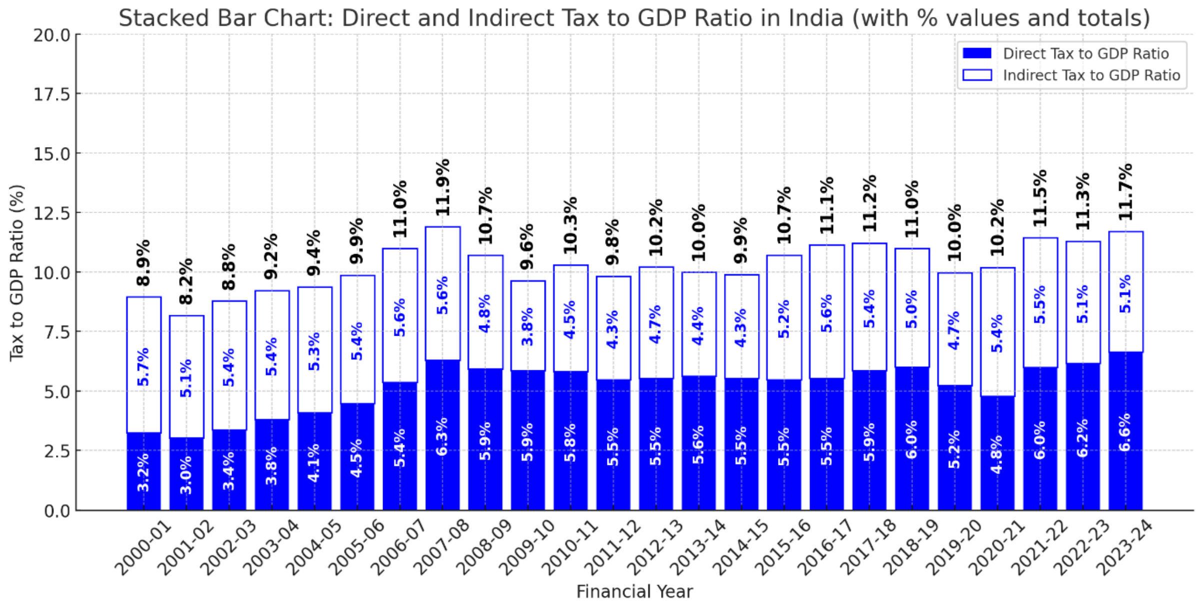
2021-22
2022-23
2023-24
Financial Year



Analysis

Long-Term Shift Towards Direct Taxation

- In 2000-01, Indirect Taxes contributed more than 63% of total tax revenue, while Direct Taxes were around 36%.
- Over the years, Direct Tax as a percentage of total tax revenue has increased, indicating a structural shift in India's tax composition.
- By 2023-24, Direct Tax constitutes around 57%, whereas Indirect Tax has declined to about 43%.

The rise in Direct Tax Revenue, has been driven by:

- Economic growth and corporate expansion.
- Better tax compliance and digitization of tax administration.
- Expansion of the middle class and rising personal income levels, leading to higher income tax collections.

Trend with Indirect Tax Revenue

- Pre-GST era (before 2017): Indirect taxes like Excise Duty, Service Tax, VAT, and Customs Duty contributed significantly to total tax revenue.
- Post-GST (2017 onward):
  - GST replaced many indirect taxes, making compliance simpler and also reducing the tax burden on businesses.
  - Initially, GST collections were lower than expected, but they gradually increased with compliance improvements.

Future Outlook

- Direct Tax's role will likely expand further with:
  - More formalization of the workforce (gig workers, freelancers, MSMEs moving into the tax net).
  - Better technology-driven compliance (AI-based tax monitoring, digital payments, and data tracking).
  - Tax policy reforms such as the New Income Tax Bill.
- Indirect Taxes may stabilize if:
  - GST rates are rationalized.
  - Reduction in custom duties due to further trade liberalization.

Conclusion

- The graph clearly illustrates India's long-term tax shift from indirect (consumption-based) taxation to direct (income-based) taxation. This trend aligns with progressive taxation principles, ensuring that wealthier individuals and corporations contribute more.
- Direct Tax dominance indicates a maturing economy where the government relies more on income earners and businesses rather than excessive taxation on goods and services.
- Sustaining this trend will require stronger tax compliance mechanisms, minimal tax evasion, and a balanced approach between direct and indirect tax policies.

Direct Taxes

Broad Trends in Corporate Tax and Personal Income Tax in India

Corporate Tax Slowdown: Corporate tax, once the dominant direct tax revenue source, has experienced a slowdown in recent years.

- Key Reasons:
  - Corporate Tax Rate Cuts (2019): The government reduced corporate tax rates to 22% for existing firms and 15% for new manufacturing units, leading to lower collections.
  - Economic Slowdown (2019-21): Sluggish corporate earnings, exacerbated by the COVID-19 pandemic, resulted in reduced tax payments.

Rise in Personal Income Tax

- Growing Individual Tax Contributions: Personal Income Tax has seen steady growth and overtook Corporate Tax in 2022-23 and 2023-24.
- Key Reasons:
  - Formalisation of workforce.
  - Rise of middle class.
  - Rise of Digital Transactions & Tax Monitoring:
    - GST implementation (2017): Led to better documentation of income, indirectly bringing more individuals under the tax net.
    - UPI & Digital Payments: Reduced cash transactions and increased transparency in financial dealings, leading to better tax compliance.
    - Faceless Assessments & AI-Based Tracking: The Income Tax Department has tightened enforcement through AI-driven scrutiny, minimizing evasion.
  - Better Taxpayer Awareness & Simplification: E-filing, pre-filled tax returns, and simplified tax slabs have encouraged voluntary compliance.
  - Growth in High-Paying Sectors: IT, finance, and startups have boosted salaries and personal income tax collection.

Tax Buoyancy

Tax buoyancy is a measure of how responsive tax revenue growth is to the growth in Gross Domestic Product (GDP). It reflects the efficiency of the tax system in mobilizing revenues as the economy grows.

Tax Buoyancy=Percentage change in tax revenue/Percentage change in GDP

A tax buoyancy greater than 1 implies that tax revenues are increasing at a faster rate than GDP, indicating a healthy and responsive tax system. Conversely, a tax buoyancy less than 1 suggests that tax revenues are growing more slowly than GDP.

Current Trends in Tax Buoyancy (as per FY26 Budget Estimates)

Based on the Union Budget FY26 (BE), tax buoyancy trends indicate a moderately responsive tax system, with some variations across tax heads:

Tax Category	FY26 (BE) Buoyancy	Observations
Corporation Tax (CIT)	1.03	CIT, after sharp declines due to rate cuts in FY20 and FY21, has stabilized and is projected to perform moderately.
Personal Income Tax (PIT)	1.42	Strongest buoyancy. PIT has shown exceptional growth, with buoyancy above 2 in FY24 and FY25 (RE), reflecting improved compliance and widening tax base. Even post FY26 tax rationalizations, PIT remains robust.
Goods and Services Tax (GST)	1.08	GST has matured as a revenue source, maintaining a buoyancy above 1.
Gross Tax Revenue (GTR)	1.07	India's gross tax revenue buoyancy has recovered post-COVID. Overall buoyancy above 1, indicating that gross tax revenues are growing in line with or faster than GDP.

Future Outlook and Medium-Term Targets

Going forward, maintaining high tax buoyancy is critical for India to achieve its fiscal and developmental objectives.

- The gross tax revenue to GDP ratio (Tax-GDP ratio) is targeted to increase from 12% in FY26 (BE) to 14% by FY31.
- The combined tax-to-GDP ratio (Centre and States) is aimed to rise above 20% by FY31.
- To achieve these targets, India needs to maintain a tax buoyancy in the range of 1.2 to 1.5 in the medium term.

Achieving these targets will require sustained efforts in:

- Broadening the tax base.
- Improving tax compliance and administration.
- Rationalizing tax rates to enhance efficiency.
- Addressing loopholes and reducing tax evasion.

Tax Reforms

The Government of India has implemented several structural tax reforms in recent years to improve compliance, transparency, and efficiency of the tax system.

1. **E-way Bill System**: Introduced under GST to track the movement of goods in real-time, helping reduce tax evasion and ensure seamless logistics. *Example*: A truck transporting goods from Delhi to Mumbai must generate an e-way bill online before starting the journey.

2. **E-invoicing**: Mandated for businesses above a certain turnover threshold, enabling automatic invoice reporting to GSTN and reducing input tax credit fraud. *Example*: A company selling goods worth ₹1 crore generates a GST-compliant invoice that is automatically uploaded to the government portal.

3. **Faceless Assessment and Appeals**: Launched to eliminate physical interface between taxpayers and tax officers, ensuring transparent, efficient, and non-discretionary tax assessments and appeals.

4. **Vivad se Vishwas Scheme**: A dispute resolution mechanism introduced to settle pending direct tax litigations by offering taxpayers an option to pay dues with complete waiver of interest and penalties.

5. **New Income Tax Portal & Pre-filled ITRs**: A modern portal launched for faster, user-friendly tax filing, with pre-filled ITRs to simplify compliance and reduce errors.

6. **Integrating GST and Income Tax Data**: Data from GST and income tax systems are cross-verified to detect discrepancies and widen the tax base by identifying non-compliant taxpayers. *Example*: A trader's GST filings show ₹50 lakh turnover, but income tax return shows ₹20 lakh income will be flagged for verification.

7. **PAN-Aadhaar Linkage**: Mandatory linkage of PAN with Aadhaar to prevent tax evasion, detect high-value transactions, and ensure better identification of taxpayers.

Practice Questions

1. Discuss the shift from indirect taxes to direct taxes in India's tax revenue structure. What factors have contributed to this shift, and what does it imply for India’s economic development?
2. Analyze the current trends in corporate and personal income tax in India, highlighting the challenges faced by the government in balancing tax rates and economic growth.
3. Assess the role of Goods and Services Tax (GST) in shaping India’s indirect tax system. What have been the key challenges and achievements since its implementation?

CHAPTER 7

PROGRESS OF BANKING IN INDIA

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Chapter 7

Progress of Banking in India

Indian Banking Sector Performance (2023-2024)

1. Profitability

In banking, profitability is measured using several key indicators that reveal how well a bank is managing its resources to generate earnings. The three primary metrics are Return on Assets (RoA), Return on Equity (RoE), and Net Interest Margin (NIM).

- **Return on Assets (RoA)** measures a bank's ability to convert its assets into profit.

RoA = (Net Income/Total Assets)×100

For instance, if Bank A has ₹10,000 crores in total assets and earns a net income of ₹500 crores, its RoA would be 5%. This tells us how effectively the bank is using its assets to generate earnings.

- **Return on Equity (RoE)** assesses how well a bank uses shareholders' equity to produce income. It reflects the financial return on the equity invested by the bank’s shareholders.

RoE = (Net Income/Shareholder’s Equity)×100

If Bank A’s shareholder equity is ₹2,500 crores and it earns ₹500 crores, the RoE is 20%.

- **Net Interest Margin (NIM)** gauges the difference between the revenues generated from a bank's interest-bearing assets and the costs of handling its interest-bearing liabilities.

NIM = (Interest Income−Interest Expense)/Average Earning Assets×100

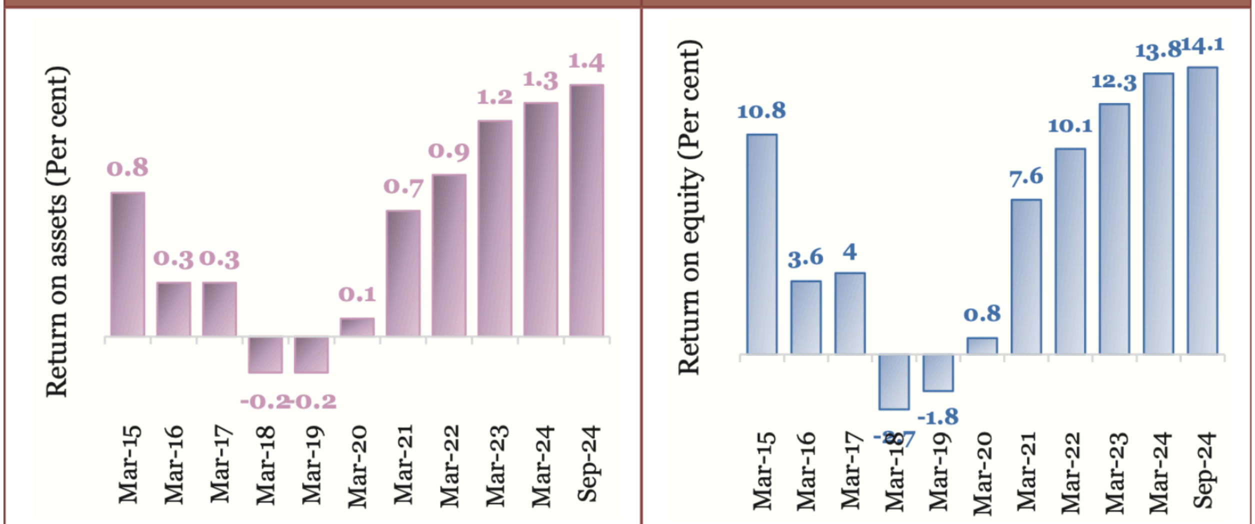
If Bank A earns ₹1,000 crores from interest on loans and pays ₹500 crores as interest on deposits, with total interest-earning assets of ₹10,000 crores, its NIM is 5%. This metric shows the efficiency of the bank’s core lending and deposit operations.

Data and Trends:

Metric	FY 2022-23	FY 2023-24
Return on Assets (%)	0.5%	0.8%

Metric	FY 2022-23	FY 2023-24
Return on Equity (%)	8.9%	11.2%
Net Interest Margin (%)	2.9%	3.2%

Chart II.4a: Return on Assets of SCBs (Annualised) | **Chart II.4b: Return on Equity of SCBs (Annualised)**



Source: RBI Financial Stability report, various issues

Analysis: These trends suggest a robust improvement in the profitability of banks across India. The increase in RoA and RoE indicates that banks are becoming more efficient at using their assets to generate profit, which is critical in a competitive banking environment. Meanwhile, the improvement in NIM from 2.9% to 3.2% reflects better management of the spread between earning interest on loans and the cost of funding these loans. This is vital for sustaining the profitability of core banking operations.

2. Asset Quality

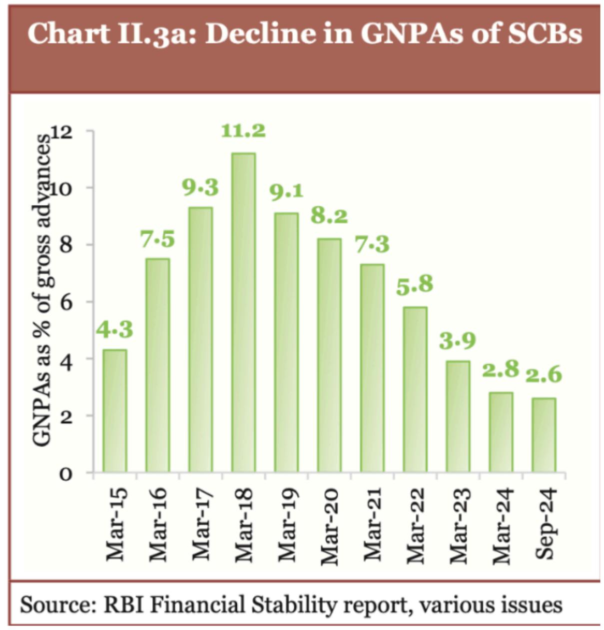
Asset quality is a crucial measure that evaluates the health of a bank's loan portfolio by examining the levels of loans likely to default. It is usually assessed through metrics such as Gross Non-Performing Assets (GNPAs) and the Slippage Ratio.

Gross Non-Performing Assets (GNPAs): This metric includes all loans that are considered 'bad,' meaning the borrower has failed to make interest or principal payments for 90 days or more. A high GNPA ratio indicates higher credit risk and potential losses for the bank.

Slippage Ratio: This ratio measures the percentage of standard loans (loans that were previously performing) that have turned into NPAs over a particular period, typically a fiscal year. It provides insight into the recent performance and trend in asset quality.

Example: If Bank E starts the year with ₹20,000 crores of standard loans and during the year, ₹400 crores of these loans slip into the non-performing category, the Slippage Ratio would be: (400/20000)×100=2%

This indicates the fresh inflow of NPAs from originally standard loans, highlighting the bank's recent credit risk trends.



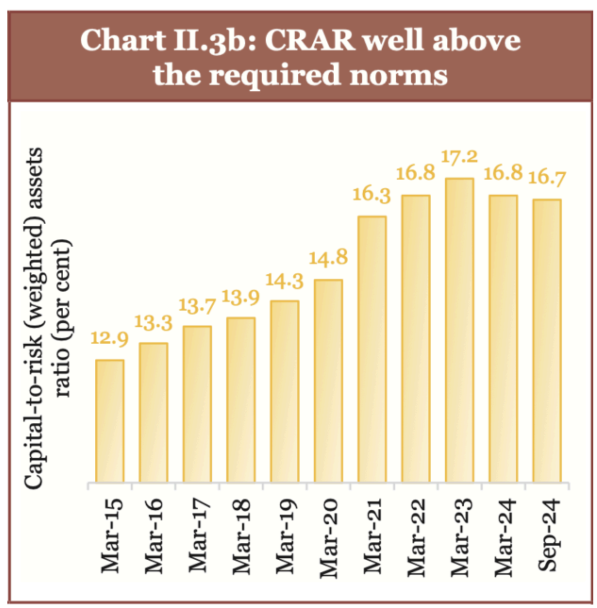
Data and Trends:

- Gross NPA Ratio: Decreased from 3.9% at the end of March 2023 to 2.7% at the end of March 2024.
- Slippage Ratio: Data indicates a reduction, which suggests that fewer loans are deteriorating from standard to non-performing status, signifying an improvement in credit management and overall economic conditions.

Analysis: The decline in both the Gross NPA and Slippage Ratios suggests that banks are not only managing existing non-performing loans more effectively but are also maintaining tighter controls to prevent new loans from slipping into NPAs. The reduction in the Slippage Ratio is particularly encouraging as it shows the banks' ability to sustain loan quality amidst potential economic fluctuations.

3. Soundness Indicators

Soundness indicators are vital metrics that help assess a bank's financial health, particularly its stability, safety, and compliance with regulatory standards. These indicators include the Capital Adequacy Ratio (CAR), Liquidity Coverage Ratio (LCR), Net Stable Funding Ratio (NSFR), and the Leverage Ratio.

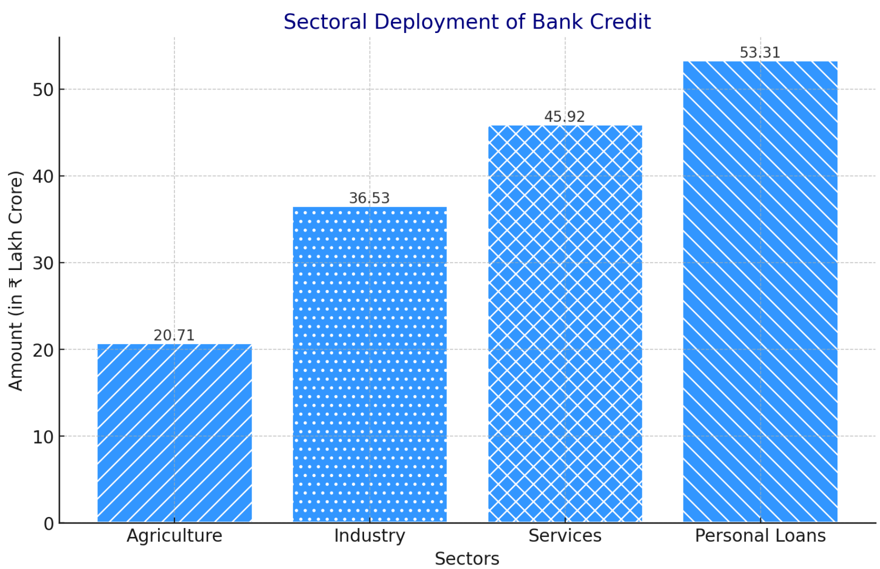


Metric	Description	Requirement	FY 2022-23	FY 2023-24	Why It Matters
Capital Adequacy Ratio (CAR)	Bank's capital vs. risk-weighted assets.	≥ 8%	Not specified	Not specified	The CAR is essential as it ensures that banks possess sufficient capital to absorb potential losses without jeopardizing their solvency, thereby maintaining financial stability and depositor confidence.
Liquidity Coverage Ratio (LCR)	Liquid assets vs. short-term liabilities.	≥ 100%	153.5%	130.3%	The LCR is critical for ensuring that banks can cover net cash outflows for 30 days under a stress scenario.
Net Stable Funding Ratio (NSFR)	Stable funding vs. required stable funding over a year.	≥ 100%	Not specified	126.9%	The NSFR ensures that banks maintain a stable funding profile, thereby reducing the likelihood of future liquidity constraints.
Leverage Ratio	Capital held against total assets.	≥ 3%	7.4%	7.8%	The Leverage Ratio helps contain the buildup of excessive leverage in the banking sector.

Conclusion: The soundness indicators collectively demonstrate the robust financial posture of Indian banks, illustrating their capacity to manage both short-term disruptions and long-term operational demands efficiently.

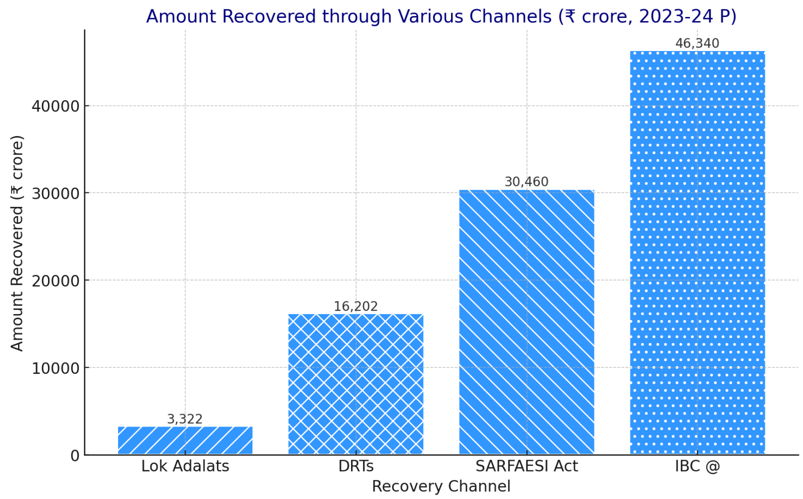
Sectoral Deployment of Bank Credit

Personal Loans form the largest segment, indicating a strong retail lending trend. The Services sector and Industry, reflecting significant credit flow towards economic activities. Agriculture, showing its essential but relatively smaller share in total credit deployment.



Recovery of NPAs by Scheduled Commercial Banks (SCBs) through various channels

In 2023-24 (Provisional), the total recovery of NPAs by Scheduled Commercial Banks (SCBs) through various channels amounted to ₹96,325 crore. Among the channels, IBC was the most effective, followed by SARFAESI Act. Recoveries through DRTs and Lok Adalats were significantly lower. This indicates a continued reliance on IBC and SARFAESI mechanisms for substantial NPA resolution.



Technology in Banking

Adoption of Emerging Technologies

The Indian banking sector is increasingly adopting emerging digital technologies to modernize operations, improve service delivery, and align with global standards.

Artificial Intelligence (AI) and Machine Learning (ML): Banks are using AI and ML for automating internal processes, customer onboarding, credit risk assessment, fraud detection, and customer support. These technologies enable banks to analyze vast amounts of data and generate real-time insights for decision-making. AI-powered chatbots and virtual assistants are increasingly deployed for enhancing customer interaction and grievance redressal.

Cloud Computing: Cloud infrastructure is being leveraged to store and process large datasets efficiently. Banks are moving towards cloud-based core banking solutions to improve scalability, reduce infrastructure costs, and ensure seamless availability of banking services.

Tokenisation: Tokenisation is being adopted to enhance the security of digital transactions. By replacing sensitive customer data, such as card details, with unique tokens, banks aim to reduce the risk of data breaches and improve the safety of payment transactions, especially in card-based and online payment ecosystems.

RBI's Role in Technology Governance: To ensure the responsible adoption of these technologies, the Reserve Bank of India (RBI) is in the process of developing a Framework for Responsible and Ethical Enablement of AI (FREE-AI).

Digital Lending

The Indian banking sector has witnessed a significant rise in digital lending, driven by the growing demand for quick and convenient credit access. Banks and non-banking financial companies (NBFCs) are increasingly offering loans through **Digital Lending Apps (DLAs)** and online platforms. These apps enable customers to apply for loans remotely, without visiting physical branches, and use technology for faster disbursement.

Regulation of Digital Lending Apps (DLAs): With the proliferation of DLAs, concerns around unauthorized and fraudulent apps have also emerged. To protect consumers and ensure transparency, the Reserve Bank of India (RBI) is establishing a public repository of DLAs. This repository will contain verified DLAs linked to Regulated Entities (REs) and will allow customers to confirm whether a digital lending platform is authorized.

Unified Lending Interface (ULI): The Unified Lending Interface (ULI), earlier known as the Public Tech Platform for Frictionless Credit, is an innovative digital public infrastructure developed to streamline and enhance the lending process. ULI aims to create a standardized and seamless platform for connecting lenders and borrowers using Application Programming Interfaces (APIs).

For example, imagine a writer named Ketan who needs a loan to publish his book. Through ULI, Ketan can fill out a single online application that accesses multiple lenders, such as public and private sector banks, small finance banks (SFBs), and NBFCs. The platform securely shares his financial data—with his consent—among these institutions, allowing them to quickly evaluate his application based on uniform criteria. This reduces the time and effort typically required to apply for loans, making credit more accessible for individuals like Ketan who are looking to fund creative projects.

Open Credit Enablement Network (OCEN): OCEN is a initiative designed to make lending easier and more integrated within various service platforms. OCEN provides a standardized framework that allows different financial services to work together seamlessly.

- OCEN enables banks and non-banking financial companies (NBFCs) to collaborate with fintech companies and other platforms, helping them offer loans directly where services or products are sold.
- By using standard Application Programming Interfaces (APIs) and credit protocols, OCEN simplifies how loans are processed. This means that financial services can be embedded directly into platforms like online marketplaces, agricultural technology sites, and supply chain financing portals.

For example, consider a small business owner named Bhavika who sells handicrafts online. Through a platform enabled by OCEN, while Bhavika is managing her online store, she can also apply for a loan to purchase more inventory directly through the same site. The site partners with banks that use OCEN's framework to review her sales data and quickly make a decision on her loan application. This seamless integration demonstrates how OCEN facilitates embedded lending right at the point of service.

RBI is working to expand the scope of ULI and OCEN by including more loan products, data providers, and lending institutions. These initiatives are expected to play a significant role in broadening credit access, especially for underserved sectors like MSMEs, farmers, and rural borrowers, through technology-driven, efficient, and secure lending processes.

Payment Systems

The Indian payment ecosystem has rapidly evolved into one of the most advanced and efficient systems globally.

Unified Payments Interface (UPI): UPI has become a cornerstone of India's digital payment landscape, facilitating instant real-time payments between bank accounts using mobile devices. The RBI continues to enhance UPI along with other systems such as Immediate Payment Service (IMPS), National Electronic Funds Transfer (NEFT), and Real-Time Gross Settlement (RTGS) to make payments more secure and user-friendly.

Internationalisation of Payment Systems: Recognizing the global relevance of India's digital payment technologies, RBI is actively working to internationalize Indian payment systems like UPI and RuPay.

Cross-border linkages have been established with countries including Singapore, UAE, Mauritius, Nepal, Bhutan, France, Sri Lanka, and Maldives, enabling Indian travelers and residents abroad to make payments seamlessly using Indian platforms.

RBI is working with other nations to deploy UPI-like systems, including Peru and Namibia, thereby making India a key player in the global payment technology landscape.

Project Nexus: In a major step toward cross-border payment integration, RBI has joined Project Nexus, an international multilateral initiative aimed at interlinking fast payment systems of multiple countries.

Key Objectives of Project Nexus:

- Enable instant, low-cost, cross-border retail payments using domestic fast payment systems.
- Initial member countries include India, Singapore, Malaysia, Thailand, and the Philippines, who are collaborating to create a seamless payment corridor among these nations.
- The project represents a significant shift toward interoperable, efficient global payments, allowing individuals and businesses to transfer funds internationally in real-time using familiar domestic platforms like UPI.

This fosters ease of remittances, tourism spending, and merchant payments using familiar Indian payment tools.

Central Bank Digital Currency (CBDC)

The Central Bank Digital Currency (CBDC) is a significant initiative by the Reserve Bank of India (RBI) to introduce a digital form of the Indian Rupee. Known as e₹ (e-Rupee), the CBDC is being developed to function as a safe, sovereign digital currency that complements the existing physical cash and supports the ongoing digitalization of the economy. The RBI is currently conducting pilot projects to test CBDC for both retail (CBDC-R) and wholesale (CBDC-W) use cases.

CBDC-Retail (CBDC-R): The CBDC-Retail (CBDC-R) is designed for use by the general public, businesses, and merchants as a digital equivalent of currency notes and coins. The pilot for CBDC-R is currently active and being scaled in a graded manner.

Key Features of CBDC-R:

- Peer-to-Peer (P2P) and Peer-to-Merchant (P2M) transactions through digital wallets provided by participating banks.
- Operable via mobile applications and offline solutions to ensure access even in areas with limited internet connectivity.
- Designed to replicate cash-like features, ensuring anonymity, safety, and universal acceptability.
- Facilitates instant settlements, reducing dependency on traditional payment infrastructure like cards and internet banking.

To broaden its use cases, RBI is testing advanced functionalities within CBDC pilots:

1. **Programmability**: CBDC can be programmed for specific purposes, such as targeted government subsidies, corporate benefits, or conditional payments. This feature allows pre-defined usage conditions, ensuring funds are utilized only for intended purposes, enhancing transparency and accountability.
2. **Offline Transactions**: Offline functionality is under testing to enable CBDC transactions without internet access. This feature is crucial for remote and rural areas, ensuring financial inclusion and uninterrupted payment access.
3. **Geo-fencing and Expiry Controls**: RBI is exploring geo-fencing — restricting the use of CBDC within a specific geographical area, and expiry controls, where a CBDC unit can be set to expire after a certain period. These features will enable better control over government disbursements and ensure timely utilization of funds distributed for specific schemes.

Wholesale CBDC (CBDC-W): While retail CBDC focuses on the public, the Wholesale CBDC (CBDC-W) is being tested for interbank transactions and securities settlement.

- Aims to enhance the efficiency of large-value payments and capital market settlements.
- Can streamline processes like government bond settlement, interbank payments, and foreign exchange transactions, reducing time and costs involved in clearing and settlement.

Fraud Detection

Fraud Vulnerability Index (FVI): RBI is developing a Fraud Vulnerability Index (FVI) to measure and monitor the fraud risk exposure of various financial institutions. The FVI leverages AI/ML to analyze fraud trends, highlight risk-prone areas, and guide preventive measures.

MuleHunter.AI™ for Fraud Detection: One of RBI's significant AI/ML-based initiatives is MuleHunter.AI™, an advanced tool designed to detect and track fraudulent mule accounts used in cybercrimes and financial frauds.

SupTech and RegTech

To improve the efficiency and effectiveness of supervisory and regulatory processes, the Reserve Bank of India (RBI) is increasingly adopting Supervisory Technology (SupTech) and Regulatory Technology (RegTech) solutions.

DAKSH: RBI's Integrated SupTech Platform

- DAKSH is RBI's end-to-end SupTech solution, designed to streamline and automate the supervisory process.
- Through DAKSH, RBI can digitally manage supervisory inspections, monitor compliance, and generate actionable insights from large datasets submitted by regulated entities.
- The platform facilitates continuous and remote supervision, moving beyond traditional on-site inspections to real-time, data-driven oversight.

RegTech focuses on enabling banks and financial institutions to comply with regulatory requirements more efficiently and effectively using technology.

Key Areas of RegTech Implementation:

- Automated Regulatory Reporting: Streamlining the submission of periodic returns and compliance documents through automated systems.
- KYC and AML Compliance: Use of digital KYC (Know Your Customer) and AI/ML-based Anti-Money Laundering (AML) tools to enhance due diligence and detect suspicious transactions.
- Audit and Monitoring Tools: RegTech solutions that assist in internal audits, stress testing, and early warning systems to ensure compliance with prudential norms.

Digital KYC: Digital KYC (Know Your Customer) tools and e-verification platforms are enabling banks to onboard customers without the need for physical visits.

- Use of video KYC, Aadhaar-based eKYC, and PAN-based verification has streamlined the customer onboarding process.
- Reduces barriers to opening bank accounts and accessing credit, especially for individuals in remote and underserved locations.

MSME and Agricultural Credit: Digital financial inclusion tools such as OCEN, ULI, and digital KYC are particularly focused on extending credit to MSMEs, farmers, and micro-entrepreneurs, which are crucial for economic growth but often face barriers in accessing formal finance.

- ULI and OCEN platforms provide context-specific credit products for these segments, supported by alternative data sources like satellite imagery, GST data, and transaction history.
- By using technology to assess creditworthiness, banks can offer tailored loan products even in the absence of traditional collateral or formal credit history.

Financial Inclusion

As the country progresses toward a digitally empowered economy, financial inclusion remains crucial for reducing inequality, empowering vulnerable populations, and achieving broader economic resilience and stability.

National Strategy for Financial Inclusion (NSFI 2.0) 2025-30: Building on the progress made under the first National Strategy for Financial Inclusion (NSFI) 2019-24, the Reserve Bank of India (RBI) is in the process of formulating a revised and forward-looking National Strategy for Financial Inclusion (NSFI) for 2025-30.

The RBI, in consultation with stakeholders such as banks, non-banking financial companies (NBFCs), development finance institutions, government bodies, and consumer organizations, is working to ensure that the strategy reflects ground realities and the diverse needs of various user segments.

NSFI 2025-30 will also align with broader national priorities such as inclusive economic growth, gender equality, and poverty reduction, while complementing India's Sustainable Development Goals (SDGs) and international commitments on financial inclusion.

Lead Bank Scheme (LBS): Under LBS, a designated Lead Bank takes responsibility for ensuring adequate banking presence, flow of credit, and financial services in each district. The scheme aims to facilitate inclusive and equitable access to financial services, particularly in rural and underbanked regions.

Progress in Banking Access

Over the years, significant progress has been made in extending banking infrastructure and services to rural and semi-urban areas.

Expansion of Banking Network

- The number of commercial bank branches per one lakh population increased 1.5 times between 2010 and 2023.
- The per capita availability of ATMs in India has increased threefold since 2010.

Business Correspondents (BCs)

- The Business Correspondent (BC) model has emerged as a key enabler of last-mile banking access, especially in remote and difficult-to-reach areas.
- BCs provide a wide range of services, including account opening, cash deposits, withdrawals, remittances, and micro-loans, using technology-enabled devices such as micro-ATMs and mobile banking units.
- As per the RBI's guidelines, banks are mandated to ensure that BC touchpoints are available within 5 kilometers of every inhabited village in identified regions.

Pradhan Mantri Jan Dhan Yojana (PMJDY): PMJDY accounts provide access to a suite of financial products, including RuPay debit cards, overdraft facilities, and direct benefit transfers (DBTs).

The widespread availability of **Basic Savings Bank Deposit Accounts (BSBDAs)** ensures that no-frills banking services are accessible to the poor and marginalized sections of society. These accounts serve as gateways to other financial services such as micro-credit, insurance, and pension schemes.

Credit Outreach

District Credit Plans (DCPs) are formulated to meet the specific credit needs of each district, with priority to sectors like agriculture, MSMEs, and weaker sections.

Support to Self-Help Groups (SHGs): Banks have actively supported Self-Help Groups (SHGs), especially women-led SHGs, by providing group-based lending and capacity building.

The SHG-Bank linkage program continues to be a major contributor to financial inclusion, empowering women, small entrepreneurs, and rural households to access formal credit.

Leveraging Technology for Outreach

- Banks have adopted digital channels, including mobile banking apps, internet banking, and UPI, to supplement physical outreach and serve customers in remote areas.
- Micro-ATMs and Aadhaar-enabled Payment Systems (AePS) have enabled interoperable, real-time transactions in rural areas without the need for traditional ATMs or branches.
- Banks are also using geo-tagging and analytics to identify gaps in service coverage and plan future expansions accordingly.

Priority Sector Lending (PSL)

Under PSL, banks are mandated to lend a specified portion of their adjusted net bank credit (ANBC) to sectors identified as "priority" by the Reserve Bank of India (RBI).

*Adjusted Net Bank Credit (ANBC) is the total credit a bank gives out, adjusted for specific regulatory requirements set by the RBI.

Key Sectors under Priority Sector Lending

1. **Agriculture**: Includes loans to individual farmers, Self-Help Groups (SHGs), Joint Liability Groups (JLGs), and agribusiness entities. Sub-targets for small and marginal farmers ensure that those with limited landholdings also benefit from formal credit.
2. **Micro, Small and Medium Enterprises (MSMEs):** PSL also supports startup funding and working capital needs, critical for MSMEs' sustainability.
3. **Export Credit**
4. **Education and Housing:** Education loans for students pursuing higher studies in India and abroad. Housing loans for construction or purchase of affordable housing units for economically weaker sections (EWS) and low-income groups (LIG).
5. **Social Infrastructure and Renewable Energy:** Financing for the creation of healthcare, education facilities, sanitation, and renewable energy projects in underserved areas.
6. **Others (Weaker Sections):** Lending to Scheduled Castes (SC), Scheduled Tribes (ST), women, minorities, artisans, and persons with disabilities.

PSL Targets and Sub-Targets

General Targets

- Commercial banks (including foreign banks with more than 20 branches) are required to allocate 40% of their ANBC to priority sectors.
- Small Finance Banks (SFBs) have a higher PSL target of 75% of ANBC.

Sub-Targets for Specific Sectors

- Agriculture: 18% of ANBC, with at least 8% for small and marginal farmers.
- Micro Enterprises: 7.5% of ANBC.
- Weaker Sections: 12% of ANBC.

These targets are reviewed periodically to align with national priorities and sectoral credit requirements.

Challenges in Priority Sector Lending

- Regional disparities in PSL disbursement, with some backward regions remaining underserved.
- Ensuring repayment discipline and addressing high NPAs (Non-Performing Assets) in certain PSL categories like agriculture.
- Need for better monitoring, impact assessment, and data-driven credit allocation.

Priority Sector Lending Certificates (PSLCs)

PSLCs are tradable instruments that enable banks to achieve PSL targets without direct lending in certain segments. PSLCs allow banks with surplus PSL to sell their excess achievement to banks falling short of PSL obligations, thereby creating a market-based mechanism for fulfilling PSL mandates efficiently.

There are four categories of PSLCs based on the underlying sectors:

- PSLC–Agriculture
- PSLC–Small and Marginal Farmers (SMF)
- PSLC–Micro Enterprises (ME)
- PSLC–General (covering any eligible priority sector categories)

Mechanism and Benefits of PSLCs

- PSLCs are traded on RBI’s e-Kuber platform, ensuring a transparent and efficient market.
- PSLCs promote efficiency in credit distribution, enabling specialization — for example, regional rural banks (RRBs) and small finance banks (SFBs) with rural expertise can sell PSLCs to banks with limited rural operations.
- Encourages market-driven solutions to PSL challenges rather than mere regulatory compulsion.

FinTech and EmTech in Banking

Financial Technology (FinTech) and Emerging Technologies (EmTech) are reshaping banking services, improving efficiency, security, and accessibility, while also introducing new regulatory and operational challenges.

FinTech and EmTech Repositories: On May 28, 2024, the RBI launched the FinTech Repository to capture essential information about FinTech entities, their activities, and technology usage.

Alongside, an EmTech Repository was launched to track the adoption of emerging technologies, such as: Artificial Intelligence (AI) and Machine Learning (ML), Cloud Computing, Distributed Ledger Technology (DLT) (Blockchain), Quantum Technology.

These repositories enable the RBI to understand technological advancements in financial services and formulate appropriate policies.

Self-Regulatory Organization (SRO) Framework for FinTechs: To encourage self-regulation in the FinTech sector, the RBI introduced a framework for Self-Regulatory Organizations (SROs) in FinTech (SRO-FT) on May 30, 2024.

SROs are responsible for:
- Setting industry standards and codes of conduct
- Monitoring compliance with regulations
- Addressing grievances and consumer protection

The FinTech Association for Consumer Empowerment has been recognized as an SRO-FT, making it the first such entity under the new framework.

PRAVAAH – Regulatory Application Platform: PRAVAAH (Platform for Regulatory Application, Validation, and Authorization) was launched by the RBI on May 28, 2024.

It is a centralized digital portal that allows individuals and entities to apply for licenses, approvals, and regulatory clearances from the RBI.
PRAVAAH aims to:
- Reduce turnaround time for regulatory approvals
- Increase transparency and ease of doing business for regulated entities.

RBI's Regulatory Sandbox: The RBI's Regulatory Sandbox (RS) allows live testing of new financial technologies in a controlled environment.

HaRBInger Global Hackathon is an annual event where FinTech startups develop new solutions for financial security, fraud prevention, and accessibility.

Retail Direct Mobile Application: To enhance participation in government securities (G-secs), the RBI launched the RBI Retail Direct Mobile App in May 2024. This app allows individual investors to directly access G-secs markets through an easy-to-use interface.

Challenges:

- Regulatory Compliance: As FinTech innovations evolve, maintaining consumer protection and financial stability remains a challenge.
- Cybersecurity Risks: Increased adoption of AI, cloud computing, and blockchain introduces data security and fraud risks.
- Algorithmic Bias: AI-driven lending and decision-making must ensure fairness and transparency.

Way Forward:

- Strengthening AI Ethics and Governance: The RBI is working on a Framework for Responsible and Ethical Enablement of AI (FREE-AI) to ensure ethical and unbiased AI adoption in financial services.
- Expanding the Scope of Regulatory Sandboxes: More emerging technologies like tokenization, quantum computing, and DeFi (Decentralized Finance) could be tested under controlled environments.

Banking and Climate Change

As banks and non-banking financial companies (NBFCs) provide credit to industries, businesses, and infrastructure projects, their exposure to climate-related financial risks has grown.

Climate-related risks can broadly be classified into two categories:

Physical Risks:

- Impact of extreme weather events such as floods, droughts, cyclones, and heatwaves on businesses, agriculture, and infrastructure.
- Increased loan defaults from climate-sensitive sectors like farming, tourism, and real estate.
- Rising insurance costs and property devaluation due to climate disasters.

Transition Risks:

- Policy changes such as carbon taxes and emission reduction mandates increasing costs for fossil-fuel-based industries.
- Market shifts towards green energy reducing demand for traditional energy investments.

To protect financial stability, the RBI is strengthening risk assessment, stress testing, and disclosure frameworks for climate-related financial risks.

Green Finance and Sustainable Banking Initiatives

Inclusion of Renewable Energy in Priority Sector Lending (PSL): RBI has included financing for renewable energy projects under PSL, ensuring greater credit flow to solar, wind, bio-energy, and small hydro projects.

Green Deposit Framework: The Green Deposit Framework was introduced by RBI to promote environmentally sustainable investments. Banks and financial institutions mobilize deposits specifically to fund green projects, ensuring capital is directed toward sustainable industries.

Sovereign Green Bonds (SGrBs): The Government of India has issued Sovereign Green Bonds (SGrBs) to fund climate-related infrastructure projects.

RBI allows foreign investors to invest and trade in these bonds at the International Financial Services Centre (IFSC) in India. Green bonds attract climate-conscious investors and help finance sustainable development.

Climate Risk Management in Banking

Climate Risk Disclosure and Reporting: On February 28, 2024, RBI released a draft disclosure framework for climate-related financial risks.

Stress Testing for Climate Risk: RBI is finalizing guidelines on scenario analysis and stress testing for climate risks. Stress tests help banks evaluate their exposure to climate risks under different climate scenarios.

Reserve Bank – Climate Risk Information System (RB-CRIS): To improve climate risk assessments, RBI is developing the Reserve Bank – Climate Risk Information System (RB-CRIS).

RB-CRIS will provide:

- A web-based directory of climate data sources (meteorological, geospatial, environmental).
- Standardized datasets for financial institutions to assess climate risks in lending and investment.

This system aims to bridge data gaps in climate finance and enhance banks' ability to manage environmental risks.

Practice Questions

1. Assess the health of the banking sector in India. How have key indicators evolved in recent years?
2. What is the significance of financial inclusion in India's economic growth? Discuss the measures taken by the government and RBI to promote financial inclusion, and their impact on marginalized sections of society.
3. How has the adoption of emerging technologies transformed the Indian banking sector? What challenges and opportunities do these technologies present?
4. Examine the impact of climate change on the banking sector in India. How are banks addressing climate-related financial risks?

CHAPTER 8

STOCK MARKET

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Chapter 8

Stock Market

Stock Market Indices

Stock market indices are crucial analytical tools used by investors and financial analysts to assess the performance of the stock market. They aggregate the value of a group of stocks to provide a single value that reflects the market or a sector's overall health and trajectory.

By tracking a market index, investors can get a sense of the market direction and make informed investment decisions without the need to analyze every individual stock.

List of the top stock exchanges in the world:

Rank	Stock Exchange	Location	Key Index
1	New York Stock Exchange (NYSE)	New York City, USA	Dow Jones Industrial Average (DJIA), S&P 500
2	NASDAQ Stock Market (NASDAQ)	New York City, USA	Nasdaq Composite, Nasdaq-100
3	Shanghai Stock Exchange (SSE)	Shanghai, China	Shanghai Composite
4	Euronext	Europe (Paris, Amsterdam, Brussels, Lisbon, Dublin)	CAC 40, AEX
5	Tokyo Stock Exchange (TSE)	Tokyo, Japan	Nikkei 225
6	Hong Kong Stock Exchange (HKEX)	Hong Kong, China	Hang Seng Index
7	London Stock Exchange (LSE)	London, UK	FTSE 100
8	Shenzhen Stock Exchange (SZSE)	Shenzhen, China	Shenzhen Composite Index
9	Bombay Stock Exchange (BSE)	Mumbai, India	SENSEX
10	National Stock Exchange of India (NSE)	Mumbai, India	NIFTY 50
11	Frankfurt Stock Exchange (FSE)	Frankfurt, Germany	DAX
12	Korea Stock Exchange (KRX)	Seoul, South Korea	KOSPI

Rank	Stock Exchange	Location	Key Index
13	Australian Securities Exchange (ASX)	Sydney, Australia	ASX 200
14	BM&FBOVESPA (B3)	São Paulo, Brazil	IBOVESPA
15	Toronto Stock Exchange (TSX)	Toronto, Canada	S&P/TSX Composite Index

In India, the Sensex and Nifty 50 are two of the most significant indices:

- **Sensex**: The S&P BSE Sensex, which includes 30 of the largest and most actively traded stocks on the Bombay Stock Exchange.
- **Nifty 50**: The Nifty 50, encompassing 50 diverse stocks from the National Stock Exchange, reflects a broad-based and multi-sectoral dimension of the Indian equity market.

Note: The composition and weightage of the stocks within both the Nifty 50 and Sensex are dynamic and are frequently rebalanced. There is no need to memorize the list of stocks that comprise the indices for exams.

	Nifty50		**Sensex**	
S.No.	Company	Industry	Company	Industry
1	Maruti Suzuki India Ltd.	Automobile and Auto Components	Maruti Suzuki	Automobiles
2	Mahindra & Mahindra Ltd.	Automobile and Auto Components	Tata Motors	Automobiles
3	Bajaj Auto Ltd.	Automobile and Auto Components	M&M	Automobiles
4	Hero MotoCorp Ltd.	Automobile and Auto Components	Axis Bank	Banking
5	Tata Motors Ltd.	Automobile and Auto Components	Kotak Mahindra Bank	Banking
6	Eicher Motors Ltd.	Automobile and Auto Components	SBI	Banking
7	Bharat Electronics Ltd.	Capital Goods	HDFC Bank	Banking
8	Larsen & Toubro Ltd.	Construction	ICICI Bank	Banking
9	UltraTech Cement Ltd.	Construction Materials	IndusInd Bank	Banking
10	Grasim Industries Ltd.	Construction Materials	Ultratech Cement	Cement
11	Asian Paints Ltd.	Consumer Durables	Reliance Ind.	Energy
12	Titan Company Ltd.	Consumer Durables	L&T	Engineering
13	Trent Ltd.	Consumer Services	Bajaj Finserv	Finance
14	ITC Ltd.	Fast Moving Consumer Goods	Bajaj Finance	Finance
15	Hindustan Unilever Ltd.	Fast Moving Consumer Goods	Hindustan Unilever	FMCG

	Nifty50		Sensex	
S.No.	Company	Industry	Company	Industry
16	Nestle India Ltd.	Fast Moving Consumer Goods	ITC	Food & Tobacco
17	Tata Consumer Products Ltd.	Fast Moving Consumer Goods	Nestle	Food & Tobacco
18	Britannia Industries Ltd.	Fast Moving Consumer Goods	Adani Ports & Sez	Miscellaneous
19	IndusInd Bank Ltd.	Financial Services	Zomato	Miscellaneous
20	Shriram Finance Ltd.	Financial Services	Asian Paints	Paints
21	Axis Bank Ltd.	Financial Services	Sun Pharma	Pharmaceuticals
22	Bajaj Finance Ltd.	Financial Services	NTPC	Power
23	Kotak Mahindra Bank Ltd.	Financial Services	Power Grid	Power
24	State Bank of India	Financial Services	Titan	Retailing
25	SBI Life Insurance Company Ltd.	Financial Services	HCL Technologies	Software
26	ICICI Bank Ltd.	Financial Services	TCS	Software
27	HDFC Life Insurance Company Ltd.	Financial Services	Tech Mahindra	Software
28	HDFC Bank Ltd.	Financial Services	Infosys	Software
29	Bajaj Finserv Ltd.	Financial Services	Tata Steel	Steel
30	Dr. Reddy's Laboratories Ltd.	Healthcare	Bharti Airtel	Telecom
31	Sun Pharmaceutical Industries Ltd.	Healthcare		
32	Apollo Hospitals Enterprise Ltd.	Healthcare		
33	Cipla Ltd.	Healthcare		
34	Tech Mahindra Ltd.	Information Technology		
35	Tata Consultancy Services Ltd.	Information Technology		
36	Wipro Ltd.	Information Technology		
37	Infosys Ltd.	Information Technology		
38	HCL Technologies Ltd.	Information Technology		
39	JSW Steel Ltd.	Metals & Mining		
40	Hindalco Industries Ltd.	Metals & Mining		
41	Tata Steel Ltd.	Metals & Mining		
42	Adani Enterprises Ltd.	Metals & Mining		
43	Reliance Industries Ltd.	Oil Gas & Consumable Fuels		
44	Oil & Natural Gas Corporation Ltd.	Oil Gas & Consumable Fuels		
45	Coal India Ltd.	Oil Gas & Consumable Fuels		

	Nifty50		Sensex	
S.No.	Company	Industry	Company	Industry
46	Bharat Petroleum Corporation Ltd.	Oil Gas & Consumable Fuels		
47	NTPC Ltd.	Power		
48	Power Grid Corporation of India Ltd.	Power		
49	Adani Ports and Special Economic Zone Ltd.	Services		
50	Bharti Airtel Ltd.	Telecommunication		

Why do we track them?

Both the Sensex and the Nifty 50 are critical indicators of the overall health of the Indian stock market and, by extension, the Indian economy. Here are a few reasons why they are extensively tracked:

- **Market Performance**: They provide a snapshot of market trends and are used by investors to understand the overall momentum of the equity markets in India.
- **Benchmarking**: Mutual funds and portfolio managers use these indices as benchmarks to compare the performance of their funds or portfolios. A fund that consistently outperforms the Sensex or Nifty 50 is considered to be doing well.
- **Investment Decisions**: Investors use changes in the indices to make decisions about entering or exiting the market. Significant movements in the indices can indicate broader economic trends, impacting investment strategies.
- **Economic Indicator**: Given their composition of leading companies across various sectors, movements in these indices can reflect broader economic conditions.

Factors Affecting the Stock Market

1. Company Performance

- Profits & Losses: Strong quarterly results, revenue growth, and profitability lead to a rise in stock prices. Conversely, poor earnings drag the stock down.
- New Product Launches, Mergers, Acquisitions: Announcements related to new product lines, strategic mergers, acquisitions, and expansions often boost investor confidence and raise stock valuations.

2. Economic Factors: Broader macroeconomic conditions are fundamental to market direction.

- GDP Growth Rate: High GDP growth signals a robust economy, encouraging investments. Slow growth or contraction (recession risks) makes markets cautious, leading to declines.
- Inflation: High inflation reduces the purchasing power of consumers and increases input costs for companies, impacting profitability and investor confidence negatively.

- Interest Rates: When RBI raises interest rates to combat inflation, borrowing becomes expensive for businesses and consumers, slowing growth and reducing market attractiveness. Falling rates often boost equity markets by encouraging borrowing and investments.
- Government Budget & Policies: Announcements like tax cuts, higher spending on infrastructure, industry-specific incentives, and policy reforms (e.g., GST, PLI schemes) significantly influence market sentiment, as they determine future profitability of companies and sectors.

3. Global Influences: Indian markets are highly sensitive to international trends due to globalization.

- Stock Market Trends (US, Europe, China): Movements in major global indices (Dow Jones, NASDAQ, FTSE, Shanghai Composite) influence Indian indices. A global rally encourages Indian investors, while a crash may trigger panic selling.
- Crude Oil Prices: As India is a large importer of crude oil, rising oil prices widen fiscal deficit and push inflation causing broad market pressure.
- Foreign Institutional Investors (FII) Flows: FIIs bring huge liquidity to Indian markets. Large FII inflows often lead to market rallies, while their exits can cause sharp corrections. Global events like US Fed rate changes, geopolitical tensions, or economic crises drive FII behavior.

4. Political & Natural Events

- Elections & Government Stability: Election outcomes influence market direction. A stable, business-friendly government boosts market confidence; political uncertainty causes volatility.
- Wars & Geopolitical Tensions: Conflicts, both domestic and international (like India-China border tensions or Russia-Ukraine war), disrupt markets due to fears of economic fallout.
- Pandemics & Natural Disasters: Events like COVID-19, earthquakes, floods disrupt economies, production, and trade, causing steep market declines.
- Policy Changes in Crisis: During such events, central banks and governments may introduce stimulus packages or rate cuts, influencing market direction.

5. Investor Sentiment & Market Trends: Market movements are often driven more by emotions and sentiment than by fundamentals in the short run.

- Fear & Greed Cycles (Bull vs. Bear Markets): In bull markets, optimism and greed dominate, driving prices higher even beyond fundamental value, creating potential bubbles. In bear markets, fear and panic lead to widespread selling and price drops, often causing markets to become undervalued. These emotional cycles can persist despite underlying company performance.
- Speculation & Rumors: Markets react sharply to speculation about deals, policies, earnings, or crises, causing high volatility. Often, speculative news leads to irrational exuberance or panic, which may not reflect reality.
- Media Influence: News coverage, expert opinions, and social media play a powerful role in shaping investor perception, sometimes amplifying trends and driving momentum. Sensational headlines can lead to overreactions, affecting index levels temporarily.

6. Valuation & Market Correction

- Overvaluation: When stock prices rise too far above their intrinsic value due to hype or excessive optimism, they are said to be overvalued. This increases the risk of a market fall.
- Undervaluation: In times of fear or crisis, good companies may trade below their true worth, presenting buying opportunities for long-term investors.
- Market Correction: A market correction is a healthy decline (typically 10% or more) in stock prices to adjust overvaluation and bring markets back to realistic levels. Corrections prevent bubbles and allow new investors to enter at fair prices.
- Profit Booking: After a long rally, investors engage in profit booking, selling shares to realize gains, which can lead to short-term corrections, even in fundamentally strong markets.

Long-Term Trend in India's Stock Market

BSE Sensex

Nifty 50

India's stock market has delivered remarkable long-term growth, reflecting the country's rise as a global economic powerhouse. The Sensex, launched in 1986, has grown from 100 points in 1979 to over 65,000 points by 2023-24, representing a CAGR of around 11-12%, excluding dividends.

Similarly, Nifty 50, launched in 1996, began at ~1,100 points and has crossed 19,500 points in 2023-24.

Key Factors Driving Long-Term Stock Market Growth

1. Economic Liberalization (Post-1991 Reforms): The 1991 economic reforms were a turning point that ended India's closed, highly regulated economic model. These reforms opened India's economy to foreign investment, global trade, and private sector growth.

2. Demographic Dividend and Rising Middle Class: India enjoys a unique demographic advantage, with 65% of its population under the age of 35, making it one of the youngest nations globally. This young workforce is driving demand for housing, banking, automobiles, technology, healthcare, and consumer goods. With rapid urbanization and a rising middle class, India is seeing a massive consumption boom.

3. Emergence of Modern Financial Markets and Institutions: The creation of NSE in 1992 and the adoption of electronic, transparent trading systems marked a major transformation of Indian stock markets. Regulation under SEBI (Securities and Exchange Board of India) brought investor protection, corporate governance, and market transparency.

India saw rapid growth in mutual funds, insurance, and pension funds, increasing the role of Domestic Institutional Investors (DIIs). Retail investors surged from a small base to over 15 crore+ Demat accounts by 2023, supported by mobile-based trading apps like Zerodha, Groww, and Upstox.

Systematic Investment Plans (SIPs) in mutual funds now contribute over ₹17,000 crore/month, providing a steady flow of capital to markets and reducing dependence on foreign investors.

4. Sectoral Growth: India's stock market reflects the multi-sectoral growth of the economy. Sectors like Information Technology (IT), Pharma, Banking & Financial Services (BFSI), Fast-Moving Consumer Goods (FMCG), and Telecom have emerged as dominant sectors.

Recently, new-age startups and digital companies such as Zomato, Nykaa, Paytm, and Policybazaar have listed, reflecting the expansion of India's digital economy.

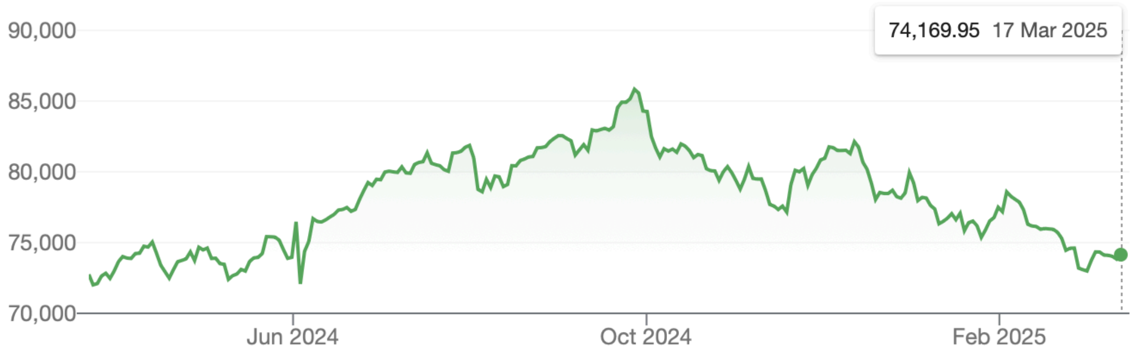
5. Government Reforms: The Indian government has implemented several transformational reforms that have directly benefited the economy and stock markets.

Key reforms include Goods and Services Tax (GST), which unified India's indirect tax system, and Insolvency and Bankruptcy Code (IBC), which streamlined corporate debt resolution, RERA brought transparency to real estate, and PLI (Production Linked Incentive) schemes boosted manufacturing. These reforms have enhanced India's attractiveness as a global investment destination.

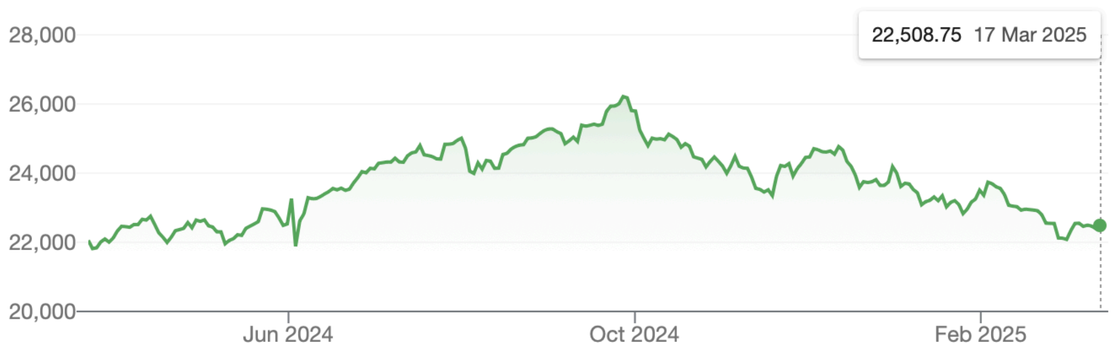
6. Globalization: India has become a major hub for Foreign Institutional Investments (FIIs) and Foreign Direct Investment (FDI), thanks to its stable democratic governance, growing market size, and skilled labor force.

Stock Market performance in FY25

BSE Sensex



Nifty 50



The Indian stock market has recently experienced a notable downturn, with key indices such as the BSE Sensex and NSE Nifty 50 witnessing significant declines.

Primary factors affecting Stock Market in FY25

1. Global Trade Tensions & Economic Slowdown: Global economic dynamics significantly influence domestic markets like India's.

- Trade Policies: Recent U.S. decisions to impose tariffs on imports have heightened fears of a trade war, leading to global economic uncertainty. Such measures can disrupt international trade flows.
- Slowdown in Major Economies: Economic slowdown in major economies, notably the U.S. and China, reduces demand for exports from emerging markets, including India. This decline in demand can lead to reduced revenues for Indian companies that rely on international markets.

2. Foreign Institutional Investor (FII) Outflows: FIIs play a pivotal role in India's stock market by bringing in substantial capital.

- Capital Withdrawal: In recent months, FIIs have withdrawn significant funds from Indian equities, influenced by factors such as rising U.S. bond yields offering better returns and global economic uncertainties.

3. Weak Domestic Economic Indicators: Domestic economic health directly affects investor confidence and market performance.

- GDP Growth: India's economy is projected to grow at its slowest pace in four years, primarily due to weak urban demand.
- Consumer Demand: A decline in consumer spending affects sectors like automobiles and consumer goods. For instance, two-wheeler sales dropped by 9% in February 2025.

4. Regulatory Changes by SEBI: The Securities and Exchange Board of India (SEBI) regulates the securities market to protect investors and ensure market integrity.

- Derivatives Trading: SEBI has introduced stricter norms for futures and options (F&O) trading by raising entry barriers and increasing margin requirements. While these measures aim to curb excessive speculation and protect retail investors, they have led to reduced trading volumes and liquidity in the market.
- Finfluencer Regulations: To combat the rise of unregulated financial advice, SEBI now restricts financial influencers ('finfluencers') from using live stock market data in their educational content. This move aims to prevent the dissemination of real-time trading tips disguised as education, thereby protecting inexperienced investors from potential misinformation.

5. Declining Corporate Earnings: Several top companies have reported quarterly results falling short of expectations, leading to stock price corrections. Sectors like IT, banking, and manufacturing have seen slower revenue growth, impacting overall investor sentiment.

6. Indian Rupee Depreciation: Currency fluctuations can have broad implications for the economy and markets.

- Rupee vs. Dollar: The Indian rupee has weakened against the U.S. dollar, making imports costlier. This depreciation increases operational costs for companies reliant on imported goods or services, squeezing profit margins and potentially leading to higher consumer prices.
- Foreign Investment: A weaker rupee can deter foreign investments, as returns in the investor's home currency may diminish.

Front Running

Front running is a form of market manipulation where a trader exploits advance knowledge of a large order or trade to make a profit before the order is executed in the market.

Why in the News?

The Securities and Exchange Board of India (SEBI) caught Ketan Parekh and several others for engaging in front-running activities between January 2021 and June 2023. They allegedly obtained non-public information regarding the trades of a major U.S.-based foreign portfolio investor (FPI) and used this knowledge to execute trades ahead of the client's orders.

How Does Front Running Work?

Here's a simple breakdown of how front running occurs:

1. Knowledge of Large Orders: A trader (or a firm) gains advance knowledge of a large buy or sell order that is likely to affect the stock's price. This information could come from brokers or financial institutions.
2. Execution of the Trade: Before the large trade order is placed in the market, the front-runner buys (in case of a large purchase order) or sells (in case of a large sell order) the security for their own benefit, anticipating that the large order will move the stock price in their favor.
3. Profit: After the large order is executed and the price moves, the front-runner sells (or buys back) the security at the new price, making a profit.

The Securities and Exchange Board of India (SEBI) has been vigilant in uncovering market manipulation schemes, including front running. In this particular case, SEBI caught Parekh and his associates by analyzing unusual trading patterns, through a combination of market data analysis and surveillance tools.

Practice Questions

1. Examine the role of stock market indices like Sensex and Nifty 50 in reflecting the health of the Indian economy. How do they serve as benchmarks for investors and policymakers?
2. Discuss the long-term growth trends in India's stock market. What are the key factors driving this growth, and how do demographic and economic reforms contribute to stock market performance?
3. Evaluate the impact of global economic factors on the Indian stock market.
4. Analyze the challenges faced by the Indian stock market in FY25. How do these factors affect investor sentiment?
5. What are the regulatory measures introduced by SEBI to ensure market integrity? How effective are these regulations in maintaining market stability?

CHAPTER 9

AGRICULTURE & ALLIED SECTORS

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Chapter 9
Agriculture & Allied Sectors

Percent of Total Workforce Engaged in Agriculture and Allied Sectors	54.6% (Census 2011).
GVA Share of Agriculture and Allied Sector (at current prices for 2022-23.)	18.4%

Land Use Statistics 2021-22

Land Use Parameter	Explanation	Value
Total Geographical Area	The total area of India, including agricultural land, water, and non-agricultural land.	328.7 million hectares
Agricultural Land	The percentage of total geographical area used for farming.	54.8% of total geographical area
Net Sown Area	The area of land actively planted with crops.	141.00 million hectares
Gross Cropped Area	The total area cropped, considering multiple cropping seasons in a year.	219.158 million hectares
Cropping Intensity	The ratio of gross cropped area to net sown area, indicating how often land is cropped.	155.4%
Net Area Sown as % of Total Area	The proportion of the total geographical area that is used for cropping.	42.8%
Total Cropped Area Growth (2021-22 vs 1950-51)	The percentage increase in total cropped area from 1950-51 to 2021-22.	66.1% increase
Net Irrigated Area	The area of land that is irrigated for crop cultivation.	77.9 million hectares
Irrigation Source Distribution	The breakdown of irrigation methods used: canal, tube wells, tanks, etc.	Canal: 24.7%, Tube Wells: 47.3%, Tanks: 2.8%, Other Wells: 13.2%, Other Sources: 12%
Gross Irrigated Area (2021-22)	The total area of land irrigated, accounting for multiple irrigation sources.	120.3 million hectares
Gross Irrigated Area as % of Gross Cropped Area	The proportion of the total cropped area that is irrigated.	54.9%

Production of Major Crops

Crop Category	Production in 2021-22 (Lakh Tonnes)	Production in 2022-23 (Lakh Tonnes)
Foodgrains	3156.16	3296.87
Rice	1294.71	1357.55
Wheat	1077.42	1105.54
Nutri/Coarse Cereals	511.01	573.19
Pulses	246.56	260.58

Rainfall and Irrigation System

- Rainfall Distribution: Around 55% of India's net sown area receives irrigation, while the rest is dependent on rainfall, which is often unpredictable. Drought risks vary across regions, with arid zones experiencing a probability exceeding 40%.
- Impact of Climate Change: Climate change is increasing the challenges of erratic monsoon patterns. Dry spells during the monsoon season have increased by 27% from 1981 to 2011, and extreme daily rainfall events have surged by 75% in central India from 1950 to 2015.

Irrigation Coverage

- Increase in Irrigated Area: Between FY16 and FY21, India saw a rise in the irrigated area from 49.3% to 55% of the gross cropped area (GCA). States like Punjab, Haryana, and Uttar Pradesh have high irrigation coverage, while others, like Jharkhand and Assam, remain underserved.
- Per Drop More Crop (PDMC) Initiative: Under the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), the PDMC scheme promotes micro-irrigation, such as drip irrigation and sprinklers, to optimize water use. The scheme supports small farmers with 55% financial assistance for installing micro-irrigation systems.
- Micro-Irrigation Fund (MIF): The Micro-Irrigation Fund (MIF) supports states with interest subvention of 2% on loans taken to implement irrigation systems.

Water Conservation Initiatives

- Rejuvenating Water Bodies: Studies have suggested community-led, technology-enabled models to rejuvenate water bodies. The CLART GIS and AVNI Gramin app are being used to monitor and restore water bodies, which can help recharge groundwater.

Key Strategies for Doubling Farmers' Income

S. No.	Strategy	Government Initiatives	Description
1.	Increase in Crop Productivity	- Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)	- Expands irrigation and improves water efficiency.

S. No.	Strategy	Government Initiatives	Description
		- National Food Security Mission (NFSM)	- Increases production through area expansion and productivity enhancement.
2.	Increase in Livestock Productivity	- National Livestock Mission - Rashtriya Gokul Mission	- Enhances genetic quality and health of livestock. - Promotes indigenous cattle breeds.
3.	Resource Use Efficiency	- Soil Health Card Scheme - Paramparagat Krishi Vikas Yojana (PKVY)	- Guides farmers on efficient fertilizer use. - Promotes organic farming.
4.	Increase in Cropping Intensity	- Mission for Integrated Development of Horticulture (MIDH)	- Supports multi-cropping and inter-cropping to enhance returns to farmers.
5.	Diversification towards High-Value Agriculture	- Operation Greens - Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)	- Stabilizes pricing for Tomato, Onion, and Potato (TOP) crops. - Supports infrastructure for high-value agriculture.
6.	Remunerative Prices to Farmers	- Minimum Support Price (MSP) - Electronic National Agriculture Market (e-NAM)	- Ensures fair pricing for crops. - Facilitates better market access and ensures optimal prices for farmers.
7.	Shift from Farm to Non-Farm Occupations	- Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) - Pradhan Mantri Mudra Yojana (PMMY)	- Focuses on skill development and employment outside agriculture. - Provides financial support for non-farm enterprises.

More Schemes

Scheme	Description
PM KISAN (Pradhan Mantri Kisan Samman Nidhi)	Provides direct financial support to eligible farmers to supplement their income, covering farming expenses and family needs.
Pradhan Mantri Fasal Bima Yojana (PMFBY)	A crop insurance scheme that provides financial support to farmers suffering crop loss/damage arising out of unforeseen events.
Institutional Credit for Agriculture Sector	Facilitates access to affordable financial services for farmers, improving their financial stability and capacity to invest in agriculture.
Minimum Support Price (MSP)	Ensures that farmers are guaranteed a minimum price for their crops, aiming to boost earnings at least 1.5 times over the cost of production.
Promotion of Organic Farming	Supports the adoption of organic farming practices which enhance biodiversity, reduce dependency on chemical inputs, and yield premium market value.

Scheme	Description
Per Drop More Crop	Part of PMKSY aimed at improving water use efficiency through drip and sprinkler irrigation systems.
Micro Irrigation Fund	Promotes micro-irrigation by extending affordable financial assistance, enhancing water conservation and increasing crop yields.
Promotion of Farmer Producer Organizations (FPOs)	Encourages the formation and growth of FPOs to collectively leverage benefits such as shared resources, access to markets, and credit.
National Beekeeping and Honey Mission (NBHM)	Aims to promote beekeeping as an integrated activity to improve agriculture productivity, enhance income through honey production.
Agricultural Mechanization	Encourages the use of modern machinery and technology in farming to increase efficiency and reduce labor costs.
Namo Drone Didi	Promotes the use of drones for agricultural purposes, such as aerial surveys, spraying pesticides, and monitoring crop health.
Providing Soil Health Cards to Farmers	Distributes Soil Health Cards which offer insights into soil health, helping farmers to optimize their fertilizer use to improve yields.
National Agriculture Market (e-NAM)	Creates a unified electronic platform for agricultural commodities, facilitating better market access for farmers and ensuring fair pricing.
National Mission for Edible Oils – Oil Palm	Focuses on increasing domestic production of edible oils by supporting oil palm cultivation under area expansion and farmers' support.
Agri Infrastructure Fund (AIF)	Aims to catalyze the creation of post-harvest infrastructure facilities and community farming assets to improve market linkages.
Improvement in Farm Produce Logistics	Introduces initiatives like Kisan Rail to improve the transportation of perishable agricultural products, reducing losses and ensuring better prices.
Mission for Integrated Development of Horticulture (MIDH)-Cluster Development Programme	Promotes holistic growth of horticulture through cluster approach adapted to local conditions, enhancing productivity and profitability.
Creation of a Start-up Ecosystem in Agriculture and Allied Sector	Supports agricultural startups by providing them with necessary resources and environment to innovate and grow.
Achievement in Export of Agri and Allied Agri- Commodities	Focuses on increasing the exports of agricultural and allied products by improving quality and market access.

Determinants of MSP

While recommending price policy of various commodities under its mandate, the Commission keeps in mind the various Terms of Reference (ToR) given to CACP in 2009. Accordingly, it analyzes

1) demand and supply;
2) cost of production;
3) price trends in the market, both domestic and international;
4) inter-crop price parity;
5) terms of trade between agriculture and non-agriculture;
6) a minimum of 50 percent as the margin over cost of production; and
7) likely implications of MSP on consumers of that product.

It may be noted that cost of production is an important factor that goes as an input in determination of MSP, but it is certainly not the only factor that determines MSP.

Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA)

PM-AASHA is an umbrella scheme implemented by the Department of Agriculture & Farmers Welfare, designed to enhance the income security of farmers. It includes several sub-schemes that provide price and procurement support to farmers.

Component	Description
Price Support Scheme (PSS)	Involves the procurement of pulses, oilseeds, and copra directly from farmers at the Minimum Support Price (MSP) when market prices fall below the MSP.
Price Deficiency Payment Scheme (PDPS)	Provides payments of the difference between the MSP and the market prices directly to farmers' bank accounts for their produce sold in designated markets.
Private Procurement & Stockist Scheme (PPSS)	Engages private stockists for the procurement of oilseeds on a pilot basis in selected districts, aiming to encourage private sector participation in stabilizing market conditions.

PM-AASHA not only provides a safety net to farmers against falling prices but also aims to encourage crop diversification and align the agricultural sector with market demands. The implementation of these schemes is tailored to the specific needs of each state, providing flexibility and local relevance to the procurement and price support mechanisms.

Floriculture Industry

India's floriculture industry has transformed into a high-performing sector, earning its status as a "sunrise industry" with a 100% export orientation. The sector has witnessed rapid growth, driven by increasing global demand for flowers and the adoption of advanced farming techniques. Floriculture offers a lucrative alternative to traditional field crops, with higher returns per unit area, especially in commercial ventures such as cut-flower production, loose flowers, dry flowers, flower seeds, perfumes, and essential oils.

This sector's profitability has encouraged small and marginal farmers to diversify their agricultural activities into floriculture. Research has shown that intercropping flowers with crops like rice has proven to be more profitable than other combinations involving cereals, pulses, vegetables, and oilseeds.

The USA, Netherlands, UAE, UK, Canada, and Malaysia are among the major export destinations.

Entrepreneurs in states like Tamil Nadu, Karnataka, Maharashtra, Uttar Pradesh, and West Bengal have capitalized on this opportunity, setting up sophisticated export-oriented floriculture units, especially in areas like Nashik, where export-quality grapes and flowers fetch higher prices compared to domestic markets. As more farmers adopt advanced techniques such as real-time monitoring systems, the industry's growth potential appears boundless.

The support from government initiatives, including subsidy support and crop loan financing, further strengthens the floriculture sector. With more than 96% of India's landholdings being small or marginal, floriculture is a promising venture for these farmers, offering opportunities to enhance incomes while diversifying their agricultural portfolios.

Oilseeds Sector

The growth rate of oilseeds in India has been a cause for concern. From FY13 to FY22, the sector registered a modest compound annual growth rate (CAGR) of just 1.9%. This slow growth raises questions about the country's ability to reduce its reliance on oilseeds imports, as domestic production is insufficient to meet the rising demand for edible oils.

High Import Dependency: India's dependence on imports for edible oils remains high, with around 60-65% of the total requirement met through imports. This import dependency creates vulnerability to price fluctuations in global markets.

Government Initiatives for Oilseeds Promotion: The government has been proactive in addressing the challenges of oilseeds production. Key initiatives to promote domestic oilseeds cultivation include:

- National Mission on Oilseeds and Oil Palm (NMOOP): Aimed at increasing the area under oilseeds cultivation, this initiative also promotes oil palm cultivation, which has the potential to reduce import dependency due to its high yield per hectare.
- Subsidy Support and Credit Schemes: The government has provided subsidies for oilseeds cultivation, along with increased institutional credit to farmers.

Opportunities for Growth: Despite these challenges, the oilseeds sector has significant growth potential:

- *Oil Palm Cultivation*: The promotion of oil palm cultivation presents a substantial opportunity to increase domestic edible oil production. Oil palm has a higher yield per hectare compared to traditional oilseeds and could help India reduce its import dependency if cultivated at scale.

- *Technological Advancements*: The adoption of modern farming practices, including the use of high-yielding seeds, efficient irrigation systems, and precision farming techniques, could significantly boost oilseeds productivity.
- *Diversification of Oilseeds*: Expanding the cultivation of diverse oilseeds such as mustard, sunflower, and safflower can reduce dependency on a few crops, mitigate risks, and stabilize the supply chain.

Horticulture

This sector includes the production of fruits, vegetables, and flowers, and has proven to be more productive and profitable than traditional agriculture. As a result, it plays a vital role in enhancing food security, generating rural employment, and boosting agricultural exports.

- Grape Cultivation Success: Maharashtra's Nashik region, in particular, has seen a dramatic improvement in grape farming, with export-quality grapes fetching significantly higher prices in international markets compared to domestic markets.
- Increasing Exports: India's export of fresh fruits and vegetables, including grapes, mangoes, and pomegranates, has increased significantly, with major export destinations including the USA, UK, UAE, and several European countries.

Mission for Integrated Development of Horticulture (MIDH)

MIDH focuses on improving the quality and quantity of horticultural produce, which includes fruits, vegetables, flowers, and other related crops.

Key Components of MIDH

Component	Focus Area
National Horticulture Mission (NHM)	Focuses on enhancing the productivity and sustainability of horticultural crops through improved practices, technology, and resource management.
Horticulture Mission for North East and Himalayan States (HMNEH)	Tailored for the specific climatic conditions of the North East and Himalayan states.
National Horticulture Board (NHB)	Supports high-tech commercial horticulture projects, providing financial assistance for the development of post-harvest infrastructure like cold storage, packhouses, and processing units.
Coconut Development Board (CDB), Kochi, Kerala	Focuses on improving the production and productivity of coconut crops and promoting its value-added products. It supports the establishment of processing units and new plantations.
Central Institute of Horticulture, Nagaland	Provides education, research, and extension services in the northeastern region, enhancing local expertise.

The MIDH strategy involves implementing the scheme in a cluster-based approach. This allows the central and state governments to target specific areas with greater precision and achieve economies of scale in horticultural development. The cluster approach ensures that small and marginal farmers can work together to access technology, improve farming practices, and market their produce efficiently.

Seed Quality and Fertilizer Use

Ensuring access to high-quality seeds and optimizing fertilizer usage are fundamental to increasing crop yields, improving soil health, and ensuring long-term agricultural sustainability.

1. Importance of Seed Quality: In India, the government has prioritized improving seed quality through various programs and research initiatives.

- *Research and Development*: The Indian Council of Agricultural Research (ICAR) plays a central role in developing improved seed varieties that are resistant to diseases, pests, and environmental stressors such as heat and drought.
- *Climate-Resilient Varieties*: Research into climate-resilient seeds has gained prominence, especially given the challenges posed by climate change. For example, heat-tolerant wheat varieties have been successfully introduced in north-western India. The release of new varieties tailored to specific regional challenges has enabled farmers to achieve better yields even under adverse conditions.
- *Seed Availability*: To ensure that high-quality seeds are accessible to farmers, seed banks have been established in various regions.

2. Fertilizer Use: Inefficient fertilizer application can lead to soil degradation, water pollution, and diminished returns. The government has implemented several measures to promote the judicious use of fertilizers.

- *Balanced Fertilizer Application*: The National Mission on Sustainable Agriculture (NMSA) emphasizes the importance of balanced fertilizer use. This includes promoting the use of organic fertilizers and bio-fertilizers, alongside chemical fertilizers, to maintain soil health and enhance nutrient cycling. The use of alternative fertilizers, such as Nano Urea and Nano Diammonium Phosphate (DAP), is being encouraged to improve fertilizer efficiency and reduce environmental impact.
- *Urea Gold*: combines urea with sulphur, minimizing wastage and enhancing plant nutrient uptake.
- *Fertilizer Subsidy and Awareness*: There is a growing need to promote awareness among farmers regarding the optimal use of fertilizers, as excessive or improper application can harm the soil and reduce productivity in the long run. The PM-PRANAM initiative, launched to incentivize the use of sustainable fertilizers, aims to improve fertilizer efficiency while reducing environmental pollution.
- *Innovations in Fertilizer Delivery*: To improve the efficiency of fertilizer use, technologies such as fertigation, where fertilizers are mixed with irrigation water, and the use of drones for precise fertilizer application, are being promoted. These methods ensure targeted delivery, reducing wastage and improving nutrient uptake by crops.

3. Soil Health: Soil degradation, particularly the depletion of organic carbon and essential micronutrients, poses a significant challenge to Indian agriculture.

- *Soil Health Management*: Programs such as the Soil Health Management (SHM) initiative aim to promote the use of organic fertilizers and improve soil health through the application of bio-fertilizers, green manure, and compost.
- *Soil Testing*: The government has supported the establishment of soil testing laboratories and encouraged farmers to use soil health cards to ensure appropriate fertilizer application based on the specific nutrient needs of the soil.

Agricultural Credit

India's agricultural credit landscape has seen significant growth and evolution.

Key Components of India's Agricultural Credit System

1. Ground Level Agriculture Credit (GLC): The government set a target for GLC at ₹27.5 lakh crore for the financial year 2024-25, with a special emphasis on allied activities like Dairy, Poultry, Sheep, Goat Piggery, Fisheries, and Animal Husbandry. By December 2024, ₹19.28 lakh crore had been disbursed, achieving 70% of the target. This reflects a significant increase from ₹8 lakh crore in FY 2014-15.
2. Kisan Credit Card (KCC): The Kisan Credit Card scheme continues to be a cornerstone of India's agricultural credit system, providing farmers with accessible financial services for agricultural and allied needs. As of March 2024, there were 7.75 crore operative KCC accounts.
3. Modified Interest Subvention Scheme (MISS): This scheme offers concessional short-term agricultural loans at a 7% interest rate, which can be reduced further to 4% upon timely repayment.
4. Credit Guarantee Scheme for e-NWR Based Pledge Financing (CGS-NPF): Launched in December 2024, this scheme provides a ₹1,000-crore corpus to support post-harvest financing, allowing farmers to access credit by pledging their produce stored in accredited warehouses.
5. Kisan Rin Portal: The Kisan Rin Portal is a digital platform aimed at facilitating easy and transparent access to credit for farmers. The platform streamlines the application process, reducing paperwork and the need for intermediaries, making it easier for farmers to access credit.
6. Priority Sector Lending (PSL): The Priority Sector Lending (PSL) guidelines issued by the Reserve Bank of India (RBI) mandate that a significant portion of the total lending by banks be directed toward agriculture.
7. Pradhan Mantri Fasal Bima Yojana (PMFBY): PMFBY is designed to provide financial protection to farmers in the event of crop failure due to natural calamities, pests, or diseases. This scheme not only provides financial security but also encourages farmers to take risks with crop diversification, knowing they are financially protected against unforeseen circumstances. PMFBY offers low premium rates for farmers and ensures quick settlement of claims.

Agriculture Mechanisation

The high cost of machinery often acts as a barrier, particularly for small and marginal farmers. To address this, the Indian government has introduced several initiatives:

1. Sub-Mission on Agricultural Mechanisation (SMAM): Through this scheme, state governments receive assistance in establishing Custom Hiring Centres (CHCs), which provide farmers with access to machinery like tractors, harvesters, and ploughs on rent.

- Farm Machinery Banks: In areas with low mechanisation, farm machinery banks have been introduced to further enhance accessibility. These banks rent out high-tech machinery at affordable rates to farmers.

2. Drone Technology for Agricultural Operations: Drones offer significant advantages in precision farming, including the application of fertilizers, pesticides, and monitoring crop health.

A new scheme has been launched to provide drones to Women Self-Help Groups (SHGs). Under this initiative, central financial assistance covers 80% of the cost of drones and related charges (up to ₹8 lakh). This scheme not only facilitates the adoption of drone technology in farming but also creates a sustainable business model for women SHGs, offering them the opportunity to generate additional income while improving agricultural productivity.

Agriculture Extension

Agricultural extension services are crucial in bridging the gap between research, technology, and farmers. These services provide vital information on best practices, new technologies, and sustainable agricultural techniques to improve productivity and income for farmers.

1. Sub-Mission on Agricultural Extension (SMAE): The SMAE focuses on farmer training, exposure visits, kisan melas (farmer fairs), and establishing farm schools. A key component of the SMAE is the support provided by the Agricultural Technology Management Agency (ATMA), which focuses on sharing the latest agricultural technologies to boost production.
2. Training Programs for Extension Workers: The government has also launched training programs aimed at enhancing the skills of rural youth and extension workers to support the agricultural sector. The government has established four regional extension education institutes in Haryana, Telangana, Gujarat, and Assam to train extension workers.
3. Kisan Call Centre: It provides farmers with a platform to ask questions and receive answers in 22 official languages.
4. Digital Agriculture Mission: This initiative promotes the use of mobile apps, online resources, and digital advisory services that can reach farmers in even the most remote areas.
5. Farmer Producer Organizations (FPOs) and SHGs: Farmer Producer Organizations (FPOs) and Self-Help Groups (SHGs) play a critical role in enhancing agricultural extension services. These groups help in knowledge dissemination, resource pooling, and creating collective access to markets and credit.

Agricultural Marketing

Agricultural marketing is crucial for enhancing the value of agricultural produce, ensuring remunerative prices for farmers, and driving economic growth in rural areas.

Integrated Scheme for Agricultural Marketing (ISAM)

ISAM is a comprehensive scheme that encompasses various sub-schemes designed to strengthen agricultural marketing infrastructure. The major sub-schemes under ISAM include:

- Agricultural Marketing Infrastructure (AMI): Supports the creation and strengthening of physical marketing infrastructure, focusing on storage facilities to reduce post-harvest losses and improve marketability of produce.
- National Agriculture Market (e-NAM): A pan-India electronic trading platform that integrates existing physical market yards (APMCs) across the country. This initiative aims to create a unified national market, providing farmers with better price discovery and reducing transaction costs.

- Marketing Research and Information Network (MRIN): Facilitates the collection and dissemination of marketing information to help farmers achieve better price realization.
- Strengthening of Agmark Grading Facilities (SAGF): Enhances the existing grading and quality certification systems to promote standardization and quality assurance of agricultural products.
- Chaudhary Charan Singh National Institute of Agricultural Marketing (CCS NIAM): Provides training, research, and consultancy in the agri-marketing sector, supporting policy advocacy and international programs.

Central Sector Scheme for Formation & Promotion of FPOs

This scheme focuses on the formation and promotion of 10,000 new Farmer Producer Organizations (FPOs) to consolidate small agricultural holdings and link farmers directly to markets, thereby ensuring maximum value for their produce. Implementing agencies work closely with FPOs to provide market access, technological support, and financial advice.

Success Stories: The Maha Farmers Producer Company Limited (MAHAFPC) in Maharashtra has empowered 646 FPOs, helping them procure and sell agricultural products like pulses and perishable items. In 2022, MAHAFPC became the largest procurement channel in Maharashtra, benefiting over 1.7 lakh farmers .

Climate Action in Agriculture

The impact of climate change on agriculture in India is increasingly evident, with erratic weather patterns such as unpredictable rainfall, rising temperatures, and frequent droughts posing significant challenges.

1. National Mission on Sustainable Agriculture (NMSA): The NMSA is part of India's broader National Action Plan on Climate Change (NAPCC) and focuses on addressing the challenges posed by climate change on the agricultural sector.
2. Sustainable Farming Practices: The Indian government is promoting organic and natural farming practices through schemes such as the Paramparagat Krishi Vikas Yojana (PKVY) and the Mission Organic Value Chain Development for North Eastern Region (MOVCDNER).
3. Climate-Resilient Varieties and Livestock: Developing climate-resilient crop varieties and promoting climate-resilient livestock are key components of India's climate action strategy in agriculture. For example, heat-tolerant wheat varieties are being promoted to address rising temperatures, particularly in regions facing heat stress.
4. Pradhan Mantri Fasal Bima Yojana (PMFBY): As the largest crop insurance program in the world, it covers a wide range of risks and provides farmers with the financial stability needed to adapt to climate-induced challenges.
5. Water Management and Micro-Irrigation: The government has launched initiatives like the Per Drop More Crop (PDMC) and Micro-Irrigation Fund (MIF) to improve water use efficiency and promote the adoption of micro-irrigation systems.

Allied Sectors

Livestock Sector: The livestock sector has shown impressive growth, with its contribution to the Gross Value Added (GVA) in agriculture increasing from 24.38% in FY15 to 30.23% in FY23.

- Rashtriya Gokul Mission: This mission is focused on the conservation and development of indigenous bovine breeds. A significant initiative under this program is the Multipurpose AI Technicians in Rural India (MAITRIs) program, which provide artificial insemination services, improving livestock genetics and productivity.
- Livestock Health and Disease Control: The government is also addressing livestock health through various schemes.

Fisheries Sector: The sector plays a key role in providing protein-rich food and employment in rural and coastal regions.

- Pradhan Mantri Matsya Sampada Yojana (PMMSY): It supports the development of fish landing centers, cold storage facilities, and fishing harbors, ensuring a more sustainable and efficient supply chain.
- Fisheries Exports: India's seafood exports have surged. The PMMSY initiative supports this growth by providing financial support for infrastructure development and promoting innovative aquaculture techniques like cages and Recirculating Aquaculture Systems (RAS).
- National Fisheries Digital Platform (NFDP): Launched under the Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY), the NFDP enhances the sector's digital footprint and supporting better management and traceability of fish production.

Food Processing Industries

The sector is growing rapidly and is vital for ensuring the value-added transformation of agricultural products into consumable and exportable items. In FY24, share of processed food exports, reached USD 46.44 billion, representing 23.4% of India's total agri-food exports, a notable increase from 14.9% in FY18.

Government Initiatives to Boost Food Processing

- Pradhan Mantri Kisan Sampada Yojana (PMKSY): This scheme aims to modernize food processing infrastructure and streamline the supply chain from farm to retail.
- Production Linked Incentive Scheme for Food Processing (PLISFPI): Launched in 2021, the PLISFPI aims to promote globally competitive food processing leaders by providing incentives for branding, marketing, and improving international market penetration.
- Pradhan Mantri Formalisation of Micro Food Processing Enterprises (PMFME): Launched in 2020, this initiative supports micro food processing enterprises by providing technical, financial, and business assistance for their establishment or upgrades.

Impact on Employment and Export Growth: The food processing sector is a major employer in the organized manufacturing industry, accounting for 12.41% of total employment in this sector.

Food Security

The concept of food security is centered around availability, access, utilization, and stability of food supply.

Public Distribution System (PDS) and National Food Security Act (NFSA)

The Public Distribution System (PDS) and the National Food Security Act (NFSA) have long been the backbone of India's food management strategy. The NFSA, enacted in 2013, provides a rights-based approach to food security, entitling up to 75% of the rural population and 50% of the urban population to receive highly subsidized food grains. This makes up about two-thirds of the population in India .

- Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY): Introduced in response to the COVID-19 pandemic, PMGKAY ensures the provision of free food grains to the poor. This initiative is an extension of the PDS. The extension of PMGKAY for five more years starting from January 2024 highlights the government's commitment to long-term food security .

One Nation, One Ration Card (ONORC)

This initiative enables beneficiaries to access their food entitlements from any Fair Price Shop (FPS) across the country. It is especially beneficial for migrant workers, allowing them to authenticate their Aadhaar biometrics at any FPS and avail of their entitlements, regardless of their home state.

- e-KYC Compliance: The government aims for 100% e-KYC compliance, which will make the system more robust and streamline access to food grains for all beneficiaries across the nation .

Foodgrain Storage Infrastructure

- Steel Silos: The government has embarked on building modern steel silos in Public-Private Partnership (PPP) mode to ramp up storage capacity across the country.
- Hub and Spoke Model: The Hub and Spoke Model focuses on creating centralized hub silos equipped with railway sidings and container depots, with transportation between these hubs facilitated via rail. This ensures efficient and cost-effective movement of food grains across the country.

Post-Harvest Lending and e-NWR Scheme

To improve the financial accessibility for farmers post-harvest, especially for small and marginal farmers, the government has introduced the Credit Guarantee Scheme for electronic-negotiable warehouse receipts (e-NWR). This scheme enables farmers to pledge their agricultural commodities stored in accredited warehouses to obtain loans.

- e-NWR-based Financing: This initiative helps farmers access credit by using their stored produce as collateral, enhancing post-harvest financing.

Digital Agriculture

1. Digital Crop Survey: This initiative leverages advanced technology to map and record crop data across India. It uses satellite imaging and GIS technology to improve the accuracy of crop forecasting and assessment, leading to better planning and management of agricultural resources.
2. UPAg (Unified Portal for Agricultural Statistics): UPAg is a comprehensive platform designed to integrate all agricultural data streams into one unified system. This portal enhances data availability and decision-making capabilities by providing real-time insights into various agricultural metrics.
3. Krishi Mapper: Krishi Mapper is a tool used for geo-tagging and mapping agricultural lands. It assists in the precise identification of crop types and their geographical distribution, which is crucial for targeted policy-making and resource allocation.

4. mKisan: mKisan is a government initiative aimed at providing timely and relevant agricultural information to farmers through SMS. It enables direct communication of advisories to farmers regarding pest attacks, weather forecasts, and crop management techniques.
5. Kisan Suvidha: Kisan Suvidha is a mobile app designed to offer comprehensive services to farmers, including weather updates, market prices, plant protection methods, and agricultural advisories, all in one platform.
6. DBT Bharat Mission: Under the Direct Benefit Transfer (DBT) Bharat Mission, subsidies and financial support directly reach the farmers' bank accounts, reducing delays and eliminating middlemen. This system ensures transparency and efficiency in the disbursement of funds.
7. PRAYAS (Platform for Real-time Agricultural Yield and Survey): PRAYAS is an initiative for real-time monitoring and data collection on crop yields, area assessments, and agricultural conditions through the use of mobile apps and cloud platforms. This helps in accurate yield estimation and supports better crop insurance schemes.

These digital initiatives are part of India's broader strategy to incorporate ICT (Information and Communication Technology) in agriculture, which not only aims to increase farm productivity and profitability but also ensures sustainability and resilience of the agricultural sector.

National Beekeeping and Honey Mission (NBHM) and National Bee Board (NBB)

NBHM seeks to enhance the productivity of honeybees, improve crop pollination, and create sustainable livelihoods for farmers, especially in rural areas.
The main objectives of the NBHM are:

- Promotion of scientific beekeeping: Modernizing beekeeping practices to increase honey production and ensure sustainable practices.
- Pollination enhancement: Using beekeeping to boost the pollination of crops, thereby increasing agricultural productivity.
- Support for rural livelihoods: Creating income-generating opportunities for farmers and landless laborers through honey production and the sale of other beehive products like beeswax, bee pollen, propolis royal jelly, bee venom etc.
- Development of infrastructure: Setting up necessary infrastructure such as beekeeping development centers, honey testing labs, and equipment manufacturing units.

The mission operates through three Mini Missions (MMs):

1. Mini Mission-I (MM-I): Focuses on raising awareness, capacity building, training, and empowering women in beekeeping. It also includes setting up necessary infrastructure like Integrated Beekeeping Development Centres (IBDCs), Honeybee Disease Diagnostic Labs, and Beekeeping Equipment Manufacturing Units.
2. Mini Mission-II (MM-II): Emphasizes on processing, value addition, and providing market support for beekeeping products. This includes the development of marketing channels for honey and other bee products.
3. Mini Mission-III (MM-III): Focuses on research and development, including the creation of quality nucleus stock centers, bee breeders, and improving bee genetics for better productivity.

National Bee Board (NBB)

The National Bee Board (NBB) is responsible for the overall coordination and implementation of the beekeeping initiatives in India. Some of its main activities include:

- Setting technical standards for honey, beeswax, and royal jelly to ensure quality and promote standardization in the industry.
- Financing beekeeping activities: Working with NABARD and financial institutions to provide loans, credit limits, and Kisan Credit Cards to beekeepers to facilitate the expansion of beekeeping activities.
- Promotion of beekeeping: NBB also plays a role in marketing honey and other beekeeping products, exploring cooperative models and networks like the NDDB's infrastructure to reach wider markets.

The National Beekeeping and Honey Mission (NBHM) is crucial for realizing the vision of a **"Sweet Revolution"** in India.

Based on the detailed information from the document you provided, here's a comprehensive section on agricultural marketing for your book:

Agricultural Trade Policy, Promotion, and Logistics Development

India's agricultural trade policy aims to enhance the competitiveness of its agricultural products in the global market.

Trade Initiatives

1. Agri-Export Zones (AEZs): Established to boost the export of specific commodities from designated zones, AEZs receive focused governmental support in terms of infrastructure, research and development, and marketing strategies tailored to international standards.
2. Promotion on Global Platforms: India actively participates in international trade fairs and exhibitions to showcase its agricultural produce, leveraging platforms to enter new markets and forge global partnerships.
3. Quality Standards and Certifications: Emphasis on meeting international quality standards and obtaining necessary certifications like Global GAP, Organic, and others to enhance marketability abroad.

Export Promotion Schemes

- Market Access Initiatives (MAI): Aimed at promoting Indian agricultural products in overseas markets through comprehensive market studies, branding campaigns, and participation in trade shows and exhibitions.
- Transport and Marketing Assistance (TMA): Provides assistance for the international transport of agricultural produce aimed at mitigating freight costs, particularly for exports to distant markets.

Logistics and Infrastructure Development

The development of dedicated agri-logistic parks, cold chain facilities, and modernization of existing infrastructure are prioritized under various government schemes:

- Krishi Udan Scheme: Launched to assist farmers in transporting agricultural products, particularly in the Northeast and tribal districts.
- Kisan Rail: Special freight trains dedicated to transporting perishable goods, including fruits, vegetables, and dairy products, ensuring faster delivery and reducing spoilage.

Regulatory Framework and Policy Support

- Plant Quarantine Regulations: Strict monitoring of the import and export of agricultural products to prevent the entry of exotic pests and diseases.
- Food Safety and Standards Authority of India (FSSAI): Ensures that agricultural exports comply with international food safety standards to maintain market credibility and consumer trust globally.

Drought Management

Drought is a recurring natural calamity in India that severely impacts agricultural productivity and the livelihood of farmers.
Monitoring and Response Mechanisms: The primary determinant of drought incidence in India is the distribution and quantum of rainfall during the Southwest Monsoon (June-September), which accounts for more than 70% of annual rainfall in the country. The DA&FW works closely with the India Meteorological Department (IMD) to monitor the progress of the monsoon and assess rainfall deficiencies across different regions. It also keeps a vigilant watch over large deficient rainfall conditions, coordinating timely responses.
The Crisis Management Plan (CMP) for Drought, reviewed annually, outlines the roles of various agencies involved in drought management.
Financial Assistance and Relief: To mitigate the impact of drought, state governments are empowered to initiate relief measures from the State Disaster Response Fund (SDRF). This fund, supported by both central and state governments, is distributed according to a prescribed formula, with a 3:1 contribution ratio for general category states and 9:1 for special category states. In cases of severe calamities, additional financial assistance is provided from the National Disaster Response Fund (NDRF). For example, in 2023, the governments of Karnataka, Andhra Pradesh, and Maharashtra requested assistance due to drought conditions during the Kharif season.

Contingency Plans and Advisory Services: The Central Research Institute for Dryland Agriculture (CRIDA), under the Indian Council of Agricultural Research (ICAR), has developed district-wise contingency plans that provide detailed strategies to manage drought risks. These plans take into account local crops, soil characteristics, and climate conditions, offering farmers alternate agricultural practices to minimize losses. These strategies are supported by advanced weather forecasting models that predict climate-related stress such as floods, droughts, and cyclones.

Technological Integration: The DA&FW has also introduced a unified geo-portal for monitoring drought conditions across the country. This portal consolidates drought-related indicators such as weather, soil moisture, and crop conditions, offering a real-time, objective assessment of drought impacts.

Drought-Proofing Initiatives: The National Rainfed Area Authority (NRAA) plays a key role in addressing the vulnerabilities of rainfed regions. It has developed drought-proofing action plans for the most drought-prone districts. The NRAA also collaborates with the National Disaster Management Authority (NDMA) to implement these plans effectively across multiple states.

International Cooperation

Key Areas of Cooperation

1. Bilateral Agreements and Partnerships: India has entered into numerous bilateral agreements and Memoranda of Understanding (MoUs) with countries of strategic importance to enhance cooperation in agriculture and allied sectors. In 2023 alone, India signed MoUs with Chile, Egypt, and Greece for strengthening agricultural ties. These agreements focus on various facets, including agricultural research, technology transfer, and capacity building.
2. Collaboration with International Organizations:
   - *Food and Agriculture Organization (FAO):* FAO plays a pivotal role in international efforts for achieving food security. India has collaborated extensively with FAO under the Technical Cooperation Programme (TCP), which aligns with India's national priorities and the United Nations Sustainable Development Cooperation Framework (UNSDCF) 2023-27.
   - *World Food Programme (WFP):* WFP's collaboration with India focuses on addressing food insecurity, particularly during times of natural or man-made crises. WFP supports the Government of India in achieving food and nutrition security, aligning with SDG 2.
3. International Research and Capacity Building: India has been a part of global initiatives for agricultural research and innovation. Through platforms like the International Fund for Agricultural Development (IFAD) and the World Bank, India contributes to international efforts for sustainable development. Additionally, India's cooperation with institutions such as the Asian and Pacific Plant Protection Commission (APPPC) and the Organization for Economic Cooperation and Development (OECD) enables the exchange of knowledge on plant health, pest management, and food security.
4. Multilateral Cooperation: India is a member of several multilateral groupings like G-20, BRICS, and IBSA, which provide platforms for cooperation on international economic, environmental, and agricultural issues. As the chair of G-20 in 2023, India placed a significant emphasis on agricultural development.

Focus Areas of Collaboration

- Technological Innovation: Through international cooperation, India has been able to access advanced agricultural technologies, such as the **FAO's satellite-based eLocust3g tool** for desert locust monitoring, which has been deployed in India's desert regions.
- Desert Locust Control: India has worked closely with countries like Argentina to develop collaborative mechanisms for controlling desert locust outbreaks, which affect agricultural production in arid regions.
- Capacity Building and Training: India collaborates with international organizations like FAO and WFP in providing training to agricultural officials and farmers.

Gender Perspective in Agriculture

As per data from the Economic Survey 2022-23, 65% of the population lives in rural areas, with 47% dependent on agriculture for their livelihood. In recent years, the Rural Female Labour Force Participation Rate (FLFPR) has notably increased from 19.7% in 2018-19 to 27.7% in 2020-21, reflecting a rise in women's active participation in the agricultural workforce.

Women play a vital role in preserving local agro-biodiversity and managing diverse natural resources essential for daily household needs. Despite their contributions, women farmers often face challenges in accessing land, credit, technology, and markets. These disparities hinder their ability to maximize productivity and earn higher incomes, thus exacerbating gender inequalities in rural economies.

Policy and Institutional Support: To address these challenges, the National Gender Resource Centre in Agriculture (NGRCA) under the Department of Agriculture and Farmers Welfare (DA&FW) serves as a focal point for gender-sensitive policies in the agricultural sector. The NGRCA is working to integrate gender concerns into agricultural policies, ensuring that women's roles in agriculture are recognized and supported.

The Gender Budgeting Cell (GBC) has been part of the Union Budget since 2005, earmarking funds for programs that specifically benefit women in agriculture.

Initiatives

- Mahila Kisan Diwas (International Rural Women's Day): Celebrated annually by the NGRCA in collaboration with other agricultural institutions, this day highlights women's contributions to sustainable agriculture.
- Side Events during G20 Presidency: Under India's G20 presidency in 2023, the NGRCA organized events focused on Women-Led Development, emphasizing the role of women in agriculture and advocating for gender mainstreaming in agricultural policies .

The future of gender-inclusive agricultural development hinges on several critical actions:

- Bridging the Gender Gap: Ensuring equal access to productive resources like land, technology, credit, and markets is essential for empowering women in agriculture. Targeted interventions in education, skill-building, and micro-financing will enhance women's economic standing.
- Policy and Institutional Support: Continued efforts to integrate gender into agricultural policy, improve data collection (such as gender-disaggregated data), and increase women's representation in decision-making processes will help level the playing field.
- Empowerment and Leadership: Women should be viewed as active contributors to agricultural growth rather than passive recipients of development.

In conclusion, promoting gender equality in agriculture is not just a moral imperative but a practical approach to enhancing productivity, ensuring food security, and achieving sustainable development.

CHAPTER 10

INDUSTRY

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Industry

Performance of the MSME Sector

The Micro, Small, and Medium Enterprises (MSME) sector is a vital component of India's economy, contributing significantly to employment, manufacturing, and exports.

Sectoral Statistics

Indicator	Value
Contribution to GDP (2022-23)	30.1%
Total Employment (as of July 2024)	20.39 crore
Contribution to Total Exports (2024-25 up to May)	45.79%

Source: Press Information Bureau

Overview

The MSME sector has shown notable progress in several areas:

- **Growth in Gross Value Added (GVA)**: The share of MSME GVA in India's GDP increased from 29.6% in 2021-22 to 30.1% in 2022-23, indicating a positive growth trajectory.
- **Export Performance**: Exports from MSMEs have surged from ₹3.95 lakh crore in 2020-21 to ₹12.39 lakh crore in 2024-25, with the number of exporting MSMEs rising from 52,849 to 1,73,350 during the same period.
- **Government Initiatives**: Schemes such as the Credit Guarantee Scheme and the Self-Reliant India (SRI) Fund have been instrumental in providing financial support to MSMEs, facilitating their growth and competitiveness.

Challenges in the Sector

- **Access to Finance**: While initiatives like the Credit Guarantee Scheme have improved access, many MSMEs still struggle with obtaining adequate financing, hindering expansion and modernization efforts.
- **Technological Upgradation**: The rapid pace of technological advancements poses a challenge for MSMEs to adopt new technologies, affecting their competitiveness in the global market.
- **Regulatory Compliance**: Navigating complex regulatory frameworks can be burdensome for MSMEs, leading to increased operational costs and potential delays in business processes.

4. Government Initiatives

- **Credit Guarantee Scheme**: Launched to enhance the flow of credit to MSMEs, this scheme provides collateral-free loans, with a guarantee cover of up to ₹1 billion per applicant.
- **Self-Reliant India (SRI) Fund**: Aimed at providing equity funding to MSMEs with growth potential, the SRI Fund has a total corpus of ₹50,000 crore, with ₹10,000 crore from the government and ₹40,000 crore to be leveraged through private equity.
- **PM Vishwakarma Scheme**: Launched to support traditional artisans and craftspeople, this scheme provides comprehensive support to enhance the quality and reach of their products and services.

International Trade

India's MSME sector plays a significant role in global trade:

- **Export Contribution**: MSMEs contributed 45.79% to India's total exports in 2024-25 (up to May), highlighting their crucial role in the export sector.
- **Global Standing**: While India's MSME sector is robust, there is potential for growth when compared to global counterparts, particularly in areas like technological adoption and export diversification.

Future Prospects

The outlook for India's MSME sector is positive, supported by:

- **Policy Support**: Continued government initiatives are expected to provide financial assistance, technological support, and market access, fostering sector growth.
- **Digital Transformation**: Embracing digital technologies offers MSMEs opportunities to enhance efficiency, reach broader markets, and innovate in product and service offerings.
- **Export Potential:** With ongoing support and capacity-building efforts, MSMEs are well-positioned to expand their presence in international markets, contributing to economic growth and employment generation.

Revision of MSME Classification Criteria

In the Union Budget 2025-26, the Government of India announced significant revisions to the classification criteria for Micro, Small, and Medium Enterprises (MSMEs). These changes aim to facilitate the growth and scalability of businesses by adjusting investment and turnover limits, thereby enabling more enterprises to benefit from MSME-specific schemes and support mechanisms.

The updated thresholds for MSME classification are as follows:

Enterprise Category	Previous Investment Limit	Revised Investment Limit	Previous Turnover Limit	Revised Turnover Limit
Micro	₹1 crore	₹2.5 crore	₹5 crore	₹10 crore
Small	₹10 crore	₹25 crore	₹50 crore	₹100 crore

Enterprise Category	Previous Investment Limit	Revised Investment Limit	Previous Turnover Limit	Revised Turnover Limit
Medium	₹50 crore	₹125 crore	₹250 crore	₹500 crore

Source: Press Information Bureau

These revisions are expected to have several positive implications for businesses:

- **Increased Inclusivity**: More enterprises will now qualify as MSMEs, allowing them to access various government schemes, financial support, and incentives designed to promote growth and competitiveness.
- **Facilitated Growth Transitions**: Businesses experiencing growth can now scale up without the concern of losing MSME benefits prematurely, as the new thresholds provide a more accommodating growth trajectory.
- **Enhanced Support Access**: Enterprises falling under the MSME category can avail themselves of benefits such as easier access to credit, subsidies, and other support mechanisms aimed at fostering innovation and expansion.

Performance of the Electronics Sector

The electronics sector has emerged as a pivotal component of India's economy, demonstrating remarkable growth and resilience over the past year. This growth is attributed to strategic government initiatives, increased foreign investments, and a burgeoning domestic market.

Sectoral Statistics

Indicator	Value
Contribution to GDP	3.4%
Total Employment Generated	Approximately 12 million jobs projected by 2027
Contribution to Total Exports	Significant, with mobile phone exports reaching ₹1.2 lakh crore in 2023-24
Domestic Production Value	₹9.52 lakh crore in FY24

Source: Press Information Bureau

Overview

India's electronics sector has experienced significant transformations:

- **Mobile Phone Manufacturing**: The number of mobile manufacturing units in India has surged from 2 in 2014 to over 300 by December 2024. This expansion has positioned India as the world's second-largest mobile phone producer. Mobile phone exports have seen a remarkable increase, rising from ₹1,566 crore in 2014-15 to ₹1.2 lakh crore in 2023-24.
- In 2014-15, 26% of mobile phones sold in India were locally made, rising to 99.2% by December 2024

- **Production Growth**: Domestic production of electronic goods escalated from ₹1.90 lakh crore in FY15 to ₹9.52 lakh crore in FY24, reflecting an annual growth rate of 17.5%.
- **Employment Opportunities**: The sector is projected to generate approximately 12 million jobs by 2027, driven by both domestic growth and export demands.

Challenges in the Sector

Despite substantial progress, the electronics sector faces several challenges:

- **Dependence on Imports**: A significant portion of electronic components, particularly semiconductors, is imported, leading to trade imbalances and supply chain vulnerabilities.
- **Technological Gaps**: While assembly capabilities have flourished, there is a need to enhance indigenous design and manufacturing capabilities to move up the value chain.
- **Regulatory Hurdles:** Complex regulatory frameworks and policy inconsistencies can impede the smooth operation and growth of electronics manufacturing units.

Government Initiatives

The Indian government has introduced several initiatives to bolster the electronics sector:

- **Production-Linked Incentive (PLI) Scheme**: Launched in 2020, the PLI scheme aims to incentivize domestic manufacturing across various sectors, including electronics. It has successfully attracted over $17 billion in investments, leading to production valued at approximately $131.6 billion and the creation of nearly one million jobs over four years.
- **Semiconductor Manufacturing Support:** The government has approved the establishment of four semiconductor manufacturing units, including a significant facility by Tata Electronics in Assam, with an investment of approximately ₹27,000 crore. This initiative is expected to generate over 25,000 jobs.
- **Budget Allocations**: The Union Budget 2025-26 has allocated ₹21,945 crore to the Electronics System Design and Manufacturing (ESDM) sector under the Ministry of Electronics and Information Technology (MeitY), emphasizing support for research and development, skill development, and export promotion.

International Trade

India's electronics sector holds a significant position globally:

- **Global Standing**: India is the second-largest producer of mobile phones worldwide, with projections indicating that electronics production will reach $300 billion by 2026.
- **Export Growth**: Electronics exports are projected to reach $120 billion by 2026, a substantial increase from current levels, highlighting India's growing prominence in the global electronics market.

Future Prospects

The outlook for India's electronics sector is promising:

- **Manufacturing Expansion**: The sector is expected to expand from $75 billion to $300 billion by 2025-26, driven by government incentives and a favorable manufacturing ecosystem.
- **Employment Opportunities:** The anticipated growth is projected to create approximately 12 million jobs by 2027, addressing both domestic demand and export requirements.
- **Technological Advancements:** Ongoing investments in semiconductor fabrication and assembly, along with a focus on research and development, aim to position India as a key player in global electronics manufacturing.

Performance of the Coal Sector

Sectoral Statistics

Indicator	Value
Total Coal Production (FY 2024-25)	1,047.57 million tonnes (MT)
Growth in Production (YoY)	5.24%
CIL Production (FY 2024-25)	773.81 MT

Source: Ministry of Coal, Government of India

Overview

- **Record Production**: India's coal production reached a historic milestone, surpassing 1 billion tonnes in the fiscal year 2024-25, with a provisional total of 1,047.57 MT, marking a 5.24% increase over the previous year.
- **Policy Initiatives**: The government has prioritized enhancing domestic coal production to reduce import dependency, leading to a 5.5 percentage point decrease in import reliance over the past decade.

Challenges in the Sector

- **Environmental Concerns**: Increased coal production has raised environmental issues, including air pollution and greenhouse gas emissions, challenging India's climate commitments.
- **Transition to Renewable Energy**: Balancing coal reliance with the transition to renewable energy sources poses infrastructural and policy challenges, especially given the rapid growth in energy demand.
- **Operational Hurdles**: The sector faces challenges such as land acquisition issues, environmental clearances, and the need for technological upgrades to enhance efficiency.

Government Initiatives

- **Production Enhancement**: The Ministry of Coal has implemented measures to boost production, including the adoption of advanced mining technologies and the auctioning of coal blocks to private players.
- **Environmental Measures:** Initiatives like afforestation, land reclamation, and stricter environmental norms aim to mitigate the ecological impact of coal mining.
- **Policy Reforms**: Reforms such as the Commercial Coal Mining Policy aim to open up the sector to greater private participation, enhancing competition and efficiency.

International Trade

- **Contribution to Exports/Imports**: India's thermal coal imports declined by approximately 2% to 173 million metric tons in 2024, attributed to increased domestic production by Coal India Limited (CIL), which reduced import dependency to 20.5%.
- **Global Standing**: India is the world's second-largest producer and consumer of coal, following China.

Future Prospects

- **Production Targets**: The government aims to further increase coal production to meet the rising energy demands, with targets set for the coming years, including the development of new coal blocks and expansion of existing mines.
- **Renewable Integration**: Efforts are underway to integrate renewable energy sources into the grid, with coal-fired plants being upgraded for flexibility to accommodate variable renewable generation.
- **Environmental Strategies**: Long-term strategies include carbon capture and storage technologies, transitioning to cleaner coal technologies, and phasing out inefficient plants to align with global climate goals.

In conclusion, the coal sector's performance over the past year highlights India's dual focus on meeting immediate energy needs through coal while navigating the complex transition towards sustainable energy practices.

Performance of the Steel Sector

Sectoral Statistics

Indicator	Value
Total Steel Production (2024)	149 million tons
Growth in Production (2024)	6%
Projected Demand Growth (2025)	8-9%
Finished Steel Imports (Apr-Feb 2024-25)	8.98 million tons
Finished Steel Exports (Apr-Feb 2024-25)	4.4 million tons

Sources: [Reuters]

Overview

- **Production Growth**: In 2024, India's steel production increased by 6% to reach 149 million tons. This growth is attributed to the commissioning of new capacities, with plants adding a combined 15 million tons per year. The National Steel Policy 2017 aims to elevate steelmaking capacity to 330 million tons by 2030.
- **Demand Outlook**: The steel demand in India is projected to grow by 8-9% in 2025, driven by increased adoption of steel-intensive construction in housing and infrastructure, along with rising demand from engineering, packaging, and other industrial segments.

Challenges in the Sector

- **Import Competition**: The influx of cheaper imports, particularly from China, South Korea, and Japan, has adversely affected domestic steel producers. Increased imports have led to market share losses and financial stress among local manufacturers.
- **Export Decline**: Finished steel exports have declined by 33.7% to 4.4 million metric tons during April-February 2024-25, with significant drops in shipments to European countries.
- **Trade Barriers**: The U.S. has imposed a 26% tariff on Indian steel imports, potentially impacting India's GDP growth and posing challenges for exporters.

Government Initiatives

- **Procurement Policy**: The government has revised procurement policies under the "Domestically Manufactured Iron And Steel Products Policy 2025," mandating all ministries and agencies to prioritize locally manufactured steel products. This policy aims to protect domestic industries from unfair competition and safeguard local employment.
- **Safeguard Measures**: To counteract the surge in imports, the government has initiated investigations into potential dumping practices and is considering the imposition of safeguard duties on certain steel products. This measure aims to level the playing field for domestic manufacturers.

International Trade

- **Global Positioning**: India continues to be among the top steel-producing nations globally, with production reaching 149 million tons in 2024. However, challenges persist due to competition from countries with overcapacity, notably China.
- **Trade Dynamics**: The imbalance between imports and exports has raised concerns about the domestic industry's health. While imports have surged, exports have declined, affecting the trade balance and signaling potential vulnerabilities in the sector.

Future Prospects

- **Demand Forecast**: Steel demand in India is projected to grow by 8-9% in 2025, driven by increased steel-intensive construction in housing and infrastructure, along with rising demand from engineering, packaging, and other industrial segments.
- **Capacity Expansion**: The sector is poised for expansion, with new capacities coming online and plans to further increase production to meet rising demand. The National Steel Policy 2017 targets an increase in steelmaking capacity to 330 million tons by 2030.
- **Policy Support**: Government initiatives, including procurement policies favoring domestic products and potential safeguard duties, are expected to bolster the sector's growth and competitiveness. These measures aim to protect domestic industries and promote sustainable development within the sector.

Performance of the Textile Sector

Sectoral Statistics

Indicator	Value
Contribution to GDP	2.3%
Contribution to Industrial Production	13%
Contribution to Total Exports	12%
Gross Value Added (GVA) in Manufacturing	₹3.77 lakh crore in FY23
Employment Generated	Significant, with textiles and apparel sectors among the largest employers in India

Source: Economic Survey 2024-25

Overview

The Indian textile sector encompasses a vast and diverse range of activities, from raw material production to the manufacturing of finished goods. Recent developments include:

- **Shift Towards Man-Made Fibres (MMF)**: There is a growing emphasis on MMF production to align with global consumption patterns, as MMF constituted 77% of global fibre consumption in 2024.
- **Technological Advancements**: Initiatives like the National Technical Textiles Mission (NTTM) are promoting research, innovation, and the development of technical textiles, aiming to enhance the sector's global competitiveness.

Challenges in the Sector

The textile industry faces several challenges that hinder its growth and competitiveness:

- **Complex Regulatory Procedures**: Bureaucratic hurdles, including intricate customs procedures and mandatory pre-shipment inspections, increase operational costs and delay exports.
- **Fragmented Industry Structure:** The dominance of micro, small, and medium enterprises (MSMEs) leads to inefficiencies and challenges in achieving economies of scale.
- **Global Competition**: Countries like China and Vietnam benefit from vertically integrated 'fibre-to-fashion' models, enabling them to offer low-cost, high-quality products.
- **Dependence on Cotton**: The sector's heavy reliance on cotton limits its competitiveness, especially as global demand shifts towards MMF products.

Government Initiatives

To address these challenges and promote sectoral growth, the government has introduced several initiatives:

- **Production Linked Incentive (PLI) Scheme:** Aimed at boosting the production of man-made fibre apparel, fabrics, and technical textiles, the PLI scheme offers financial incentives to manufacturers meeting specified targets.
- **National Technical Textiles Mission (NTTM):** Launched with a fund outlay of ₹1,480 crore for the period 2020-21 to 2025-26, NTTM focuses on research, innovation, and market development in technical textiles.
- **PM Mega Integrated Textile Region and Apparel (PM MITRA) Parks:** Seven PM MITRA parks are being established with a budget of ₹4,445 crore, aiming to provide world-class infrastructure and attract investment in the textile sector.

International Trade

India's textile sector operates in a highly competitive global market. Key international comparisons include:

- **Export Performance**: In 2023, India's textile and apparel exports were valued at $35.87 billion, while China's exports stood at $161 billion, highlighting the need for enhanced competitiveness.
- **Market Share in MMF:** India's share in global MMF production is approximately 9.2%, significantly lower than leading producers like China and Vietnam.

Future Prospects

The future of India's textile sector appears promising, supported by strategic initiatives and a vast domestic market. Key prospects include:

- **Enhanced Export Potential:** With the implementation of PLI schemes and trade agreements, there is potential to increase textile exports, aiming to recapture growth levels seen in FY22.

- **Diversification into Technical Textiles**: Investments in technical textiles are expected to open new markets and applications.
- **Infrastructure Development:** The establishment of PM MITRA parks and improvements in logistics infrastructure are anticipated to attract investment and enhance manufacturing capabilities.
- **Sustainability Initiatives:** Adoption of sustainable practices and focus on eco-friendly products are likely to align with global trends and consumer preferences.

Performance of the Pharmaceuticals Sector

Sectoral Statistics

Indicator	Value
Market Size (2024)	$58 billion
Projected Market Size by 2030	$120-130 billion
Projected Market Size by 2047	$400-450 billion
Global Production Ranking (by volume)	3rd
Global Generic Drug Export Share	20%

Sources: India Briefing

Overview

- **Regulatory Developments**: The U.S. administration exempted Indian pharmaceutical products from new reciprocal tariffs, positively impacting the sector. This exemption is significant as the U.S. represents a major market for Indian pharmaceutical exports.
- **Technological Advancements**: The adoption of Generative AI (GenAI) is poised to transform India's pharmaceutical industry, unlocking unprecedented efficiency and innovation. Projections suggest potential productivity gains of 30-40% with GenAI adoption.

Challenges in the Sector

- **Trade Tariffs**: The U.S. imposed a 26% tariff on Indian imports, lower than tariffs on some Asian peers but still a concern for exporters. While pharmaceuticals were exempted, other sectors like electronics and gems and jewelry were affected, potentially influencing the overall trade balance.
- **Global Competition**: The industry faces stiff competition from global pharmaceutical giants, necessitating continuous innovation and compliance with international quality standards.

Government Initiatives

- **Policy Support:** The government has introduced measures to stimulate economic growth, including tax cuts for middle-income individuals and small businesses, aiming to enhance consumption and investment.
- **Regulatory Reforms:** Efforts are underway to ease business regulations, with the establishment of a high-level regulatory reform committee and an investment-friendly index for states, aiming to attract investments and foster sector growth.

International Trade

- **Global Standing**: India ranks as the third-largest producer of drugs and pharmaceuticals by volume, with a 20% share in the export of generic drugs. The U.S. exemption of Indian pharma products from new tariffs highlights India's significant role in global pharmaceutical trade.
- **Trade Dynamics**: Despite global economic challenges, India's pharmaceutical exports have remained robust, with the U.S. being a key market. The recent tariff exemption is expected to further strengthen trade relations.

Future Prospects

- **Market Expansion:** The Indian pharmaceutical market is projected to reach $120-130 billion by 2030 and $400-450 billion by 2047, driven by factors such as rising lifestyle diseases, an aging population, and increased focus on holistic health.
- **Technological Integration:** The integration of advanced technologies like GenAI is expected to revolutionize drug discovery, manufacturing processes, and personalized medicine, contributing to sector growth and global competitiveness.
- **Regulatory Developments**: Ongoing regulatory reforms and favorable government policies are anticipated to create a conducive environment for investment and innovation, further enhancing India's position in the global pharmaceutical industry.

Performance of the Automobile Sector

Sectoral Statistics

Indicator	Value
Passenger Vehicle Sales (Feb 2025)	377,689 units
Three-Wheeler Sales (Feb 2025)	57,788 units
Two-Wheeler Sales (Feb 2025)	1,384,605 units

Source: Society of Indian Automobile Manufacturers (SIAM)

Overview

- **Market Dynamics**: The passenger vehicle segment demonstrated growth, with sales increasing by 3.7% year-on-year in February 2025. However, car sales growth decelerated to 5% in 2024, the lowest in four years, indicating a slowdown in urban markets.
- **Electric Vehicle (EV) Landscape:** EV adoption remains modest, with electric cars accounting for 2.5% of total car sales in 2024. The government aims to increase this to 30% by 2030, amidst ongoing policy debates and industry concerns over tariff reductions.

Challenges in the Sector

- **Trade Tensions**: Recent U.S. tariffs pose a threat to India's GDP growth, potentially slowing it by 20-40 basis points in the financial year 2025-26. This situation could lead to additional interest rate cuts by the Reserve Bank of India.
- **Regulatory Pressures:** Negotiations with international partners like the EU and the U.S. regarding tariff reductions on car imports present challenges for domestic manufacturers, who fear increased competition from global automakers.
- **Market Saturation**: The slowdown in car sales growth, particularly in urban areas, suggests market saturation and a need for innovative strategies to stimulate demand.

Government Initiatives

- **Policy Reforms**: The government has introduced measures to promote eco-friendly vehicles, including incentives for EV manufacturing and infrastructure development, aiming to boost adoption rates.
- **Budget Allocations:** The Union Budget for 2025-26 emphasizes promoting electric mobility, with provisions for manufacturing incentives, EV infrastructure development, and GST reforms to support the sector's growth.

International Trade

- **Global Positioning**: India's automobile market is among the largest globally, with significant sales volumes. However, challenges such as trade tensions and tariff negotiations with major economies like the EU and the U.S. impact the sector's international competitiveness.
- **Trade Relations:** Ongoing trade negotiations aim to balance tariff reductions with the protection of domestic industry interests, influencing future trade dynamics and foreign investment in the sector.

Future Prospects

- **Market Outlook:** The sector's growth trajectory is influenced by domestic demand, export opportunities, and the successful implementation of government policies promoting sustainable mobility.

- **Technological Advancements:** Embracing technological innovations, including EVs and smart mobility solutions, is crucial for the sector's evolution, requiring collaboration between industry stakeholders and policymakers.
- **Policy Support:** Continued government support through favorable policies, infrastructure development, and incentives is vital to sustain growth and position India as a leader in the global automotive landscape.

Performance of the Telecommunications Sector

Sectoral Statistics

Indicator	Value
Internet Subscribers (End of 2024)	969 million
Rural Internet Subscribers (%)	42%
Projected Telecom Market Size (2024)	$48.61 billion
Projected Telecom Market Size (2029)	$76.16 billion

Sources: Grant Thornton

Overview

- **Market Growth**: The Indian telecommunications market is projected to expand from $48.61 billion at the end of 2024 to $76.16 billion by 2029, indicating a robust growth trajectory.
- **Technological Advancements:** The sector has seen significant technological progress, including the rollout of 5G services and the exploration of satellite broadband solutions to enhance connectivity, especially in rural and remote areas.
- **Digital Adoption:** India's internet subscriber base reached 969 million by the end of 2024, with 42% of these subscribers in rural areas, highlighting the expanding digital footprint across the country.

Challenges in the Sector

- **Regulatory and Policy Hurdles:** The telecommunications industry faces challenges related to regulatory policies, spectrum allocation, and compliance requirements, which can impact operational efficiency and profitability.
- **Infrastructure Constraints**: Despite advancements, there are ongoing challenges in upgrading infrastructure to support emerging technologies like 5G, particularly in rural and underserved regions.
- **Financial Sustainability:** Telecom operators continue to grapple with financial stress due to high spectrum costs, infrastructure investments, and competitive pricing pressures.

Government Initiatives

- **Policy Reforms:** The government has introduced measures to enhance the ease of doing business in the sector, including the establishment of a high-level regulatory reform committee to review existing regulations and promote investment.
- **Budgetary Allocations:** In the Union Budget 2025, the government has emphasized strengthening the telecom ecosystem by promoting affordability, infrastructure development, and self-reliance, paving the way for next-generation digital services.

Global Standing

- India's telecommunications sector is among the largest globally, with a vast subscriber base and rapid adoption of new technologies. The country's focus on expanding 5G services positions it competitively in the global telecom landscape.

Future Prospects

- **5G Deployment:** The continued rollout of 5G services is expected to revolutionize sectors such as healthcare, education, and manufacturing, driving economic growth and digital inclusion.
- **Digital Inclusion:** Efforts to enhance connectivity in rural and remote areas through initiatives like satellite broadband are anticipated to bridge the digital divide, fostering inclusive growth.
- **Market Consolidation:** The sector may witness consolidation as companies strive for financial stability and scale, potentially leading to improved service offerings and operational efficiencies.

CHAPTER 11

INFRASTRUCTURE

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Chapter 11 Infrastructure

Physical Infrastructure

Roads

The roads sector is a cornerstone of India's economy, facilitating the movement of goods and people across the country. It plays a pivotal role in supporting trade, employment, and infrastructure development.

Key Data Points

- Total Road Length: India's road network spans approximately 6.37 million kilometers, making it the second-largest in the world.
- Contribution to GDP: Road transport accounted for 3.14% of India's GDP in FY2024.
- Employment: The road transport sector directly employs over 20 million people, encompassing drivers, construction workers, and maintenance staff.

Overview

- National Highways Expansion: The National Highway network has increased by 60% from 91,287 km in 2014 to 146,145 km in 2024.
- Highway Construction Pace: In FY2023-24, approximately 12,349 km of national highways were constructed, averaging about 34 km per day.
- Government Initiatives: Programs like Bharatmala Pariyojana aim to enhance road connectivity, especially in border and remote areas.

Challenges in the Sector

- Road Safety: In 2023, India reported over 1.72 lakh road fatalities, averaging 474 deaths daily.
- Traffic Congestion: Urban areas face severe congestion, impacting productivity and quality of life.
- Infrastructure Maintenance: A significant portion of the road network requires regular maintenance and upgrades to meet current demands.
- Funding Constraints: While investments have increased, sustained funding is essential for ongoing and future projects.

Government Initiatives and Reforms

- Bharatmala Pariyojana: A comprehensive program focusing on the development of economic corridors, border roads, and coastal roads.
- FASTag Implementation: The introduction of electronic toll collection has streamlined tolling processes and reduced congestion.
- Urban Mobility Projects: Initiatives like the Delhi infrastructure transformation aim to modernize urban transport systems.
- Safety Measures: Enhanced enforcement of traffic laws and the promotion of road safety awareness campaigns.

Global Standing: India's road network ranks second globally in terms of length, just behind the United States.

Future Prospects

- Accelerated Construction: The government aims to increase the highway construction rate to 100 km per day to meet growing demands.
- Sustainable Practices: Adoption of eco-friendly materials and technologies to reduce the environmental impact of road construction.
- Smart Infrastructure: Implementation of smart traffic management systems and intelligent transportation solutions.
- Public-Private Partnerships: Encouraging private sector participation to enhance efficiency and innovation in road development.

Railways

Economic Impact of the Sector

- Contribution to GDP: Indian Railways contributes approximately 3% to India's Gross Domestic Product (GDP).
- Employment Generated: As one of the largest employers in the country, IR provides direct employment to over 1.31 million individuals.

Sectoral Statistics

Indicator	Value
Passenger Traffic (2023-24)	6.73 billion trips
Freight Traffic (2023-24)	1,588 million tonnes
Operating Ratio (2023-24)	98.45%
Electrification Progress (As of March 2024)	63,456 route km

Sources: Economic Survey 2024-25, Economic Survey 2023-24

Overview

- Passenger and Freight Growth: In the fiscal year 2023-24, IR recorded an 8% increase in passenger traffic and a 5.2% rise in freight revenue, highlighting robust demand and operational efficiency.
- Digitalization Efforts: IR has made significant strides in digitalizing services, with e-ticketing in the reserved sector reaching 86% and in the unreserved sector, 33% by October 2024. Additionally, refund processes have been streamlined, with 98% of eligible cases processed within 24 hours.
- Infrastructure Development: The focus has been on modernizing passenger amenities, introducing high-speed trains like Vande Bharat Express, and enhancing freight corridors to boost capacity and efficiency.

Challenges in the Sector

- Operating Ratio Concerns: The operating ratio, a key indicator of financial health, stood at 98.45% in 2023-24, indicating that a significant portion of revenue is spent on operational expenses, leaving limited scope for capital investment.

  Operating Ratio=(Operating Expenses/Operating Revenue)×100

- Infrastructure Constraints: Despite progress, challenges remain in upgrading infrastructure to meet increasing demand, particularly in high-density routes and urban transit systems.
- Safety and Efficiency: Ensuring safety while enhancing speed and efficiency requires continuous investment in technology and training, amidst growing traffic volumes.

Government Initiatives

- Increased Capital Expenditure: The government has significantly boosted capital expenditure in the rail sector, focusing on infrastructure development, capacity enhancement, and modernization projects.
- Dedicated Freight Corridors (DFC): The development of DFCS aims to separate freight and passenger operations, enhancing speed and efficiency. The Eastern and Western DFCs are under construction, with portions operational, aiming to reduce logistics costs and transit times.
- Electrification and Sustainability: IR is on track to achieve 100% electrification of its broad-gauge network, promoting sustainability and reducing dependence on fossil fuels.

Global Standing: India has world's fourth-largest rail network.

Future Prospects

- High-Speed Rail Initiatives: Projects like the Mumbai-Ahmedabad bullet train are underway, with construction progressing, aiming to revolutionize inter-city travel.

- Technological Upgrades: Investments in modern signaling, electrification, and rolling stock are expected to enhance safety, speed, and capacity.
- Public-Private Partnerships (PPP): Encouraging PPPs is seen as a strategy to bring in investment and expertise, particularly in operations and maintenance, to improve efficiency and service quality.

Civil Aviation

Economic Impact of the Sector

The civil aviation sector contributes an estimated $53.6 billion to India's GDP, about 1.5%. It employs around 0.37 million people directly in aviation enterprises and supports 7.7 million jobs, including in related sectors like tourism. Air travel also plays a vital role in international trade, with approximately 35% of India's merchandise trade by value carried by air.

Key Data Points

- Passenger traffic in FY 2022-23: 327.3 million
- Air cargo handled: 3.15 million tonnes
- Scheduled airline fleet: 723 aircraft

Recent Developments and Trends

The aviation sector has seen strong growth post-pandemic, with a significant rebound in both domestic and international air traffic. This resurgence is driven by pent-up demand, economic recovery, and expanded connectivity. Notable trends include:

- Fleet Expansion and New Routes: Indian airlines, such as Air India and IndiGo, placed record aircraft orders in 2023, fueling network expansion.
- Regional Connectivity: The UDAN scheme continues to improve access to regional airports, with 619 UDAN routes operational by 2023, connecting 88 airports.
- Airport Infrastructure: Several new airports, like Mopa in Goa and Donyi Polo in Arunachal Pradesh, have been inaugurated, improving connectivity to underserved regions.

Challenges in the Sector

- High Fuel Costs: Aviation Turbine Fuel (ATF) prices are a significant burden, accounting for 40-45% of operating expenses, exacerbated by high taxes.
- Airport Congestion: Major airports like Mumbai and Delhi are nearing saturation, leading to congestion and delays.

- Financial Viability and Competition: Intense competition and thin profit margins, highlighted by the collapse of Go First in 2023, continue to stress the financial health of airlines.
- Regulatory Hurdles: The sector faces challenges in adapting regulations to modern technologies (e.g., drones, seaplanes) and ensuring safety with increasing air traffic.

Government Initiatives and Reforms

- UDAN Scheme: This initiative aims to make air travel affordable and accessible to the common man by connecting underserved and unserved regions.
- Airport Infrastructure Expansion: The government is increasing airport capacity through the construction of new airports and the modernization of existing ones, targeting 220 airports by 2025.
- PPP and Privatization: The government encourages private sector participation in airport development through public-private partnerships (PPP), and several airports have been privatized to boost efficiency.
- Airfare Reforms: The abolition of airfare caps has restored pricing flexibility to airlines, improving their financial viability.

Global Standing

India's aviation market is now the 3rd largest globally in terms of domestic air traffic. However, in international traffic, it ranks about 10th, with a modest share (2.2%) of global international passenger traffic. Despite this, India plays a crucial role in air cargo, handling high-value exports like pharmaceuticals, electronics, and perishables.

Future Prospects

- Continued Growth: Passenger traffic is expected to double over the next 6-7 years, driven by rising incomes, tourism, and urbanization.
- Sustainability: There is a growing focus on sustainable aviation fuels (SAF), with India experimenting with bio-ATF and aiming for a SAF blend by 2030.
- Technological Advancements: Digital initiatives, such as biometric boarding and AI-based traffic management, will enhance efficiency and passenger experience.
- International Expansion: The sector is also looking to expand its international footprint with improved connectivity and direct routes to major global hubs.

India's civil aviation sector is poised for continued growth, supported by strategic government initiatives, infrastructure expansion, and technological advancements, making it a key enabler of India's economic progress.

Ports

Economic Impact of the Sector

India's ports and shipping sector is critical for the country's external trade, handling about 95% of India's merchandise trade by volume and 70% by value. The sector significantly contributes to the economy through trade, employment, and infrastructure development. The "blue economy" (ocean-related industries) contributes roughly 4% to India's GDP.

Key Data Points

- Cargo handled at Major Ports: 819.2 million tonnes in FY 2023-24
- Cargo handled at Non-Major Ports: 721 million tonnes in FY 2023-24
- Total Cargo (All Ports): 1,540.2 million tonnes in FY 2023-24
- Major Ports Capacity: 1,630 million tonnes per annum (MTPA) as of March 2024

Overview

- Traffic Growth: Cargo traffic at India's major ports increased to 819.23 million tonnes in FY 2023-24, a 4.45% year-on-year growth.
- Port-wise Performance: Paradip Port in Odisha saw the highest cargo throughput in FY 2023-24 with 145.4 million tonnes, reflecting an 8% year-on-year growth.
- Capacity Expansion: Capacity utilization at major ports averages around 50%, with higher utilization at busiest ports like JNPA, Mundra, and Paradip.
- Competition in the Sector: Private ports now handle 47% of the cargo, contributing to overall sector growth and improved service quality. Mundra Port remains the largest by total cargo handled.

Challenges in the Sector

- Port Congestion and Berth Capacity: At peak demand times, some ports, such as JNPA and Mundra, face congestion, leading to delays and higher turnaround times.
- Hinterland Connectivity: Ports, particularly those in urban areas, face challenges in connecting with inland areas, leading to inefficiencies in last-mile connectivity.
- High Logistics Costs and Procedural Delays: High logistics costs are compounded by inefficiencies in port operations, including slow customs clearance processes and manual handling of cargo.
- Limited Use of Coastal Shipping and Inland Waterways: Despite India's extensive coastline and river network, coastal and inland waterway shipping remains underutilized, limiting the potential for lower-cost transportation.

- Regulatory and Policy Issues: The transition to market-driven pricing under the Major Port Authorities Act 2021 is ongoing, with legacy tariff contracts still posing challenges.

Government Initiatives and Reforms

- Sagarmala Programme: This flagship initiative aims to modernize port infrastructure, improve capacity, and promote coastal shipping and inland waterways. It includes ambitious projects like deep-sea ports and transshipment hubs.
- PM Gati Shakti: Launched in 2021, this platform coordinates 16 ministries for infrastructure development, including port connectivity. The initiative aims to streamline projects and reduce logistical costs.
- Maritime India Vision 2030: This strategic roadmap includes 150+ initiatives to transform India's maritime sector, such as setting up transshipment hubs, improving port efficiency, and digitizing port processes.
- PPP and Privatization: The government is encouraging private sector participation through public-private partnerships (PPP) to boost efficiency. Several ports, like Krishnapatnam, have been developed under PPP models.
- Inland Waterways Development (Arth Ganga): The government has focused on reviving inland waterways through projects like the Jal Marg Vikas Project and incentivizing shippers to use inland routes.

International Comparison

India's ports are becoming increasingly efficient, although there's room for improvement compared to top global players:

- Efficiency Gains: The average turnaround time at Indian ports has improved to about 48 hours, with container port performance improving as well.
- Port Capacity and Scale: While India's ports handle substantial volumes, they still lag behind global mega ports like Shanghai and Singapore in terms of throughput.
- Liner Shipping Connectivity: India's ports are well-connected in the South Asian region, but India lags behind China and South Korea in global liner shipping connectivity.

Future Prospects

- Cargo Growth: The sector is expected to grow at 6-7% annually, with total cargo throughput projected to reach 2.5 billion tonnes by 2030.
- Port Infrastructure Expansion: The development of mega ports, such as the Vadhavan Port in Maharashtra, and improved port depths will help handle growing cargo volumes.
- Sustainability and Green Ports: Ports are adopting green initiatives like renewable energy, green tugs, and carbon-neutral operations by 2030.

- Digitalization and Smart Ports: Increased automation, IoT, and AI-based systems will make ports more efficient and customer-friendly, enhancing global competitiveness.

The Indian ports sector, through sustained investment, strategic reforms, and technological upgrades, is set to play a key role in India's growth as a global trade hub.

Inland Water Transport

Inland Water Transport (IWT) is a vital component of India's logistics infrastructure, offering an eco-friendly and cost-effective alternative to road and rail transport.

Overview

The inland waterways sector has experienced significant growth and modernization:

- Expansion of National Waterways: The number of National Waterways increased from 5 in 2014 to 111 in 2024, with the operational length growing from 2,716 km in 2014–15 to 4,894 km in 2023–24.
- Infrastructure Development: Key initiatives include the establishment of Multi-Modal Terminals (MMTs) at Varanasi, Sahibganj (Jharkhand), and Haldia (West Bengal), and Inter-Modal Terminals (IMTs) at Kalughat (Bihar).
- Technological Advancements: The introduction of River Information Systems (RIS), Least Available Depth (LAD) surveys, and the Jalvahak Scheme has enhanced navigational safety and efficiency. [The 'Jalvahak' scheme offers reimbursement upto 35% of total operating expenditure incurred while transporting cargo via waterways on NW 1 (Ganga river), NW 2 (Brahmaputra river) & NW 16 (Barak river) via Indo Bangladesh Protocol (IBP) route.]
- Green Initiatives: The sector is adopting eco-friendly technologies, including hybrid electric and hydrogen vessels, to promote sustainable transport.

Challenges in the Sector

- Infrastructure Bottlenecks: Issues such as inadequate dredging, insufficient terminal facilities, and limited connectivity to hinterlands hinder optimal utilization.
- Regulatory Hurdles: Complex regulatory frameworks and lack of standardization across states impede seamless operations.
- Environmental Concerns: While IWT is more eco-friendly than road and rail transport, concerns regarding water pollution and habitat disruption remain.

Government Initiatives and Reforms

- Maritime India Vision 2030: A strategic roadmap aiming to increase the IWT modal share from 2% to 5%, targeting over 200 MMT by 2030 and 500 MMT by 2047.
- Infrastructure Investments: Projects worth ₹1,400 crore have been launched or announced to enhance connectivity and navigability.
- International Connectivity: The Kaladan Multi-Modal Transit Transport Project aims to enhance connectivity between India and Myanmar, facilitating trade and strategic cooperation.

International Comparison

India's IWT sector lags behind global leaders:

- Global Standing: Countries like Bangladesh and Germany have higher modal shares for IWT, at 35% and 20%, respectively, compared to India's 2%.

Future Prospects

- Expansion Plans: The government aims to operationalize 76 additional waterways by 2027, expanding the sector's footprint to 23 states and 4 Union Territories.
- Sustainability Goals: Plans are in place to transition all coastal and inland waterway shipping to renewable energy sources within the next five years, supporting India's net-zero carbon emissions target by 2070.
- Technological Integration: The adoption of digital platforms and automation is expected to streamline operations and improve efficiency.

Electricity

Economic Impact of the Sector

The electricity sector is a cornerstone of India's economic infrastructure, driving industrial growth, urbanization, and technological advancement.

- Contribution to GDP: The electricity, gas, water supply, and other utility services sector is estimated to grow by 6.4% in FY2025, supporting overall industrial expansion.
- Employment: In 2023, India had an estimated 1.02 million renewable energy jobs, with hydropower being the largest employer in the renewable sector.
- Electricity Generation: In FY2024–25, India achieved a record 1,824.13 billion kWh of electricity generation, marking a 5.8% annual increase.

Overview

India's electricity sector has undergone significant transformations, focusing on capacity expansion, grid modernization, and renewable energy integration.

- Installed Capacity: As of April 30, 2025, India's total installed power generation capacity stands at 472,468 MW, with 49.19% from non-fossil fuel sources.
- Generation Mix:
  - Coal: 53%
  - Solar: 15%
  - Hydro: 10%
  - Wind: 9%
  - Gas: 6%
  - Oil: 3%
  - Biomass: 2%
  - Nuclear: 2%
- Growth in Renewable Energy: India's renewable energy capacity has seen significant growth, with solar and wind energy capacities increasing substantially over the past decade.

Challenges in the Sector

- Grid Reliability: Infrastructure stress during peak demand periods leads to power outages in various regions, highlighting the need for grid modernization.
- Water Scarcity: Coal-fired power plants, especially in water-stressed areas, face operational challenges due to limited water availability.
- Financial Health of DISCOMs: State-owned distribution companies (DISCOMs) continue to face financial difficulties, affecting the sector's overall efficiency.

Government Initiatives and Reforms

- PLI Schemes: Production-Linked Incentive (PLI) schemes aim to boost domestic manufacturing in solar, battery storage, and green hydrogen sectors.
- Transmission Waivers: Waivers on inter-state transmission system charges for energy storage projects have been extended until June 2028 to support clean energy goals.
- Reforms in Distribution: States like Mizoram are corporatizing their power departments to enhance efficiency and service delivery.

Future Prospects

- Capacity Expansion: The government aims to achieve 500 GW of non-fossil fuel-based power capacity by 2030.
- Technological Advancements: Investments in smart grids, energy storage, and digitalization are expected to enhance grid management and reliability.
- Sustainability Goals: Initiatives like biomass co-firing and green hydrogen development are part of India's strategy to decarbonize the energy sector.

India's electricity sector is undergoing a significant transformation, balancing the need for increased capacity with sustainability goals.

Space Infrastructure

India's space infrastructure has grown rapidly, becoming one of the key contributors to the country's technological advancements and global position in space exploration.

Space Assets and Satellite Systems

- India currently operates 56 active space assets, including:
  - 19 communication satellites.
  - 9 navigation satellites.
  - 4 scientific satellites.
  - 24 earth observation satellites.
- These satellites play an essential role in facilitating communication, navigation, weather forecasting, and disaster management. They also provide vital data for agriculture, urban planning, and environmental monitoring.

- Small Satellite Launch Vehicle (SSLV):
  - ISRO has developed the Small Satellite Launch Vehicle (SSLV), which enhances the country's ability to launch small payloads into space. This initiative caters to increasing demand for small satellite deployment, both domestically and internationally.
  - SSLV's addition to the fleet signifies India's growing capability to address the emerging needs of satellite communications and scientific observations.
- Public-Private Partnerships:
  - The Indian government has opened doors for private sector involvement in space activities. New Space India Limited (NSIL), a government-owned entity, has played a pivotal role in expanding India's commercial space operations. For example, NSIL successfully launched 72 OneWeb satellites into low Earth orbit and continues to foster collaboration between the government and private players.
- International Collaboration:
  - India has strengthened its space infrastructure through international collaborations. Recently, ISRO launched the GSAT-20 satellite in partnership with SpaceX, illustrating the growing reliance on global partnerships to enhance satellite capacity.
- Space-Based Monitoring Platforms:
  - ISRO's advanced geospatial platforms, such as the Bhuvan Platform, are instrumental in infrastructure monitoring. These platforms support various development projects, including rural development and urban planning. They also

facilitate monitoring of electrical infrastructure and judicial projects, improving overall governance and project execution.
  - Bhuvan, in particular, has been useful in overseeing infrastructure schemes like MGNREGA and watershed development under PMKSY, showcasing its vital role in large-scale project monitoring.
- Future Projects and Vision 2047:
  - India’s Space Vision 2047 outlines several ambitious missions, including:
    - Gaganyaan Follow-on Mission: Aiming to establish the first module of the Bhartiya Antariksh Station, marking India’s entry into human spaceflight.
    - Chandrayaan-4 Lunar Sample Return Mission: This mission will focus on returning lunar samples, enhancing scientific understanding of the Moon.
    - Venus Orbiter Mission: Targeting Venus for in-depth study of the planet's atmosphere and surface.
    - Next Generation Launch Vehicle: To further strengthen India’s satellite launch capabilities, ensuring more efficient and cost-effective access to space.
- Space-Based Infrastructure Monitoring and Management:
  - ISRO’s space-based initiatives are key in monitoring infrastructure projects across the country. The NyayaVikas Portal monitors judicial infrastructure, tracking over 2,800 judicial projects, thus improving transparency and project management.
  - Urban infrastructure, particularly in AMRUT cities, has benefited from ISRO’s urban geospatial databases, enabling better planning and development through GIS-based master plans.

India's space infrastructure is integral to its developmental trajectory, playing a key role in communication, monitoring, and scientific research. As India moves towards its Space Vision 2047, the expansion and innovation in space infrastructure will be pivotal to achieving national development goals.

Digital Infrastructure

Telecommunications

Economic Impact of the Sector

India's telecommunications sector is a cornerstone of its digital economy, driving growth in various industries and contributing significantly to GDP.

- Market Size: The Indian telecom market is estimated at USD 53.18 billion in 2025, with projections to reach USD 83.34 billion by 2030, growing at a CAGR of 9.4% .

- Subscriber Base: India boasts a subscriber base of over 1.2 billion, with a tele-density of 85.43%. Urban areas have a tele-density of 132.94%, while rural areas stand at 59.05% .
- Employment: The sector provides direct and indirect employment to millions, encompassing roles in infrastructure development, customer service, and technology.

Recent Developments and Trends

- 5G Rollout: Major operators like Bharti Airtel and Reliance Jio have expanded 5G coverage, aiming to reach 1 billion users by 2030 .
- Technological Innovations: The sector is embracing AI, machine learning, and cloud technologies to enhance network efficiency and customer experience .
- Manufacturing Growth: India has emerged as a hub for telecom equipment manufacturing, producing 15% of the world's iPhones .

Challenges in the Sector

- Financial Stress: Operators like Vodafone Idea face financial difficulties due to high debt and regulatory dues .
- Spectrum Costs: High spectrum acquisition costs and regulatory fees burden operators, affecting profitability .
- Competition: Intense competition among operators leads to price wars, impacting average revenue per user (ARPU).

Government Initiatives and Reforms

- Policy Support: The Union Budget 2025 emphasizes affordability, infrastructure development, and self-reliance in the telecom ecosystem .
- Revival Packages: The government has allocated funds to upgrade telecom networks in underserved areas and settle dues for state-run operators .
- Security Measures: Initiatives like the Sanchar Mitra Scheme aim to enhance communication between the telecom sector and citizens, ensuring safety in the digital space .

International Comparison

- Global Standing: India ranks as the second-largest telecom market worldwide, with a vast subscriber base and rapid technological adoption.

Future Prospects

- 6G Research: India is actively involved in research and development for 6G technologies, aiming to be a leader in next-generation communications .

- Satellite Broadband: The government is facilitating the deployment of satellite communication services to bridge the digital divide in remote areas .
- AI Integration: Telecom operators are integrating AI and machine learning to optimize network performance and offer personalized services to customers .

Digital Public Infrastructure

Economic Impact of the Sector

India's Digital Public Infrastructure (DPI) has significantly contributed to the nation's economic growth and digital transformation.

- Digital Payments: The Unified Payments Interface (UPI) has become a cornerstone of India's digital economy, with over 1.86 billion transactions worth ₹24.77 lakh crore in April 2025 alone.
- Financial Inclusion: Initiatives like Aadhaar and the Aadhaar Enabled Payment System (AePS) have facilitated the inclusion of over 80% of the Indian population into the formal financial system.
- Government e-Marketplace (GeM): As of May 2025, GeM has facilitated transactions worth ₹13.60 lakh crore, promoting transparency and efficiency in public procurement.

Recent Developments and Trends

- BharatNet: By January 2025, BharatNet had connected over 2.18 lakh Gram Panchayats with high-speed internet, laying nearly 6.92 lakh km of optical fiber cable.
- Open Network for Digital Commerce (ONDC): Launched in 2022, ONDC aims to democratize digital commerce by providing a platform for buyers and sellers to transact independently of platforms like Amazon or Flipkart.
- Digital Literacy: Programs like the Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) have certified over 47.8 million rural citizens in digital literacy, bridging the digital divide.

Challenges in the Sector

- Infrastructure Gaps: While urban areas are well-connected, rural regions still face challenges in internet connectivity and digital infrastructure.
- Data Privacy Concerns: The extensive collection and usage of personal data through platforms like Aadhaar raise concerns regarding data privacy and security.
- Digital Literacy: Despite efforts, a significant portion of the population remains digitally illiterate, hindering the full utilization of DPI services.

Government Initiatives and Reforms

- National Broadband Mission (NBM) 2.0: Launched in January 2025, NBM 2.0 aims to provide high-speed broadband connectivity to 2.70 lakh villages by 2030, with a national average fixed broadband speed of 100 Mbps.
- Digital India Programme: This flagship initiative encompasses various projects like DigiLocker, eSign, and UMANG, aiming to provide digital access to government services.
- AI Integration: States like Odisha have appointed dedicated AI officers in all departments to promote AI-driven governance and service delivery.

International Comparison

India's DPI model has garnered international recognition.

- Global Adoption: Countries like Singapore, France, and Australia have shown interest in adopting India's DPI frameworks, particularly the India Stack.

Future Prospects

The future of India's DPI looks promising with several emerging trends.

- 6G Research: India is actively involved in research and development for 6G technologies, aiming to lead in next-generation communications.
- Global Collaboration: India continues to share its DPI experiences and frameworks with other nations, fostering global digital collaboration.

Social Infrastructure

Rural Infrastructure

- The Indian government has focused significantly on enhancing rural infrastructure through initiatives aimed at improving drinking water, sanitation, connectivity, electricity, and digital services.
- The vision of "Viksit Bharat" (Developed India) by 2047 hinges on the successful development of rural infrastructure.

Rural Drinking Water and Sanitation

- Jal Jeevan Mission (JJM)
    - Launched in 2019 to provide reliable access to safe piped drinking water for rural households.
    - Before JJM, only 17% of rural households had tap water connections.

- By November 2024, over 79% of rural households have been connected.
- Eight states (including Gujarat, Haryana, Punjab) achieved 100% coverage.
- Water Quality Labs: for testing drinking water safety.

- Swachh Bharat Mission – Grameen (SBM-G)
  - Phase II focuses on converting ODF villages to ODF Plus villages with proper waste management systems.
  - By 2024, 3.64 lakh villages achieved ODF Plus status, ensuring comprehensive sanitation and waste management.
  - Ongoing focus on solid and liquid waste management, visual cleanliness, and sustainable sanitation practices.

Rural Roads and Connectivity

- Pradhan Mantri Gram Sadak Yojana (PMGSY)
  - Aims to provide all-weather roads to rural areas, connecting them to markets, schools, and hospitals.
  - Significant expansion of road networks to enhance access and mobility.
- Bharatmala Pariyojana
  - Focuses on improving connectivity through the development of national highways and economic corridors.
  - Bridges the rural-urban divide by improving the transport network across remote and agricultural regions.

Power and Energy Infrastructure

- Electrification Initiatives
  - Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) and Saubhagya Scheme focus on rural electrification.
  - Rural areas now receive 21.9 hours of electricity per day, a significant improvement from 12.5 hours in 2014.
- Renewable Energy
  - Adoption of solar energy in rural areas to provide sustainable energy solutions.
  - Focus on clean energy projects to reduce dependency on fossil fuels.

Digital Connectivity and ICT

- BharatNet Project
  - Aims to connect all Gram Panchayats with high-speed broadband.
  - By December 2024, 2.14 lakh Gram Panchayats were service-ready, enabling access to government services, education, and digital banking.
- 5G Services

- Rollout of 5G networks has expanded digital connectivity to rural areas, enabling faster internet access and better communication.

Rural Housing and Social Infrastructure

- Pradhan Mantri Awas Yojana – Gramin (PMAY-G)
  - Over 1.25 crore houses have been built, improving living conditions and ensuring shelter for rural families.
- National Rural Livelihood Mission (NRLM)
  - Focuses on empowering rural populations through skill development, social welfare programs, and income-generation activities.
- Health, Education, and Social Welfare
  - Ongoing efforts to improve rural healthcare, education, and social infrastructure, ensuring a more inclusive rural development framework.

Way forward

- Continued focus on private sector participation and public-private partnerships (PPP) will be essential for scaling up rural infrastructure development.
- These advancements are central to achieving Viksit Bharat by 2047, ensuring that rural India is equipped to drive sustainable growth and inclusive prosperity.

Urban Infrastructure

As the urban population continues to grow, providing quality infrastructure in cities becomes crucial to ensuring sustainable development.

Urban Housing Development

- Pradhan Mantri Awas Yojana – Urban (PMAY-U)
  - Launched in 2015, the PMAY-U aims to provide affordable housing for all in urban areas by 2022.
  - As of November 2024, 1.18 crore houses have been sanctioned.
  - PMAY-U 2.0 was introduced in September 2024 to extend housing assistance to an additional 1 crore households.
  - This initiative addresses the urban housing shortage, especially for economically weaker sections and lower-income groups, by providing subsidies and promoting affordable housing projects.

Urban Transport Infrastructure

- Metro Rail and Rapid Transit Systems

- Metro and rapid transit systems are operational or under construction in 29 cities across India, with over 1010 km operational in 23 cities.
- In FY25, 62.7 km of metro were operationalized, with a daily ridership of 10.2 million people.
- The growth of metro networks has contributed significantly to reducing traffic congestion, improving air quality, and promoting sustainable public transportation .

- Atal Mission for Rejuvenation and Urban Transformation (AMRUT)
    - The AMRUT scheme, launched in 2015, focuses on improving water supply, sewerage, and urban greenery across 500 cities.
    - As of 2024, the scheme has contributed to a 70% increase in tap water coverage and a 62% rise in sewerage coverage.
    - AMRUT 2.0, launched in 2021, extends the scheme's benefits to all statutory towns.

Smart Cities Mission

- Transforming Urban Living
    - Launched in 2015, the Smart Cities Mission aims to create 100 smart cities that offer a good quality of life and sustainable infrastructure.
    - Key elements include smart mobility, smart energy, public spaces, and smart governance .
    - Smart Mobility: Projects focus on smart roads, pedestrianization, and public transport systems.
    - Smart Energy: Includes solar and LED streetlights, solar energy installations, and gas pipeline networks.
    - Smart Governance: Digital solutions for better municipal management and citizen services.

Waste Management and Sanitation

- Swachh Bharat Mission – Urban (SBM-U)
    - Aimed at eliminating open defecation and promoting cleanliness in urban areas, SBM-U has been a game-changer in waste management.
    - Over 63.7 lakh individual household latrines and 6.4 lakh community toilets have been constructed under the mission.
    - The mission also emphasizes solid waste management, aiming for 100% door-to-door collection of municipal solid waste across cities.
    - By 2024, 93,756 wards had 100% waste collection coverage .

Technological Integration in Urban Governance

- Data-Driven Urban Management
    - The DataSmart Cities strategy promotes the use of data for efficient governance and service delivery.
    - National Urban Digital Mission (NUDM) aims to establish shared digital infrastructure across cities, enhancing citizen-centric governance .
- Climate-Smart Cities Framework
    - Launched in 2019, the Climate Smart Cities Assessment Framework (CSCAF) evaluates cities based on climate-sensitive development indicators.
    - This framework helps cities incorporate sustainability into urban planning and infrastructure development .

Continuous investment in technology, sustainable practices, and private sector participation will be necessary to meet the growing demands of urban populations and ensure that cities evolve into hubs of sustainable living and economic growth.

Tourism Infrastructure

India's tourism sector is poised for significant growth, with substantial government initiatives aimed at enhancing tourism infrastructure to cater to both domestic and international tourists.

Pilgrimage Rejuvenation and Spiritual Augmentation Drive (PRASHAD)

- Objective: Focuses on the development of tourism infrastructure at key pilgrimage sites and heritage cities.
- Projects: Includes projects for infrastructure upgrades such as better connectivity, facilities for tourists, and beautification of pilgrim destinations.
- Impact: Aimed at promoting spiritual tourism, the PRASHAD scheme is vital for attracting both national and international visitors to spiritual hubs.

Swadesh Darshan Scheme

- Objective: Designed for the integrated development of tourism destinations, with a focus on theme-based circuits like coastal, heritage, and eco-tourism circuits.
- Key Features: The initiative encourages sustainable and responsible tourism by improving tourism facilities, developing world-class infrastructure, and enhancing the overall tourist experience at these destinations.

National Infrastructure Investment

- Tourism-Related Infrastructure: Significant investments are being made in creating iconic tourism destinations by upgrading amenities, improving connectivity, and creating new attractions.

Public-Private Partnerships (PPP)

- Collaborative Efforts: To meet the growing demand for tourism infrastructure, the government has emphasized PPP models, which play a critical role in planning, financing, construction, and maintenance.
- Focus Areas: These partnerships are focused on upgrading airport terminals, developing resorts, improving transportation services, and enhancing hospitality infrastructure.

Airports and Connectivity

- Improvement in Air Connectivity: Investments in regional connectivity under schemes like UDAN (Ude Desh Ka Aam Naagrik) have made air travel accessible to underserved regions, connecting 88 airports and several heliports and water aerodromes.
- Airport Modernization: Projects aimed at expanding and modernizing airports, along with improving cargo handling facilities, are pivotal for increasing tourism arrivals and enhancing the travel experience.

Infrastructure for Sustainable Tourism

- Eco-Friendly Practices: The Swadesh Darshan Scheme 2.0 and other initiatives prioritize sustainable tourism practices, including waste management, energy-efficient facilities, and eco-friendly transport options.
- Community Participation: Tourism infrastructure projects under these schemes are designed to include local communities, ensuring that development benefits are shared and preserve the local culture and environment.

State-Specific Projects

- Iconic Projects Across States: States have received targeted funding for specific tourism infrastructure projects, such as beach resorts in coastal areas, heritage circuits in Rajasthan, and religious tourism centers in Uttar Pradesh and Madhya Pradesh.
- Focus on Rural and Urban Balance: While urban tourism infrastructure receives substantial attention, rural tourism is also being promoted through improved road access, sanitation, and hospitality services to boost rural economies.

Global Standards and Branding

- Destination Branding: The government's focus on upgrading tourism infrastructure is complemented by global branding and marketing campaigns that promote India as a year-round tourist destination, targeting niche markets such as adventure, cultural, and medical tourism.

- Promotion of Iconic Destinations: India’s world-famous sites, such as the Taj Mahal, Jaipur’s forts, Kerala’s backwaters, and Rishikesh for adventure tourism, are being repositioned with world-class amenities and better visitor management systems.

With enhanced focus on sustainable practices, private sector participation, and government-led initiatives, the country is well-positioned to meet the growing demand for tourism while ensuring the preservation of its cultural and environmental assets. The ongoing projects under schemes like PRASHAD and Swadesh Darshan, along with a focus on modernizing facilities and improving connectivity, are set to make India a globally competitive tourism destination.

Health Infrastructure

Health Expenditure: India's health spending doubled from ₹3.2 lakh crore in 2020–21 to ₹6.1 lakh crore in 2024–25, accounting for 3.8% of GDP.

Recent Developments and Trends

- Medical College Expansion: The number of medical colleges in India increased from 387 in 2014 to 780 in 2024, expanding access to medical education.
- AIIMS Expansion: The establishment of 23 new All India Institutes of Medical Sciences (AIIMS) since 2014 has improved access to tertiary healthcare services.
- Telemedicine Initiatives: The National Tele Mental Health Programme and Ayushman Bharat Digital Mission aim to enhance digital health services, especially in rural areas.

Challenges in the Sector

- Infrastructure Gaps: 80% of public health facilities do not meet minimum essential standards for infrastructure, workforce, and equipment.
- Regional Disparities: States like Jharkhand and Bihar face significant shortages in healthcare personnel, with up to 73% shortfall in Primary Health Centres.
- Rural Access: Limited access to quality healthcare in rural areas due to inadequate infrastructure and workforce distribution.

Government Initiatives and Reforms

- PM-ABHIM: The Pradhan Mantri Ayushman Bharat Health Infrastructure Mission aims to enhance health infrastructure by strengthening Health and Wellness Centres, adding critical care beds, and supporting Block Public Health Units.
- PMSSY: The Pradhan Mantri Swasthya Suraksha Yojana focuses on correcting regional imbalances by setting up new AIIMS and upgrading existing medical colleges.

- Financial Allocations: The Union Budget 2025 allocated ₹99,858.56 crore to the Health Ministry, a 2% increase from the previous year, focusing on maternal and child healthcare and infrastructure improvements.

International Comparison

- India's health expenditure as a percentage of GDP remains below the global average, indicating potential for further investment.
- Medical Tourism: The 'Heal in India' initiative aims to position India as a global hub for medical tourism, leveraging its advanced healthcare services.

Future Prospects

- AI Integration: Collaborations between tech firms and pharmaceutical companies are expanding the use of AI in diagnostics and disease modeling.
- Traditional Medicine: The Global Centre for Traditional Medicine in Jamnagar aims to promote traditional medicine as a system of treatment for various ailments.
- Sustainable Practices: The government is focusing on integrating sustainable practices in healthcare infrastructure development to ensure long-term viability.

12 CHAPTER

INDIA & THE WORLD

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India and the World

Changing Global Trade Dynamics

Global trade has faced significant disruptions due to geopolitical conflicts and evolving trade practices.

Major Developments

Geopolitical Disruptions

1. **Russia-Ukraine Conflict**: This conflict has led to rising inflation and energy supply uncertainties, prompting European economies to shift energy imports from Russia to Norway and the U.S.
2. **Middle East Conflicts**: Ongoing tensions, particularly involving Israel and neighboring regions, have heightened instability, affecting global oil prices and supply chains.
3. **Red Sea Crisis:** Houthi rebel attacks on commercial vessels have disrupted shipping routes, leading to increased transit times and costs as ships reroute around the Cape of Good Hope.

Disruptions in Shipping Routes

1. **Panama Canal:** The canal handles 6% of global trade, but severe droughts have reduced water levels, limiting vessel transits and causing significant delays and cost increases.
2. **Suez Canal:** Facilitating 12% of global trade, the Suez Canal has seen reduced traffic due to security concerns and trade diversions caused by conflicts in the Red Sea. Ships rerouting via the Cape of Good Hope have added 10 days to Asia-Europe journeys, raising fuel costs.

Changing Trade Patterns

Shifts in Trade Partnerships

Mexico Surpassing China: In 2023, Mexico became the largest goods trade partner of the U.S., reflecting a reconfiguration of global supply chains. This shift is partly due to companies seeking to reduce reliance on China by nearshoring production to neighboring countries.

Vietnam's Trade Growth: Vietnam has increased trade with both China and the U.S., serving as an intermediary in supply chains. Chinese firms have been rerouting supplies through Vietnam to circumvent trade restrictions, highlighting Vietnam's growing role in global commerce.

Energy Trade Shifts: European countries have reduced pipeline gas imports from Russia, replacing them with supplies from Norway and the U.S., diversifying energy sources to enhance security.

Emerging Trade Practices

1. **Decoupling and De-risking**: Nations are reducing dependency on politically volatile trading partners to mitigate risks. For example, the U.S. has implemented policies to decouple critical technology sectors from China, aiming to protect national security.
2. **Reshoring, Nearshoring, and Friend-Shoring**: Businesses are relocating production closer to home (reshoring) or to politically aligned nations (friend-shoring). For instance, Apple has expanded manufacturing in India, reducing reliance on Chinese production facilities.
3. **De-globalization**: The U.S. and China are gradually reducing reliance on global markets. Despite this, the U.S. remains reliant on Chinese inputs, with Chinese firms rerouting supply chains through countries like Mexico and Vietnam to maintain market access.

Economic Implications

1. **Global Slowdown**: World merchandise trade contracted by 5% in 2023, and global FDI decreased by 2%, driven by higher interest rates and industrial policy shifts in developed economies.
2. **Inflation and Interest Rates:** Inflation remains a global challenge, with developed nations adopting higher interest rates, slowing investment and economic growth.
3. **External Debt and Trade Deficit:** Emerging markets, including India, have seen external debt rise. Trade deficits in major economies have widened due to disrupted supply chains and increased import costs.

India’s Trade Resilience Amidst Global Turmoil

India has demonstrated remarkable resilience in trade amidst global disruptions. This resilience is driven by merchandise trade stability, robust services export growth, and regional diversification.

Merchandise Trade

Exports

- Merchandise exports faced a decline in FY24 due to the lagged impact of monetary tightening and a slowdown in major trading partners, particularly the EU.
- Key export destinations in FY24 included the UAE, Singapore, China, Russia, and Australia, replacing traditional partners like the UK, Germany, and Belgium.

Imports

- Merchandise imports contracted by 5.7% in FY24, driven by reduced crude oil and commodity prices, despite strong domestic demand.
- The increase in capital goods imports highlights strengthening domestic manufacturing capabilities.

Trade Openness

- India's trade openness indicator improved from 37.5% in FY05 to 45.9% in FY24, reflecting growing integration into global trade networks.

Services Trade

- Services exports grew at a compound annual growth rate (CAGR) of over 14% over three decades, outpacing merchandise trade growth.

Key Drivers

- Transition from low-cost business process outsourcing (BPOs) in the early 2000s to providing upstream and high-value-added services in IT, software, and consulting.
- India has become a hub for Global Capability Centres (GCCs), hosting over 1,600 GCCs by 2023, contributing significantly to employment and revenues in the services sector.

Impact on Balance of Payments (BoP)

- Services trade has imparted strength to India's BoP by offsetting a significant portion of the merchandise trade deficit.

Regional Diversification

Evolving Export Destinations

- Post-FY2000, countries like the UAE, Singapore, Hong Kong, and China have replaced traditional export markets such as the UK and Germany.
- India has diversified its export markets, reducing dependency on traditional trading partners and expanding trade ties with Asian, African, and Middle Eastern nations.

Global Rankings: Merchandise and Services Trade

Category	Exports	Imports
Merchandise Trade	Ranked 18th globally in 2023	Ranked 13th globally in 2023
Services Trade	Ranked 7th globally in 2023	Ranked 11th globally in 2023

Case Studies: India's Export Success Across Key Sectors

Case Study 1: Toy Exports - From Net Importer to Export Leader

For decades, India relied heavily on imports for its toy needs, with 94% of toy imports in FY13 originating from China. However, by FY24, India transitioned to being a net exporter of toys, signaling a remarkable turnaround. This growth story reflects a combination of strategic policies and a commitment to quality enhancement.

Key Strategies and Interventions:

1. National Action Plan for Toys:
   - Introduced 21 action points focused on strengthening domestic manufacturing and fostering innovation.
   - Promoted toy clusters across states like Karnataka, Tamil Nadu, and Uttar Pradesh.
2. Quality Control and Import Substitution:
   - Imposition of higher customs duties on imported toys curbed low-quality imports.
   - Implementation of Quality Control Orders (QCOs) ensured compliance with Indian safety and quality standards.
3. Global Integration:
   - Leveraged trade agreements for zero-duty market access in key destinations such as the UAE and Australia.

Impact:

- Exports grew at a CAGR of 15.9% from FY13 to FY24.
- China's share in India's toy imports reduced from 94% to 64%, showcasing India's ability to substitute imports with domestically produced toys.
- Local toy clusters have not only boosted exports but also created employment for artisans and small-scale manufacturers.

Case Study 2: Defence Exports - From Import Dependency to Export Powerhouse

India, traditionally one of the world's largest arms importers, has emerged as a significant exporter, breaking into the top 25 arms-exporting nations globally. Defence exports grew to USD 2.5 billion in FY24, driven by high-value indigenous products.

Key Policy Initiatives:

1. Indigenous Design and Manufacturing: Under the Aatmanirbhar Bharat initiative, India prioritized the domestic development of advanced defence systems, including:

- Dornier-228 aircraft for surveillance.
- BrahMos missiles for precision strikes.
- PINAKA rocket systems for artillery firepower.

2. Streamlined Export Procedures:

- Transitioned to end-to-end online authorization systems to reduce delays and improve ease of doing business.
- Simplified compliance and export documentation, encouraging private sector participation.

3. Strategic Partnerships: Collaborated with countries like Vietnam and the Philippines for the export of BrahMos missiles and other defence equipment.

Impact:

- India exported defence equipment to over 85 countries in FY24, establishing itself as a reliable global supplier.
- Indigenous manufacturing reduced import dependency, aligning with India's goal of achieving self-reliance in defence production.

Case Study 3: Footwear Exports - Tapping into Global Markets

India is the second-largest footwear producer globally and has steadily increased its presence in the global market. Exports surged from USD 1.9 billion in FY21 to USD 2.5 billion in FY24, driven by growing demand for quality products and government support.

Key Measures:

1. Quality Enhancement:
    - Issuance of Quality Control Orders (QCOs) under the Bureau of Indian Standards ensured compliance with international standards.
    - Relaxation in rules for setting up testing facilities encouraged small-scale manufacturers to upgrade their products.
2. Awareness Campaigns: Educated manufacturers across India about export promotion schemes and quality standards.
3. Indian Footwear and Leather Development Programme: Provided financial assistance to exporters and fostered innovation in design and production.
4. Market Diversification: Focused on emerging markets and reduced reliance on traditional partners, expanding India's footprint in Europe, the Middle East, and North America.

Impact:

- India's domestic market is projected to grow from USD 26 billion in 2023 to USD 90 billion by 2030.
- Greater brand awareness and urbanization have strengthened India's reputation as a global footwear hub.

Case Study 4: Smartphone Exports - Rising Tech Superpower

India's smartphone industry has witnessed an extraordinary transformation, becoming the world's sixth-largest exporter of smartphones in 2022. This achievement stems from a strategic focus on manufacturing, innovation, and export promotion.

Key Initiatives:

1. Production Linked Incentive (PLI) Scheme: Launched in 2020, the scheme provided financial incentives to companies producing smartphones and related components domestically.

2. Domestic Manufacturing Boom: Companies like Apple and Samsung have expanded manufacturing in India, with facilities catering to both domestic demand and export markets.

3. Focus on Export Growth: Domestic production surpassed domestic demand for the first time in FY20, positioning exports as the primary growth driver.

Impact:

- Smartphone exports grew by 42.2% YoY in FY24, with the segment becoming one of India's top five export items.
- India's emergence as a manufacturing hub has created employment and bolstered technological capabilities, reinforcing its position in global supply chains.

The Rise of Global Capability Centres (GCCs) in India

Over the past few years, India has cemented its position as a global hub for Global Capability Centres (GCCs), with over 150 multinationals establishing their GCCs in the country. These centres, which primarily employ engineers and scientists, deliver high-value, complex work in areas like research and development (R&D), data analytics, artificial intelligence (AI), and digital innovation. GCCs have not only contributed to their parent organisations' success but have also emerged as a key driver of India's economic growth, accounting for more than 1% of the country's GDP.

India's Unique Position as a GCC Hub

1. Talent Advantage
    - India's large pool of highly skilled engineers, scientists, and technologists offers a cost advantage unmatched globally.
    - The availability of a young and dynamic workforce proficient in emerging technologies like AI, blockchain, and cloud computing makes India a preferred destination for GCCs.
2. Cost Efficiency: India provides a substantial cost arbitrage compared to developed markets, enabling companies to lower operational costs while maintaining high productivity.
3. Government Support
    - Policies like Digital India, ease of doing business reforms, and streamlined tax regulations have created a business-friendly environment.
    - Investments in digital infrastructure, including high-speed internet and state-of-the-art data centres, have facilitated seamless operations for global enterprises.
4. Innovation Ecosystem: Government-backed innovation labs, hackathons, and start-up incubators have nurtured a culture of entrepreneurship and technological advancements, aligning with GCCs' objectives of fostering innovation.

Regional Diversification and Tier-II Expansion

1. Tier-II Cities: The Next Frontier: GCCs are increasingly exploring tier-II cities such as Pune, Coimbatore, and Bhubaneswar, driven by:

- Cost Arbitrage: Operating costs in tier-II cities are significantly lower compared to metro cities.
- Reverse Migration: The pandemic-induced reverse migration has created a rich talent pool in smaller cities.

This shift not only reduces operational costs but also expands GCCs' reach to untapped talent pools.

2. Strategic Growth in Tier-II Towns: Companies like Microsoft and Google have started setting up secondary innovation hubs in smaller cities, blending cost efficiency with access to skilled labor.

Global Investment Trends

1. Japan and South Korea's Foray
    - Multinational companies from Japan and South Korea have started establishing R&D and innovation centres in India to leverage its talent endowment and cost efficiencies.
    - These centres are focusing on cutting-edge domains such as semiconductors, green energy solutions, and automotive innovation.
2. Broadening Horizons: India's reputation as a GCC hub has extended beyond traditional markets like the U.S. and Europe, attracting interest from emerging global players seeking to tap into India's talent ecosystem.

Impact of GCCs on India's Economy

1. Contribution to GDP: GCCs contribute over 1% to India's GDP, reflecting their substantial role in driving economic activity and employment.
2. Fostering Innovation: GCCs host advanced R&D projects, fostering innovation in technologies that benefit both parent organisations and India's domestic industries.
3. Employment Creation: GCCs employ hundreds of thousands of professionals, offering competitive salaries and global exposure, which uplift the standard of living and boost domestic consumption.
4. Knowledge Spillovers: The presence of GCCs accelerates knowledge transfer and capacity building in local industries, fostering a culture of innovation and entrepreneurship.

Case Study: GCCs in Tier-II Cities

A prominent global IT firm established a digital innovation centre in Bhubaneswar, Odisha, to leverage local talent and reduce operational costs.

Impact:

- Created over 1,000 jobs within two years.
- Reduced annual operational costs by 30% compared to metro operations.
- Successfully executed R&D projects in AI-driven healthcare solutions, which were later adopted globally.

India's Global Value Chain (GVC) Evolution

Global Value Chains (GVCs) embody the modern dynamics of international trade, where production processes are distributed across multiple countries. During the era of hyperglobalisation in the early

2000s, GVCs experienced rapid expansion, transforming global commerce. However, the 2008 Global Financial Crisis (GFC) initiated a shift toward slowbalisation, further exacerbated by the China-USA trade war, the COVID-19 pandemic, and the Russia-Ukraine conflict. Despite these challenges, India has increasingly integrated into GVCs, supported by government initiatives, sectoral reforms, and its vast domestic market.

India's GVC Participation

1. Evolving Trade Dynamics
   - India's GVC trade expanded significantly, growing from USD 62.9 billion in 2010 to USD 233.1 billion in 2022, at a CAGR of 14.6% (2018–2022).
   - The share of medium- and high-technology manufacturing in exports has risen, while low-technology manufacturing has declined. Key drivers include increased investments in electronics, semiconductors, and transport equipment.
2. Transition from Forward to Backward Participation
   - Historically, India's GVC involvement relied on forward participation, exporting raw materials like textiles and agricultural goods.
   - Recent trends show a focus on backward participation, with India importing intermediate goods for the production of high-value finished products. For example, Apple now assembles 14% of its global iPhones in India, signifying this shift.
3. Sectoral Contributions
   - Essential products driving India's GVC participation include business services, chemicals, coal and petroleum, and transport equipment.
   - India has also matured in services exports, transitioning from low-value BPOs to high-value services such as those provided by Global Capability Centres (GCCs).

Government Initiatives Driving GVC Integration

1. Production Linked Incentive (PLI) Scheme
   - Introduced to boost domestic manufacturing in sectors such as electronics, semiconductors, and automobiles.
   - Success stories include Foxconn's investments in Karnataka and Tamil Nadu, supporting component and device manufacturing.
2. Districts as Export Hubs (DEH)
   - Focused on developing district-level production hubs for export-specific goods.
   - For instance, Ladakh's apricots have gained significant traction in Gulf markets, showcasing the integration of rural regions into GVCs.
3. Improved Trade Infrastructure
   - Investments in port upgrades, streamlined customs processes, and digital trade facilitation measures have enhanced India's GVC readiness.
   - Special economic zones (SEZs) and logistics parks further improve global supply chain connectivity.

India as a GVC Destination

1. Attractive Domestic Market
    - India's large consumer base remains a significant draw for global firms setting up operations.
    - Companies like Apple, Tesla, and Samsung have expanded production in India to cater to both domestic and export markets.
2. Asia's Role in Shifting Supply Chains
    - India, alongside Vietnam and Thailand, has emerged as a primary beneficiary of supply chain shifts away from China.
    - India's integration into GVCs in electronics, toys, and automotive components reflects this trend.

Challenges Hindering India's GVC Growth

1. Lower Participation Levels: India's GVC share in total trade stands at 40.3%, lagging behind countries like Malaysia (60%) and South Korea (56.2%).
2. Infrastructure Deficits: Limited last-mile connectivity and insufficient trade facilitation measures hinder seamless integration into GVCs.
3. MSME Integration: India's MSMEs, which form the backbone of its manufacturing sector, often face challenges in accessing global supply chains due to limited resources and technology adoption.
4. Global Headwinds: Rising protectionism and mercantilist policies globally have created a challenging environment for GVC expansion.

Recommendations for Strengthening GVC Participation

1. Enhance Trade Infrastructure: Invest in multimodal logistics, ports, and digital trade platforms to improve efficiency and reduce costs.
2. Support MSMEs: Provide targeted financial and technological support to MSMEs for better integration into global supply chains.
3. Focus on High-Value Manufacturing: Continue promoting sectors like semiconductors, renewable energy, and pharmaceuticals under the PLI scheme.
4. Regional Partnerships: Strengthen trade ties with Asia, Europe, and Africa to diversify export markets and reduce dependency on traditional partners.

India's Evolving Role in the Global Trade System: FTAs and Strategic Partnerships

India has consistently advocated for a rule-based international trading system, with the WTO as its cornerstone. In the face of rising protectionism and evolving trade dynamics, the country has strategically leveraged Free Trade Agreements (FTAs) to enhance market access, diversify export destinations, and promote trade complementarity. Over the past three years (2021–2024), India has signed four landmark FTAs, reinvigorating its trade relations with Mauritius, the UAE, Australia, and the European Free Trade Association (EFTA).

India's New FTAs (2021–2024)

FTA Partner	Key Features	Economic Significance
India-Mauritius CECPA	First FTA with an African country. Covers 310 export items, including foodstuffs, beverages, and agricultural products. Mauritius gains preferential access to items like specialty sugar and mineral water.	Total bilateral trade reached USD 554.5 million in FY23. Indian exports include pharmaceuticals and cotton, while imports feature vanilla and refined copper
India-UAE CEPA	Focus on gems and jewelry, cereals, and fuel. Includes provisions for digital trade and preferential access for Indian pharmaceutical products.	Bilateral trade stood at USD 83.7 billion in FY24. UAE is India's second-largest export destination and a hub for value-added exports to Africa and Europe .
India-Australia ECTA	Ensures zero-duty market access for 98.3% of tariff lines. Promotes investment in computer-related services, construction, health, and environmental services.	Bilateral trade is projected to grow to USD 45 billion by 2027, with mutual benefits in labour-intensive sectors .
India-EFTA TEPA	First FTA with European countries (Switzerland, Norway, Iceland, and Liechtenstein). Covers goods, services, and bilateral investments.	Strengthens India's access to European markets. Aimed at fostering deeper integration with developed economies during a period of rising global protectionism 【5†source】.

Strategic Considerations for FTAs

1. Natural Trading Partners: India prioritizes trading partners with high trade complementarity, geographic proximity, and established trade relations.
   - Example: The India-UAE CEPA aligns with the UAE's position as one of India's top three trading partners for over two decades.
   - The India-Australia ECTA leverages Australia's vast resource base and India's strength in labor-intensive manufacturing.
2. Enhanced Market Access: FTAs provide zero-duty or preferential tariffs, enabling India to expand exports in key sectors like pharmaceuticals, apparel, and electronics.
3. Diversification Beyond Asia: Recent agreements with Mauritius and EFTA underscore India's strategy to strengthen ties with African and European markets, moving beyond its traditional East-Asian partnerships.

Economic and Strategic Impacts

1. Trade Expansion: These FTAs have enhanced bilateral trade, with agreements like the India-UAE CEPA targeting a USD 100 billion goods trade and USD 15 billion services trade in the next five years.

2. Boost to Services Sector: Agreements like the India-EFTA TEPA ensure significant liberalization of services trade, with enhanced access to high-value sub-sectors such as telecommunications, financial services, and education.

3. Job Creation: Labour-intensive sectors like textiles, gems, and jewelry are expected to witness substantial growth, creating employment opportunities domestically.

4. Geopolitical Positioning: FTAs signal India's commitment to trade liberalization amid rising global protectionism. The agreements with Australia and EFTA position India as a preferred trading partner for developed economies.

India's Trade Facilitation and Logistics Reforms

Setting Export Targets and Monitoring Progress

India has adopted a strategic approach to improve export performance by:

- Defining Clear Export Targets: Establishing sector-specific and market-oriented export goals to drive growth.
- Monitoring and Course Correction: Regularly tracking progress to identify bottlenecks and implement timely interventions for achieving export objectives.

Export Credit and Insurance for MSMEs

1. Affordable Export Credit: Efforts are underway to ensure banks provide accessible and adequate credit to MSME exporters, helping them scale operations and penetrate new markets.

2. Export Credit Insurance: Specialized insurance schemes safeguard exporters against risks like payment defaults and market disruptions, particularly benefiting smaller exporters.

Streamlining Trade Processes

1. Technological Advancements:

    - Turant Customs: A contactless and paperless initiative for faster customs clearance using advanced technology.
    - SWIFT (Single Window Interface for Trade Facilitation): A centralized platform for seamless import/export document processing.
    - e-Sanchit: Digital submission and storage of trade-related documents, reducing reliance on physical paperwork.
2. Efficient Border Management: Initiatives like Coordinated Border Management and pre-arrival data processing have improved cargo clearance times at ports and borders.

Logistics Reforms for Enhanced Competitiveness

1. PM GatiShakti National Master Plan:

    - A multimodal infrastructure initiative aimed at connecting supply chain nodes across the country.

- Enhances efficiency by minimizing logistical redundancies and improving interconnectivity between road, rail, air, and ports.

2. National Logistics Policy (NLP):
   - Aims to bring down logistics costs by focusing on digitization and efficiency improvements.
   - Key tools include:
     - Unified Logistics Interface Platform (ULIP): Integrates various logistics systems for real-time updates and decision-making.
     - Logistics Data Bank: Tracks container movement for efficient supply chain management.
3. Sagarmala Programme:
   - Utilizes India's 7,500 km coastline to boost port-led development.
   - Reduces transportation costs through coastal shipping and improved port infrastructure.
4. GST: Revolutionizing Logistics:
   - The 'One Nation, One Tax' GST regime has streamlined goods movement across states, cutting inter-state truck waiting times by up to 30%.
   - Increased truck productivity from 225 km/day to 300–325 km/day, significantly reducing logistics costs.

Impact on Logistics Costs

India's logistics costs as a percentage of GDP have decreased by 0.8–0.9 percentage points between FY14 and FY22, reflecting enhanced efficiency and cost-effectiveness.

India's Current Account Balance

India's current account balance, which tracks its economic transactions with the rest of the world, saw a notable improvement in FY24. The Current Account Deficit (CAD) narrowed significantly to USD 23.2 billion (0.7% of GDP) from USD 67 billion (2% of GDP) in FY23. This improvement was driven by a combination of a reduced merchandise trade deficit, rising net services exports, and increasing remittance inflows.

Key Components Influencing the Current Account Balance

1. Merchandise Trade Deficit

India's merchandise trade deficit decreased from USD 264.9 billion in FY23 to USD 238.3 billion in FY24, reflecting:

- Lower global commodity prices.
- Resilience in non-petroleum and non-gems and jewelry exports, which grew by 1.5% to USD 320.2 billion.
- A 3.5% decline in imports of non-petroleum and non-precious metals due to falling commodity costs.

2. Invisibles: Services and Remittances

Net Services Exports

Net services receipts increased significantly, from USD 143.3 billion in FY23 to USD 162.8 billion in FY24, driven by:

- Rising exports in software services, travel, and business services.
- Enhanced contributions from India's Global Capability Centres (GCCs), which focus on high-value technology and consulting services.

Remittances

India remained the world's top remittance recipient, receiving USD 120 billion in FY23, supported by:

- Strong labor markets and declining inflation in the United States and Europe, which are key destinations for skilled Indian migrants.
- Positive demand for Indian workers in GCC countries, where the oil-exporting economies continued to recruit both skilled and less-skilled labor.
- The introduction of the UAE-India Dirham-Rupee agreement, which streamlined cross-border transactions.

Role in CAD: Remittances, a stable foreign currency inflow, offset merchandise trade deficits and contribute significantly to stabilizing India's CAD, especially during global economic downturns.

Factors Driving Remittance Growth

1. Economic Recovery in Key Markets: Job market recovery in high-income OECD countries, particularly the U.S. and Europe, bolstered remittance inflows.
2. Exchange Rate Dynamics: Depreciation of the rupee incentivized higher remittance volumes as remitters received greater value in rupee terms.
3. Oil Prices: While rising oil prices increase India's CAD by USD 0.8 billion for every USD 1 increase in crude prices, they also positively impact remittances from the GCC, India's primary remittance source.
4. Policy Initiatives: Integration of Unified Payments Interface (UPI) with countries like the UAE and Singapore aims to reduce remittance costs and improve transaction efficiency.

Structural Insights and Recommendations

1. Export Diversification: India's increased focus on expanding export markets beyond traditional partners (e.g., EU and US) to Asia, Africa, and the Middle East reduces dependency and mitigates risks.
2. Strengthening Services Exports: Promoting high-value services exports, particularly in IT, consulting, and engineering, will boost net receipts and support the current account.
3. Leveraging Remittances:

- Diversifying the migrant pool between skilled workers in OECD countries and less-skilled workers in GCC nations enhances resilience to external shocks.
- Agreements to simplify cross-border payments, such as the Dirham-Rupee initiative, further encourage stable remittance inflows.

India's Capital Account Balance

India's capital account in FY24 displayed remarkable stability, with robust inflows financing the Current Account Deficit (CAD). Despite global challenges such as rising interest rates in developed markets and declining global FDI flows, India remained an attractive investment destination due to its economic stability, progressive reforms, and promising growth story.

Key Components of the Capital Account

1. Foreign Portfolio Investments (FPIs):

- Net FPI inflows surged to USD 44.1 billion in FY24, marking the highest level since FY15 and reversing outflows from previous years.
- Contributing factors include:
  - Economic stability and optimism around India's growth trajectory.
  - Policy reforms enhancing ease of doing business and fiscal prudence.
  - Sectoral appeal, particularly in financial services, healthcare, and automobiles.

2. Banking Capital and NRI Deposits:

- Banking capital, including NRI deposits, continued to provide steady inflows, reflecting global confidence in India's economic environment.

3. Foreign Direct Investments (FDI):

- Gross FDI inflows remained stable at USD 71 billion in FY24, but net FDI inflows declined to USD 26.5 billion, compared to USD 42 billion in FY23.
- The contraction was largely due to:
  - Increased repatriation of investments, rising to USD 44.5 billion in FY24.
  - Higher interest rates in developed economies making alternatives more attractive.
  - India's buoyant stock market offering profitable exit opportunities, reflecting the market's maturity.

Policy and Structural Factors Supporting Capital Inflows

1. Mature Investment Ecosystem: India's market dynamics allow investors to make profitable exits, showcasing a healthy and mature investment environment.
2. Global Integration: Inclusion in indices like the JP Morgan Government Bond Index-Emerging Markets has enhanced debt inflow prospects.

3. Regulatory Reforms: Simplified FPI investment rules in debt markets and eased compliance requirements have made India an appealing destination for global capital.

Challenges and Key Considerations

1. Decline in Global FDI Flows:
    - Global FDI fell by 2% to USD 1.3 trillion in 2023, primarily due to geopolitical tensions and tighter financial conditions.
    - While this impacted India's net FDI inflows, investor interest in the country remained strong.
2. Rising Interest Rates in Developed Economies: Higher interest rates in advanced markets reduced the relative attractiveness of emerging markets, diverting capital.
3. Sectoral Weakness in FDI: The ratio of FDI to GDP in key sectors like industry and services fell below pre-pandemic levels, necessitating targeted policies to boost these segments.

FDI Trends and Composition

Foreign Direct Investment (FDI) serves as a cornerstone of India's economic development. Recent trends reveal a weakening of FDI inflows into the industry and services sectors, alongside notable shifts between physical and digital FDI, influenced by global economic challenges and sectoral dynamics.

Trend and Composition of FDI

1. Industry vs. Services Sector

FDI inflows into both the industry and services sectors have declined in recent years:

- The industry sector experienced a drop in its FDI-to-GDP ratio from 0.62% in FY20 to 0.39% in FY24.
- The services sector witnessed a similar decline, falling from 0.87% to 0.69% over the same period.

Contributing factors include rising global protectionism and reduced investor confidence due to geopolitical uncertainties.

2. Physical vs. Digital FDI

FDI inflows are now characterized by the divergence between physical and digital investments:

Physical FDI

- Includes traditional sectors such as automobiles, pharmaceuticals, and construction.
- Growth in physical FDI has stagnated due to:
    - Rising protectionist policies.
    - Geopolitical tensions disrupting global supply chains and equity-based investments.
    - A shift towards non-equity modes like contract manufacturing and franchising.

Digital FDI

- Covers sectors like computer services, telecommunications, consultancy services, and information broadcasting.
- Digital FDI surged during the pandemic, driven by:
  - The widespread adoption of remote work.
  - Increased demand for digital services due to efficient infrastructure and rapid digitization.
- The share of digital FDI in total FDI rose significantly, reaching 69.2% in FY21, compared to 46.6% in FY17.

Post-Pandemic Decline in Digital FDI

- After a pandemic-induced boom, global investment in tech start-ups has declined, impacting digital FDI in India as well.
- This reflects the challenges faced by the technology sector in maintaining the high growth trajectory seen during the pandemic.

Key Challenges Affecting FDI Trends

1. Global Protectionism: Increasing trade barriers and economic nationalism discourage cross-border investments, particularly in equity-based models.

2. Geopolitical Tensions: Disruptions caused by events like the Russia-Ukraine war and China-USA trade conflicts have impacted investor confidence globally.

3. Shift Towards Non-Equity Models: Asset-light approaches, such as outsourcing and franchising, are increasingly replacing traditional equity investments, reducing overall FDI flows.

China Plus One Strategy: Opportunities and Challenges for India

The China Plus One Strategy reflects a global shift by multinational corporations to diversify their supply chains and reduce dependency on China, traditionally regarded as the "world's factory."

Factors Driving the China Plus One Strategy

1. COVID-19 Pandemic Disruptions: The pandemic exposed vulnerabilities in over-reliance on a single country for critical components, especially in sectors like electronics and pharmaceuticals.

2. Geopolitical Tensions: The US-China trade war and rising diplomatic strains have pushed businesses to explore alternatives.

3. Economic Considerations: Rising wages and operating costs in China have eroded its traditional cost advantage, making countries like Mexico, Thailand, Vietnam, and India more attractive.

India's Appeal in the China Plus One Strategy

1. Large Domestic Market: India offers access to a booming consumer market, making it a dual-purpose hub for manufacturing and local sales.

2. Production Linked Incentive (PLI) Scheme:
    - The PLI scheme provides tax breaks and subsidies to encourage manufacturing in priority sectors like electronics, automotive, and pharmaceuticals.
    - Case in Point: In FY24, Apple assembled 14% of its global iPhone production in India, driven by the PLI scheme and robust domestic demand for smartphones.
3. Global Value Chains (GVCs):
    - India's focus on reducing trade costs and facilitating foreign investment aims to deepen its integration into GVCs.
    - Strategic investments in infrastructure and logistics, such as PM GatiShakti, are enabling seamless connectivity and reduced production costs.

Challenges in Fully Benefiting from the Strategy

1. Dependency on China: Despite diversification efforts, the world cannot fully bypass China due to its entrenched role in global supply chains and its scale of production.
2. India's Trade Deficit with China: China remains India's top import partner, and the trade deficit has been widening. Key imports include electronics, machinery, and chemicals.
3. FDI vs. Imports:
    - India faces a critical choice: either integrate into China's supply chain or attract more Foreign Direct Investment (FDI) from China.
    - Promoting FDI from China appears more promising, as it aligns with India's focus on building domestic manufacturing capacity.

India's Strategies to Leverage the China Plus One Shift

1. Encouraging Foreign Direct Investment: India should encourage FDI from China in non-sensitive sectors to gain capital and technology transfer while mitigating risks from over-reliance on Chinese imports.
2. Balancing Trade and FDI: India must strike a balance between importing goods from China and importing capital (FDI) to address the growing trade deficit.
3. Infrastructure and Ease of Doing Business: Continued investments in infrastructure and digitization, along with streamlined business regulations, are critical for attracting global and regional investors.
4. Diversification of Partners: Strengthening trade ties with countries like Vietnam, Thailand, and Mexico can complement India's efforts to integrate into diversified supply chains.

India's Foreign Exchange Reserves (FER)

India's Foreign Exchange Reserves (FER) have emerged as a cornerstone of economic resilience, providing a critical buffer against global economic uncertainties. By ensuring liquidity, covering external obligations, and stabilizing the currency, FER plays a pivotal role in maintaining macroeconomic stability.

Current Status and Adequacy

As of June 2024, India's FER stood at USD 653.7 billion, reflecting a strong external position.
These reserves offer significant coverage:

- More than 10 months of imports projected for FY25.
- Over 98% of India's total external debt, highlighting their adequacy in meeting external liabilities.

Key Roles and Benefits

1. Economic Resilience: FER provides insulation against global economic spillovers, such as geopolitical tensions and external financial shocks. The substantial increase in reserves during FY24 has further bolstered India's external sector stability.
2. Liquidity and External Obligations: Ensures the availability of foreign currency to meet import payments, external debt servicing, and unforeseen contingencies.
3. Currency Stabilization: FER acts as a tool to manage exchange rate volatility, safeguarding the value of the Indian Rupee during periods of global financial turbulence.

Strategic Implications

1. Support for the Current Account Deficit (CAD): FER serves as a cushion to finance the CAD without exerting pressure on domestic economic activity.
2. Trade and Investment Confidence: A robust FER level enhances investor confidence and supports India's trade activities by ensuring stable external accounts.
3. Debt Management: With reserves covering over 98% of external debt, India is well-prepared to navigate global financial uncertainties and meet its debt obligations.

Exchange Rate Trends in FY24

FY24 was characterized by significant geopolitical risks, rising global interest rates, and volatile commodity prices, all of which influenced global currency markets. The Indian Rupee faced depreciation pressures but remained relatively stable compared to other major currencies.

Performance of the Indian Rupee

- The Rupee/USD exchange rate fluctuated within a narrow band of ₹82-83.5/USD throughout FY24.
- The Rupee experienced a modest depreciation of 2.9% against the US Dollar during the fiscal year.

Relative Stability

- Despite external pressures, the Rupee proved to be one of the least volatile major currencies globally.

- This stability underscores the resilience of India's external sector amidst global economic turbulence.

Factors Influencing the Exchange Rate

1. Global Demand for the US Dollar:
   - The resilient US economy, with strong labor markets and consumer spending, attracted global funds to US Treasury markets.
   - As a result, demand for the US Dollar surged, reinforcing its safe-haven appeal.
2. Geopolitical and Economic Challenges:
   - Rising interest rates in developed economies increased the attractiveness of Dollar-denominated assets, putting downward pressure on emerging market currencies, including the Rupee.
   - Global commodity price volatility further added to external sector risks.
3. Market Determination and RBI's Role:
   - The Indian Rupee remains market-determined, with the Reserve Bank of India (RBI) intervening selectively to curb excessive volatility.
   - Measures such as encouraging foreign portfolio investments (FPI) and maintaining adequate foreign exchange reserves helped stabilize the currency.

Future Outlook

- With robust foreign exchange reserves and steady capital inflows, the Rupee is expected to remain stable in the near term.
- Structural reforms and consistent economic policies will further enhance the Rupee's resilience against global headwinds.

India's External Debt

External debt is a vital tool for supplementing domestic savings, enabling developing economies to achieve faster growth. However, an unsustainable buildup of external debt can expose countries to vulnerabilities and hinder long-term growth. India has prudently managed its external debt, ensuring stability while leveraging debt for economic progress.

Trends in India's External Debt

1. Current Debt Levels:
   - As of March 2024, India's total external debt stood at USD 663.8 billion, reflecting a marginal increase from the previous year.
   - The external debt-to-GDP ratio declined to 18.7%, down from 19.0% in March 2023, indicating improved debt sustainability.
2. Debt Composition:
   - Long-term debt accounted for the majority of the total external debt, emphasizing India's preference for stable financial commitments.

- The share of short-term debt declined to 18.5% in March 2024, compared to 20.6% in March 2023, reducing refinancing risks and enhancing debt resilience.

Key Indicators of Stability

1. Foreign Exchange Reserves:
   - India's foreign exchange reserves stood at USD 653.7 billion in June 2024, providing coverage for over 98% of total external debt and more than 10 months of projected imports for FY25.
   - This robust reserve position ensures liquidity to meet external obligations and mitigates risks from global financial shocks.
2. Debt Service Ratio:
   - The debt service ratio remained at a manageable level of 6.7% in March 2024, reflecting India's ability to meet repayment obligations without straining foreign exchange earnings.

Impact on Growth and Stability

1. Growth Enabler:
   - External debt has been a crucial driver of infrastructure development and other capital-intensive projects, complementing domestic resources.
   - In developing economies, high external debt often correlates with periods of accelerated growth.
2. Potential Risks:
   - High external debt levels can pose risks if global interest rates rise or export revenues decline.
   - A significant portion of debt denominated in foreign currencies could create vulnerabilities during exchange rate fluctuations.

India's Debt Management Strategy

1. Prudent Borrowing: India prioritizes concessional borrowing, with concessional debt accounting for 7.5% of total external debt, thereby minimizing debt servicing costs.

2. Diversifying External Financing: The government focuses on attracting non-debt creating capital flows such as foreign direct investment (FDI) and portfolio investments to reduce dependence on external debt.

3. Maintaining a Manageable CAD: India's strategy emphasizes keeping the current account deficit (CAD) at sustainable levels, ensuring that external debt remains within safe limits.

India's Trade Landscape

Challenges

1. Fall in Demand from Major Trading Partners:

- Slowing economic growth in key export markets, particularly in Europe and North America, has reduced demand for Indian goods and services.
- Tight monetary policies and recessionary fears in developed economies exacerbate this issue.

2. Rising Trade Costs:

- Increasing global logistics costs and surcharges, coupled with higher shipping rates, have raised the overall cost of trade.
- Trade disruptions caused by geopolitical tensions add to these costs, particularly for long-distance shipments.

3. Commodity Price Volatility:

- Fluctuations in global commodity prices, especially for crude oil, metals, and agricultural products, directly impact India's trade balance.
- High import dependency for energy sources magnifies this challenge.

4. Trade Policy Changes:

- Protectionist policies adopted by major economies, along with tariff and non-tariff barriers, challenge India's export growth.
- Frequent changes in domestic trade policies create uncertainty for exporters and investors.

Opportunities

1. International North-South Transport Corridor (INSTC):

- Expected to reduce shipment times to Russia and Europe significantly by offering a shorter, cost-effective route via Iran and the Caspian Sea.
- Enhances trade connectivity with Central Asia and Eurasia, diversifying India's trade network.

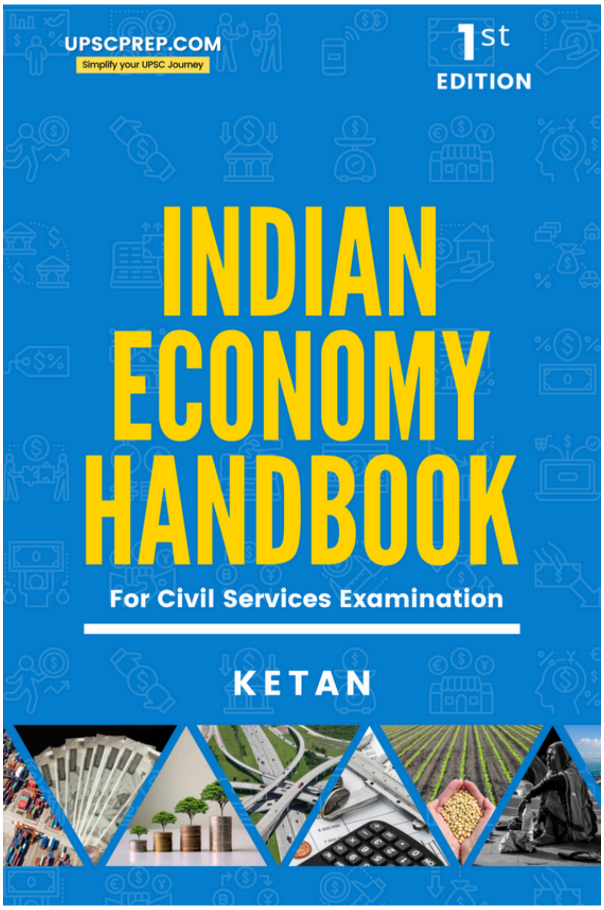
2. India-Middle East-Europe Economic Corridor (IMEC):

- A joint infrastructure initiative to connect Asia with Europe via ports and railroads through the Middle East.
- IMEC promises to create a robust logistics network, facilitating faster movement of goods and opening new markets for Indian exports.

The Path Forward: To navigate these challenges and seize emerging opportunities, India must:

- Improve Competitiveness: Invest in infrastructure, reduce trade costs, and streamline logistics to ensure Indian products remain globally competitive.
- Diversify Markets: Expand trade partnerships beyond traditional partners to include Africa, Latin America, and Central Asia.
- Enhance Product Safety and Quality: Foster quality consciousness in the private sector to meet international standards and gain market trust.
- Policy Stability: Ensure consistent, long-term trade policies to build confidence among exporters, investors, and trading partners.

India's ability to adapt to evolving global trade dynamics will be crucial for sustaining growth, creating jobs, and bolstering its position in international markets.



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