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SUMMARY OF ECONOMIC SURVEY 2017-18

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ECONOMIC SURVEY SUMMARY 2018 – VOLUME 1 & 2

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VOLUME 1

CHAPTER 01: STATE OF THE ECONOMY: AN ANALYTICAL OVERVIEW AND OUTLOOK FOR POLICY

Introduction

The chapter gives an overview of Indian economy in the light of major reforms undertaken during last year as well as the preceding year. It analyses the global growth prospects and the inherent risks thereto. Under outlook for Indian economy, it analyses the factors which could push it ahead in FY 2018-19.

Overview of the Indian Economy

Short term

During the past year, the government has undertaken some major reforms. These include launch of GST, actions taken to address Twin Balance Sheet (TBS) challenge, resolution framework under Indian Bankruptcy Code (IBC), and a recapitalization package (about 1.2 percent of GDP) to strengthen the balance sheets of the public sector banks (PSBs).

- In **the first half**, India's economy temporarily **"decoupled,"** (decelerating as the rest of the world accelerated). However, it remained the second-best performer amongst major countries, with strong macroeconomic fundamentals.
- In the **second half of the year**, the economy witnessed robust signs of revival. Economic growth improved as the shocks began to fade, corrective actions were taken, and the global economic recovery boosted exports. As a result, India improved its ranking by 30 spots on the World Bank's Ease of Doing Business rankings, and foreign direct investment (FDI) increased.

The concerns relating to macro-economic stability still remain as fiscal deficit, current account deficit and inflation were all higher than expected.

Decoupling of Indian Economy

Until early 2016, India's growth had been accelerating when growth in other countries was decelerating. But then the converse happened. The world economy embarked on a synchronous recovery, but India's GDP growth—and indeed a number of other indicators such as industrial production, credit, and investment—decelerated. This is referred to as "decoupling".

Reasons for decoupling

- **India's tight monetary conditions** contributed by depressing consumption and investment and caused the rupee to strengthen, dampening both net services exports and the manufacturing trade balance.
- **Demonetization and GST:** Demonetization temporarily reduced demand and hampered production, especially in the informal sector. GST affected supply chains.
- **The TBS challenge** has reduced investment and consequently economic activity and, hence growth.
- **Oil prices increase since 2017**
- sharp falls in certain food prices that impacted agricultural incomes.

Medium term

Going forward in the medium term, there is a need to draw broader lessons for the Indian economy:

- Promote **cooperative federalism**. Spirit of cooperative federalism, as evident in creation of the GST Council should be used to address difficult structural reforms that involve the states. For example, to create a common agricultural market, integrate fragmented and inefficient electricity markets, solve interstate water disputes, implement direct benefit transfers (DBT), make access to social benefits portable across states, and combat air pollution.
- **Facilitating "exit":** Over the last 50 years India had gone from "socialism with limited entry to marketism without exit." Indian Bankruptcy Code (IBC) and proposed Financial Resolution and Deposit Insurance (FRDI) Bill will address this problem in the Indian corporate sector and financial sector respectively.

- **Rationalize government resources**: Significant progress has been made in providing bank accounts, cooking gas, housing, power, and toilets (amongst others). However, there is a need to convert increased physical availability into greater actual use: toilet building into toilet use, bank accounts into financial inclusion, cooking gas connections into consistent gas offtake, and village electrification into extensive household connections.
- India has **two underlying macroeconomic vulnerabilities**, its fiscal and current accounts, both of which tend to deteriorate when oil prices rise.
  - Overcoming the **fiscal vulnerability** requires increasing the tax-GDP ratio and halting the steady conversion of contingent liabilities into actual ones (typically through the assumption of state discom debts and public sector bank recapitalization).
  - The **current account vulnerability** can be addressed by export growth. This can be achieved by **reviving manufacturing and increasing the international competitiveness of manufacturing**.

Public provision of private goods & services

- 74% of household in rural India have toilets. However, only 91% of these households actually use them
- More than 30 crores Jan Dhan accounts have been opened. Out of which approximately 22 crores have linked it with Adhaar. Moreover, zero balance accounts have also reduced drastically.
- As of January 2018, 16.3 lakhs houses have been built under Pradhan Mantri Awas Yojana - Gramin and 3.2 lakh were built under Indira Awa Yojana
- Over 32 million gas connections have been provided under Ujjwala and 79% of these connections came back for refill.

Political Economy of Interest and Exchange Rates

Group	Preference	Reasons
Manufacturers, services exporters, and farmers	Low interest rates, weak currency	Profits increase, even if some inputs are imported, since market share grows. This applies both to exporters (clothing) and firms producing for domestic market but competing with imports (steel, aluminium). Software exporters with high domestic value added will favor weak rupee.
Exception: Import-intensive manufacturers	No strong preference	Weaker rupee increases export revenues but increases import costs
Domestically oriented firms	Low interest rates	Profits increase; debt burden declines
Infrastructure companies (especially power and renewables)	Strong currency, low interest rates	Strong currency reduces costs without affecting revenues, which are earned in rupees. Costs fall because firms typically import capital equipment, financed with dollar loans. Low interest rates reduce debt service burden on domestic loans.
Households	High interest rates	Returns on savings increase. Household saving far outweighs household borrowing.
Equity investors -- Domestic	Low interest rates	Corporate profits increase, so returns rise.
Equity investors -- Foreign	Low interest rates, strong currency	Combination boosts dollar returns. Tension: low rates typically lead to weaker currency.
Bond investors -- Domestic	Falling interest rates	Generates capital gains. Banks prefer low rates; other investors (such as LIC) prefer high rates.
Bond investors -- Foreign	High but falling interest rates, strong currency	Combination maximizes dollar returns. Tension: falling rates weaken currency.
Government	Low interest rates	Low rates reduce debt service. Extra growth or inflation increases revenues.
Non-economic actors	Strong currency	Strong currency equated with national economic strength.

- **Maintaining a balance between attacking corruption and reducing its cost:** While there are significant social and economic benefits to attacking corruption and weak governance, addressing those pathologies entails cost and challenges viz impacting growth and informal sector (due to demonetisation). Thus policy design must minimize these costs wherever possible.

- There should be greater reliance on using incentives and carrots than on sticks; greater focus on addressing the flow problem (the policy environment that incentivizes rent-seeking) than the stock problem.
- **Clarity on the role of markets and state, private capital and public institutions.** India is in a grey zone of uncertainty on the role of state and markets. Limitations on state capacity (center and states) affect the delivery of essential services such as health and education. At the same time, the introduction of technology and the JAM (Jan Dhan—Aadhaar— Mobile) architecture, now enhanced by the Unified Payments Interface (UPI), holds the potential for significant improvements in such capacity.
- **Addressing meta challenges:** Last year's survey identified **three meta-challenges**: addressing inefficient redistribution; accelerating the limited progress in delivery of essential public services, especially health and education; and correcting the ambivalence toward property rights, the private sector, and price incentives. This year's survey has identified following new issues: **Education, Agriculture and employment.**

Way Forward for Indian economy

Over the coming year, the government need to

- Focus on the 4 R's of the TBS—*recognition, resolution, recapitalization, and reforms*. It needs to ensure that the process of resolving the major indebted cases and recapitalizing the PSBs is carried to a successful conclusion.
- stabilize GST implementation to remove uncertainty for exporters, facilitate easier compliance, and expand the tax base;
- privatize Air- India; and
- stave off any nascent threats to macroeconomic stability, notably from persistently high oil prices, and sharp, disruptive corrections to elevated asset prices.

The Global Outlook

- According to the International Monetary Fund (IMF), the **global economy is experiencing a near-synchronous recovery**. Roughly three-quarters of countries experienced improvements in their growth rates.
- The recovery is driven by improvement in world trade in goods and services, upswing in commodity prices, accommodative monetary policies in advanced regions, buoyant demand conditions etc.
- However there are **geo-political and geo-economic risks**: war in the Korean peninsula; political upheaval in the Middle East; aggressive output cuts by Saudi Arabia (and Russia) which could force oil prices even higher; China's unprecedented credit surge in the form of capital controls, slowdown in growth and trade tensions.
- There are risks on the macrofinance front in advanced economies due to possibility of correction in asset valuation, and bond and equity prices due to possible increase in interest rates.

Outlook for Indian Economy for 2017-18

Economic Activity

- Recovery is taking hold as reflected in a variety of indicators, including overall GVA, manufacturing GVA, the IIP, gross capital formation and exports. Similarly, real non-food credit growth has rebounded. The flow of non-bank resources to the corporate sector, such as bond market borrowing and lending by NBFCs, has increased, substituting in part for weak bank credit. Rural demand is recovering.
- The re-acceleration of export growth and deceleration of import growth suggest that the demonetization and GST effects are receding. Services export and private remittances are also rebounding.
- However, while the direction of the indicators is positive, their level remains below potential. IIP growth is low, real credit growth to industry is still in negative territory, and the growth in world trade remains less than half its level of a decade ago. Moreover, even though the cost of equity has fallen to low levels, corporates have not raised commensurate amounts of capital, suggesting that their investment plans remain modest.

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Macro-economic Indicators

- Headline inflation has increased recently. The recent upswing in inflation stems from rising global oil prices, unseasonal increase in the prices of fruits and vegetables, and the 7th Pay Commission housing rent allowances.
- The current account deficit has also widened in 2017-18. Despite these developments, the overall external position remains good. The current account deficit is well below the 3 percent of GDP threshold beyond which vulnerability emerges. Meanwhile, foreign exchange reserves have reached a record level of about $432 billion.

Fiscal Developments

- The fiscal deficit has breached the norms, largely because of a shortfall in non-tax revenue, reflecting reduced dividends from government agencies and enterprises. Expenditure also increased due to the advancing of the budget cycle by a month which gave considerable leeway to the spending agencies to plan in advance and start implementation early in the financial year.

Do Government Market Borrowings Reflect the Underlying Fiscal Deficit?

Since late July 2017, interest rates on 10-year government securities (g-secs) have been climbing steadily, rising from about 6.4 percent to 7.3 percent on January 1, 2018. Over that period, the outlook for policy rates has deteriorated as the RBI has shifted from rate-cutting to a more hawkish stance. But this shift would not seem to warrant a nearly 1 percentage point increase in long-term rates. Neither would the changes in international rates, which have only increased modestly. So, what explains the sudden rise in g-sec rates?

The key factor seems to be financial market concerns that government issuances of g-secs will be greater than earlier anticipated. Certainly, concerns that fiscal deficits of the general (central and state) government might be larger than targeted are real. But even if fiscal over-runs do occur, this does not automatically mean that market borrowings will be greater than anticipated; put differently, market borrowings do not necessarily reflect the underlying fiscal deficit. That's because in India market borrowings are determined not just by the fiscal deficits but also by a distinctively Indian arrangement, the National Small Savings Fund (NSSF).

Essentially, the government gets deposits from the public—independent of its deficit-induced borrowings—in the form of various savings schemes to the public, encompassed in the NSSF. Currently, these schemes offer above-market rates, risk-free investment options, and favorable tax breaks, both at the time of deposit and withdrawal, not available in most regular savings schemes. The *Economic Survey* of 2015-16 had estimated the magnitude of the implicit subsidies to small savers under the NSSF. But what is relevant here is that the flows into the NSSF are autonomous, determined by their perceived attractiveness, rather than the size of the fiscal deficits. The following identity captures the idea.

Net Market Borrowings = Fiscal Deficit- NSSF net flows[5]

If NSSF net flows increase, for any given fiscal deficit, market borrowings should decline; and vice versa. Market borrowings and hence the supply of g-secs are endogenous to these autonomous flows. So it's perfectly possible for market borrowing to increase, even when the fiscal deficit decreases or remains constant.

At the level of the state governments, the converse has been true. The states have chosen to reduce their reliance on the NSSF in order to reduce their borrowing cost (market rates are substantially lower than NSSF rates). But the consequence has been to increase market borrowings. In 2016-17, market borrowings increased by about Rs. 83,000 crores even though the combined state government deficit increased by only around Rs. 47,000 crores, with the rest expected to go towards repayment of NSSF liabilities. Put another way, market borrowings *increased* by 0.2 percent of GDP more than the fiscal deficit.

- GST revenue collections are robust despite being it in the initial phase.
- Government measures to curb black money and encourage tax formalization, including demonetization and the GST, have increased personal income tax collections substantially (excluding the securities transactions tax). From about 2 percent of GDP between 2013-14 and 2015-16, they are likely to rise to 2.3 percent of GDP in 2017-18, a historic high. The number of taxpayers have substantially increased post demonetisation. After November 2016, 10.1 million filers were added compared with an average of 6.2 million in the preceding six years.

Outlook for Indian Economy for 2018-19

If macro-economic stability is kept under control, the ongoing reforms are stabilized, and the world economy remains buoyant, growth could start recovering towards its medium term economic potential of at least 8 percent.

The components of demand that will influence the growth outlook:

- The acceleration of **global growth** will provide a solid boost to export demand.
- **Private investment** is expected to increase. However it will depend on the resolution and recapitalization process. If this process moves ahead expeditiously, stressed firms will be put in the hands of stronger ownership, allowing them to resume spending.

Understanding the Stock Market Boom: Is India Different?

Over the past two fiscal years, the Indian stock market has soared, outperforming many other major markets. This has led to a convergence in the price-earnings ratios of the Indian stock market to that of the US. Yet over this period the Indian and US economies have been following different paths:

- The stock market surge in India has coincided with a decelaration in economic growth, whereas US growth has accelerated.
- India's current corporate earnings/GDP ratio has been sliding since the Global Financial Crisis, while profits in the US have remained healthy.
- Real interest rates have diverged substantially. Rates in the US have persisted at negative levels, while those in India have risen to historically high levels.

Why stock market convergence then?

Two factors seem to be at work:

- First, expectations of earnings growth are much higher in India.
- Second is demonetization. The government's campaign against illicit wealth over the past few years—exemplified by demonetization, has reduced returns in gold, property etc. This led to increased investment in stock markets.

- **Consumption demand:** On the positive side, it will be helped by the likely reduction in real interest rates in 2018-19. At the same time, increase in average oil prices will crimp real incomes and spending. Resultant tighter monetary policy to meet the inflation target will increase real interest rates which could exert a drag on consumption.
- **Increased exports** can help in increasing the growth.
- **Implementation of the IBC process**: Timelines in resolution and acceptance of the IBC solutions must be a priority to kick-start private investment.
- Persistently **high oil prices** (at current levels) remain a key risk. They would affect inflation, the current account, the fiscal position and growth, and force macro-economic policies to be tighter than otherwise.

Way forward

- India seems poised to achieve its medium term economic potential of at least 8 percent growth rate. However it needs to guard against an emerging market "sudden stall" induced by sharp corrections to elevated stock prices.
- Also for the coming year, the fiscal policy should target a **reasonable fiscal consolidation** i.e. modest consolidation that credibly signals a return to the path of gradual but steady fiscal deficit reductions.

A case study on Export packages: The Clothing Package of 2016

Importance points related to apparel sector:

- Has immense potential to drive economic growth, increase employment, and empower women in India.
- Space vacated by China with its share of global apparel exports coming down in recent years. However, India has not capitalized on this opening with countries like Vietnam and Bangladesh quickly filling the space left by China.

The export package: Rs. 6,000 crore package for the apparel sector including rebates on state levies (ROSL) to offset indirect taxes levied by the state.

Three main findings emerge:

- The package increased exports of readymade garments (RMG) made of man-made fibres (MMFs) and its impact increased gradually over time.
- The package did not have a statistically positive impact on RMG made of other fibres (silk, cotton, etc.

A policy implication is that the GST Council should conduct a comprehensive review of embedded taxes arising from products left outside the GST (petroleum and electricity) and those that arise from the GST itself (for example, input tax credits that get blocked because of "tax inversion,"). This review should lead to an expeditious elimination of these embedded export taxes, which could provide an important boost to India's manufacturing exports.

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CHAPTER 02: A NEW, EXCITING BIRD'S-EYE VIEW OF THE INDIAN ECONOMY THROUGH THE GST

Theme

This chapter provides a brief insight from the data provided by GST from different perspectives - indirect taxpayers, composition and analysis of tax base of different firms, states' trading trends and informality of economy. Thus, it provides a radical alteration and enlargement in the understanding of the Indian Economy.

Introduction

Apart from GST's potential to create one Indian market, expand the tax base and foster cooperative federalism, data from the GST can help unveil and understand some long-elusive and basic facts about the Indian economy. Some new findings include:

1) **Taxpayers:**
    - There has been a fifty percent increase in the number of indirect taxpayers; and a large increase in voluntary registrations, especially by small enterprises that buy from large enterprises and want to avail themselves of input tax credits. More than 54.3% of those eligible to register under the composition scheme chose instead to be regular filers.

> **Composition scheme**
>
> Taxpayers (with turnover less than 1.5 crore) registered under this scheme pay a small tax (1%, 2% or 5%) on their turnover.
>
> It reduces administrative burden of taxpayers but makes it difficult for them to sell to larger firms as they are not eligible for input tax credits.

2) **Tax base and its spatial distribution:**
    - The distribution of the GST base among the states is closely linked to their Gross State Domestic Product (GSDP), allaying fears of major manufacturing states that the shift to the new system (with GST being a destination and consumption-based tax) would undermine their tax collections;
    - The top states are Maharashtra (16 percent), Tamil Nadu (10 percent), Karnataka (9 percent), Uttar Pradesh (7 percent), and Gujarat (6 percent).
    - For manufacturing states, though the tax base under the GST is lower than their respective share of manufacturing. However, due to significant presence in services as well, overall fairness is maintained in GST outcomes with tax base share being in line with GSDP
3) **Size distribution of inter-firm transactions:**
    - Registered smaller firms (less than Rs. 5 crore) seem to be equally involved in B2C and B2B transactions whereas medium and large firms have a much greater presence in B2B than B2C transactions.
    - Not only small B2B firms but also small B2C firms voluntarily chose to register under GST. Therefore, they not only sell but also buy from large enterprises (with 68 percent of their purchases being from medium or large registered enterprises) and secure input tax credits.
4) **International Trade, Interstate Trade and Economic Prosperity:**
    - Data on the international exports of states (the first in India's history) suggests that conventional wisdom is correct with a state's GSDP per capita (standard of living) being highly correlated with its export share in GSDP (Kerala being an outlier due to large remittances).

> **Data on inter-state trade**
>
> - Five states—Maharashtra, Gujarat, Karnataka, Tamil Nadu & Telangana—in that order account for 70% of India's exports.
> - The five largest importing states are Maharashtra, Tamil Nadu, Uttar Pradesh, Karnataka and Gujarat;
> - The states with the largest internal trade surpluses are Gujarat, Haryana, Maharashtra, Odisha and Tamil Nadu.

- Internal trade is about 60% of GDP, even greater than estimated in last year's *Survey* and comparing very favorably with other large countries. Two observations related to inter-state trade include:
    - The states that export the most are also the ones that import the most.

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- o The states that trade the most are the ones that are the most competitive and run the largest trade surpluses.

5) Trading Superstars: Indian Export Egalitarian Exceptionalism:

- Exports superstars are firms that account for a disproportionately large share of exports. India's exports are unusual in that the largest firms account for a much smaller share than in other comparable countries:

	Share in exports	
	Other major countries	India
top 1% firms	55-72	38
top 5% firms	74-91	59
top 25% firms	93-99	82

- The possible reason could be that unlike in other countries, Indian data includes exports of services, where concentration ratios in top firms tend to be much lower than in manufacturing.
- The implication, however, of such an egalitarian export structure are unclear as concentration in favor of few firms can have advantages (spillover effects on other firms & dynamism) as well as disadvantages (impeding competition).

6) Informality of the Indian Economy:

- Major findings related to magnitude of formal sector firms are 87% of firms are purely informal (outside both social security and tax nets), 12% of firms are under tax net but not social security net and less than 0.1% are in social security net and not in tax net
- India's formal sector non-farm payroll is substantially greater than currently believed. Its estimate is ranging from 31% in the case of social security-defined formality and 53% in case of tax-defined formality.

<table>
<tr>
<td>The survey analyses Informality (or rather formality) in two ways:
• Social security provided by firms
• Firms under tax net
There are many different definitions of formality/ informality. The most common ones are:
• whether a worker has a formal contract
• whether a worker is a regular/salaried worker (as opposed to self-employed or casual)
• whether a firm is registered with any branch of the government;
• whether the firm pays taxes and
• whether a worker receives social security.</td>
<td></td>
<td>Social security provided
• In form of pensions & provident funds - Government provides this for its employees and the Employees' Provident Fund Organization (EPFO) to private sector employees. EPFO contribution is mandatory for firms employing greater than 20 workers and whose monthly salary is below 15000. Above that, contributions are voluntary.
• In respect of medical benefits - Employees' State Insurance Corporation (ESIC) provides it. ESIC contribution is mandatory for firms employing greater than 10 workers and whose monthly salary is below 21000.</td>
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CHAPTER 03: INVESTMENT AND SAVING SLOWDOWNS AND RECOVERIES: CROSS-COUNTRY INSIGHTS FOR INDIA

Theme

This chapter studies the pattern of investment and saving slowdowns as well as recoveries in order to obtain policy lessons for India. This is in context of India's unique trajectory of unprecedented climb to historic high levels of investment and saving rates in the mid-2000s followed by a pronounced, albeit gradual, decline which is still ongoing.

Introduction

- There is a firm belief that domestic saving and investment will soon start to accelerate and help the Indian economy revert to 8-10 percent growth.
- But this cannot be taken for granted as neither saving nor investment is actually unduly depressed. Investment (gross fixed capital formation) rate and gross domestic saving rate are actually above the levels that prevailed throughout the 1990s.
- After the exceptional boom of the 2000s in domestic saving and investment rates (9 percentage point pick-up), the subsequent slide in investment and saving (as a percent of GDP) has merely brought these rates back towards normal levels.
- However, such sharp swings in investment and saving rates have never occurred in India's history.
- The decline in private investment and household/government saving was the main reason behind the recent saving/investment decline in India.

Identifying Investment and Saving Slowdowns

Some important observations include:

- Investment slowdown episodes are more frequent than saving episodes, while common episodes (both investment and saving slow) are relatively unusual.
- However, owing to concerted efforts in emerging economies to revive investment after the Global Financial Crisis via stimulus and other policies, there has been relatively lower number of investment episodes recently.
- Investment and saving slowdowns tend to be similar in duration. However, investment slowdowns are greater in magnitude and is more prone to extreme events.
- India's current investment/saving slowdown episode has been lengthy compared to other cases (investment slowdown started in 2012 and saving slowdown started in 2010) – and it may not be over yet.

Saving Versus Investment: Growth Consequences

- On the question of prioritizing boosting investment or saving, the standard solution that is often prescribed is that both problems - slump in saving and investment - need to be tackled simultaneously. However, the issue is about relative importance and urgency.
- The survey along with other studies observes that policies should focus on encouraging investment, rather than saving, to boost growth.

Recovery from 'India-Type' Investment Slowdowns

India's investment slowdown is unusual in that:

- It is relatively moderate in magnitude, long in duration and started from a relatively high peak rate of 36 percent of GDP.
- It is a balance sheet-related slowdown. In other words, many companies have had to curtail their investments because their finances are stressed, as the investments they undertook during the boom have not generated enough revenues to allow them to service the debts that they have incurred.

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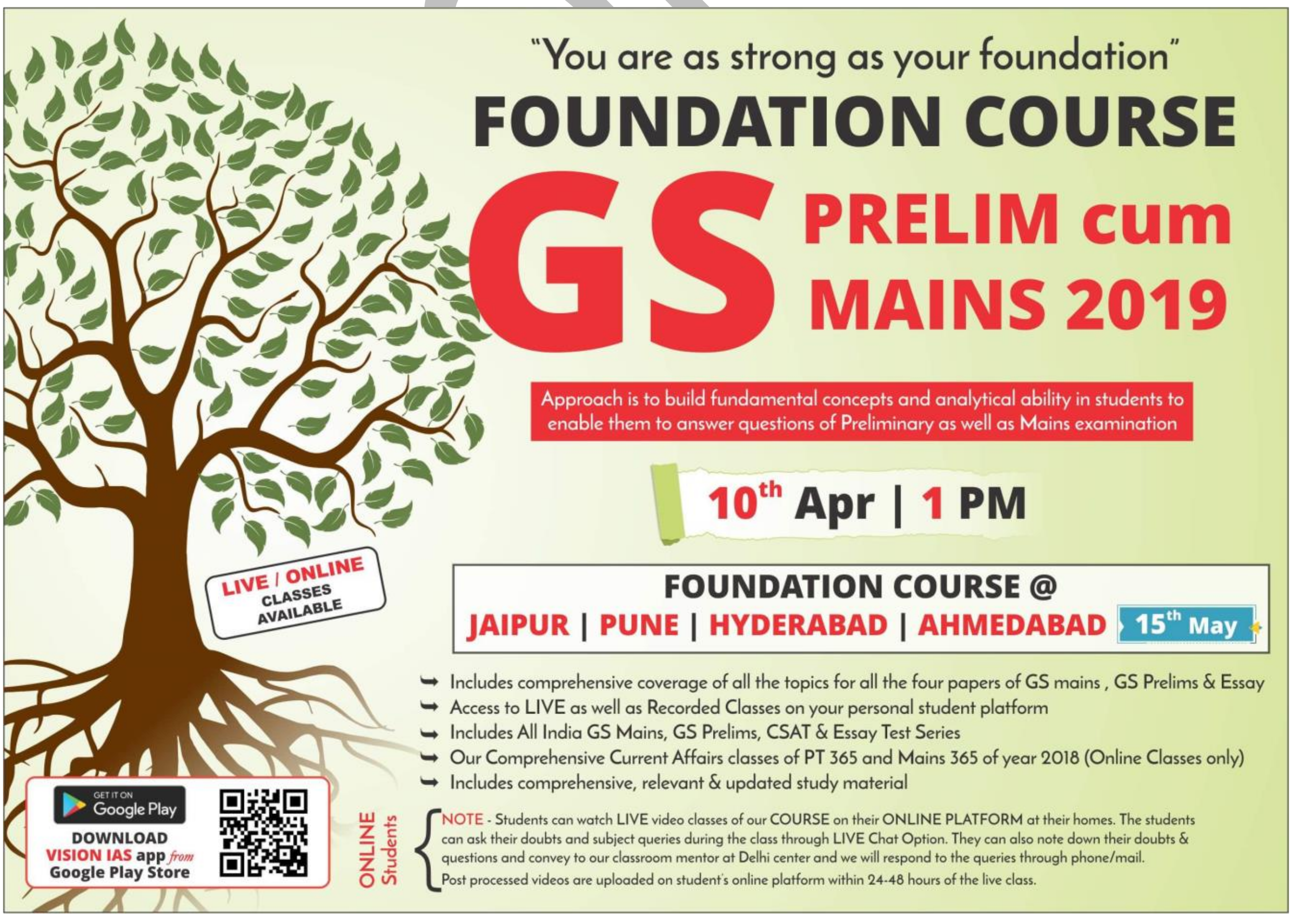
Implications of balance-sheet slowdowns

- Investment declines flowing from balance sheet problems are much more difficult to reverse. In these cases, investment remains highly depressed, whereas in case of non-balance-sheet slowdowns the shortfall is smaller and tends to reverse.
- India's investment decline so far (8.5 percentage points) has been unusually large when compared to other balance sheet cases. Due to this, it has paid moderate costs in terms of growth. Between 2007 and 2016, rate of real per-capita GDP growth has fallen by about 2.3 percentage points.

Way forward

To reverse the investment slowdown, the government has already launched a policy agenda; first with the step-up in public investment since 2015-16; and policies to decisively resolve the Twin Balance Sheet challenge. These steps will have to be followed up, along with complementary measures:

- Easing the costs of doing business further, and creating a clear, transparent, and stable tax and regulatory environment.
- Creating a conducive environment for small and medium industries to prosper and invest will help revive private investment. The focus of investment-incentivizing policies has to be on the big and small alike.



CHAPTER 04: RECONCILING FISCAL FEDERALISM AND ACCOUNTABILITY: IS THERE A LOW EQUILIBRIUM TRAP?

Theme

The chapter throws light on the issues related to fiscal federalism, taxation, and accountability. It makes a commentary on own-resources generated by different tiers of government and draws important conclusions. This is important because the better the performance in generating own revenue via taxes, the stronger accountability is expected to be.

Introduction

- Taxation is not just a vehicle for raising state revenue but can also be critically important for economic and political development. Taxation is the economic glue that binds citizens to the state in a necessary two-way relationship as part of the social contract.
  - The state's role is to create the conditions for prosperity for all by providing essential services and protecting the less well-off via redistribution.
  - The citizen's part of the contract is to hold the state accountable. But a citizen's stake in exercising accountability diminishes if he does not pay in a visible and direct way for the services the state commits to providing.
- Also, economic and institutional development is stunted when countries rely on non-tax sources of government revenues as illustrated by "aid" and "natural resource" curses.

Direct taxation and development: General Government

- Economic and political development has been associated with a rising share of direct taxes in total taxes.
  - Advanced countries collect a substantially higher proportion of their taxes as direct taxes than do emerging markets. For instance, direct taxes account on average for about 70 percent of total taxes in Europe.

Why more focus on direct tax?
- As the name itself suggests, direct taxes are felt more by the taxpayer. Direct taxes feel more like expropriation because they reduce citizens' disposable income, the earnings that they get to keep.
- With indirect taxes, citizens are burdened but that sense is leavened to the extent that citizens feel they are exercising choice.

- Even though, India is not an outlier with its direct tax share being similar to other countries at a comparable stage of development, India has the lowest share of direct taxes in total taxes.
  - However, unlike in other countries its reliance on direct taxes seems to be declining, a trend that will be intensified if the Goods and Services Tax (GST) proves to be a buoyant source of revenue.

Direct taxation and development: Sub-federal levels

- Own direct tax collections by Indian states and local governments are significantly lower than those of their counterparts in other federal countries.

Resources received by the states as part of successive Finance Commission verdicts – Devolved or shared? To answer this, following points need to be considered:
- It is difficult to dispel the association (in the eyes of taxpayers) of the Center with the income taxes and customs duties that form a major part of the divisible pool.
- If the Center were a mere collecting agency the funds would be apportioned according to states' tax bases; they would not have sizable redistributive components.
- GST provides a sharp contrast in that it is clearly more "shared" because decisions and tax administration are done by both.
- In sum, whatever their de jure status, de facto resources from the divisible pool to the states have the strong whiff of devolution.

Figure 2. Own Revenue and Direct Taxes of Lower Tiers
(In per cent of total revenue)

- India's urban local governments (ULGs), meanwhile, are much closer to international norms. This is evidence that ULGs have emerged more fiscally empowered than RLGs so far in India

Local governments: what do we know?

- Over the past two decades, local governments have gained prominence as institutions with substantial 'say' in grassroots development issues, albeit with significant spatial variations, and spaces of intense political contestability. However, the tied nature of a considerable part of resource flow constrains spending autonomy in RLGs.
- **Expenditure patterns of different tiers of government:** The central and state governments spend on an average 15-20 times more per capita than do RLGs. ULGs spend about 3 times more. More importantly, this gap has persisted over time despite per capita spending by RLGs increasing almost four-fold since 2010-11.
- **Overwhelming reliance on devolved funds:**
  - **ULGs are different:** ULGs generate about 44 per cent of their total revenue from own sources. RLGs, in contrast, rely overwhelmingly (about 95 percent) on devolution. Per capita own revenue collected by ULGs is about 3 per cent of the urban per capita income while the corresponding figure is only 0.1 per cent for RLGs.
  - **Variation across states -** Broadly, there are two categories—RLGs of those States that collect some direct taxes and own tax revenue (e.g. Kerala, Andhra Pradesh and Karnataka in our sample), in contrast to RLGs of states like Uttar Pradesh that almost entirely depend on transfers. This variation is much starker in case of RLGs than ULGs.
  - Due to the overwhelming reliance on devolved funds which, to a large extent, are tied to sectors and schemes, the gram panchayats (GP) spend the bulk of such funds on earmarked areas, such as roads, other basic services, sanitation and community assets. The spending on purely local public goods like irrigation are not a priority out of such funds.

State and local governments: posing an entirely different question

- Standard discourse has primarily focused on the following:
    - **Inadequate tax and expenditure devolution**: Successive Devolution Reports of the Ministry of Panchayati Raj (MoPR) show that the share of revenues assigned to local governments in many states are much less vis-à-vis expenditure assignments. For example, the permissible taxes for panchayats include property and entertainment taxes but not land taxes or tolls on roads (except local panchayat roads).
    - **State Finance Commission's recommendations**: As per the latest MoPR Devolution Report (2015-16) the percentage of acceptance of such recommendations varies from as low as 11 percent in Karnataka to above 50 percent in West Bengal, Andhra Pradesh and Rajasthan to full acceptance in Kerala.

However, much less examined has been a different question: given their powers to tax, how have they performed and whether they have collected revenues close to the potential conferred by these powers.

- Property taxes are the principal sources of direct tax revenue at the third tier of government, apart from professional taxes. The collections from these potentially buoyant sources of revenue are generally stacked at very low levels because of archaic base values—far below market values—applied to properties, low rates of taxes levied, and lack of powers to local bodies in some states like Odisha and Rajasthan.

The property taxes collected at the second and third tiers of government are-

- land tax assessed and collected at the state level; and
- building tax, including property/house tax, collected at the municipality (ULG) and gram panchayat (RLG) levels.

- Further, the under-collection of direct taxes relative to potential afflicts the Center (in UTs where the central government assumes this responsibility) as much as the other two tiers.

Conclusion

- There is a broader challenge—afflicting all tiers of government—in the limited ability to collect direct taxes. Given the quality of public service delivery, such taxes are often viewed as a "tribute" rather than a contribution to the state in raising the quality of life. One consequence is middle-class exit to more privately-provided services (safety, health, and education) that only serves to exacerbate the problem.
- Future discussions of devolution and decentralization must identify and solve underlying problems as local governments could remain stuck in a low equilibrium trap. That is, the fiscal model of the states and third tier institutions could forever be based on outside resources which come with weak accountability mechanisms and weak own-resource generation capacity. This is perhaps the heart of the governance challenge in India.

CHAPTER 05: IS THERE A "LATE CONVERGER STALL?" IN ECONOMIC DEVELOPMENT? CAN INDIA ESCAPE IT?

Theme

The chapter focuses on convergence process (poorer countries closing gaps with richer countries in standards of living) that has been broadening and accelerating for the last 20-30 years. Identifying certain challenges, it talks about potential slowdown in the process of lower middle income countries. It also lists policy lessons for India to avoid "late convergence stall".

Introduction

- In last few decades, the global goods (standards of living, access to essential services & material well-being more generally) have improved drastically, especially among the poor countries.
- A **major driver** of these developments has been the process of poorer countries "catching up" with richer countries and closing gaps in the standard of living between the two, also known as "**economic convergence**".
- The poor countries continue to catch up so rapidly that the process has been called as **"convergence with a vengeance"**.
- Following two trends justify the **broadening of this process**-
    - Substantial increase in the number of poor countries growing faster than advanced economies.
    - Accelerated rate of catch up among these economies.
- However, there are fears that there could be a slowdown **for the "late converger stall"** (the countries that joined the process of convergence after the Global Financial Crisis (GFC)), due to 4 possible headwinds that were absent for early convergers like Japan & Korea.

Survey talks about 4 categories of economies, viz-

- **Low-income-** Real Per Capita Income less than 5% of the US.
- **Lower middle income**- Real Per Capita Income of about 5-15% of the US
- **Upper Middle Income**- Real Per Capita Income of about 15-35% of the US.
- **High Income**- All those above that line- including some above US' level.

Middle Income Trap

- The doubts about the convergence process have been articulated around the notion of **"middle income trap"**, under which the middle income countries would have grown slowly as expected because of two fold reasons-
    - On one hand, as the countries attain middle income status, they would be squeezed out of manufacturing and other dynamic sector,
    - One the other hand, they would lack the institutional, human and technological capital to carve out niches higher up the value added chain.
- However, denying such fears the middle income countries continued to grow faster than the convergence standard demanded. Rather, the poorest have been growing faster than the lower middle income countries that in turn have been growing faster than the richest.

Why such Scepticism?

- The scepticism emerges from the fact that after GFC, there was a sharp decline in rates of growth across the world. Even if the rate of decline among the lower income countries was lower as compared to the richer ones, there is a scepticism regarding a "late converger stall" for countries like India who are looking to pace up their convergence process. The major reasons behind the worry are-
    - **Hyperglobalization Repudiation-**
        - The hyperglobalization (that benefited the early convergers) led to a **backlash in the advanced countries**, as seen through their de-facto moves in the direction of seeking and forcing lower trade GDP ratios to protect their domestic economies and interests (reflected in the decline in world trade GDP ratio since 2011).
        - This means that similar trading opportunities may no longer be available for the new convergers.

Gravity Model of Trade-

- It says that if there is convergence there would also be increased trade.
- Two equal size countries will experience higher trade as compared to a scenario where one big country is responsible for the majority part of the trade.
- Due to convergence the world is increasingly becoming equal which means higher trade.

- For few countries like India, there might not be such external constraint on growth due to such changes in trends in global trade. But it may impact lower and middle income countries as a group.

- **Thwarted Structural Transformation: good growth and sustainable growth:**
  - The manufacturing sector is identified as a critically important sector for ensuring transformation. Further, there are two structural transformations important for the successful development-
    - ✓ Shift of resources from low productivity to high productivity
    - ✓ Larger share of resources devoted to sectors that have potential for rapid productivity growth.
  - However, in many cases there has been "**thwarted structural transformation**", i.e. shift from informal/low productivity sectors to ones that are marginally less informal/more productive.
  - This is why "**premature de-industrialization**", the tendency for manufacturing in late convergers to peak at lower levels of activity and earlier in the development process, is a cause of concern.
  - Also, there is a **negative share of good growth** over time along with weakening of the positive correlation between growth and good growth.
  - There are various outliers to the convergence process in this regard like **India and China.** China's good growth persists and India's share of the same declined.
  - However, such cases are very few and it would be more prudent not to rely on permanent exceptionalism.

> **Good Growth**- involving desirable structural transformations.
> **Less Good Growth-** Growth in sectors like hotels, restaurants, transport, etc.

- **Human Capital Regression:**
  - Unlike early convergers (whose human capital endowment aligned with the sector associated with structural transformation, i.e. manufacturing), the current situation is going to be tough for late convergers because-
    - ✓ They failed to provide even basic education necessary for some structural transformation.
    - ✓ Human capital frontier for the new structural transformation has shifted further away making the transformation costlier. This is because advents in technology would require skilled human capital which would have greater adaptability and ability to learn continually.
  - As opposed to these requirements, there is a wider **educational attainment gap** between lower income countries and advanced economies. If this gap persists or widens, the kind of transformation enjoyed by the early convergers might prove more difficult for late convergers.
  - This gap is highly stark for **India** given its absolute **Learning Poverty Count** between 40-50% and **Learning Poverty Gap** is about 25% for reading and a little lower for math.

> **Learning Poverty Count**- measures the number of children who do not meet the basic learning benchmark.
> **Learning Poverty Gap**- Takes into account how far each student is from the benchmark.

- **Climate change-induced Agricultural Stress-**
  - For late convergers, the agricultural productivity is crucial both for feeding people and for ensuring human capital accumulation in those who move from agriculture to modern sector.
  - The agricultural growth rates of richer countries have been consistently greater than for developing countries in each time period. While for the poorest, these growth rates have even declined post-GFC.
  - The reason behind this is the impact of change in temperature. For example in India, agriculture is vulnerable to temperature increase and heavily dependent on precipitation.

India's Case

- In 1960, India was a low-income country with per capita income around 6% of the US. However India attained status of lower middle income in 2008 with per capita income of about 12% of the US.
- But the growth has occurred with limited transfer of labour resources to high productivity and dynamic sectors, despite relatively modest agricultural growth. Thus, the late converger stall risk remains for India too.

Way Forward

- The key to India's dynamic and sustainable growth trajectory will be-
    - Rapidly improving Human Capital- healthy individuals, including all women, with the basic education to continually learn and adapt.
    - Rapidly improving agricultural productivity- against the headwinds of climate change and water scarcity.
- Along with this, the hyperglobalization repudiation must also recede to create a favourable external climate to sustain rapid growth.
- There is no late converger stall for India as yet but it would be wise to act to head it off.

CHAPTER 06: CLIMATE, CLIMATE CHANGE AND AGRICULTURE

Theme

This chapter pursues three objectives - first, to document the changes in climactic patterns in temperature and rainfall. Second, to estimate the effects of fluctuations in weather on agricultural productivity. And finally, to use these short-run estimates in conjunction with predicted changes in climate over the long-run to arrive at estimates of the impact of global warming on Indian agriculture. In the end, while calling for review of the cereal-centric policy, some policy implications have been given.

Overview

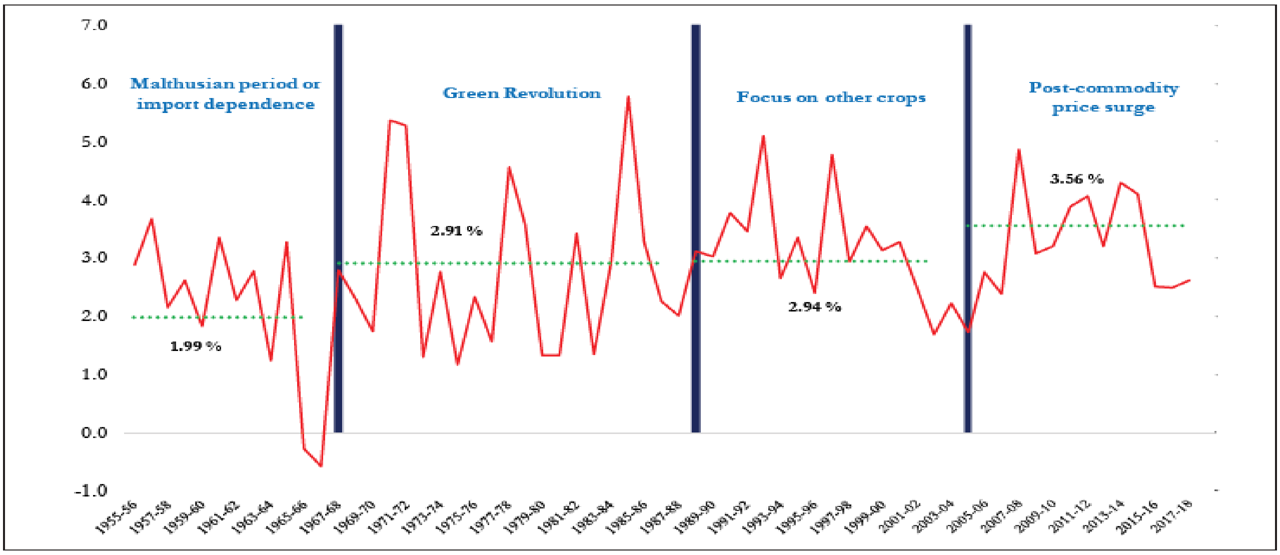
Need to focus on agriculture

- Agriculture accounts for a substantial part of **GDP (16 percent) and employment (49 percent).** Poor agricultural performance can lead to inflation, farmer distress and larger political and social disaffection.
- Raising productivity in agriculture will facilitate transition to more productive sectors of the economy.

The survey calls this focus on agriculture for transition to other sectors an irony. However, this does not mean neglecting farmers rather making them more productive. This is because the transition itself requires rapid productivity growth in agriculture, to produce greater food supplies for the people, provide rising farm incomes, and permit the accumulation of human capital.

Long run agricultural performance

Figure 1. Real Agricultural GVA Growth in India, 1960-2016
(in percent, 5 year moving average)



Source: Survey calculations.
Note: Numbers represent average agricultural growth rates for each period in percent.

- Real agricultural growth since 1960 has averaged about 2.8 percent in India. However, China's annual agricultural growth over the long run has exceeded that of India by a substantial 1.5 percentage points on average.
- Even though the volatility of agricultural growth in India has declined substantially over time, it continues to be high as compared to China where the ups and downs have been virtually eliminated.

Reason behind persistent volatility in agriculture - Agriculture in India continues to be vulnerable to the vagaries of weather because close to 52 percent (73.2 million hectares area of 141.4 million hectares net sown area) of it is still un-irrigated and rainfed.

Documenting changes in climatic patterns

Temporal and spatial patterns of temperature and precipitation

- The average increase in temperature between the most recent decade and the 1970s is about 0.45 degrees and 0.63 degrees in the kharif and rabi seasons respectively.
- During the same period, rainfall for kharif and Rabi season has declined on average by 26 millimeters and 33 millimeters respectively. Annual average rainfall has on average declined by about 86 millimeters.
- The imprint of climate change is also manifested in the increasing frequency of extreme weather outcomes-
    - proportion of dry days (rainfall less than 0.1 mm per day), as well as wet days (rainfall greater than 80 mm per day) has increased steadily over time
    - rise in the number of days with extremely high temperatures, and a corresponding decline in the number of days with low temperatures

- Temperature increases have been particularly felt in the North-East, Kerala, Tamil Nadu, Kerala, Rajasthan and Gujarat. On the other hand, Punjab, Odisha and Uttar Pradesh have been the least affected.
- Rainfall deficiencies are more concentrated in Uttar Pradesh, North-East, and Kerala, Chattisgarh and Jharkhand. While, there has actually been an increase in precipitation in Gujarat, Odisha and Andhra Pradesh.
- This suggests that spatially temperature increases and rainfall declines seem to be weakly correlated.

Impact of weather on agricultural productivity

The two key findings are:

- Marginal changes in weather have little or no impact and the impact is felt almost only when temperature increases and rainfall shortfalls are extreme.
    - These findings have important implications for the impact of climate change on agriculture, since most climate change models predict an increase in extreme weather events.
- Extreme shocks have highly divergent effects between unirrigated (defined as districts where less than 50 percent of cropped area is irrigated) and irrigated areas almost twice as high in the former compared with the latter.
    - Crop impacts - crops grown in rainfed areas—pulses in both kharif and rabi—are vulnerable to weather shocks while the cereals—both rice and wheat—are relatively more immune.

Table 1. Impact of Weather Shocks on Agricultural Yields
(percentage decline in response to temperature increase and rainfall decrease)

	Extreme Temperature Shocks	Extreme Rainfall Shocks
Average Kharif	4.0%	12.8%
Kharif, Irrigated	2.7%	6.2%
Kharif, Unirrigated	7.0%	14.7%
Average Rabi	4.7%	6.7%
Rabi, Irrigated	3.0%	4.1%
Rabi, Unirrigated	7.6%	8.6%

Source: Survey calculations.

Impact on farm revenue

Table 2 shows the impact of extreme shocks on famer incomes, measured by value of production.

- Here again, the largest adverse effects of weather shocks are being felt in unirrigated areas.
- Also, these figures indicate that even though lower supply should increase local prices, here the "supply shock" dominates, with reductions in yields leading to reduced revenues.

Table 2. Impact of Weather Shocks on Farm Revenue

	Extreme Temperature Shocks	Extreme Rainfall Shocks
Average Kharif	4.3%	13.7%
Kharif, , Irrigated	7.0%	7.0%
Kharif, Unirrigated	5.1%	14.3%
Average Rabi	4.1%	5.5%
Rabi, Irrigated	3.2%	4.0%
Rabi, Unirrigated	5.9%	6.6%

Source: Survey calculations from IMD & ICRISAT data.

Implication on agriculture performance in the long run

- Climate change models predict that temperatures in India are likely to rise by 3-4 degree Celsius by the end of the 21st century. These imply that in the absence of any adaptation by farmers and any changes in policy (such as irrigation), farm incomes will be lower by around 12 percent on an average in the coming years. Unirrigated areas will be the most severely affected, with potential losses amounting to 18 percent of annual revenue.

> **Another way of looking at the findings:**
> - In a year where temperatures are 1 degree Celsius higher farmer incomes would fall by 6.2 percent during the kharif season and 6 percent during rabi in unirrigated districts.
> - In a year when rainfall levels were 100 millimetres less than average, farmer incomes would fall by 15 percent during kharif and by 7 percent during the rabi season.

- Based on the observed decline in precipitation over the last three decades, it is found that in unirrigated areas, farm incomes will decline by 12 percent for kharif crops and 5.4 percent for rabi crops.
- Models of climate change also predict an increase in the variability of rainfall in the long-run, with a simultaneous increase in both the number of dry-days as well as days of very high rainfall. This channel alone would imply a decrease in farm incomes by 1.2 percent.
- These three channels through which climate change would impact farm incomes are likely to be correlated. Taking these correlations into account, farmer income losses from climate change could be between 15 percent and 18 percent on average, rising to anywhere between 20 percent and 25 percent in unirrigated areas. These are stark findings, given the already low levels of incomes in agriculture in India.

Policy Implications

- In thinking about agricultural policy reforms in India, it is vital to make a clear distinction between two agricultures in India.
  - cereals grown in Northern India— the well-irrigated, input-addled, and price-and-procurement-supported, where the challenge is for policy to change the form of the very generous support from prices and subsidies to less damaging support in the form of direct benefit transfers.
  - non-cereals in central, western and southern India - inadequate irrigation, continued rain dependence, ineffective procurement, and insufficient investments in research and technology (non-cereals such as pulses, soyabeans, and cotton), high market barriers and weak post-harvest infrastructure (fruits and vegetables), and challenging non-economic policy (livestock).
- India needs to spread irrigation – and do so against a backdrop of rising water scarcity and depleting groundwater resources. Technologies of drip irrigation, sprinklers, and water management—captured in the "more crop for every drop" campaign should be accorded greater priority in resource allocation. Also, the power subsidy needs to be replaced by direct benefit transfers so that power use can be fully costed and water conservation furthered.
- There is a need to embrace agricultural science and technology. It will not only be vital in increasing yields but also in increasing reliance to all the pathologies that climate change threatens to bring in its wake: extreme heat and precipitation, pests, and crop disease, especially important for crops such as pulses and soyabean that are most vulnerable.
- Building on the current crop insurance program (Pradhan Mantri Fasal Bima Yojana), weather-based models and technology (drones for example) need to be used to determine losses and compensate farmers.

India needs bottom-up planning along with benevolent-and-strategic top-down planning and reforms. The cooperative federalism model of the GST Council that brings together the Center and States could be promisingly deployed to further agricultural reforms and durably raise farmers' incomes.

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CHAPTER 07: GENDER & SON META-PREFERENCE: IS DEVELOPMENT ITSELF AN ANTIDOTE?

Theme

The chapter makes an assessment of the current status of gender equality in the country considering both chronological and development time in tandem. It has made critical observations on - comparison with other countries, heterogeneity within India and issues of son preference. It also throws light on the steps taken by the government to address the situation.

Introduction

Since independence there have been numerous initiatives for elevating the role and status of women in the country. As a result of these efforts India has improved on most of the indicators towards greater equality like increased literacy among women, better health etc. However, there remain few arenas that require better focus and improved efforts like their participation in the work force etc.

Gender Equality

Gender Equality is inherently a multidimensional issue. The assessments in the survey are made on 3 specific dimensions, viz:

- **Agency**- relate to women's ability to make decisions on reproduction, spending on themselves, spending on households, and their own mobility and health.
- **Attitude**- relate to attitudes about violence against women/wives, and the ideal number of daughters preferred relative to the ideal number of sons.
- **Outcomes-** relate to son preference (measured by sex ratio of last child), female employment, choice of contraception, education levels, age at marriage, age at first childbirth, and physical or sexual violence experienced by women.

Need to take stock of progress made towards gender equality

- Apart from inherent benefits of Gender Equality in society, evidences show that there can also be significant gains in economic growth if women acquire greater personal agency, assume political power & participate equally in the labour force.
- It is also important to take stock of Gender Equality in society so as to correct a methodological problem of combining "development time" (based on assessment over the stages of development) and "chronological time" (based on assessment over a period of time) together into one.
- It is crucial to measure and utilize both of them for an informed policy making. Urgency in actions can be informed by assessments in chronological time but that must be infused by the understanding achieved from the development time assessment.

Major findings and observations

1. **Convergence impact on India:** 15 out of 17 indicators of gender equality show a positive correlation with wealth in the country (which has been more than the effect for other countries). This means that even if India is lagging in development time, it can expect to catch up with other countries as household wealth increases.
    - The 2 indicators that show a negative correlation are- participation of women in the labour force & sex ratio of last birth.

Assessing indicators that India needs to work on-

a) **Using reversible contraception**- Not many women in India use such methods. Thus, women only seem to have control over when they stop having children and not on when they start having them.
This may have impact on other milestones early in a woman's life. For example, women may not get same access to employment than men.

b) **Participation in workforce**- too has declined because-
On supply side, increased incomes of men allow women to withdraw from work force.
On demand side, there is a lower demand for women due to
- Farm mechanization
- Insufficient availability of type of jobs that women prefer
- Security concerns & social norms

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2. **India as compared to other countries:** India has improved over time in 12 out of 17 variables between 2005-2015. Further, in 7 out of these 12 indicators India performed either better or at par with cohort of other developing countries.
3. **Heterogeneity within India:** All states have improved across all the dimensions except Delhi. There is also a "convergence" effect where the poorer performers from the earlier period improved their score over time.
   - Most of the North east states (except Tripura & Arunachal) and Goa stand as the best performers at all points of time followed by Kerala.
   - The states that lag behind are Bihar, Rajasthan, Madhya Pradesh, Uttar Pradesh, Jharkhand & Andhra Pradesh.
4. **Issues of son preference & son meta preference:** The biologically determined natural sex ratio is 1.05 males for every female.
   - **Son Preference**- India's sex ratio (males for every female) during the period between 1970-2014 increased substantially from 1060 to 1108.
   - However, a negative correlation has been observed between income and sex ratio in the country
   - One of the major reasons behind the high sex ratio in India is sex selective abortion as well as the neglect of the girl child after birth. It reflects an explicit son preference which results in millions of "**missing women**".
   - **Son-Meta Preference**- It is measured by the Sex Ratio of the Last Child (SRLC)
     - For India, the sex ratio of the last child for first-borns is 1.82, heavily skewed in favor of boys compared with the ideal sex ratio of 1.05. This ratio drops to 1.55 for the second child for families that have exactly two children and so on. The striking contrast between the two panels conveys a sense of son meta preference.
     - It gives rise to **"unwanted" girls** (girls whose parents wanted a boy, but instead had a girl), computed as the gap between the benchmark sex ratio and the actual sex ratio among families that do not stop fertility. It stands at 21 million for India.
   - Reasons for such a son preference include patrilocality (women having to move to husbands' houses after marriage), patrilineality (property passing on to sons rather than daughters), dowry (which leads to extra costs of having girls), old-age support from sons and rituals performed by sons.

Concept of Missing Women

It is the number of women who go missing across age groups every year either due to sex selective abortion, disease, neglect, or inadequate nutrition.

There are around 100 million missing women around the world, 40 million of which are in India alone.

Son Meta Preference

- It is a subtler way of son preference which means that parents may choose to keep having children until they get the desired number of sons.
- It does not lead to sex selective abortion but it may be detrimental to female children because it may lead to fewer resources devoted to them.
- This form of sex selection alone will not skew the sex ratio. However, this kind of fertility stopping rule will lead to skewed sex ratios but in different directions i.e. skewed in favor of males if it is the last child, but in favor of females if it is not.
- A preference for sons will manifest itself in the SRLC being heavily skewed in favor of boys.

Conclusion

The challenge of gender inequality is historical and long standing in India, the stakes are equally held by both the government as well as the society. The government has already taken many steps including-

- Launching schemes like *Beti Bachao, Beti Padhao & Sukanya Samridhi Yojana*.
- Providing 26 weeks long maternity leave in both public and private organizations.
- Every organization having more than 50 employees is now required to offer creche facility, etc.

CHAPTER 08: TRANSFORMING SCIENCE AND TECHNOLOGY IN INDIA

Theme

The chapter gives an insight into the status of science in India by drawing evidences from inputs (R&D expenditure and number of PhDs) and outputs (publications and patents). It then provides a number of suggestions for India to recapture the spirit of innovation that can propel it to be a global science and technology leader-from net consumer to net producer of knowledge.

Need to focus on Science

- It would lay the knowledge foundations to address some of India's most pressing development challenges in addition to maintaining a decent, open society, thus acting as a key driver of economic performance and social well-being.
- It is also important for developing a scientific temper. With its spirit of enquiry, the primacy accorded to facts and evidence and the ability to challenge the status quo, it can provide a bulwark against the darker forces of dogma, religious obscurantism, and nativism that are threateningly resurfacing around the world.
- It is also essential for human security, for combating climate change as well as national security threats ranging from cyber ware to autonomous military systems such as drones.

Historically, India boasts of many contributions such as the first use of zero as revealed by the Bakshali manuscript. However, India now needs to look ahead of its past laurels and move from being a net consumer of knowledge to becoming a net producer as it emerges as one of the world's largest economies.

More recent accomplishments include nuclear energy program, hybrid seeds program, space program, production of vaccines and generic drugs, participation in LIGO program.

Status of Science in India - Some Evidence for inputs and outputs

Inputs

- **R&D Expenditures**
  - It has tripled in nominal terms and doubled in real terms since 2004-05 to 2016-17. However, it has remained **stagnant at 0.6-0.7% of GDP** over the past two decades. This is well below other countries such **as US (2.8), China (2.1), Israel (4.3) and Korea (4.2)**.
    - This is not surprising given the fact that India is a lower middle-income country. However, it currently underspends even relative to its income level.
  - The government is the primary source of fund (compared to other countries where private sector carries the bulk of R&D) as well as the primary user of these funds.
    - Further, the Central government undertakes almost entire R&D expenditure with limited State government spending but spending by state governments is needed especially for application oriented R&D aimed at problems specific to their economies and populations.
  - There is a disconnect between the teaching and research enterprise with research being concentrated in specialized research institutes under different government departments limiting universities to largely play a teaching role.
    - This has led to a situation where universities have students but need additional faculty support, while research institutes have qualified faculty but are starved of young students.
    - This is in contrast to the practise followed in many other countries where universities play a critical role in both creating the talent pool for research as well generating high quality research output.
- **Ph.Ds in Science, Technology, Engineering and Mathematics (STEM)**
  - In comparison to China, there are less than half Indian STEM Ph.D students in the US. Fewer students have been enrolling for such degrees either due to lucrative career options after master's degree or rising work visa challenges.
  - On the other hand, there has been an increase in the no. of Ph.D enrolments in India which can be attributed to government efforts such as Prime Minister Research Fellowships at IITs. However, if we look at the overall picture India has fewer researchers than other countries.

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Outputs – Publications and patents (reflects a country's prowess in science and technology respectively) can help assess the productivity and quality of Indian research.

- **Publications**
  - India's share in global publications increased from 3.1% (2009) to 4.5% (2014).
  - However, this increase must be seen with a caution with major catalyst for this being number of publications being a determinant for the appointment or promotion of a faculty or scientists. There are many journals that publish non-peer-reviewed manuscript for a substantial fee.
  - Overall though, the quality of publications (as measured by highly cited articles) has increased over the years but it still lags behind China and US.
- **Patents**
  - According to WIPO, India is the **seventh largest patent filing office** in the world. However, India produces **fewer patents per capita**.
    - While on one hand, India's lower middle-income status hinders patent output; patents have grown much faster with income in countries like China, Korea and Japan implying that India needs a greater focus on R&D along with rising income to catch up.
  - India's patent applications and grants have grown rapidly abroad, however the same is not true at home. Since joining the international patent regime in 2005, while residential applications have increased substantially; the number of patents granted fell sharply post 2008 and has remained low.
  - The decrease in grants can be due to stricter examination process but more pressing problem is pendency and backlog applications which could be as a result of less examiners.
  - The recent hiring of more examiners by government and creation of an expedited filing system for Indian residents in 2017 will help fix the system. Moving forward, addressing patent litigation issues will also be crucial.

Expanding R&D in India: Way Forward

In order to improve Science and R&D in the country, India needs to **double its national expenditure** on R&D with larger share of the pie coming from private sector and universities**.** The metrics need to go beyond paper and publications to providing value for society.

- **Educating its youth in science and mathematics**
  - **Improve Maths and Cognitive Skills at School level**: Despite increasing access to primary and secondary education, learning outcomes have been weak compromising the foundations for future R&D.
  - **Link National Labs to Universities and Create new Knowledge ecosystems:** Better synergy between universities and research institutes would fill the gaps of faculty support and young talents and ensure deep commitment to excellence. Together they can link up with commercial sector, which requires speed and nimbleness, and help develop industrial clusters.
- **Engage private sector, state government and Indian diaspora**
  - **Increase Funding for Research from Private sector as well as from State governments:**
    - The private sector should be incentivised to both undertake and support R&D through **CSR (Corporate Social Responsibility) funds**. Along with the current favourable tax law for CSR investments in R&D, type of eligible activities can be expanded.
    - Government can also partner with private sector to create new R&D funding opportunities such as 50:50 partnerships with Science and Engineering Research Board (SERB) for industry relevant research under **Ucchtar Avishkar Yojana (UAY).**
    - State governments also need to invest as it would strengthen state universities and provide much needed knowledge in areas such as crops, ecology and species specific to a state.
  - **Leverage Scientific Diaspora**
    - India has the opportunity to attract back more scientists with growing strength of India's economy and anti-immigrant atmosphere in some countries. There has been an increase in scientists returning to India. However, the number has been modest.
    - Schemes like **Ramanujan Fellowship Scheme, the Innovation in Science Pursuit for Inspired Research (INSPIRE) Faculty scheme and the Ramalingaswami Re-entry Fellowship**, **Visiting**

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Advanced Joint Research Faculty Scheme (VAJRA) can act as a catalyst in leveraging the scientific diaspora.
    - The inducements should be to allow them to do good research (laboratory resources, ability to hire post-docs, housing etc.) rather than financial, to ensure that home grown talent has level playing field.

- **Greater public engagement of the science and research establishment:** National laboratories and other publicly funded R&D institutions need to make much stronger efforts to engage with the public through the media or through regular tours and lectures and create broad public support for their work.
- **Take a More Mission Driven Approach to R&D in some areas such as:**
    - **National Mission on Dark Matter:** It would have implications on future space missions, quantum computing, newer solutions to energy problems etc. It will not only build on the strong foundations of astrophysics and astronomy research institutes but will also open up more international collaborative possibilities.
    - **National Mission on Genomics:** Various countries are involved in projects to study the determinants and life course of biological pathways and disease. India can make considerable contribution in this field through its already existing life research institutes.
    - **National Mission on Energy Storage Systems:** In lieu of the fact that India has made a major commitment to renewable energy and has lagged behind in manufacturing renewable energy systems, investments in energy storage systems can be a game changer. It will be especially helpful for round the clock electricity to villages using off-grid renewable energy systems.
    - **National Mission on Mathematics:** Encompassing several initiatives, it would have an overall goal of rapidly increasing India's human capital and research profile in mathematics within a decade.
    - **National Mission on Cyber Physical Systems:** These are the building blocks of future industry which will throw new challenges and opportunities.
    - **National Mission on Agriculture:** It could help overcome the weaknesses in existing agricultural research institutions and provide a much needed thrust in agricultural science and technology given the plethora of looming challenges.

Cyber Physical System (CPS)

- It refers to machine based communication, analysis, inference, decision, action, and control in the context of a natural world
- It is a multidisciplinary area including deep mathematics used in Artificial Intelligence, machine learning, Big Data analytics, blockchains, expert systems, contextual learning to integration of all of these with intelligent materials and machines, control systems, sensors and actuators, robotics and smart manufacturing.

- **Reform the way research is conducted**
    - **Improve the Culture of Research:** Indian science and research institutes need to inculcate less hierarchical governance systems and encourage risk-taking and curiosity in the pursuit of excellence. There should also be greater representation of younger scientists in decision making bodies in their areas of expertise.
    - **Encourage investigator-led Research:** India needs to build upon the establishment of the SERB, which has sanctioned new R&D projects to individual scientists, with more resources and creative governance structures.

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CHAPTER 09: EASE OF DOING BUSINESS' NEXT FRONTIER-TIMELY JUSTICE

Theme

Recognizing that economic activity is being affected by the realities and long shadow of delays and pendency across the legal landscape, this chapter makes an attempt at quantitatively highlighting these developments. It then suggests certain steps so that Government and the Courts can both work together for large-scale reforms and incremental improvements to combat a problem that is exacting a large toll from the economy.

Introduction

- India's performance in ease of doing business has improved over last few years jumping about 30 places ahead. However, among various individual indicators, India lags behind in terms of enforcing contracts causing and further accentuating pendency, delays and backlogs in the applellate & judicial arenas.
- A clear and certain legislative and executive regime backed by an efficient judiciary that fairly and punctually protects property rights, preserves sanctity of contracts, and enforces the rights and liabilities of parties provides conducive environment for growth of business and commerce.

Steps taken by government to improve contract enforcement regime-
- Scrapping of over 1000 redundant legislations
- Rationalizing the Tribunals
- Amending the Arbitration & Conciliation Act 2015
- Passing the Commercial Courts, Commercial Division & Commercial Appellate Division of High Courts Act 2015
- Expanding Lok Adalat programme
- Reduced intra governmental litigation
- Advancing prospective legislative regime for legal consistency

Major Findings

1. **Pendency & Delay-** Delays and Pendency of economic cases have led to issues like stalled projects, mounting legal costs, contested tax revenues and reduced investments.
   a) **Economic Tribunals-** Two major patterns have been noticed regarding appellate **tribunals** of commercial cases-
      - There is high level of pendency of cases. The average age of pending cases across these tribunals is 3.8 years.
      - Pendency has risen sharply over time. In telecommunication & electricity the rise in pendency is due to interventions by the Supreme Court.
   b) **High Courts (HC)** - As opposed to the expectation, the creation of Tribunals could neither alter pendency in High Courts nor their ability to deal with other economic cases. Pendency continues to increase.
      - The volume of economic cases is smaller than other case categories, but their average duration of pendency is worst of most cases at around 4.3 years.
2. **Reasons for Pendency & Delay**
   a) **Burden from expansion of Discretionary Jurisdictions in High Courts**- A major reason behind the increasing pendency, apart from increasing number of cases and the complexity of commercial and economic cases, is the expansion of discretionary jurisdiction by courts.
      - This has not been accompanied by countervailing measures such as balancing the scope of other jurisdictions exercised by HCs or improving overall efficiency, thereby further aggravating the problem of pendency.
      - HCs have extensively interpreted the provisions of Art 226 & 227 of the constitution which has resulted in a substantial increase in cases.

Any **reductions in pendency** were achieved either due to changes in the counting methodology of pending cases, or due to changes in pecuniary jurisdictions that led to a mass transfer of cases from the original side of the High Courts to District Courts.

Art 226 & 227 empower HCs with carefully circumscribed writ jurisdiction.

   b) **Burden on HCs from Original Side Jurisdiction-** Some High Courts retain a unique original jurisdiction, under which the High Court, and not the relevant lower court, transforms into the

Court of first instance for some civil cases. These cases occupy a significant share of the Court's docket. The Delhi and Bombay High Courts have original jurisdictions that occupy nearly 10-15% of their workload.

- Also HCs take longer to clear civil suits as compared to their district court counterparts.

c) **Expansion of Special Leave Petition (SLP) Jurisdiction of Supreme Court-** Article 136 of Constitution empowers any party to approach SC directly from any court on Tribunal (initially invoked in exceptional circumstances).

- The number of SLPs, admitted by SC, has grown from 25% in 2008 to 40% in 2016. This has increased pendency in SC.

d) **Recourse to Injunctions & Stays**- Due to injunction 60% of cases are being stayed, whose average pendency is 4.3 years.

- About 50% of these cases are pending at the stage of pleadings and another 12% of these cases are pending for final disposal.

3. **Cost of Pendency & Delay-**
   - Numerous projects currently stayed by the court injunction and their average duration of stays lead to high amount of losses (close to 52,000 crores in six infrastructure ministries)
   - In many cases, since the project costs were predominantly debt financed, the **likely increase in** the **cost of project** is estimated to be around 60% given the average duration of stay.
   - This has also led to a spiraling of **legal expenses of corporate India**.

Way forward

To address the situation following steps may be considered-

- There needs to be an **expansion in judicial capacity in the lower courts** and **reducing the existing burden on the HCs and SC**. Following steps may be considered-
  - ✓ **Lower Judiciary** needs to be capacitated to particularly deal with economic and commercial cases via amendments to the Code of Civil Procedure, Commercial Courts Act & other related commercial legislations and training judges
  - ✓ Downsizing or removing original and commercial jurisdiction of High Courts and revisiting the size and scale of their discretionary jurisdictions.
  - ✓ Fully utilizing the existing judicial capacity.

Constituting Dedicated subject matter Benches-

- Such benches ensure that the SC speaks in one voice and there is continuity & consistency of legal jurisprudence.
- They allow judges to focus on the specialised branch of law placed before them.
- The Supreme Court has been able to control the increasing pendency of tax cases by constituting tax benches in 2014.
- The special bench authored 197 judgements in 2015, nearly 3 times as many passed in the previous three years.

- Need to **substantially increase expenditure on the judiciary and its modernization** (and digitalization). Legislations must be accompanied by judicial capacity and public expenditure memorandums, which lays out the necessary provisions required to address increasing judicial requirements and ensure their adequate funding.
- Given low success rate, **tax department should exercise greater self-restraint by limiting appeals**. This may be done via-
  - ✓ Framing ex ante rules
  - ✓ Creation of an independent panel to decide on further appeals
  - ✓ Limiting the number of tiers of scrutiny for taxation cases
- **Creating more subject matter and stage specific benches** that allow the court to build internal specializations and efficiencies in combating pendency and delay.
- **Reducing reliance on injunctions and stays.** Courts may consider prioritizing stayed cases and impose stricter timelines within which cases with temporary injunctions may be decided.
- Improving the **Courts Case Management & Court Automation Systems**. initiatives like the Crown Court Management Services of the UK that are dedicated to the management and handling of administrative duties, may be considered.

Conclusion

- Recent experience with the GST has shown that vertical cooperation between the center and states—Cooperative Federalism—has brought transformational economic policy changes.
- The horizontal variant of this, called the **Cooperative Separation of Powers**, could be applied to the relationship between the judiciary on the one hand, and the executive/legislature on the other.
- This will enable them to preserve their independence and legitimacy and also ensure speedier justice to help overall economic activity.

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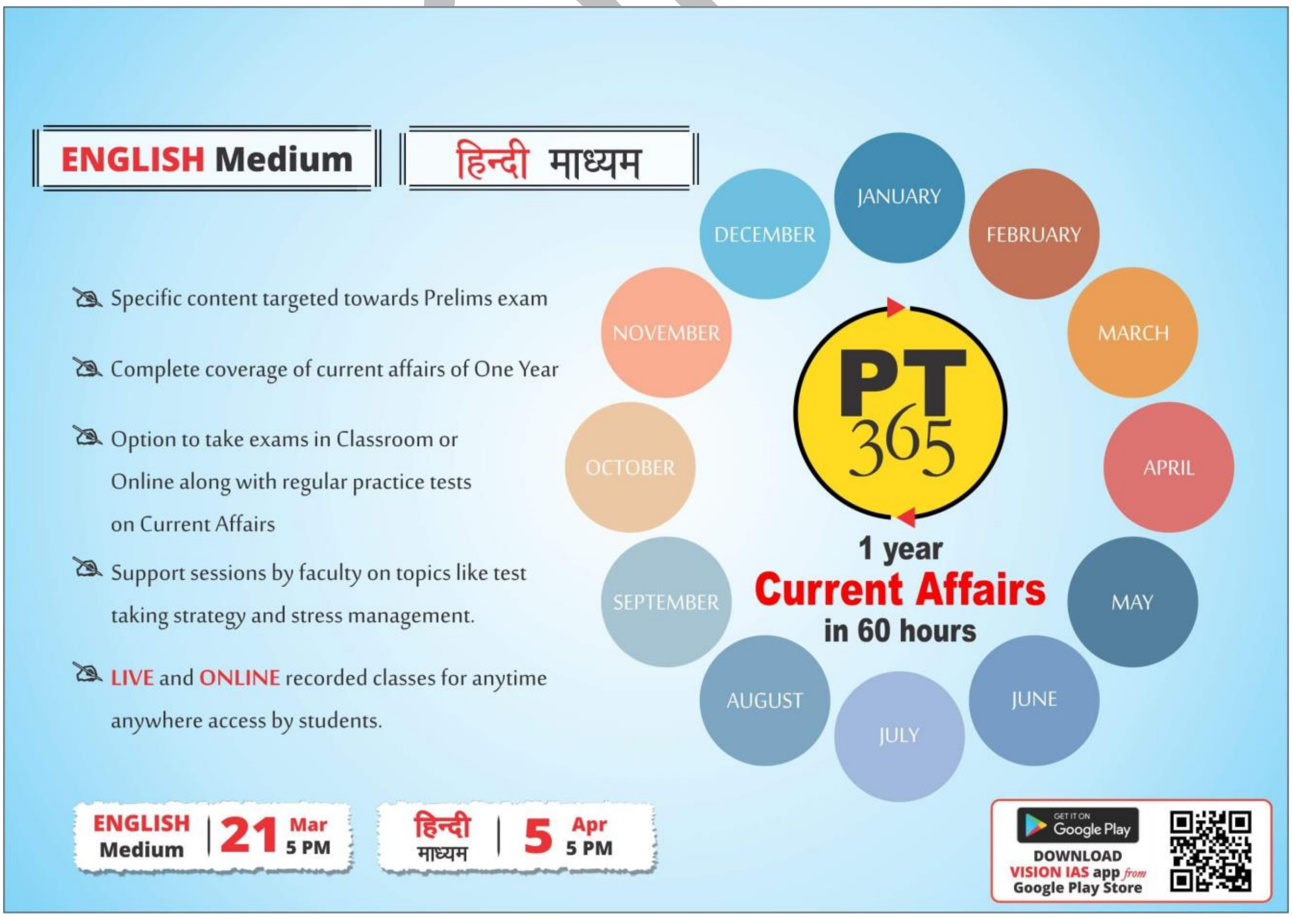


VOLUME 2

CHAPTER 01: AN OVERVIEW OF INDIA'S ECONOMIC PERFORMANCE IN 2017-18

Introduction

The chapter gives a bird's eye view of India's economic performance in 2017-18 by analyzing the factors responsible for movement in GDP growth rate, its sectoral composition, movements in savings and investment rate etc. It also gives the growth prospects for FY 2018-19 and factors that could derail it.

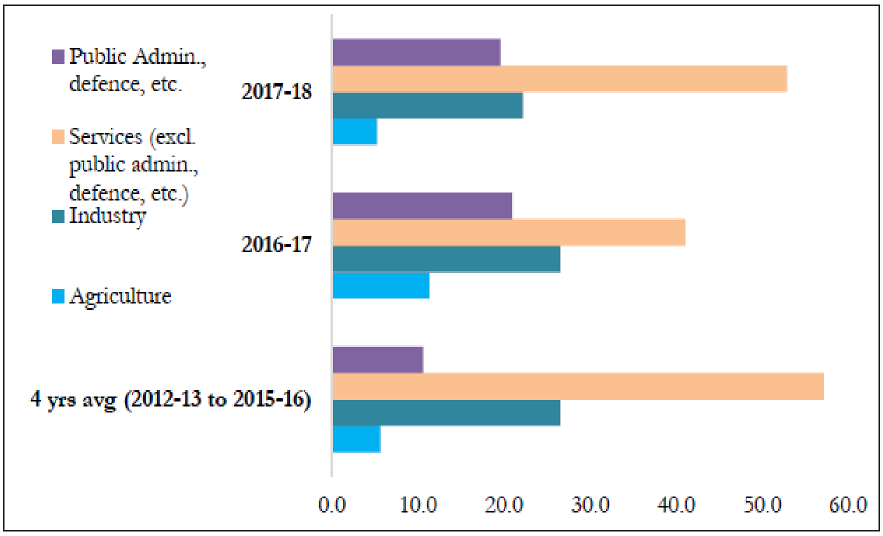
GDP growth in 2017-18

> The main difference between nominal and real values is that real values are adjusted for inflation, while nominal values are not. As a result, nominal GDP/GDP growth will often appear higher than real GDP/ GDP growth.

- India registered average Gross Domestic Product (GDP) growth of 7.5% between 2014- 15 & 2016-17, and was among the best performing economies in the world.
- However, it is expected to decline to 6.5 per cent in 2017-18 due to lower growth in 'Agriculture & allied', and 'Industry' sector. Despite this, it will be significantly higher than most economies of the world.
- In the recent years, **the wedge between the real and nominal GDP growth** has narrowed significantly. From a avg difference of 6 per cent between 2012-13 and 2014-15, it has declined to avg difference of 3% during 2015-16 to 2017-18. This is due to the fact that inflation in the earlier period (particularly in 2012-13 and 2013-14) was significantly higher than the latter period.
- The differences in the nominal growth between GVA (Gross Value Added) and GDP have increased in the last few years. This is indicative of an increase in the share of net indirect taxes in GDP.

GVA growth of major sectors

Figure 4 : Percentage contributionto GVA growth



- The **agriculture sector registered significantly higher growth** in 2016-17 than the previous two years on the back of normal monsoon. Most of the other crops and non-crop agriculture sector also showed significant growth.
- **Public administration, defence & other services'** sector also registered growth due to higher payouts in salaries and arrears on account of implementation the Seventh Pay Commission.
- However, growth of industry sector declined in the last financial year. The growth of manufacturing sector showed an improvement in 2017-18.
- Overall the growth of all three major sectors of the economy viz. agriculture & allied, industries, and services sectors in second half (H2) of 2017-18 was better than H1 of 2017-18.
- During 2016-17 two sectors viz. 'Agriculture & allied', and 'Public administration, defence & other services, contributed nearly one-third of the total growth of the economy. In 2017-18, the contribution of both these sector declined somewhat as the growth of this sector decelerated. The contribution of industry sector also declined primarily on account of lower growth (due to the slowdown in credit growth.).

Per-capita Income

The real per capita income (measured in terms of per capita net national income at constant (2011-12) prices) is expected to increase to Rs. 86,660 in 2017-18. In nominal terms to Rs. 111,782 in 2017-18.

Components of GDP growth

- **Consumption expenditure has been the major driver of GDP growth** in India. Between 2012-13 and 2015-16, it accounted for nearly sixty per cent of the total GDP growth. This increased to over 95 per cent in 2016-17, due to higher growth of both Private Final Consumption Expenditure (PFCE) and Government Final Consumption Expenditure (GFCE).
- PFCE has been the single most important driver of GDP growth from 2011-12. In 2016-17, it contributed nearly two-thirds to GDP growth.

PFCE includes final consumption expenditure of (a) households and (b) non-profit institutions serving households (NPISH) like temples, gurdwaras. The final consumption expenditure of households relates to outlays on new durable as well as non-durable goods (except land) and on services.

GFCE: Final consumption expenditure of administrative departments is equivalent to the current expenditure on compensation of employees, purchase of non-durable goods and services net of sales and the CFC. By convention, expenditure on durable goods, which are used for defence, are also treated as part of consumption expenditure of the Government.

- The **share of investment** (in particular that of fixed investment) in the GDP continuously declined between 2011-12 and 2016-17. Although fixed investment is expected to grow at a faster rate in 2017-18 (thus pointing to some recovery in investment), it is still not high enough to prevent a further reduction in the share of fixed investment in GDP.
- The **share of net exports of goods and services in GDP is negative** and is expected to decline further.

Trends in Savings and Investment

- The **investment rate** (Gross Capital Formation (GCF) as a share of GDP) in the economy **declined** by nearly 5.6 percentage points between 2011-12 and 2015-16.
    - This was on account of number of factors viz. difficulties in acquiring land, delayed and cumbersome environmental clearances, problems on infrastructure front, etc. Although many of these problems have been addressed, the investment rate (mainly fixed investment) has not picked up.
- The faster decline in investment rate vis-à-vis the savings rate has led to lower level of current account deficit (Savings Investment Gap) from 2013-14 to 2015-16.

Table 3 : Saving, Investment rate (per cent)

	2011-12	2012-13	2013-14	2014-15	2015-16
Investment rate	39.0	38.7	33.8	34.4	33.3
Savings rate	34.6	33.9	32.1	33.1	32.3
Saving Investment gap	-4.3	-4.8	-1.7	-1.3	-1.0

Savings

Savings in an economy originate from households, private corporate sector and public sector (including general government).

- **Household sector:**
    - The savings of household sector as a ratio of GDP have declined from 23.6 per cent in 2011-12 to 19.2 per cent in 2015-16.
    - **Household sector** accounts for the bulk of the savings. However, the share of household savings in total savings declined from around 68 per cent in 2011-12 to 59 per cent in 2015-16. Within the households' savings, there has been a substitution away from physical to financial assets.
    - Financial savings by the households are held mainly in currency, bank deposits, life insurance funds, provident and pension funds and of late in the form of shares and debentures.
    - During 2016-17, saving in the form of currency notes has declined due to demonetization while it has increased in the form of shares, mutual funds etc.

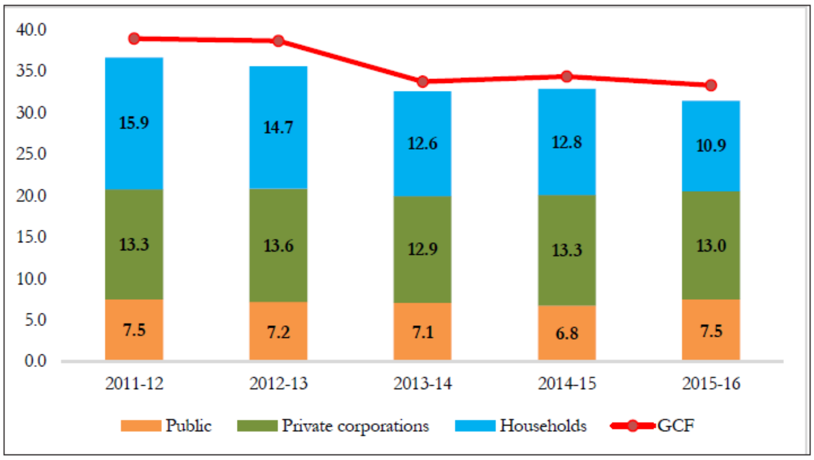
- **Public savings** that declined to 0.9 per cent in 2014-15, increased again in 2015-16. This could be partly explained by higher collection of union excise duties, particularly from petroleum products and reduced level of petroleum subsidy bill of the central government.
- The **share of private corporate sector in the total savings** increased from 9.5 per cent of GDP in 2011-12 to about 12 per cent of GDP in 2015-16.

Investment

There has been a **consistent reduction in investment rate** from close to 39 per cent in 2011-12 to 33.3 per cent in 2015-16. Gross fixed capital formation (GFCF) accounts for major proportion of Investment.

- Fixed investment rate (measured by GFCF as a share of GDP) declined due to twin-balance sheet problem. This trend of declining fixed investment rate needs to be reversed at the earliest to realise the potential growth of over 8 per cent in the years to come.
- **The institution-wise break-up of the investment** in the economy has undergone significant changes in the last few years.
- **Assets-wise fixed investment:**
  - Fixed investment accounts for around 90 per cent of total investment. Fixed investment is in various assets including dwellings, machinery & equipment and intellectual property products (IPP), along with small contribution coming from cultivated biological resources (CBR).
  - Household's investment in dwellings has declined considerably, which is possibly linked to reduction in the share of household's savings in the form of physical assets.

Figure 8 : Investment by different institutions as percentage of GDP (per cent)



Source : Based on NAS, CSO
Note : Investment across different sectors does not includes valuables and errors & omissions, hence will not add up to GCF.

Prospects of Growth for 2018-19

- CSO has estimated the GDP growth in 2017-18 to be 6.5 per cent. However, the growth during 2018-19 could be higher, depending on a number of factors.
  - Increase in global growth in 2018 will provide further boost to India's exports.
  - Remittances are expected to increase, owing to rising trend in oil prices.
  - Stable policy rates along with the favourable interest rate regime in the global markets could provide greater certainty to the investment climate.
  - The reform measures undertaken in 2017-18 are expected to strengthen further in 2018-19 and will reinforce growth momentum.
- **Downside risk to higher growth** emanate from higher crude oil prices, protectionist tendencies in some of the countries, and possibility of tightening of monetary conditions in the developed countries which could lead to lower capital inflows and financial stress.

Overall, there is a strong possibility of growth in 2018-19 and it could be in the range of 7.0 to 7.5 per cent.

Note: Following parts of chapter have been left, as they are covered in detail in respective chapters:

- **PUBLIC FINANCE** Covered in chapter 2.
- **PRICES AND MONETARY MANAGEMENT** Covered in Chapter 3 and 4
- **EXTERNAL SECTOR** (Covered in chapter 6)
- **AGRICULTURE AND ALLIED SECTORS** (Covered in Chapter 7)
- **INDUSTRIAL, CORPORATE AND INFRASTRUCTURE PERFORMANCE** (Covered in Chapter 8)
- **SUSTAINABLE DEVELOPMENT, ENERGY AND CLIMATE CHANGE** (Covered in Chapter 5)

CHAPTER 02: REVIEW OF FISCAL DEVELOPMENTS

Introduction

- During the last few years, the government has focused on improving its public financial management which has resulted in improved macro-economic stability in the last three years. Building further on this, the Central Government, in partnership with States, has implemented GST.
- During current FY also the direct tax collections are expected to meet targets and spending plans are broadly on track.

Trends in Receipts and Expenditure of the Central Government

A. Receipts: As per Economic Survey till November 2017, the gross tax collections of the government are reasonably on track and Non-debt capital receipts, mainly proceeds from disinvestment, are doing well. However, the non-tax revenues have under-performed.

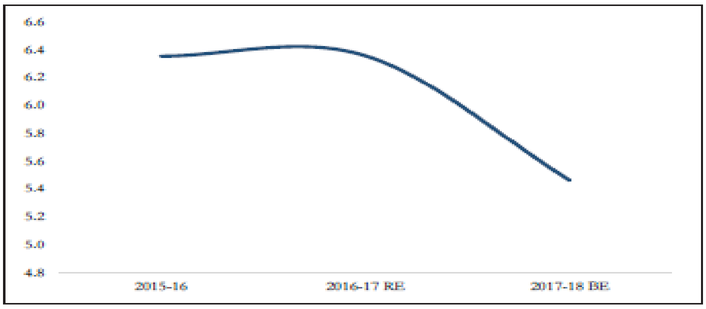
B. Expenditure and Deficits:

- **Central Government expenditure has progressed at a robust pace** due to the advancing of the budget cycle and processes by almost a month. This gave considerable leeway to the spending agencies to plan in advance and start implementation early in the financial year. This has also partly contributed to greater deficits in the current year compared to the previous year so far.
- **The fiscal deficit has overshot** the budgetary target during April-November 2017 due to the early progression of expenditure and front-loading of some expenditure, undertaken as part of prudent expenditure management.
- **Revenue expenditure has increased** due to increase in:
  - Interest payment liabilities (possibly due to outgo on account of servicing the market stabilization bonds issued to reduce excess liquidity, post demonetization).
  - petroleum subsidy due to its increasing prices.
  - enhanced outgo on pensions after seventh pay commission.

State and General Government

- After the UDAY-led aberration in their fiscal balances for the previous two years, **States have consolidated their finances** in the current year. UDAY bonds had an impact of 0.5 and 0.6 percentage points of GDP on the deficits of the States in 2015-16 and 2016-17 respectively.
- Both revenue and fiscal deficits as percentage of the corresponding budget estimates are lower in the current year, compared to the previous year.
- For the general government as a whole, the Fiscal Deficit as % of GDP has declined (see figure).

Gross Fiscal Deficit of the general government (*) as per cent of GDP



Source: Reserve Bank of India;

* *Note:* Data relating to deficit pertain to only 26 States: RE=Revised Estimate; BE=Budget Estimate

Government initiatives to improve fiscal parameters:

a) **Salient measures under indirect taxes:** The government has introduced GST on 1st July, 2017, subsuming almost all major indirect taxes. Under GST regime, it has taken various measures to improve ease of doing business for small traders. Also changes in customs duty were made to incentivize 'Make in India'.

b) **Salient measures Taken on Direct Taxes:**
   - Lowering of tax rate on domestic companies with turnover or gross receipts less than or equal to Rs. 50 Crore in FY2015-16 to 25 per cent from 30 per cent.

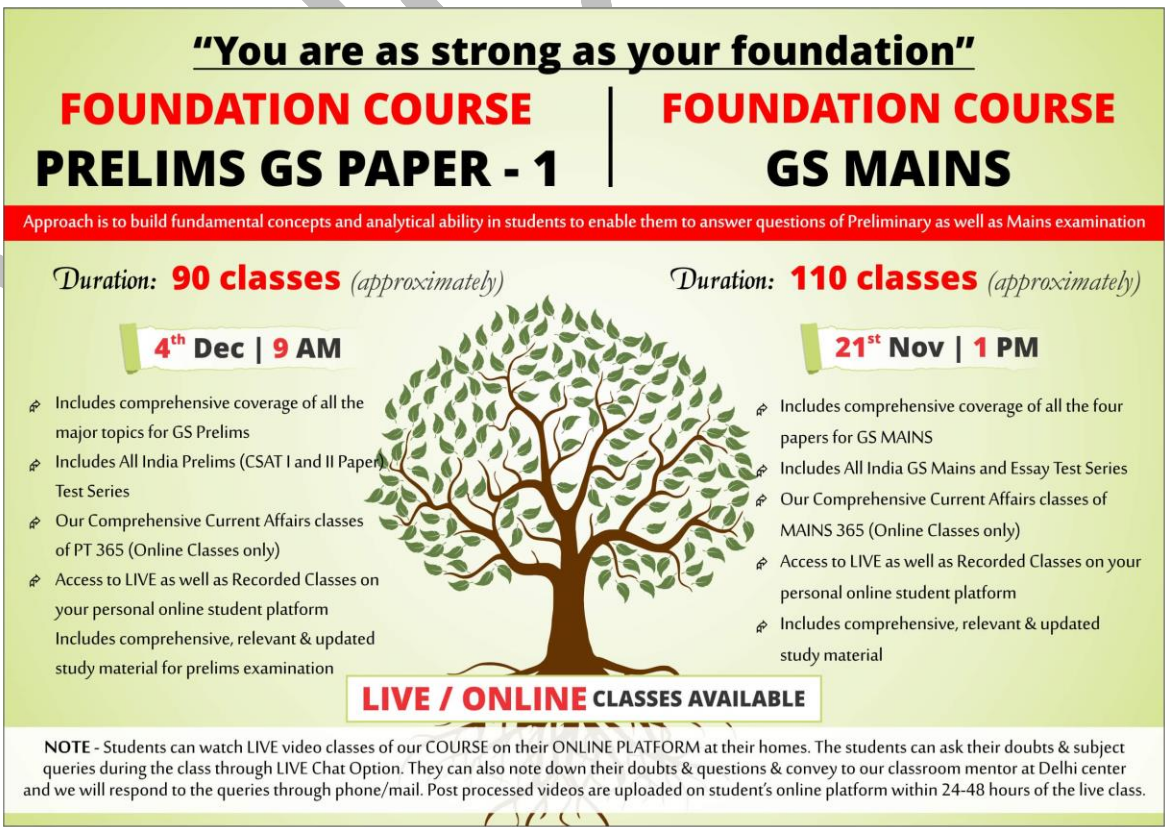
- Lowering of tax rate on individuals between income of Rs. 2.5 lakhs & 5 lakhs to 5% from 10%
- A new **safe harbour regime** has been notified for three years with effect from 1st April, 2017 to reduce transfer pricing disputes, provide certainty to taxpayers, align safe harbour margins with industry standards and enlarge the scope of safe harbour transactions.

> A ***safe harbour*** is a provision of a statute or a regulation that specifies that certain conduct will be deemed not to violate a given rule. From the perspective of Transfer pricing provisions, the safe harbour rules provides a window for the taxpayers wherein in case of defined circumstances the income-tax authorities shall accept the transfer pricing declared by the taxpayer.
>
> The adoption of safe harbour rules provides many perceived benefits both for taxpayers and the revenue authorities like,
>
> - Advance information or knowledge about the range of profits or prices to qualify for the safe. This brings certainty in transactions.
> - Elimination of the possibility of litigation between taxpayers and revenue authorities.
> - Automatic approvals and self-assessment procedures,

- Base year for fair market value and cost inflation index has been shifted from 1981 to 2001.
- Mandatory linking of Aadhaar with PAN database.
- Income-tax return (ITR) Forms have been rationalised to make it more objective and taxpayer friendly.

c) **Policy Initiatives On Investment Management In CPSEs:**

- The government has **migrated from the 'disinvestment based approach' to 'investment based approach'** for CPSEs.
- Guidelines on **"Capital Restructuring of CPSEs"** has been issued with focus on **efficient managem**ent of Government's investment in CPSEs by addressing various aspects, such as **payment of dividend, buyback of shares**, issues of bonus shares & splitting of shares.
- **Time-bound listing of CPSEs:** The Government has put in place a mechanism/procedure along with indicative timelines for listing of CPSEs.
- The focus of the **strategic disinvestment** is on adopting a pragmatic approach for the Government to exit from non-strategic business to optimize economic potential.
- The Government has started using **index based Exchange Traded Fund (ETF)** to offer an investment opportunity in CPSEs to pension funds and retail investors in India. For this purpose a new ETF, namely **BHARAT 22** was launched.



CHAPTER 03: MONETARY MANAGEMENT & FINANCIAL INTERMEDIATION

Introduction

- Monetary Policy Committee (MPC) was constituted in August 2016. Monetary policy since then is being conducted under the MPC.
- As the year-on-year effect of demonetisation wore off, the growth rate of both currency in circulation and reserve money (M0) turned sharply positive

The chapter further analyses the developments in monetary market in the wake of first Demonetisation and the re-monetisation, as discussed below:

Liquidity Conditions and its Management

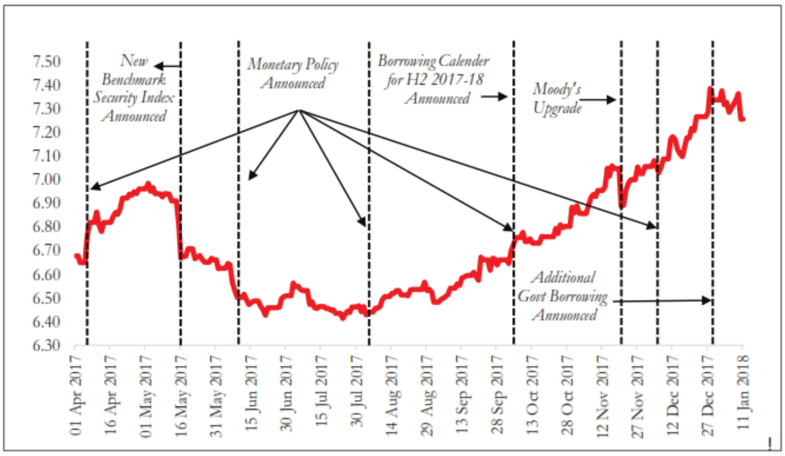
- After demonetisation in early November 2016, RBI had scaled up its liquidity absorption operations using a mix of both conventional and unconventional instruments. Net RBI credit to government declined owing to net open market sales as well as an increase in government deposits.
- Liquidity conditions remain in surplus mode even as its magnitude moderated gradually with progressive re-monetisation.

Developments in the G-Sec Market

During 2017-18, the 10-year G-sec yield altered significantly. Following factors affected it:

- Announcement of new benchmark security index, lower inflation, positive monsoon forecast, dovish stance of monetary policy and rating upgrade reduced yield
- Higher CPI inflation, additional supply of securities through OMO sales, rise in oil prices leading to concerns of higher inflation, and higher government borrowings exerted upward pressure on yields

10 Year G-Sec Yield (Per cent)



Source: Bloomberg.

Banking Sector

- The performance of the banking sector, Public Sector Banks (PSBs) in particular, continued to be below par in the current financial year. During the period March – September 2017
  - The Gross Non-Performing Advances (GNPA) ratio of Scheduled Commercial Banks (SCBs) increased to 10.2%, their Restructured Standard Advances (RSA) ratio declined, Stressed Advances (SA) ratio rose marginally and Capital to Risk-weighted Asset Ratio (CRAR) increased
  - GNPA ratio of PSBs increased to 13.5% and their Stressed advances ratio also rose. Many PSBs have continued to record negative profitability ratios since March 2016.

Credit Growth

- There was revival in credit operations of banks. Bank credit lending to Services and Personal Loans (PL) segments continue to be the major contributor to overall non-food credit growth.
- Credit growth finally picked up in industrial sector too. However, growth of credit to medium scale industries has remained negative and is yet to pick up.

Non-Banking Financial Sector

- Non-Banking Financial Companies (NBFCs) bring in diversity and efficiency to the financial sector and make it more responsive to the needs of the customers.

- The NBFC sector, as a whole, accounted for 17 per cent of bank assets and 0.26 per cent of bank deposits as on September 30, 2017. NBFCs depended largely on public funds for funding their balance sheets.
- The Reserve Bank has introduced a new category of Non-Banking Financial Company (NBFC) called **NBFC-P2P (NBFC- Peer to Peer Lending Platform)** to further financial inclusion through direct interaction between small lenders and small borrowers. One more category of NBFC has been announced – NBFC – Account Aggregators.

Capital Market:

- **The Primary market segment** witnessed a steady increase in resource mobilization with launch of many IPOs. The Indian mutual fund industry also registered a robust growth.
- Resource mobilisation through issuance of corporate bonds (public issuance and private placement) also rose rapidly. However, it is **not a substitute for bank credit**. The flip side is that the maturity period of bonds is much shorter compared to bank credit. Also, if banks subscribe to corporate bonds then it may lead to double counting.
- **The secondary market segment**, represented by BSE and NSE, also witnessed healthy growth due to increased investor confidence.

Insurance Sector

Insurance penetration is defined as the ratio of premium underwritten in a given year to the gross domestic product (GDP). **Insurance density** is defined as the ratio of premium underwritten in a given year to the total population (measured in US$ for convenience of international comparison).

- Insurance, an integral part of the financial sector, plays a significant role in India's economy. The performance of the insurance sector is assessed on the basis of two parameters, viz., Insurance Penetration and Insurance Density.
    - The **Insurance penetration** in India which was 2.71 per cent in 2001, increased to 3.49 per cent in 2016 (Life 2.72 per cent and General 0.77 per cent).
    - The **insurance density** in India, which was US$ 11.5 in 2001, has increased to US$ 59.7 in 2016 (Life 46.5 and General 13.2).
    - **Globally** insurance penetration and density were 3.47 per cent and US$ 353 for the life segment in 2016 and 2.81 per cent and US$ 285.3 for the non-life segment respectively.

Review of the New Insolvency and Bankruptcy Regime

The Insolvency and Bankruptcy Code, 2016 (IBC) was passed in May 2016. Since then, there has been a **significant amount of progress** –

- The entire mechanism for the Corporate Insolvency Resolution Process (CIRP) has been put in place. Rules and regulations have been notified to create the institutions and professionals necessary for the process to work.
- A major **factor behind the effectiveness** of the new Code has been the adjudication by the Judiciary.
    - The Code prescribed time limits have been followed by NCLT benches across India.
    - In addition, appellate courts, including the NCLAT, High Courts and the Supreme Court have also disposed appeals quickly and decisively.
- **The Insolvency and Bankruptcy Code (Amendment) Bill, 2017** was passed recently. It has made some persons ineligible to submit resolution plans viz an undischarged insolvent, wilful defaulter; a person disqualified as a director, a convicted person etc.
    - The aim is to prevent a range of undesirable persons from bidding for the debtor. This will prevent promoters from bidding for their own firms.
    - A resolution plan would typically involve significant haircuts on the parts of the financial and operational creditors. Thus, allowing a promoter to bid without restriction would mean permitting a situation where an owner, having driven a firm into insolvency, is now able to purchase it back at a discount. This can lead to a situation of moral hazard, where incompetent or fraudulent promoters are effectively rewarded with the control of their company, leaving the creditors to write off their debts.

VISIONIAS

CHAPTER 04: PRICES AND INFLATION

Introduction

The economy has witnessed a gradual transition from a period of high and variable inflation to more stable prices in the last four years. This chapter analyses the inflation trends through various indices, drivers of inflation and government measures taken to control inflation.

Facts about inflation in India:

- Inflation in the country continued to moderate during 2017-18.
- CPI based headline inflation averaged 3.3 per cent during April-December 2017-18, the lowest in the last six financial years.
- The average food inflation fell to 1.2 per cent during April-December 2017-18.

Trends in inflation

- **Headline inflation** measured by the Consumer Price Index (CPI) has remained under control. This was indicative of benign food inflation.
- **Food inflation** measured by the Consumer Food Price Index (CFPI) declined. Good agricultural production coupled with regular price monitoring by the Government helped to contain inflation. **The rise in food inflation in recent months** is mainly due to factors driving prices of vegetables and fruits. Though decline in food inflation is broad-based, major drivers are meat & fish, oil & fats, spices and pulses & products.
- **Core Inflation:** The CPI based core inflation (i.e. CPI excluding food and fuel group) has remained above 4 per cent during the last four financial years. Refined core (CPI excluding food and fuel group, petrol & diesel) is in line with core inflation.

Drivers of Inflation

- Both CPI-Combined and CPI-Rural inflation was driven mainly by food during FY 2016-17. The miscellaneous group (includes household goods & services, health, transport & communication, recreation and amusement, education and personal care and effects.) has contributed the most to it during the current FY.
- In urban areas, while food was the main driver of inflation during last year, housing sector has contributed the most in the current financial year.

Seasonal Movements in CPI-C and its Food components

- Seasonal movement of inflation refers to the price variations/fluctuations in items arising from supply shocks during certain periods of the year.
- General (Headline) inflation is more volatile than core inflation due to large changes in the prices of certain food items which are vulnerable to supply shocks. For e.g. Pulses, fruits and vegetables groups.
- An analysis of seasonality of the price indices shows that the seasonality starts from July and end in November for CPI-C (All Groups) with peak observed in August for CFPI (Consumer Food Price Index) and Vegetables.
- Unlike the presence of seasonality in Food groups of CPI-C, its Non-Food groups display negligible seasonality.

Trends in Global Commodity Prices

- As per the commodity prices published by the World Bank, energy commodity prices are surging recently. Movement of 'Fuel & Power' inflation based on All India WPI tracks World Bank Energy price index.
- World Bank Food price index declined in 2017-18 reflecting moderation in food prices.
- WPI 'Basic Metals' prices also tracked World Bank's 'Base Metals' prices. Inflation of 'Basic Metals' as per WPI is lower than that of World Bank's 'Base Metals' inflation.

Efforts to Contain Inflation

Central Government has taken a number of measures to control inflation especially food inflation:

- **Advisories issued to State Governments** to take strict action against hoarding & black marketing.
- **Higher MSP announced** to incentivize production and thereby, enhanced availability of food items may help moderate prices
- **Price Stabilization Fund** to control price volatility of agricultural commodities like pulses, onions, etc.
- **Enhancement in buffer stock** of pulses to enable effective market intervention for moderation of retail prices.
- To **incentivize domestic production of oil**, restriction on oil export has been removed except for palm oil, mustard oil and sunflower oil.
- Imposition of stock holding limits on stockist/dealers and duty on export of sugar.
- **Limitations on export of all varieties of onion**.

Development of New Indices

Producer Price Index

The Producer Price Index (PPI) measures the average change in the prices of goods and services, either as they leave the place of production called **Output PPI** or as they enter the production process called **Input PPI**.

- PPI contrasts with other measures such as the Consumer Price Index (CPI) which measures changes in prices from buyers or consumers perspective.
- The **benefits of migrating from WPI to PPI** are to cover bulk transactions of **all goods and services**, do away with the bias of double counting inherent in WPI and to compile indices that are conceptually consistent with the National Accounts Statistics (NAS) for use as deflators.

Recommendation of Working Group under the Chairmanship of Professor B. N. Goldar: The committee set up in 2014, submitted its report in 2017. The major recommendations are as follows:

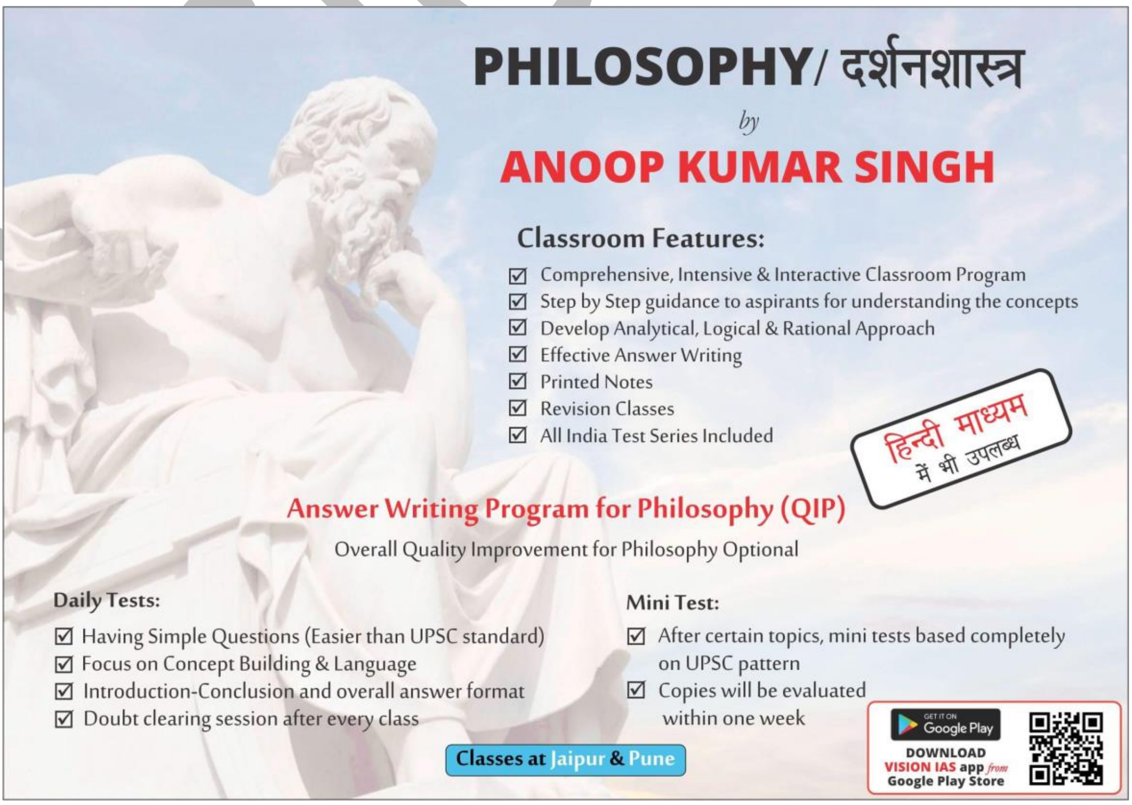
- **Two separate sets of input PPIs may be compiled** - one including services and the other excluding services.
- The PPIs may be initially compiled on an experimental basis and **switching over from WPI to PPI should be undertaken after the PPI series stabilizes**.
- The experimental PPI will be released on monthly basis with base year 2011-12.
- Inclusion of 15 services in the PPI basket to begin with.

Housing Price Index

The Housing Price Indices (HPIs) are a broad measure of movement of residential property prices observed within a geographic boundary.

NHB RESIDEX: It is the first official housing price index launched in 2007 by the National Housing Bank (NHB). The base year has been revised to FY 2012-13 to ensure capturing the latest information and accurately reflect the current economic situation in the country.

- Currently, National Housing Bank is publishing NHB RESIDEX for 50 cities on quarterly basis.
- NHB is not computing the composite all India housing price index as of now.
- However using population proportion as weights, an all India index as weighted average of city indices has been computed. The rate of growth in housing prices at All India level has started to decline from the quarter ending December, 2016.



CHAPTER 05: SUSTAINABLE DEVELOPMENT, ENERGY & CLIMATE CHANGE

Introduction

During past few years, India has taken many steps to meet its commitment towards the goals of climate change, sustainable development and energy access.

The chapter analyses progress made by India in above mentioned areas.

Sustainable Development Goals

The VNR report is based on an analysis of progress under various programmes and initiatives in the country. The VNR report focused on 7 SDGs: 1 (No Poverty); 2 (Zero Hunger); 3 (Good Health and Well-Being); 5 (Gender Equality); 9 (Industry, Innovation and Infrastructure), 14 (Life below Water) and 17 (Partnerships for the Goals).

- The UN Sustainable Development Goals (SDGs) adopted in 2015 comprehensively covers social, economic and environmental dimensions. For ex - a universal agreement to end poverty in all its forms and dimensions, including extreme poverty.
- India has volunteered to take part in the **Voluntary National Reviews (VNRs)** at the High-Level Political Forum (HLPF) 2017. India presented its 1st VNR on implementation of SDGs in July, 2017 in the HLPF at United Nations, New York.
- In the light of the global SDG indicators endorsed by the UN Statistical Commission, **the draft national SDG indicators are being developed** by Ministry of Statistics & Programme Implementation to regularly track progress of the SDG with base year as 2016.

Urban India and Sustainable Development

- India is now embarking on a fast rural to urban transition as India's urban population is projected to grow to about 600 million by 2031. Indian cities are facing multiple problems including delivery on a number of basic services. Thus, government has undertaken various measures such as Smart Cities Mission, Swatch Bharat Mission, National Urban Housing and Habitat Policy etc. to be able to achieve SDG 11 which states: "make cities inclusive, safe, resilient and sustainable".
- However certain challenges remain such as financing (about 39 lakh crore (at 2009-10 prices) was required for creation of urban infrastructure and 20 lakh crore for operation and maintenance in next 20 years as estimated by High Powered Expert Committee appointed by the Ministry of Housing and Urban Affairs) and recovering of user charges when the average cost recovery is less than 50 per cent in most of the Urban Local Bodies (ULBs).

Pillars of urban sustainability: According to World Economic and Social Survey, 2013, achieving the sustainability of cities entails integration of **four pillars** -social development, economic development, environmental management, and effective urban governance.

- Thus**,** ULBs should be encouraged to bring operational efficiency and financial viability in urban projects, raise resources through various innovative financial instruments such as municipal bonds, PPPs, credit risk guarantees etc. For e.g. in July, 2015, SEBI notified a new regulatory framework for issuing municipal bonds in India. It allows municipal bodies to issue municipal bonds through private placement or public issue.

Access to Sustainable Energy

- Access to affordable, reliable, sustainable and modern energy is important for achieving the SDGs as it has deep inter-linkages with all the other goals.
- For example – lack of access to clean cooking to around 64% of the population (world average – 38%) increases the burden on female members of the households to collect fuel wood. It also impacts their health disproportionately due to more exposure to indoor air pollution due to usage of such fuels. Thus, access to clean energy may reduce time spent on collection of fuelwood and may have a positive impact on girl's education and employment
- Therefore government has taken various initiatives for improving access to clean energy
  - **Pradhan Mantri Ujjwala Yojana** to provide LPG connections to BPL households.
  - **"Ujjwala Plus"** to address the cooking needs of deprived people who are not covered under the Socio-Economic Caste Census (SECC) 2011.

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- Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) to achieve 100 per cent village electrification and **Saubhagya scheme** to universal household electrification.
- **Focus on energy generation through sustainable sources**. As on 30th November 2017, 18% of the total installed capacity of electricity was from renewable energy sources. However this has also led to disputes relating to **renegotiations of Power Purchase Agreements (PPAs)**.
- For **efficient energy use**, guidelines were issued for mandatory installation of energy efficient appliances in all Central Government buildings across India under **Buildings Energy Efficiency Programme** implemented by Energy Efficiency Services Limited (EESL).

Renegotiation of PPAs by certain states

PPA is a contract between purchaser of electricity and electricity generator setting out the terms and price for supplying electricity. In the case of renewable energy, state electricity regulatory commissions set the Feed-in Tariffs for the purchase of electricity from these sources. PPAs were signed based on these pre-determined prices for a number of years.

Present problems: The recent auctions for solar/ wind power procurement have led to discovery of very low tariffs. In view of this some Discoms have hinted at the possibility of renegotiating the earlier PPAs. This renegotiation could risk investments worth 48000 crore and may also result in legal battles which will bring uncertainty for the sector leading to reduced financing by banks.

Way forward: Government has already placed renewable energy under the priority sector lending. Affordable financing holds the key for financing sustainable energy projects. Risk mitigating instruments such as payment guarantee fund or a foreign exchange fund available to developers could be a way forward. Subsidies and incentives given by government could be revisited.

International Solar Alliance (ISA) Entered Into Force

ISA, a coalition of countries lying fully or partially between the Tropics of Cancer and Capricorn, entered into force on 6th December, 2017. It has become the **first International intergovernmental treaty-based organization headquartered in India** (Gurugram, Haryana). The **United Nations** including its organs are **ISA's strategic partners**.

- India has made a **provision of 100 crore for ISA Fund corpus** and provided `15 crore per annum till 2020-21 for running expenditure. India has earmarked around US $ 2 billion Line of Credit (LoC) to the African countries for implementation of solar and related projects
- Presently ISA has **three programmes** Scaling Solar Applications for Agricultural Use, Affordable Finance at Scale and Scaling Solar Mini-grids. In addition, ISA plans to launch two more programmes on Scaling Solar Rooftops and Scaling E-Mobility & Storage.
- Major initiative of ISA includes development of "Common Risk Mitigating Mechanism" (CRMM) for de-risking & reducing the financial cost of solar projects and establishment of Digital Infopedia which serves as a platform to interact, connect, communicate and collaborate with one another.

India and Climate Change

- India has always engaged constructively under the United Nations Framework Convention on Climate Change (UNFCCC) and India is now actively engaged in the efforts towards developing guidelines for effective implementation of the Paris Agreement on climate change.
- Domestically, India has launched various policies & institutional mechanisms to advance its actions.
  - **National Action Plan on Climate Change and State Action Plans on Climate Change**, which includes eight national missions covering solar, energy efficiency, agriculture, water, sustainable habitat, forestry, Himalayan ecosystem and knowledge, apart from various other initiatives.
  - **Mission on strategic knowledge for climate change**, India has established 8 Global Technology Watch Groups in the areas of Renewable Energy Technology, Advance Coal Technology, Enhanced Energy Efficiency, Green Forest, Sustainable Habitat, Water, Sustainable Agriculture and Manufacturing.
  - **Climate Change Action Programme**, for building and supporting capacity at central & state levels, strengthening scientific & analytical capacity for climate change assessment, establishing appropriate institutional framework and implementing climate related actions
  - **National Adaptation Fund on Climate Change** to support concrete adaptation activities which are not covered under on-going activities through the schemes of State and Central Government.

- **Forest and tree cover has increased** transforming country's forests into a net sink
- **Pradhan Mantri Krishi Sinchayee Yojana** for extending the coverage of irrigation and improving water use efficiency.
- **Zero Effect, Zero Defect** to enhance energy efficiency and resources efficiency in MSMEs.
- **National Mission for Clean Ganga** to rejuvenate the river
- Indian financial market also moved in the direction of greener actions. SEBI issued the circular on the disclosure requirements for Issuance and Listing **of Green Debt Securities** in May, 2017.

Air Pollution in Delhi -- Possible Solutions

In recent years, the National Capital Delhi and adjoining areas have experienced poor air quality starting winter. It is imperative to address the proximate 4 top reasons for Delhi's worsening air quality:

- **Crop residue, biomass burning**
- **Vehicular emissions and redistributed road dust**
- **Massive construction, power plants, industry, other.**
- **Winter temperature inversion, humidity and (absence of) wind.**

Effective actions have been suggested (National Green Tribunal and Supreme Court decisions), some of which have begun:

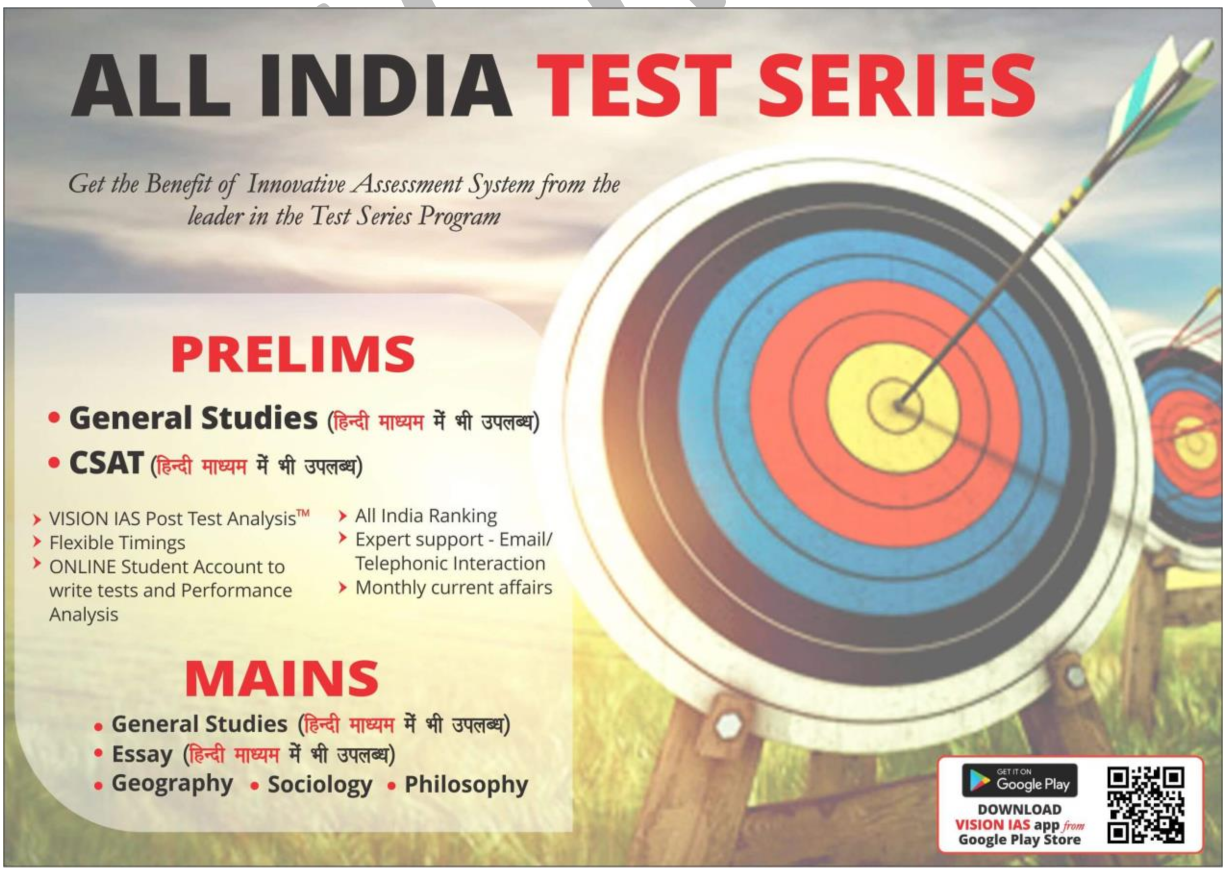
Short-Term Emergency Plan (when 24-hourly PM2.5 exceeds 300-400 mg/m3): Strict enforcement through heavy penalties on agricultural waste burning using satellite based tools detecting fires, and mobile based applications in NCR; and incentive payments to farmers, coordinated across states and NCR.

Medium and Long-Range Actions: Implement congestion pricing for vehicles, expand and improve public buses dramatically to reduce private vehicle use, and for connectivity to and beyond metro. Phase-out old vehicles, accelerate BS-VI (already notified and to be commenced from 2020), and expand modernized bus fleets.

Use technologies to convert agricultural waste into usable concentrated fodder or bio-fuels, develop and implement business models with private sector and communities and incentivize shift to non-paddy crops.

Conclusion

The Global Climate Risk Index 2018 has put India amongst the six most vulnerable countries in the world. Given that a sizeable population under poverty lives in areas prone to climatic shifts and in occupations that are highly climate-sensitive, future climate change could have significant implications for living standards. In view of this, India needs to build inherent adaptive capacities of individuals, households, and communities.



CHAPTER 06: EXTERNAL SECTOR

Introduction

India's external sector has been resilient and strong so far. The Balance of Payments situation has been comfortable. Merchandise exports have picked up, net services receipts have increased, net foreign investment grew and the external debt indicators has improved.

Global Economic Environment

- The global economy is expected to accelerate from 3.2% in 2016 to 3.6% in 2017 and 3.7% in 2018.
- The upward trend is supported by better results in the first half of 2017 in Euro Area, Japan, emerging Asia and Russia even though there are downward revisions in USA and UK.
- World trade volume is projected to increase. Commodity prices (Oil and Nonfuel) are also expected to grow, in contrast to previous years of decline.

India's Balance of Payments Developments

- India's balance of payments situation has been comfortable since 2013-14 and continued to be so in the first half of 2017-18.
- **India's CAD has increased** primarily on account of a higher trade deficit due to sharp rise in imports of gold coupled with the rise in crude oil prices.
- **Net invisibles receipts were higher** mainly due to the increase in net services earnings and private transfer receipts.
  - ✓ Net services earnings increased primarily on account of the rise in net earnings from travel and telecommunications, computer & information services.
  - ✓ Private transfer receipts, mainly representing remittances by Indians employed overseas also increased. However, the structural factors viz tightening norms of hiring foreign workers in USA, labour market adjustment in GCC countries and rising anti-immigration sentiments in many source countries pose considerable downside risk.
- While **trade deficit widened**, the improvement in invisibles balance and the net capital flows dominated by foreign investment and banking capital was able to finance the CAD leading to **accretion in foreign exchange reserves**.

- **The top five countries with which India has negative bilateral trade balance** are China, Switzerland, Saudi Arabia, Iraq and South Korea while the **top five countries with which it has surplus trade balance** are USA, UAE, Bangladesh, Nepal and UK.
- India has the **highest trade deficit with China**. Its share in India's total trade deficit increased from 20.3 per cent in 2012-13 to 43.2 per cent in 2017-18 (April-September).
- In the case of Switzerland, the trade deficit is mainly due to import of gold. This deficit has fallen in the last two years. Moreover, a part of it is used in exports.
- In the case of Saudi Arabia and Iraq, the deficit is due to crude oil imports, while for South Korea it is due to import of electrical machinery & equipments and iron and steel.

Composition of Indian Trade

In 2017-18 (April - November) among the major sectors, there was good export growth in engineering goods and Petroleum crude & products; moderate growth in chemicals & related products, and textiles & allied products; but negative growth in gems and jewellery.

Sector wise share of Exports

Rank		Share (per cent) 2015-16	2016-17	2017-18 (Apr-Nov) (P)
1	Engineering goods	23.1	24.4	25.9
2	Gems and Jewellery	15.0	15.7	14.4
3	Chemicals and related products **	14.7	14.2	14.5
	of which			
	Drug & pharmaceutical	6.2	5.8	5.4
4	Textiles & allied products	13.7	13.0	11.8
	of which			
	Textiles	5.6	5.2	4.9
	Clothing	8.1	7.8	6.9
5	Petroleum crude & products	11.7	11.4	11.8
6	Agriculture and allied products *	9.9	9.5	9.7
7	Electronic goods	2.2	2.1	2.0
8	Marine products	1.8	2.1	2.7
9	Ores and minerals	0.8	1.2	1.0
10	Leather & leather products	2.1	1.9	1.9
	Total exports including others	100.0	100.0	100.0

Sector wise share of Imports

Rank	Sector	Share (per cent) 2015-16	2016-17	2017-18 (Apr-Nov) (P)
1	Petroleum Oil and Lubricants	21.8	22.6	22.0
2	Capital goods	21.1	20.9	19.2
	of which			
	Machinery	8.7	8.5	8.3
	Base metals	6.5	5.6	6.0
	Transport equipment	4.0	5.1	3.3
3	Gems and Jewellery	14.8	14.0	16.8
	of which			
	Gold	8.3	7.2	7.8
	Pearls and semi precious stones	5.3	6.2	7.6
	Silver	1.0	0.5	0.8
4	Chemicals and related products **	13.3	12.4	12.7
	of which			
	Organic chemicals	2.5	2.6	2.6
	Fertilizers	2.1	1.3	1.3
5	Electronic goods	10.5	10.9	11.4
6	Agriculture & allied Products*	5.7	6.3	5.6
7	Ores and minerals	5.4	5.6	6.6
	of which			
	Coal, Coke & Briquettes, etc.	3.6	4.1	4.8
	Total imports including others	100.0	100.0	100.0

Development in Trade Policy

Two important developments on the trade policy are mid-term review of Foreign Trade Policy (FTP) and the recent multilateral negotiations of WTO in December 2017. Besides these, some developments on the trade logistics front and anti-dumping measures were also there.

Highlights of the Mid Term Review of Foreign Trade Policy and subsequent trade related policies

- MEIS (Merchandise Exports from India Scheme) incentives for two sub-sectors of Textiles i.e. Ready Made Garments and Made Ups increased
- Across the board increase of 2% in existing MEIS incentive for exports by MSMEs / labour intensive industries.
- To provide an impetus to the services trade, the SEIS (Service Export from India Scheme) incentives have been increased by 2% for notified services such as Business, Legal, Accounting, Architectural, Engineering, Educational, Hospital, Hotels and Restaurants.
- New trust based **Self Ratification Scheme** introduced to allow duty free inputs for export production under duty exemption scheme with a self-declaration.
- New **Logistics Division created in the Commerce Department** to develop and coordinate implementation of an Action Plan for the integrated development of the logistics sector,

- For clarity, **a negative list of capital goods** which are not permitted under the EPCG (Export Promotion on Capital Goods) scheme has been notified.
- Second Hand Goods imported for the purpose of repair/ refurbishing/re-conditioning or re-engineering have been made duty free, thereby facilitating generation of employment in the repair services sector.

Special package for leather and footwear sector: The scheme would lead to development of infrastructure for the leather sector, address environment concerns specific to the leather sector, facilitate additional investments, employment generation and increase in production. The Special Package has the potential to generate 3.24 lakhs new jobs in 3 years and assist in formalization of 2 lakh jobs as cumulative impact in Footwear, Leather & Accessories Sector.

- The **special package for employment generation in leather and footwear sector** was announced. The package involves implementation of Central Sector Scheme "Indian Footwear, Leather & Accessories Development Programme" over the three years from 2017-18 to 2019-20.

WTO Multilateral Negotiations

- The Eleventh Ministerial Conference (MC11) of World Trade Organisation (WTO) ended without a Ministerial Declaration or any substantive outcome.
- During the Ministerial Conference (MC11), India stood firm on its stand on the fundamental principles of the WTO, including multilateralism, rule-based consensual decision making, an independent and credible dispute resolution and appellate process, the centrality of development, which underlies the Doha Development Agenda (DDA), and special and differential treatment for all developing countries.
- However, still work on issues such as public stockholding for food security purposes, agricultural Special Safeguard Mechanism and agricultural domestic support, need to be continued.

Trade Related Logistics

- The Indian logistics industry is estimated to be worth around US$ 160 billion in 2016-17 and has grown at a compound annual growth rate (CAGR) of 7.8 per cent over the past five years.
- It is expected to reach about US$ 215 billion in 2019-20 considering the positive impact of GST implementation.
- Improved logistics have huge implications on increasing exports, as a 10% decrease in indirect logistics cost can contribute to around 5-8% of extra exports. India has improved its ranking in the "Logistics Performance Index" but compared to countries like Singapore, South Africa, Taiwan and China, India has long way to go.

Anti-Dumping Measures

- In the aftermath of global slowdown, complaints of dumping have been rising hurting the domestic industry.
- In 2016, 300 anti-dumping investigations were initiated by all countries with India leading at 69 investigations followed by USA (37).
- Products wherein anti-dumping duty has been imposed fall in the products group of Chemicals & Petrochemicals, Products of Steel & other metals and Rubber or Plastic Products.
- Major products were found to have been dumped from China.

Foreign Exchange Reserves

- India's foreign exchange reserves reached US$ 409.4 billion by end-December 2017.
- The level of foreign exchange reserves can change due to change in reserves on BoP basis as well as valuation changes in the assets held by the Reserve Bank of India.
- The import cover of India's foreign exchange reserves was 11.1 months at end-September 2017 as compared with 11.3 months at end-March 2017.
- Within the major economies running current account deficit, India is among the largest foreign exchange reserve holder and sixth largest among all countries of the world.

Exchange Rate

During 2017-18 (up to December 2017), the rupee generally traded with an appreciating bias against the US dollar on the back of significant capital flows, both foreign portfolio flows and FDI.

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In terms of the real effective exchange rate (trade weighted) against a basket of 36 currencies, the rupee appreciated. Though the rupee continued to be broadly stable, the appreciation of REER indicates that India's exports might have become slightly less competitive.

External Debt

India's External Debt stock increased to US$ 495.7 billion at end- September 2017.

- The long-term debt also showed growth, though its share remained almost same at 81.3%. The increase was primarily due to the increase in foreign portfolio investment in the debt segment. Short term debt also grew due to increase in trade related credits.
- Share of Government (sovereign) debt in total debt increased to 21.6 percent end-September 2017, mainly due to other Government external debt component reflecting the increased level of foreign portfolio investments in Government securities.
- Foreign exchange cover to total external debt also improved to 80.7 per cent.

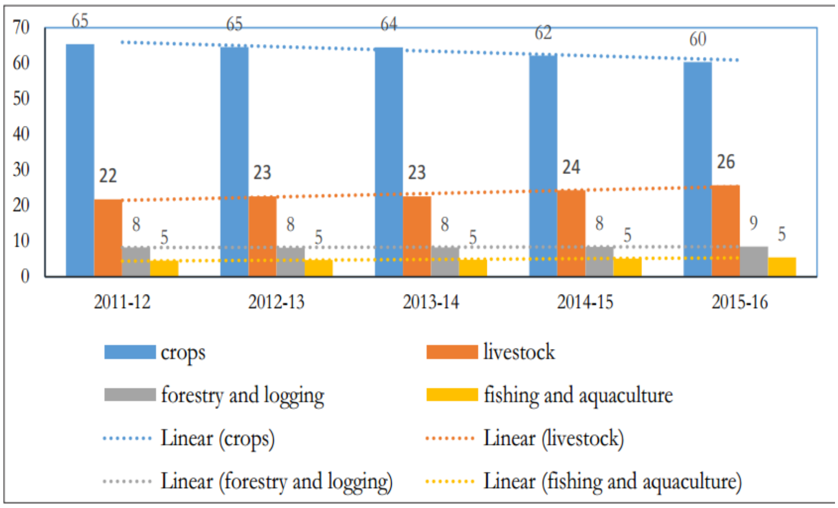
International comparison of external debt situation based on World Bank data shows that

- Among the top 20 developing debtor countries in 2016, India's external debt stock to Gross National Income (GNI) ratio at 20.4 percent was the second lowest after China's 12.8 per cent.
- In terms of the foreign exchange reserves cover to external debt, India's position is the fifth highest and India's debt service rate is the eight lowest.
- As per the World Bank data, though India is the third largest debtor country among developing countries (after China and Brazil), India's share of short term debt to total debt (18.6%) is much less compared to China's 59.0%.
- India is not among the top debtor countries in the world (including developed and developing) with 26th position at end-June 2017.

CHAPTER 07: AGRICULTURE AND FOOD MANAGEMENT

Agriculture in India plays a pivotal role in providing livelihood, ensuring food security, reducing poverty and sustaining growth.

Figure 1 : Share of Agriculture and allied sectors in Gross Value Added (in %)



Source: National Accounts Statistics 2017

Overview of agriculture sector in India

- **Agriculture & GVA**: India is witnessing a general decline in share of agriculture in Gross Value Added (GVA). However, growth rate of agriculture & allied sectors have been fluctuating at 1.5% in 2012-13 to (-)0.2% in 2014-15 to 4.9% in 2016-17 primarily due to fact that more than 50% of agriculture in India is **rainfall dependent** and **private investment has declined**.
- **Crop Production**: There is an overall increase in food production on account of good rainfall during 2016-17 and policy initiatives taken by government.
- **Structural changes in sector**: A gradual shift can be seen in Indian Agriculture sector, where the share of livestock in GVA has increased and share of Crop sector has declined (Figure 1). This also coincided with the **change in sources of income** of farm households.
- **Feminisation of Agriculture**: Role of women as cultivators, entrepreneurs, and labourers has increased with growing rural to urban migration by men. According to Census 2011, out of total female main workers, 55% were agricultural labourers and 24% were cultivators. However, there is a **gender disparity** in ownership of landholding in agriculture (only 12.8% owned by women) along with **concentration of operational holdings (25.7 per cent)** by women in the marginal and small holdings categories.

Gender-specifc interventions in agriculture to integrate women as active agents in rural transformation are:

- Earmarking at least 30% of the budget allocation for women beneficiaries in all ongoing schemes/programmes and development activities.
- Initiating women centric activities to ensure benefits of various beneficiary-oriented programs/schemes reach them.
- Focusing on women self-help group (SHG) to connect them to micro-credit through capacity building activities and to provide information and ensuring their representation in different decision-making bodies.

- **Cropping pattern:** India has **highest net cropland area** (NCA) with 179.8 Mha (9.6% of global NCA). However, according to **Index of Crop Diversification**, there is a declining inter-temporal behavior in crop diversification among most of States (exception being Himachal Pradesh & Jharkhand). This **monoculture practices** has been the reason for declining productivity, lower response to fertilizer, degradation of soil health and declining profitability of cultivation.

- **Crops Diversification Programme:** Government is implementing it in green revolution states viz. Punjab, Haryana and in Western UP to diversify paddy area towards less water requiring crops like oilseeds, pulses, coarse cereal, agroforestry.
- It will also help in mitigating the risks faced by farmers in terms of price shocks and production/ harvest losses.

Some steps taken to improve Input management

- **Direct Beneft Transfer in Fertiliser sector**: It will help in better soil health management, balanced fertilization, and better productivity with the combine usage of Soil Health Card, Aadhaar and Land Records.
- **'Seed Production in Agricultural Crops' project**: Under this, high quality seeds are produced to promote **Seed Replacement Rate (SRR) and Varietal Replacement Rate (VRR)**.

SUMMARY OF ECONOMIC SURVEY

- **Input Management in Agriculture:** A sustainable use of inputs like irrigation, seeds, fertilizer, credit, machines, extension services etc. helps in improving the productivity without losing soil fertility and causing environmental damages. However, **lack of educational level** of farmers had impacted their capacity to adopt and inculcate new methods of cultivation and input management.
  - ✓ **Irrigation:** Only 34.5% of total cropped area is irrigated in India**.** To improve irrigation facility **Pradhan Mantri Krishi Sinchayee Yojana** was launched by government.
  - ✓ **Agriculture Mechanization:** As 50% of Indian population would be urban by the year 2050 (World Bank), It is estimated that percentage of agricultural workers of total work force would drop to 25.7% by 2050 from 58.2% in 2001. Thus, there is a need to cater the increasing food security need by enhancing the level of farm mechanization in the country which has the potential to **increase productivity up to 30%** and **reduce the cost of cultivation** up to 20%.

Reason for low Insurance coverage: lack of awareness, improper coverage & reach, complicated procedures & lack of resources etc

Pradhan Mantri Fasal Bima Yojana (PMFBY) components:

- Uniform premium to be paid by farmer of 2% for all Kharif crops and 1.5% for all Rabi crops and 5% for commercial and horticultural crops.
- There is no upper limit on Government subsidy and no capping on sum and farmers will get claim against full sum insured without any reduction.

- **Crop Insurance and crop loss:** According to the **NSSO Report** (July 2012 – June 2013), very small share of agricultural households engaged in crop production activities was insuring their crops. Government initiated **PMFBY** which provides comprehensive coverage of risks from pre-sowing to post harvest against natural non-preventable risks.
- **Agriculture credit and marketing Initiatives**
  - Credit is a critical input in achieving high productivity and overall production in the agricultural sector. Institutional Credit helps in delinking the farmers from non-institutional sources of credit, and increases financial inclusion.
  - Marketing reform has been undertaken to benefit farmers from remunerative prices for their produce in the market like **electronic National Agriculture Market (e-NAM)**.

Interest Subvention Scheme

- Under it, farmer can effectively avail short term crop loans up to Rs. 3 lakh payable within one year at only 4% per annum.
- It also gives loans at concessional rate of 7% for storage in ware houses accredited by Warehousing Development Regulatory Authority (WDRA) for upto 6 months post harvest for avoiding distress sale.

e-NAM: It aims at integrating the dispersed APMCs through an electronic platform and enable price discovery in a competitive manner.

Open Market Sale (OMS) Scheme: **Food Corporation of India** sells excess stocks out of Central Pool in the open market from time to time at predetermined prices to

- To enhance the supply of food grains during the lean season and deficit regions
- To moderate the open market prices
- To offload the excess stocks
- To reduce the carrying cost of food grains.

- **Agriculture Research and Development**
  - It is the main source of innovation, which is needed to sustain agricultural productivity growth in the long-term.
  - There has been an increasing allocation for it which is manifested in development of a total 209 new varieties/hybrids for Cereals, Pulses, Oilseeds, Commercial and Forage crops, tolerant to various biotic and abiotic stresses with enhanced quality.

Climate-smart agriculture (CSA)

It is an approach that helps to guide actions needed to transform and reorient agricultural systems to effectively support development and ensure food security in a changing climate.

Objectives

- To sustainably increase agricultural productivity and incomes.
- Adapting and building resilience to climate change.
- Reducing and/or removing greenhouse gas emissions wherever possible.

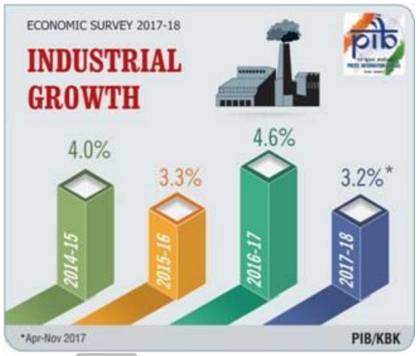
- **Food Management**
  - ✓ In India, both central and state government are engaged in managing food security through centralized and decentralized process of procurement (**MSP**), allocation and distribution of foodgrains to consumer (**PDS**) under National Food Security Act and in maintaining buffer stocks for emergencies and for price stabilization (**OMS scheme**).

Way forward

Due to the structural changes being experienced in farming practices, the farmers should be encouraged to diversify their income generating sources along with adopting climate smart agriculture. Also, government should consolidate land to reap the benefits of Farm mechanisation, contract farming etc.

CHAPTER 08: INDUSTRY & INFRASTRUCTURE

Industry



- **Introduction:** It forms the backbone of any modern country, so to improve its situation Government has undertaken a number of economic and institutional reforms like implementation of Goods and Services Tax (GST), Insolvency and Bankruptcy Code (IBC), introduction of eBiz portal, Demonetization, inflation targeting regime etc. which have led to significant up-gradation in India's ranking in **Ease of Doing Business of the World Bank Report** 2018 and improvement in its **sovereign credit rating** to **Baa2 from Baa3** by credit rating agency Moody's Investor Service.
- **Challenges and solution**: Twin balance sheet problem of corporate and banking system has undermined the capacity utilization of industries, which is reflected in lower industrial growth in 2017-18. However government has recently taken **Bank Recapitalization reform** to improve the balance sheet of PSB's and also encouraging **alternative sources of investment** for industrial sector revival through slew of measure like simple FDI regime, promoting corporate bond market etc.

Champions Sectors include Capital goods, Auto and Auto Components, Defence & Aerospace, Biotechnology, Pharmaceuticals and Medical Devices, Chemicals, Electronic System Design & Manufacturing (ESDM), Leather & Footwear, Textiles & Apparels, Food Processing, Gems & Jewellery, New & Renewable Energy, Construction, Shipping and Railways.

Initiatives taken by the Government to boost industrial performance

- **Make in India:** It aims at making India a global hub for manufacturing, research & innovation and integral part of the global supply chain.
  - Government has identified ten '**Champions sectors' under Make in India 2.0**, which have potential to become global champion, drive double digit growth in manufacturing and generate significant employment opportunities.
- **Intellectual Property Rights (IPR) Policy, 2016**: It aims to improve Indian intellectual property ecosystem and to create an innovation movement in the country and aspires towards "**Creative India; Innovative India**".
- **Start-up India**: It aims to create an ecosystem that is conducive to growth of Startups.
  - Under this, regulatory burden have been reduced on Startups such as Government have allowed them to self-certify compliance under 3 labour laws and 6 environment law.

- **Startup India hub**: Developed as a single point of contact for the entire Startup ecosystem and enables knowledge exchange
- **Fund of Funds for Startups (FFS),** managed by SIDBI, has been created with a corpus of 10,000 crores to provide financial support. Seed Fund and Equity Funding support is also provided to **Bio-Tech Startups.**

Sector wise Analysis of industries

- **Steel sector:** India witnessed rising **imports of cheap steel** from countries like China, South Korea and Ukraine due to **slowing world economy** and **over capacity** in production of steel, which adversely affected domestic producers. However, they saw a revival in its growth with introduction of **New Steel Policy 2017** and implementation of **a policy on preference** to domestically manufactured select iron & steel products, along with imposition of **anti-dumping duty, Minimum Import Price (MIP)** and **Countervailing duty** on imports.

Schemes for the development of MSME sector
- **Prime Minister's Employment Generation Programme (PMEGP)** is aimed at generating self-employment opportunities through establishment of micro-enterprises in the non-farm sector.
- **Credit Gurantee Scheme for MSME –** It covers collateral free credit facility extended by eligible financial institutions.
- **Credit Linked Capital Subsidy Scheme (CLCSS)** aims at facilitating technology upgradation of the MSME sector.
- **Pradhan Mantri Mudra Yojana**: To provide funding to the non-corporate small business sector.

- **MSME sector:** According to the **National Sample Survey (NSS: 2015-16)** there are 633.8 lakh unincorporated non-agriculture MSMEs (helps in **industrialization of rural & backward areas**) in country engaged in different economic activities providing **employment to 11.10 crore workers**. The share of MSME in India's GVA is 32% approximately. However, sector faces **challenge in getting adequate credit** (only 17.4% of the total credit outstanding) for expansion of business activities.

- **Textiles and Apparels:** This sector has enormous potential for growth in exports and employment, particularly, women's employment. It witnesses a **historic opportunity** with China losing market share in clothing exports due to rising labour costs. However, India also faces **stiff competition** from Bangladesh, Vietnam, Ethiopia in global market due to high domestic taxes on man-made fabrics , stringent labour laws and high logistics cost.

Step to promote Textiles & Apparels in India
- Subsidy under **Amended Technology Upgradation Fund Scheme** for concessional import of machinery.
- Government to bear 12% of the employers' contribution of the full EPFS for new workers.
- Increasing overtime caps in line with ILO norms and introduction of fixed term employment.
- Scheme for Capacity Building in Textile Sector (SCBTS), 2017 – It involves National Skill Qualification Framework compliant training courses.

- **Leather sector**: It is highly **labour intensive sector**. Indian tax policy favors leather footwear production but it is facing challenges such as global demand for footwear is moving towards non leather footwear, high customs tariffs is being faced by India in a number of developed country markets. Therefore to improve the situation, government unveiled **Scheme for promotion of employment in the leather & footwear sector, 2017,** for the development of infrastructure, addressing environment concerns, facilitating additional investments by more tax incentives, improving employment capacity and increasing production by better technology.
- **Gems and Jewellery:** It is one of the fastest growing sectors and is export oriented and employed 20.8 lakh persons in 2011-12 (NSSO). Economic survey gives following recommendations for promoting employment in this sector:
  - ✓ **leverage Public Private Partnership models** for training in jewellery designing. The jewellery training institutes may be affiliated with the Gems and Jewellery Sector Skill Council.
  - ✓ **Setting up infrastructure** such as refineries, hallmarking centres etc., to promote jewellery manufacturing in rural areas.
  - ✓ **Creation of multiple jewellery parks** (accommodating manufacturers, shared services, testing, banking, logistic support etc.), to promote production in a more organized environment.

Infrastructure

- Efficient Infrastructure helps in maintaining **high and sustainable growth**; therefore substantial investment has been seen in transportation, energy, communication, housing & sanitation and urban infrastructure sector.

Reason for under-investment in Infrastructure sector
- Collapse of Public Private Partnership (PPP) especially in power and telecom projects.
- Stressed balance sheet of private companies.

- **Under-Investment**: According to **Global infrastructure outlook**, the gap between required infrastructure investment and current trend of investment is expected to be widened over the year (US$ 526 Billion by 2040).

Road Sector

- India has one of the largest road networks of over 56.17 lakh km (rural road = 61%) and contribute highest in terms of inland freight transportation. Road transportation also plays a key role in promoting equitable socio-economic development across regions of the country.
- India's road density at 1.66 km/sq.km of area is highest among BRIC countries.
  - o Density of National Highways is proportional to the Per capita GSDP (Gross State Domestic Product) and Interstate Trade (Export + Import) as % of GSDP in Indian States.
- **Challenges and Solution**: Increasing stalled Projects and NPAs in road sector mainly due to problem in land acquisition, utility shifting, poor performance of contractors, environment/ forest/wildlife clearances, arbitration/ contractual disputes with contractors etc. However, revival has been seen in 88% of the stalled project after one time fund infusion by NHAI, streamlining acquisition and clearances, adopting Hybrid Annuity Model (HAM) and exploring alternative funding mechanism like Infrastructure Investment Trust, LIC, Long term pension fund etc.

Railways

- Share of Indian Railways in freight movement has been declining over a period of time primarily due to non-competitive tariff structure and stiff competition from other modes of transportation.
- To make rail transportation attractive and arrest the declining trend various initiatives were taken like tariff rationalization, withdrawal of dual freight policy for export of iron ore, policy guidelines of Merry Go Round System, new delivery models like Roll-on Roll-off services etc. Government is also pushing for railway infrastructure development like completion of broad gauge lines, Infrastructure Status to Station Redevelopment etc.

- **Pradhan Mantri Gram Sadak Yojana (PMGSY):** It is a centrally sponsored scheme connecting habitations with rural roads.
- **Bharatmala Pariyojana**: It is a **new umbrella program** for the highways sector with an objective to achieve optimal resource allocation for a holistic highway development by bridging critical infrastructure gaps through effective interventions like development of Economic Corridors, Inter Corridors and Feeder Routes, National Corridor Efficiency Improvement etc.

Metro Rail System

- Following the success of the Delhi Metro, it is seen as a solution to the problem of urban transportation.
- Metro rail projects are **highly capital intensive**, so it is difficult to fund metro rail projects from Government exchequer only. Thus, Government of India has **notified Metro Rail Policy, 2017**, which imbibes on the learning from international examples and bridges the gap for enhancing the feasibility of metro rail projects from economic, social and environmental perspective.

Civil Aviation

- India is the **3rd largest and the fastest growing domestic aviation** market in the world in terms of number of domestic tickets sold.
- Government has been promoting it through schemes such as UDAN, granting in-principle approval for **setting up 18 Greenfeld airports** in the country, **reviving 50 unserved** and underserved airports/air strips and **Liberalizing Air Services** like India-Afghanistan Air freight Corridor etc.

Regional Connectivity Scheme – 'Ude Desh ka Aam Naagrik' (RCS-UDAN): This is a first-of-its-kind scheme globally to stimulate regional connectivity through a marketbased mechanism. It also aims to make flying accessible and affordable for the masses in the regionally important cities.

Shipping

- Around 95% of India's trade by volume and 68% in terms of value is transported by sea.
- **Shipbuilding and ship-repair industry**
  - Shipbuilding industry employs over 30,000 people directly and more than lakhs indirectly. In India, there are 27 Shipyards comprising 6 under Central Public Sector, 2 under State Governments and 19 under Private Sector Undertakings
  - **Future potential**: Geostrategic location of India, abundance of labour etc. are the strengths for Indian ship-repair business which needs to be harnessed for realising the potential of the industry.
- **Port development**: It is essential to harness country 7,500 km long coastline, 14,500 km of potentially navigable waterways and strategic location on key international maritime trade routes. Initiatives to improve the performance of Major Ports:
  - Introduction of Major Ports Authorities Bill, 2016 to modernise the institutional structure of Major Ports
  - Introduction of Radio Frequency Identifcation System (RFID) in 9 major ports to reduce dwell time, transaction time and ease congestion.
  - Direct port delivery and direct port entry initiated at Major Ports for EXIM containers.
- **Inland Waterways Transport (IWT):** To promote it, **Jal Marg Vikas Project** was launched along with declaration of additional 106 inland waterways as National Waterways(NW) through **NW Act, 2016.** To

Sagarmala programme is the flagship programme of the Ministry of Shipping to promote **port-led development** in the country. It aims to reduce logistics cost for international and domestic trade with minimal infrastructure investment.

VISION IAS

provide institutional funding government has proposed to allocate 2.5% proceeds of the Central Road Fund for development and maintenance of National waterways

Telecom Sector

- The mobile industry provide employment to over 4 million people both directly and indirectly, with overall tele-density in India at 93.42% (56.78% in rural areas and 172.86% in urban areas) in September 2017.
- **Challenges:** Telecom sector is going through a stress period with growing losses, increasing debt, price war due to new entrant, reduced revenue and irrational spectrum costs

Bharat Net project: It is the largest rural connectivity project of its kind in the world and is the first pillar of Digital India Programme. It aims to link each of 2.5 lakh gram panchayats of India through optical fibre network. It will facilitate the delivery of various e-Services and applications including e-health, e-education, e-governance and e-commerce.

- **Reforms undertaken by government -** spectrum management, Bharat Net programme and Digital India scheme to convert India into a digital economy and a knowledge based society. TRAI has also recommended new policy on net neutrality to prohibit discriminatory tariffs in data services
- **Reforms in pipeline –** formulation of new telecom policy to address issues such as regulation, licensing, connectivity, service quality, adopting new technology (5G etc.)

Power Sector

- India has witnessed a substantial development in power sector with **improved power generation capacity** at 330860.6 MW (November, 2017) and **reduced peak deficit** i.e. the percentage shortfall in peak power supply vis-à-vis peak hour demand.
- However, **challenge of efficient distribution of power supply** still remains, for which various initiatives like **Deen Dayal Upadhyaya Gram Jyoti Yojana, Ujjawal DISCOM Assurance Yojana (UDAY) etc.** have been taken to provide electricity for all by 2019.
- **Energy conservation**: Lighting accounts for about 20% of the total electricity consumption in India, therefore **energy efficiency** assumes significance, for which various initiatives have been taken like
  - **National LED programme**: For promoting use of efficient lighting technology at affordable rates. Two component:
    - **Unnat Jyoti by Affordable LED for All (UJALA)** providing LED bulbs to domestic consumers to replace 77 crore incandescent bulbs with LED bulbs
    - **Street Lighting National Programme (SLNP)** to replace 1.34 crore conventional street lights with smart and energy efficient LED street lights by March 2019.

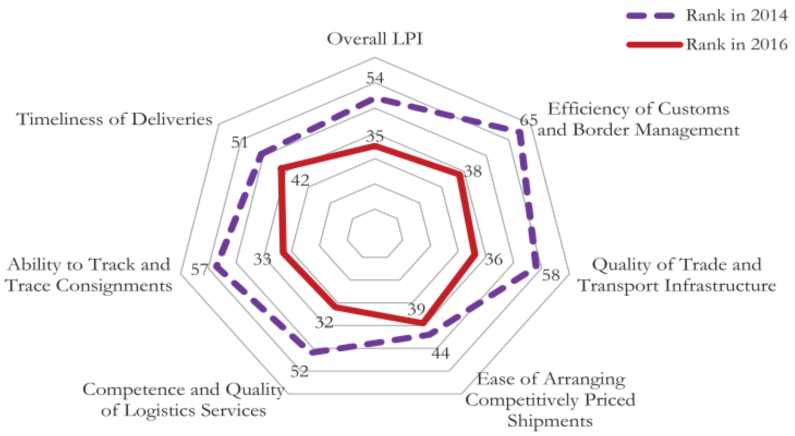
- **Saubhagya (Pradhan Mantri Sahaj Bijli Har Ghar Yojana):** It envisages electrification of around 4 crore households that do not have electricity connection by March 2019. Under it, beneficiary households would be identified using Socio Economic Caste Census (SECC) 2011.
- Establishment of a **National Smart Grid Mission in power sector** to plan and monitor implementation of programmes related to smart grid activities.

Logistics includes transportation, inventory management, warehousing, materials handling & packaging, and integration of information. It is related to management of flow of goods between the point of origin and the point of consumption.

Logistics Sector

- Indian logistics industry provides employment to more than 22 million people and worth around US$ 160 Billion. With the implementation of GST, it is expected to reach about US$ 215 Billion in 2020. India also ranked 35th in World Bank's 2016 **Logistics Performance Index** (see fig.12)

Figure 12 : Logistics Performance Index (LPI): India's Ranking



- **Some key challenges**
  - largely an unorganised market at present
  - High cost of logistics – impacting competitiveness in domestic & global market
  - Unfavorable modal mix (Roadways 60%, Railways 30%) and inefficient fleet mix
  - Under-developed material handling infrastructure and fragmented warehousing.
  - Multiple regulatory/policy making bodies with procedural complexities including cumbersome and duplicate processes.
  - High dwell time and lack of seamless movement of goods across modes.
- **Suggested Action Plan**
  - Formulation of National Integrated Logistics Policy to bring in greater transparency and enhance efficiency in logistics operations
  - Develop integrated IT Platform as a single window for all logistics related matters. This portal will have linkages with the IT systems of Railways, Road transport & Highways, Shipping, Civil Aviation, CBEC, State Transport departments, etc. and act as a Logistics marketplace
  - Usher in ease of documentation, faster clearance, digitization.
  - Bring down logistics cost to less than 10% of GDP by 2022
  - Faster clearances for setting up of logistics infrastructure like Multi-modal logistic parks (MMLPs), Container Freight Station (CFS), Air Freight Station (AFS) & Inland Container Depot (ICD).
  - Introduce professional standards and certification for service providers
  - Promote introduction of high-end technologies like high-tech scanning equipment, RFID, GPS, EDI, online Track & Trace systems in the entire logistics network.
  - Improve Logistics skilling in the country and increase jobs in Logistics sector to 40 million by 2022.
- **Initiatives taken:** Including Logistics sector in the Harmonized Master List of Infrastructure Subsector (HMLIS), creation of new Logistics Division in Department of Commerce for integrated development of the sector.

Benefit of inclusion of Logistics in HMLIS:
- Facilitation of credit flow into the sector with longer tenures and reasonable interest rates.
- Simplification of the process of approval for construction of multimodal logistics (parks) facilities
- Encouraging market accountability through regulatory authority & attracting investments from debt and pension funds into recognized projects.

Petroleum & Natural Gas

- Indian companies were unable to meet its Crude oil production target during 2017-18 due to declining production from old and marginal fields, delay in completion of some projects in western offshore, unplanned shutdown of wells, processing platform/plants and pipelines.
- Government has **taken new initiatives** to transform hydrocarbon sector:
  - **Mapping of Sedimentary Basins**: it will help in launch of future Exploration and Production (E&P) activities and increasing investments in domestic production of oil and gas
  - **Increasing refining Capacity**: India has emerged as a refinery hub (2nd largest in Asia) with refining capacity exceeding demand.
  - **National gas Grid**: To ensure easy availability of clean and eco-friendly fuel, Natural Gas, to the industrial, commercial, domestic and transport sector. E.g.: Pradhan Mantri Urja Ganga of Eastern India
  - **Pratyaksh Hanstantrit Labh (PAHAL)**: Targeted system of subsidy delivery to LPG consumers.
  - **Pradhan Mantri Ujjwala Yojana (PMUY):** Aimed at replacing the unclean cooking fuels mostly used in rural India with the clean and more efficient LPG.

Housing sector

- Housing for all by 2022 is government priority for which a housing policy is required which caters to the need of increasingly fluid Indian population, by enabling horizontal and vertical mobility. It can be achieved by promoting **Rental Housing** and solving the issue of **Vacant Housing.**
- **Importance of Rental Housing**
  - **Trend in rental housing:**

Rental housing: It allows people to access suitable housing without actually having to buy it. It is an important foothold into a city for new arrivals especially rural migrants.

        - Its share in Indian cities has been declining from 54% in 1961 to 28% in 2011. However, it is not uniform as northern states experienced sharper decline (excluding the mountain states).
        - More prevalence in Urban areas (31%) than in rural areas (only 5%) - census 2011.
        - More in larger cities than in smaller cities.
    - Rental market is an important part of the urban eco-system, however some issue needed to be resolved like **rent control**, **unclear property rights** and **difficulties with contract enforcement.**
- **Issue of Vacant Housing:** According to the census, vacant houses constitute around 12% of the share of the total urban housing stock mainly due to the difficulties mentioned in rental housing.
    - **Trend with vacant housing:**
        - Greater prevalence in the western half of the country with Maharashtra has the highest number of vacant houses.
        - It generally increases with distance away from the denser urban cores.

CHAPTER 09: SERVICES SECTOR

Introduction

The services sector continued to be the key driver of India's economic growth contributing almost 72.5% of gross value added growth in 2017-18 while providing employment to around 30% of population (ILO estimates, 2016). The government has initiated many reforms to boost the sector which is expected to grow at 8.3% in 2017-18.

Government has taken many initiatives in the different services to provide impetus to service sector and ensure that India remains an increasingly attractive investment destination. Some steps are:

- **Ease of doing business**: Simplifying and overhauling FDI process by abolishing FIPB (Foreign Investment Promotion Board) as a result, more than 90% of FDI inflows are now through automatic route.
- Increasing incentives under **Services Exports from India Scheme (SEIS)** by 2%, through mid-term **Review of Foreign Trade Policy 2015-2020**, to help services exports including Hotel & Restaurant, Hospital, Educational services, etc.
- **Other Initiatives** like digitization, e-visas, infrastructure status to Logistics, Start-up India, announcement of National Intellectual Property Rights (IPR) policy, implementation of GST etc. also provide filip to sector.

India's Services Sector

- **State wise estimation:** Services sector contributed more than half of the **gross state value added (GSVA)** in 15 states and UTs. However, **regional variation** is witnessed in terms of services-GSVA share, with Delhi and Chandigarh are at the top with over 80% share, while Sikkim is at the bottom with 31.7%
- **FDI in India's service sector:** Total share of FDI equity inflows to the services sector is 69.6% during 2017-18 (April-October), mainly led by higher inflow in two sectors viz. Telecommunications and Computer Software & Hardware**.**
- **India's Service Trade:** India remained the **eighth largest exporter of commercial services** in the world in 2016 (WTO, 2017) with 3.4% share, which is double the share of India's merchandise exports in the world at 1.7%. It reflects
    - Growing importance of the services sector in India's exports, as it helped in **financing about 49% of India's merchandise deficit** in 2017-18 H1 and thus, providing **cushion to current account deficit (CAD**).
    - Improvement in **Baltic Dry Index**, which is a freight index and a good proxy for the robustness of trade and shipping services.

Sector Wise Performance

- **Tourism Sector:** It has seen an overall improvement, with increasing number of Foreign Tourist Arrival (FTA), Outbound Tourism and Domestic Tourism. Some important facts are:
    - According to provisional data by Ministry of Tourism, FTAs have increased to 8.8 million and Foreign Exchange Earnings (FEEs) from tourism have grown to US$ 27.7 billion in 2017.
    - Outbound tourism is more than double the FTA in India.
    - In terms of number of domestic tourist visits, Tamil Nadu, Uttar Pradesh, Andhra Pradesh, Madhya Pradesh, and Karnataka were the top 5 destination States.

Initiative taken by government to promote Tourism in India

- **E-Visa Facility** under three categories of Tourist, Medical and Business for the citizens of 163 countries.
- Celebration of **'Paryatan Parv'** under:
    - **'Dekho Apna Desh'** to encourage Indians to visit their own country.
    - '**Tourism for All'** with tourism events at sites across all states in the country.
    - **'Tourism & Governance'** with interactive sessions & workshops with stakeholders on varied themes.
- **Other steps** like **Launch of Global Media Campaign** for 2017-18 on various Channels and launch of **'The Heritage Trail'** to promote the World Heritage Sites in India.

Initiatives to promote IT-BPM sector

- **BPO Promotion and Common Services Centres**: To help create digital inclusion and equitable growth and provide employment to 1.45 lakh persons, mostly in the small towns.
- Setting up a separate **Northeast BPO Promotion Scheme** with 5000 seats and having employment potential of 15000 persons.
- Preparation of the draft open **Data Protection Policy Law**.

- **India's Information Technology - Business Process Management (IT-BPM) Services:** It is estimated to employ nearly 3.9 million people and value around US$ 139.9 billion (excluding e-commerce and hardware) in 2016-17.
  - **Challenges**: The share of ICT in total services exports for India has declined marginally during the decade (2006-2016), due to stance of protectionism in some countries and increasing competition from countries like China, Brazil, Russia, Philippines, Israel and Ukraine.
  - **New opportunity**: A new market is emerging in Asia-pacific, Latin America and in Middle East Asia.
- **Real State and Housing:** Real estate and construction together, is the second largest employment provider in the country, next only to agriculture. Out of these, over 80% constitutes minimally skilled workforce.
  - **Employment Potential:** As per the National Skill Development Council (NSDC), it is expected to require over 66 million people by 2022.
  - **Challenges**: Credit is a major reason for achieving full potential of sector due to rising Non-Performing Asset (NPA) of PSBs due to which share of bank lending for organized funding to real estate sector has dropped significantly from over 68% in 2013, to 17% in 2016. However, Private Equity (PE) fund and Finance Institution such as pension funds and sovereign wealth funds have replaced banks as the largest source of credit for this sector.
  - **Increasing Transparency and accountability:** Recent policy initiatives (See box) by government have created positive sentiment among investors reflected by increasing **private equity (PE) investments** in the real estate sector from US$ 0.9 billion in 2013 to over US$ 5.9 billion in 2016.

> **PPP policy for affordable housing segment** to provide impetus to the ambitious **'Housing for all by 2022'** mission.
>
> **Pradhan Mantri Awas Yojana (PMAY):** Government sanctioning over 3.1 million houses for the affordable housing segment in urban regions.
>
> **Extension of Credit Linked Subsidy Scheme (CLSS)** under PMAY to the Middle Income Group (MIG)
>
> **Enactment of Real Estate (Regulation & Development) Act, 2016**: It involved compulsory disclosures and registrations to increase transparency whereas increased accountability would lead to higher growth across the real estate value chain.

- **Research & Development:** India-based R&D services companies, account for almost 22% of the global market, grew at 12.7% in 2015-16. However, India's **gross expenditure on R&D** has been low at around 1% of GDP and it ranks 60th out of 127 on **the Global Innovation Index (GII) 2017.**
  - **Future Potential**: India, Western Europe and North America capture 75% of the global Engineering R&D Services market and According to consulting firm Zinnov, for India, it is estimated to grow at a CAGR of 14% to reach US$ 42 billion by 2020. India is also expected to witness strong growth in its agriculture and pharmaceutical sectors.
- **Space Services:** Indian Space Programme contributes to national development, through the application of space technology, comprising communication, navigation and earth observation to address issues related to societal development and strategic requirements.
  - Foreign exchange earnings (FEE) of India from export of satellite launch services is Rs 394 crore in 2016-17, while it's share in global satellite launch services revenue has increased to 1.1 per cent in 2015-16 from 0.3 per cent in 2014-15.

Conclusion

- The growth of India's services sector is expected to improve in 2017-18 as reflected in the Nikkei/ IHS Market Services Purchasing Manager's Index **(PMI).** The prospects look bright with good performance of sub sectors like Tourism, Aviation, and Telecom. However, downward risk lies in the external environment for software and business services.

CHAPTER 10: SOCIAL INFRASTRUCTURE, EMPLOYMENT & HUMAN DEVELOPMENT

Introduction

The government has taken many steps to ensure a sustainable growth by enhancing the efficiency of the expenditure incurred on human capital through the convergence of schemes. Five of the major areas where the government has taken various steps to improve their performance have been discussed below.

1) Education for All:

- Since the passage of the Right to Free & Compulsory Education Act (RTE, 2009) there has been significant improvement in the quantitative indicators such as enrolment levels, completion rates and other physical infrastructure like toilets, school buildings, etc.
- Further, to improve the **qualitative indicators** of learning outcome the central rules under RTE Act were amended in 2017, to include the defined class wise, subject wise learning outcomes.
- The indicators defined under RTE Act are-
    - **Student Classroom Ratio** is defined as average number of pupils per classroom in a school in a given school year. The ideal SCR should be 30 students/classroom. In India the number of schools with SCR more than 30 declined from 43% in 2009-10 to 25.7% in 2015-16 with varied improvement in almost all states.
    - **Pupil Teacher Ratio** at primary level and upper primary level should be 30:1 and 35:1 respectively. India's national level PTR for primary schools has improved to 23:1 in 2015-16, which is comparable to countries with similar socio-economic indicators.
    - However, still many states like Bihar, Jharkhand, Madhya Pradesh & Uttar Pradesh have a higher percentage of schools with PTR >30. The central government through various flagship programmes (like Sarva Shiksha Abhiyan) provides assistance to the state governments that manage aspects like recruitment, service conditions and redeployment of teachers.
    - **Gender Parity Index** in education reflects the discrimination against girls in access to education opportunities. Although gender disparity still prevails in the higher education, the government has improved it substantially at primary levels through measures like Beti Bachao Beti Padhao (BBBP).

Learning Outcomes- are assessment standards indicating the expected levels of learning that a student should achieve for a particular class.

Beti Bachao Beti Padhao

It is a tri-ministerial scheme introduced for promoting survival, protection and education of girl child; targeted at changing mind set and creating awareness about the criticality of the issue.

It has been introduced in 161 districts in 2 phases and has further been approved for expansion to cover all 640 districts in the country.

2) Progress in Labour Reforms:

- In order to remove the multiplicity of definitions and authorities, government is in process to rationalize 38 central labour Acts by framing their relevant provisions under 4 major Codes-
    - Code on Wage
    - Code on Safety & Working Conditions
    - Code on Industrial relations
    - Code on Social Security & Welfare
- Other steps taken by the government are-
    - Technology enabled initiatives like Shram Suvidha Portal
    - Universal Account Number have been affected to bring transparency and accountability
    - National Career Service Portal to facilitate online registration, job search, career counselling, etc.
    - Extension of Employee's State Insurance Act to more districts and areas.

Employee's State Insurance Act

- Under the scheme, insured persons are entitled to various cash benefits in the events of abstention from work due to sickness, temporary disablement, dependent benefit, unemployment allowance, maternity benefits, etc.
- Family members of the insured person are also entitled to the benefits.

SUMMARY OF ECONOMIC SURVEY

- **Gender gap in labour force participation** in India is as high as 50% which adversely affects the growth potential of the country. The disadvantaged position of women workers is due to their low levels of skills and engagement in low productivity and low paying work.
- One of the important schemes to ensure a better gender participation is MGNREGA, while others being-
  - **Mahila E-Haat-** promoting Self Employment ventures among women
  - **Maternity Benefits (Amendment) Act, 2017-** provides a 26 weeks maternity leave & provision for crèche facilities (by establishments employing more than 50 employees)

3) **Political Empowerment of Women:**

- The representation of women in Parliament and in decision making roles in public sphere is one of the key indicators of empowerment. However, in India women representatives in Lok Sabha (as in 2016) were 11.8% and 11% in Rajya Sabha. While only 9% women MLAs are there across the country.
- In this context the Indian constitution provides for-
  - **Article 243 D (3)-** 1/3rd of total number of seats be reserved for women in every Panchayat.
  - **Article 243 D (4)-** 1/3rd of total number of seats of office of Chairperson in Panchayat be reserved for women.

> - Women Sarpanch, in the country, account for about 43% of total gram Panchayats.
> - Highest percentage of women MLAs were from Bihar, Haryana and Rajasthan (14%), followed by West Bengal & Madhya Pradesh (13%) and Punjab (12%).

- For their leadership development and addressing women's issues, schemes like Mahila Shakti Kendra & Nai Roshni have been launched at the village level.

4) **Health for All:**

- A crucial step towards the achievement of SDG(3) is India's National Health Policy, 2017. However, there are areas which need further improvement like-
  - **Prominence of Private Healthcare** because the government healthcare providers accounted only for 23% of current healthcare expenditure.
  - **Out of Pocket Expenditure (OoPE)** as high as 62% (2014-15) adversely impacts the poorer section and widens inequality. While 10% of this OoPE is spent merely on diagnostics, which highlights the need for standardized rates through appropriate quality assurance framework and regulatory mechanism.

> **DALYs** is the sum total of the years of potential life lost due to premature mortality and the years of productive life lost due to disability. One DALY represents loss of the equivalent of one year of full health.
> - The per person disease burden measured as DALYs rate dropped by 36% from 1990 to 2016.
> - Of total disease burden in India due to communicable, maternal, neonatal, & nutritional diseases fell from 61% (1990) to 33%(2016).
> - While the contribution of non communicable diseases increased from 30% to 55%.
> - Highest DALY rate increase observed for Diabetes (80%) and ischemic heart disease (34%).

- **Burden of Diseases in India**- There is an inverse relation between Disability Adjusted Life Years (DALYs) and life expectancy at birth (LEB).
- Various risk factors specified as the drivers of risk and injury are-
  - **Malnutrition**- Neonatal disorders and nutritional deficiencies are manifestation of maternal and child malnutrition for which government has laid down various schemes.

Government Programmes for Women & Children

- **Integrated Child Development Scheme-** aims at holistic development of children upto 6 years and pregnant & lactating women. The fortification of food items with essential micro nutrients has been made mandatory in government funded nutrition related schemes.
- **Pradhan Mantri Matru Vandana Yojana-** earlier known as Maternity Benefit Programme, it provides for partial compensation for the wage loss in terms of cash incentive.
- **National Nutrition Mission** will monitor, supervise, fix targets and guide the nutrition related interventions across ministries. It will create synergy, ensure better monitoring, issue alerts for timely action to achieve the targeted goals.
- **Pradhan Mantri Ujjawala Yojana** is to provide LPG connection to 5 crore women belonging to BPL families to safeguard their by providing cleaner fuel.

- Pollution causes a mix of non communicable and infectious diseases, mainly cardiovascular, chronic respiratory and lower respiratory infections.
- **Behavioural and Metabolic** risks are caused due to lifestyle changes in the country and cause a rising burden of non communicable diseases.
- **Unsafe water, Sanitation & hand washing** causes 5% of health loss. However, it has dropped to 7th risk factor (2014) from 2nd in 1990.

- Apart from increasing expenditure on health (8% of state government's budget as suggested by National Health Policy), it is crucial to acknowledge that efficiency in the use of resources along with measures of preventive and curative healthcare is necessary to translate enhanced expenditure into improved health outcomes.
- Two other factors that require attention are the excessive use of antibiotics and better access to sanitation and safe drinking water.

Steps taken to regulate the prices of Drugs and Diagnostics

- **National Free Diagnostic Service Initiative** to provide essential diagnostic services in public health facilities.
- **National Free Drug Initiative** for expanding the availability of free drug in all public health facilities.
- **Under Clinical Establishments (Registration & Regulation) Act, 2010 and Clinical Establishments Rules, 2012,** the clinical establishments shall charge the rates determined by the central govt in consultation with the state governments.
- All the registered Medical practitioners have been directed by the **Medical Council of India** to ensure rational prescription of generic drugs.

Combating Antimicrobial Resistance (AMR)

- The resistance (in bacteria, virus, fungi, etc) may occur naturally but is facilitated by inappropriate use of medicines.
- India has among the highest bacterial disease burden in the world which makes the issue even more crucial.
- Government has finalized a National Action Plan based on Global Action Plan for a holistic and collaborative approach involving all stakeholders such as UN, WHO, FAO and other UN agencies.
- Other steps taken include- setting up a National Surveillance System for AMR, enacted Regulations (schedule-H-1) to regulate sale of antibiotics, National Guidelines for use of antibiotics, etc.

5) Swachh Bharat Mission (SBM)

Eight states and two Union Territories have been **declared ODF**, i.e. Sikkim, Himachal Pradesh, Kerela, Haryana, Uttarakhand, Chhattisgarh, Arunachal Pradesh, Gujarat, Daman & Diu, and Chandigarh.

- **Health & Sanitation-** Health of population is largely related to the quality of sanitation and safe drinking water. To address this issue government launched SBM. It has been found that the households in Open Defecation Free (ODF) villages, in India, have significantly better health indicators as compared to non-ODF villages. In ODF areas, not only children but their mothers were also healthier as compared to non-ODF areas.
- **Education & Sanitation-** It was also found that the ODF villages had higher number of population with secondary education while the non-ODF villages had lesser population with secondary education.
- **Economy & Sanitation-** World Bank estimates that the lack of sanitation facilities costs India over 6% of GDP. While UNICEF estimated that a household in an ODF village saves appx 50,000 Rs.

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