ECONOMIC SURVEY

2020-21

VOLUME 1

ForumIAS

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Chapter 1 - Saving Lives and Livelihoods amidst a Once-in-a-Century Crisis

INTRODUCTION

The COVID-19 pandemic engendered a once-in-a-century global crisis in 2020. It posed an unprecedented challenge for policy making, globally and nationally.

In this Chapter, the Economic Survey deals with India's unique vulnerabilities to the Covid-19 pandemic and its response and strategy towards it and its related benefits.

COVID-19: ONCE IN A CENTURY CRISIS

- **Covid-19 pandemic has led to global health crisis and global economic recession.**
- The crisis world is facing today is unique in number of ways:
    - The **current global recession is induced by health crisis**. Previous global recessions which were driven by confluences of a wide range of factors, including financial crises (the Great Depression in 1930-32; 1982; 1991; 2009), sharp movements in oil prices (1975; 1982), and wars (1914; 1917-21; 1945-46).
    - The current recession is **highly synchronised**. More than 90% of economies are expected to see contraction in per capita income in 2020.
    - The COVID crisis presented a trade-off between lives and livelihoods, in the short run.
- The pandemic is, therefore, once in a 150-year event with an unprecedented impact with all regions in the world projected to experience negative growth in 2020. It is aptly called the 'Great Lockdown'.

Research Driven Policy Response Amidst Unprecedented Uncertainty

- Two fundamental strategies to combat an epidemic are possible:
    - **Mitigation** – It focuses on slowing the epidemic spread.
    - **Suppression** – It aims to reverse epidemic growth.

Learning from Spanish Flu pandemic of 1918-19

- The learning from research focused on the Spanish Flu guided India's policy response to control the spread of Covid-19. The learning from Spanish Flu were as follows:
    - The pandemic curve needs to be 'flattened' to spread the pandemic over time and enable more people to receive proper health treatment, thereby lowering the fatality rate ultimately.
    - Given the network structures that affect the transmission of the pandemic, higher population can lead to faster spread of the pandemic.
    - Denser areas are more vulnerable to faster spread of the virus and this effect is especially strong at the onset of the pandemic.
    - Early lockdowns delay the time taken to reach the peak, reduces the magnitude of the peak, and thereby decreases the total mortality burden by providing valuable time to ramp up the health and testing infrastructure.
    - Implementing lockdowns earlier in the pandemic and using them more intensely – while costly in the short-run – led to a much sharper economic recovery and reduced mortality as well.

- o When faced with enormous uncertainty, policies must be designed with the objective of minimizing large losses by selecting the policy that would be optimal under the worst-case scenario.

India's Humane Policy response: Short Term Pain, Long Term Gain

- The Covid -19 pandemic presented government with the dilemma of 'lives vs livelihood'.
- India's efforts focused on saving lives and livelihoods by its willingness to take short-term pain for long term gain. The clear objective of 'Jaan Hai to Jahan hai' and to 'break the chain of spread' before it reaches 'community transmission' helped the government face the dilemma of 'lives vs livelihood'
- **India's policy response**
  - o India's policy response to the pandemic stemmed fundamentally from the humane principle advocated in the Mahabharata that 'Saving a life that is in jeopardy is the origin of dharma.' Therefore, India recognised that while GDP growth will recover from the temporary shock caused by the pandemic, human lives that are lost cannot be brought back
  - o The response by India also drew on epidemiological and economic research, especially those pertaining to the Spanish Flu, which highlighted that an early, intense lockdown provided a win-win strategy to save lives, and preserve livelihoods via economic recovery in the medium to long-term
  - o Indian policymakers followed an approach similar to the Barbell strategy in finance – hedging for the worst outcome initially, and updating its response step-by-step via feedback
  - o The strategy was also motivated by the Nobel-Prize winning research in Hansen & Sargent (2001) that recommends a policy focused on minimising losses in a worst case scenario when uncertainty is very high.
- India was amongst the first of the countries that imposed a national lockdown when there were only 500 confirmed cases
- India's strategy flattened the curve, pushed the peak to September, 2020
- The cross country analysis shows that India has been able to effectively manage both the spread of COVID-19 and the fatalities

V shaped economic recovery

- India implemented stringent lockdown from late March to May (2020) to curb the pace of spread of COVID-19. It led to 23.9% contraction of GDP (Q1 of FY 2020-21). The economy was gradually unlocked since June, 2020 and has experienced a V-shaped recovery since then (7.5% decline in GDP in Q2 of FY 2020-21)

Far Sighted Policy Response for Economic Recovery

- COVID pandemic affected both demand and supply.
- The fiscal policy response of the Government of India to the pandemic was, accordingly, strategized with a step-by-step approach.
  - o The initial approach was to provide a cushion for the poor and section of society and to the business sector (especially the MSMEs) to tide over the distress caused by disruption of economic activity. The Pradhan Mantri Garib Kalyan Yojana (PMGKY) for ensuring food security through public distribution system, direct benefit

transfers to widows, pensioners and women, additional funds for MGNREGS, and debt moratoria and liquidity support for businesses

- With the easing of movement and health-related restrictions in the third quarter, the government transited in a calibrated fashion to support investment and consumption demand through Atmanirbhar 2.0 and 3.0.

Structural reforms

- India undertook structural reforms focussing on strengthening the potential of primary and secondary sectors of the economy to create jobs
- Major structural reforms launched by the Government
  - Reform in agriculture markets,
  - Labour laws reform
  - Changed the definition of MSMEs
  - production-linked incentive (PLI) schemes have been implemented in ten key specific sectors to make Indian manufacturers globally competitive, attract investment in the areas of core competency and cutting-edge technology; ensure efficiencies; create economies of scale; enhance exports and make India an integral part of the global supply chain.

Sector	Structural Reform Undertaken
Deregulation and Liberalization of Sectors	
Agriculture	• Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020 • Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Act, 2020 • Essential Commodities (Amendment) Act, 2020
MSMEs	• New MSME definition covering almost 99 per cent of all firms enabling MSMEs to grow in size and create jobs • Removal of artificial separation between manufacturing and service MSMEs
Labour	• Enactment of four labour codes namely, Wage Code, Industrial Relations Code, 2020, Code on Occupational Safety, Health & Working Conditions Code, 2020 & Social Security Code, 2020 • 'One labour return, one licence and one registration'
Business Process Outsourcing (BPO)	• Simplification of the Other Service Provider (OSP) guidelines of the Department of Telecom. Several requirements, which prevented companies from adopting 'Work from Home' and 'Work from Anywhere' policies have been removed
Power	• Tariff Policy Reform: DISCOM inefficiencies not to burden consumers, Progressive reduction in cross subsidies, Time bound grant of open access, etc. • Privatization of Distribution in UTs

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PSUs	• PSUs in only strategic sectors • Privatization of PSUs in non-strategic sectors
Mineral Sector	• Commercial Mining in Coal Sector • Removal of distinction between captive and merchant mines • Transparent auction of mining blocks • Amendment to Stamp Act, 1899 to bring uniformity in stamp duty across States • Introduction of a seamless composite exploration-cum-mining-cum-production regime
Strengthening Productive Capacity	
Industry	• Production Linked Incentive (PLI) Scheme for 10 identified sectors • National GIS-enabled Land Bank system launched
Space and	• Level playing field provided to private companies in satellites, launches space-based services • Liberal geo-spatial data policy for providing remote-sensing data to tech-entrepreneurs
Defence	• Corporatization of Ordnance Factory Board • FDI limit in the Defence manufacturing under automatic route to be raised from 49 per cent to 74 per cent. • Time-bound defence procurement process
Strengthening Productive Capacity	
Education	• PM-eVidya to enable multi-mode and equitable access to education • Manodarpan initiative for psychosocial support
Social Infrastructure	• Scheme for Financial Support to Public Private Partnerships (PPPs) in Infrastructure Viability Gap Funding (VGF) Scheme extended till 2024-25
Ease of Doing Business	
Financial Markets	• Direct listing of securities by Indian public companies in permissible foreign jurisdictions • Provisions to reduce time line for completion of rights issues by companies • Private companies which list NCDs on stock exchanges not to be regarded as listed companies
Corporates	• Including the provisions of Part IXA (Producer Companies) of Companies Act, 1956 in Companies Act, 2013 • Decriminalization of Companies Act defaults involving minor technical and procedural defaults • Power to create additional/ specialized benches for NCLAT

	• Lower penalties for all defaults for Small Companies, One-person Companies, Producer Companies & Start Ups • Simplified Proforma for Incorporating Company Electronically Plus (SPICe +) introduced
Administration	• National platform for recruitment: National Recruitment Agency to conduct a Common Eligibility Test • Revised guidelines on Compulsory retirement to remove ineffective or corrupt officials through Fundamental Rule 56(j)/(l) and Rule 48 of CCS (Pension) Rule • Faceless tax assessment and a 12-point taxpayers charter • Fast track Investment Clearance through Empowered Group of Secretaries

CONCLUSION

Despite the hard-hitting economic shock created by the global pandemic, India is witnessing a V-shaped recovery with a stable macroeconomic situation aided by a stable currency, comfortable current account, burgeoning forex reserves, and encouraging signs in the manufacturing sector output. India is reaping the "lockdown dividend".

Chapter 2 - Does Growth lead to Debt Sustainability? Yes, But Not Vice-Versa!

INTRODUCTION

Amidst the Covid-19 crisis, fiscal policy has assumed enormous significance across the world. Naturally, the debate around higher Government debt to support a fiscal expansion is accompanied by concerns about its implications for future growth, debt sustainability, sovereign ratings, and possible vulnerabilities on the external sector.

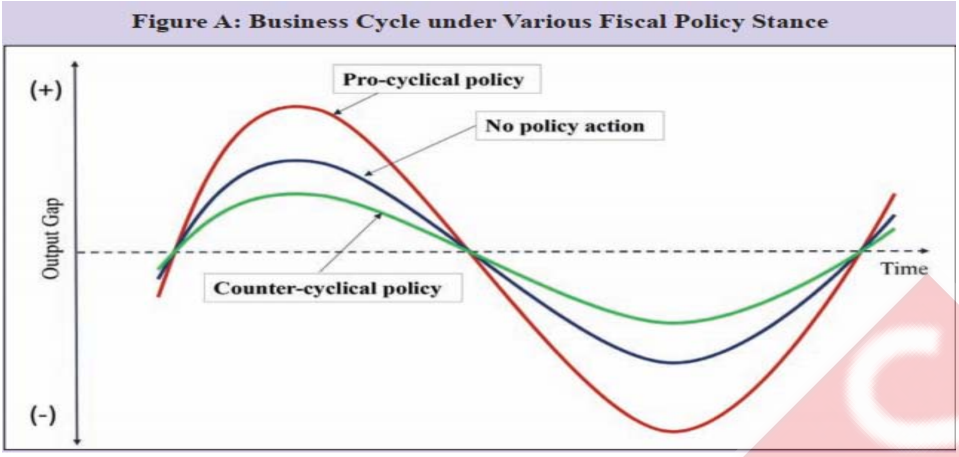
In this Chapter, Survey endeavours to provide the intellectual anchor for the government to be more relaxed about debt and fiscal spending during a growth slowdown or an economic crisis.

COUNTER-CYCLICAL FISCAL POLICY

Countercyclical Fiscal Policy: in a recessionary year, Government must spend more than during expansionary times. Such counter-cyclical fiscal policy stabilizes the business cycle by being contractionary (reduce spending/increase taxes) in good times and expansionary (increase spending/reduce taxes) in bad times.
Pro-cyclical Fiscal Policy: a pro-cyclical fiscal policy is the one wherein fiscal policy reinforces the business cycle by being expansionary during good times and contractionary during recessions.

While fiscal policy is especially salient during an economic crisis, in general, fiscal policy must be **counter-cyclical to smooth out economic cycles instead of exacerbating them.** Such a counter- cyclical policy becomes critical during an economic crisis. This is because fiscal multipliers, which capture the aggregate return derived by the economy from an additional Rupee of fiscal spending, are unequivocally greater during economic crises when compared to economic boom.

Fiscal policy (FP) stance	Recession (↓ GDP)	Expansion (↑ GDP)	Outcome
Pro-cyclical	Contractionary FP ↓ Govt. Expenditure or /and ↑ Taxes	Expansionary FP ↑ Govt. Expenditure or/and ↓ Taxes	Deepens recessions and amplifies expansions, thereby increasing fluctuations in the business cycle.
Counter-cyclical	Expansionary FP ↑ Govt. Expenditure or/and ↓ Taxes	Contractionary FP ↓ Govt. Expenditure or /and ↑ Taxes	Softens the recession and moderates the expansions, thereby decreasing fluctuations in the business cycle.



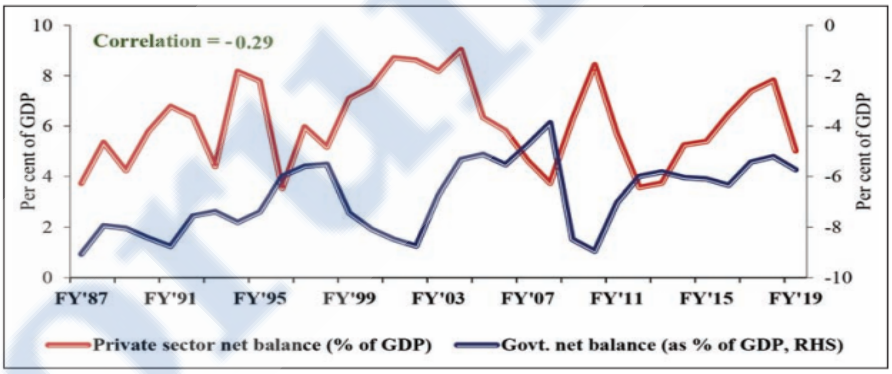
REASONS FOR COUNTER-CYCLICAL FISCAL POLICY

As per the National Income identity, Y= C+I+G+X-M, the net effect of a recession on the private sector may be in terms of lower private consumption (C), lower private investment (I), risk aversion by the private sector and pessimistic expectations/sentiments.

In such a scenario, adopting a counter cyclical policy by expanding the Government Expenditure – both consumption and investment - will support the GDP and minimise the output gap.

As seen for the United States and United Kingdom, the correlation between private sector and public sector net balances is almost perfectly negative (-0.9). In India, however, fiscal policy has not been counter-cyclical in general.

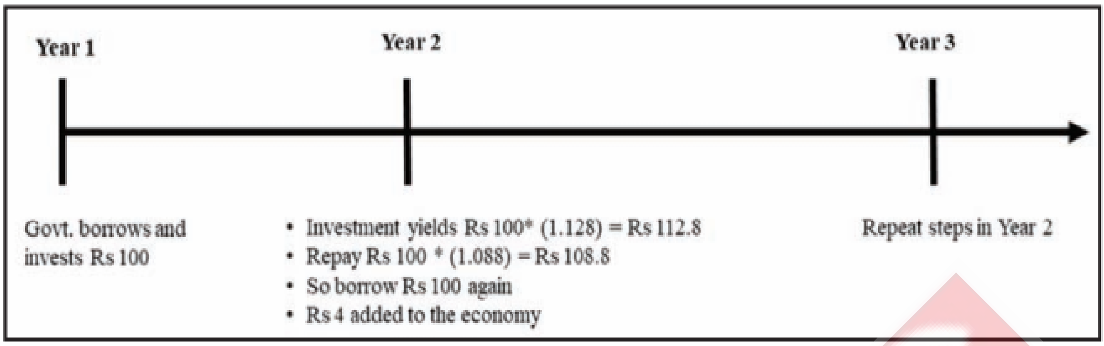
Figure 1: Trends in Government and Private sector balances
Figure 1a: *India (FY 1987 – FY 2019)*



Source: RBI, MoSPI
Note: Govt net balance = (Public Sector Financial & Non-Financial Corporations and General Govt Gross Domesic Saving) – (Public Sector Financial &Non-Financial Corporations and General Govt Gross Capital formation)
Private sector net balance = Private sector Gross Domesic Saving – Private sector Gross Capital formation
For Households, total savings does not include gold and silver (to make it comparable).

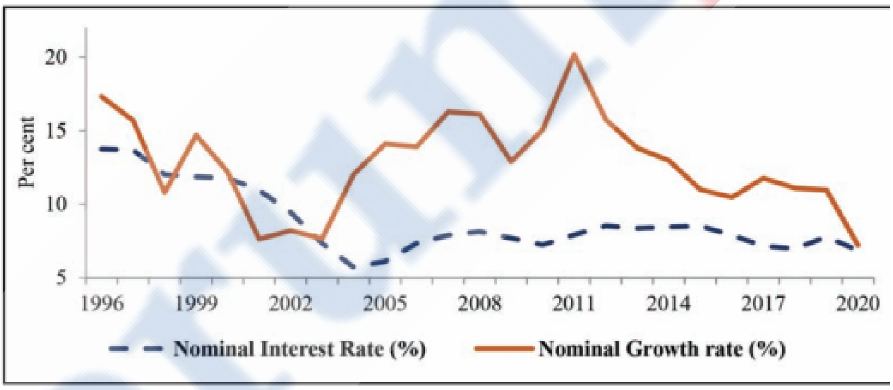
THE (r-g) DIFFERENTIAL AND DEBT SUSTAINABILITY IN INDIA

- Intuitively, when nominal growth rate exceeds the nominal interest rate for the foreseeable future, debt sustainability is obtained as explained in the figure below.

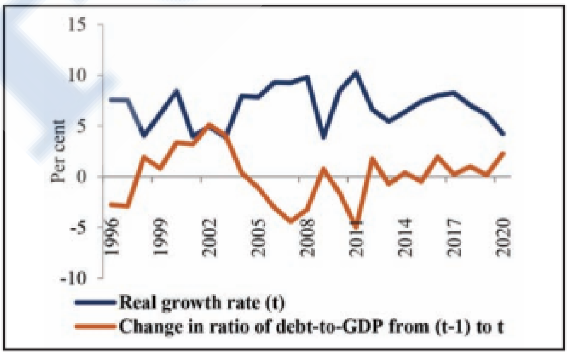


- This Chapter establishes clearly that growth leads to debt sustainability in the Indian context but not necessarily vice-versa.
- This is because the interest rate on debt paid by the Indian government has been less than India's growth rate by norm, not by exception.
- Debt sustainability depends on the 'Interest Rate Growth Rate Differential' (IRGD), i.e., the difference between the interest rate and the growth rate
- Figure below shows the strong correlation observed between IRGD and change in general government debt. Since this inequality reduces the fiscal costs of a debt rollover (Blanchard 2019), it expands the scope for fiscal policy to (i) cater to slowdowns in aggregate demand and (ii) thereby enable growth to foster debt sustainability.

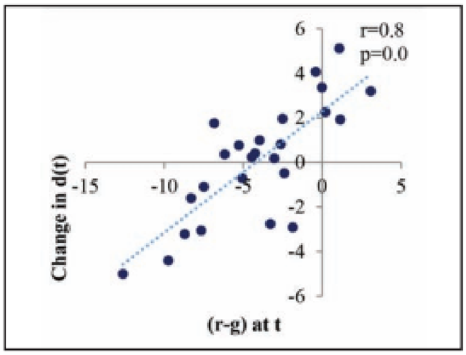
2a: During the Last 25 years, i > γ is a Norm, Except for a Short Period During the Asian Financial Crisis



2b: Trends in real growth rate (g) and change in debt-to-GDP ratio (d)



2c: Strong correlation between (r-g) and change in debt to GDP ratio



Source: RBI, MoSPI

IN INDIA, GROWTH LEADS TO DEBT SUSTAINABILITY, NOT VICE-VERSA

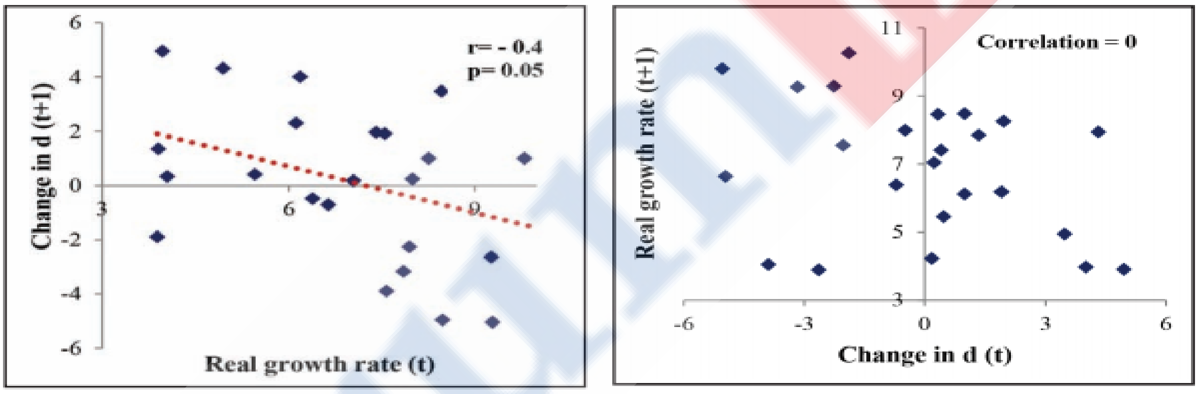
How does the consistently negative IRGD affect the relationship between debt and growth in India? Does higher growth lead to lower debt or lower debt cause higher growth? Conceptually, causality could flow in either direction.

Evidence over the last two-and-a-half decades demonstrates clearly that in India, higher GDP growth causes the ratio of debt-to-GDP to decline but not vice-versa.

Figure below demonstrates the lagged relationship between real GDP growth rates and change in general government debt-to-GDP levels over the last 25 years. Over the last two-and-a-half decades, real GDP growth rates and one-year-ahead change in general government debt-to GDP levels show a significant negative correlation. However, during the same time period, the correlation between change in general government debt-to-GDP levels and one-year-ahead growth rates turns out to be statistically indistinguishable from 0. The evidence therefore shows the direction of causality between the two variables: higher growth leads to lower public debt in India, but not vice-versa.

Figure 8: Direction of causality between growth and change in GG debt for India (FY 1996 to FY 2020)

Figure 8a: Growth → Debt : Correlation between g and 1 year ahead Δd | **Figure 8b: Debt → Growth : Correlation between Δd and 1 year ahead g**



Source: RBI, MoSPI

COMPARISON WITH OTHER ECONOMIES

- For India and other EMEs, which have consistently grown their GDP at high rates over the last few decades, the relationship between debt and growth exhibits a clear direction of causality: Higher growth lowers debt-to-GDP ratios but lower debt does not necessarily lead to higher growth.
- The same phenomenon is obtained during the high growth phases for the advanced economies, which have otherwise grown at significantly lower GDP growth rates when compared to India and other EMEs.
- In contrast, across both the high and low growth episodes, in the advanced economies, where GDP growth rates have been low on average over the last few decades, this relationship does not manifest.

INDIA'S DEBT STRUCTURE

- India's public debt-to GDP has been significantly low compared to high global debt levels.

- A cross-country comparison of debt levels points out that, India's overall debt levels as a per cent of GDP are the lowest amongst the group of G-20 OECD countries and also among the group of BRICS nations.
- Moreover, public debt and overall debt level for India has declined since 2003 and has been stable since 2011
- The Government's debt portfolio is characterized by very low foreign exchange risk
- as the external debt is only 2.7 per cent of GDP (5.9 per cent of total Central Government liabilities).
- Of the total public debt, 70 per cent is held by the Centre.
- The long maturity profile of India's public debt (issuance of longer tenure bonds) along with a small share of floating rate debt (floating rate debt of Central Government is less than 5 per cent of public debt) tends to limit rollover risks, and insulates the debt portfolio from interest rate volatility

RECOMMENDATIONS:

- As the COVID-19 pandemic has created a significant negative shock to demand, **active fiscal policy** – one that recognises that fiscal multipliers are disproportionately higher during economic crises than during economic booms – can ensure that the full benefit of seminal economic reforms is reaped by limiting potential damage to productive capacity.
- As the IRGD is expected to be negative in the foreseeable future, a fiscal policy that provides an impetus to growth will lead to lower, not higher, debt-to-GDP ratios.
- In fact, simulations undertaken till 2030 highlight that given India's growth potential, debt sustainability is unlikely to be a problem even in the worst scenarios. The chapter thus demonstrates the desirability of using counter-cyclical fiscal policy to enable growth during economic downturns.
- **Active fiscal policy** can ensure that the full benefit of reforms is reaped by limiting potential damage to productive capacity
- Given India's growth potential, **debt sustainability is unlikely to be a problem** even in the worst scenarios
- **Desirable to use counter-cyclical fiscal policy** to enable growth during economic downturns

Chapter 3 - Does India's Sovereign Credit Rating reflect its fundamentals? No!

INTRODUCTION

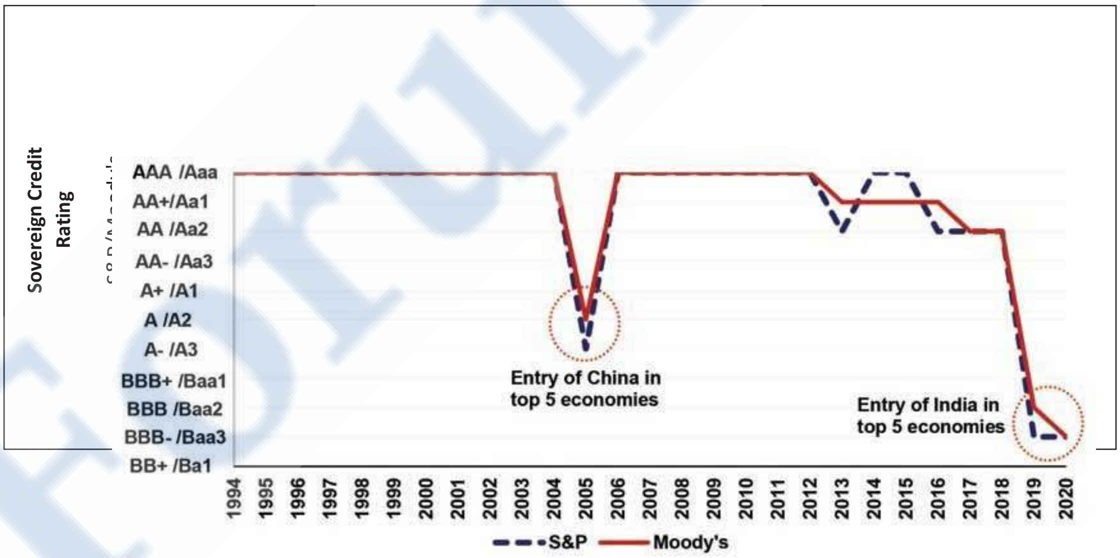
- In the history of sovergein credit ratings , never before the fifth largest economy in the world has been rated as the lowest rung of the investment grade (BBB-/Baa3).
- Reflecting the economic size and thereby the ability to repay debt, the fifth largest economy has been predominantly rated AAA.
- However, China and India are the only exceptions to this rule – China was rated A-/A2 in 2005 and now India is rated BBB-/Baa3.

This chapter covers this debatable issue of sovereign credit of India by external auditors. Do the fundamentals that supposedly drive sovereign credit ratings rationalise this historical anomaly? In this chapter, the Survey asks this important question and answers a resounding No!

THE BIAS AGAINST EMERGING GIANTS IN SOVEREIGN CREDIT RATINGS

Figure 1 shows that the sovereign credit rating of the fifth largest economy (current US$) by two credit ratings agencies (CRAs) declined steeply in 2005 following China's entry into the top five economies. Similarly, the sovereign credit rating of the fifth largest economy (current US$) by two CRAs declined steeply in 2019 following India's entry into the top five economies.

Figure 1: Sovereign Credit Rating of Fifth Largest Economy (Current US $)



Source: Bloomberg and World Bank

INDIA'S SOVEREIGN CREDIT RATINGS

- Currently, India is rated **investment grade** by three major CRAs – S&P, Moody's and Fitch. India's sovereign credit ratings upgrades have mainly been witnessed in the second half of 2000s, in recognition of higher economic growth prospects and strengthened fundamentals of the Indian economy.

- Further, during most of the 1990s and mid 2000s, India's sovereign credit rating was **speculative grade**. India's credit rating was upgraded to investment grade by Moody's in 2004, Fitch in 2006 and S&P in 2007. Notably, Indian economy grew at an average rate of over six per cent, and at approximately eight per cent in several years during this period. Hence, during most of the decade of 1990 and early 2000's, India's high rate of economic growth co-existed with a sovereign credit rating of **"speculative grade".**

DOES INDIA'S SOVEREIGN CREDIT RATING REFLECT ITS FUNDAMENTALS? NO!

- There is a large academic literature that highlights bias and subjectivity in sovereign credit ratings, especially against countries with lower ratings.
- Do the fundamentals that supposedly drive sovereign credit ratings rationalise this historical anomaly of India's low ratings? Answer is a resounding No!

HAVE INDIA'S SOVEREIGN CREDIT RATINGS REFLECTED ITS FUNDAMENTALS IN THE PAST? NO!

- India's negative outlier status w.r.t. its sovereign credit ratings vis-à-vis performance on several parameters remains true not only now but also during the last two decades.
- India has consistently been rated below expectation as compared to its performance on various parameters during the period 2000-20.
- Within its sovereign credit ratings cohort, India has consistently been rated much below expectation for its level of GDP growth rate during the period 2000-20.

DOES INDIA'S SOVEREIGN CREDIT RATING REFLECT ITS WILLINGNESS AND ABILITY TO PAY? NO!

Credit ratings map the probability of default and therefore reflect the willingness and ability of borrower to meet its obligations. India's willingness to pay is unquestionably demonstrated through its zero sovereign default history. Within India's sovereign credit ratings cohort, India is rated much below expectation for its number of sovereign defaults since 1990 (which is zero for India), making it a negative outlier.

- India is again a negative outlier, rated below expectation for the numbers of years since last sovereign default (which is zero for India) within its sovereign credit ratings cohort. Unlike several of its cohort countries, India has never defaulted during the period.
- India's ability to pay can be gauged not only by the extremely low foreign currency denominated debt of the sovereign but also by the comfortable size of its foreign exchange reserves that can pay for the short term debt of the private sector as well as the entire stock of India's sovereign and non-sovereign external debt.
- India's sovereign external debt as per cent of GDP stood at a mere four per cent as of September 2020 (DEA). Moreover, 54 per cent of India's sovereign external foreign currency denominated debt was owed to multilaterals and IMF as of end-March 2020 (DEA), which is not expected to impact credit rating assessments. Since India does not have full capital account convertibility, the private sector has to repay its foreign currency denominated debt by exchanging rupees through the forex reserves.
- India's non- government short term-debt as per cent of forex reserves stood at 19 per cent as of September 2020 (DEA). India's forex reserves stood at US$ 584.24 as of January 15, 2021 (RBI), greater than India's total external debt (sovereign and non-sovereign) of US$ 556.2 bn as of September 2020 (DEA).
- In corporate finance parlance, therefore, India resembles a firm that has negative debt,

whose probability of default is zero by definition.

- Despite this compelling statistic, India is an inexplicable negative outlier in its ratings cohort. Within countries with partial capital account convertibility in India's sovereign credit ratings cohort, India has consistently been rated much below expectation for its level of short-term external debt (per cent of reserves) during the period 2000-20, emerging as a negative outlier.
- Similarly, India has consistently been a negative outlier, rated below expectation for its level of reserves adequacy ratio within its sovereign credit ratings cohort during 2000-20,
- India's sovereign foreign denominated debt is met through India's forex reserves. Since India has partial capital account convertibility, this implies that private foreign denominated debt also needs to be met by either private export earnings or India's forex reserves.
- Given private export earnings, India's large forex reserves are in fact an underestimation of its ability to repay its short-term obligations. Yet India's sovereign credit rating is BBB-/Baa3, failing to capture this high ability to pay debt obligations!

EFFECT OF SOVEREIGN CREDIT RATING CHANGES ON SELECT INDICATORS

- Changes in sovereign credit ratings can affect economies. From 1998 till date, India has witnessed four instances of a sovereign credit ratings downgrade and seven instances of a sovereign credit ratings upgrade.
- As ratings do not capture India's fundamentals, it comes as no surprise that past episodes of sovereign credit rating changes for India have not had major adverse impact on select indicators such as Sensex return, foreign exchange rate and yield on government securities.

Short-Term Effect of India's Sovereign Credit Rating Downgrades

- There is correlations between a credit ratings downgrade and Sensex return as well as exchange rate (INR/USD), averaged across downgrade episodes from 1998-2018. It may be seen from various data that during the rating downgrade, Sensex return, on average, fell by around one per cent over the previous day, and recovered to grow at 0.38 per cent over the next two weeks.
- Exchange rate (INR/USD), on average, appreciated by around 0.01 per cent over the previous day, and appreciated by 0.01 per cent over the next two weeks.

Medium-Term Effect of India's Sovereign Credit Rating Downgrades

- There are correlations between a credit ratings downgrade and Sensex return, exchange rate (INR/USD) and G-Sec yields (5 year and 10 year) and spread in the medium term, averaged across downgrade episodes from 1998-2018.
- It may be seen that during ratings downgrade, Sensex return, on average, fell by around four per cent over the previous month, and recovered to grow at 0.5 per cent over the next six months. Figure 34
- During ratings downgrade, exchange rate (INR/USD), on average, depreciated by around one per cent over the previous month and depreciated by 0.2 per cent over the next six months.
- During ratings downgrade, yield on G-Sec (5 years), on average, fell by 1.4 per cent over the previous month, and grew at 0.1 per cent over the next six months. Yield on G-Sec (10 year), on average, fell by 3.3 per cent over the previous month, and declined by 0.29 per cent over the next six months. Spread (RHS), on average, fell by 22 per cent over the previous month,

and grew at one per cent over the next six months

Long-Term Effect of India's Sovereign Credit Rating Downgrades

- There are correlations between a credit ratings downgrade and Sensex return, exchange rate (INR/USD) and FPI (Equity and Debt) in the long term, averaged across downgrade episodes from 1998-2018.
- It may be seen that: (i) that during the year of ratings downgrade, on average, Sensex return rose by around 34 per cent over the previous year, and grew at 26 per cent the next year.
  (ii) During the year of ratings downgrade, on average, exchange rate (INR/USD) depreciated by around nine per cent over the previous year, and depreciated by two per cent the next year.
  (iii) During the year of the rating downgrade, on average, FPI Equity fell by 67 per cent over the previous year, and fell by 759 per cent in the next year. Average FPI Debt too followed a similar pattern, declining by 289 per cent, on average, during the year of rating downgrades, and declining by 114 per cent in the next year.

MACROECONOMIC INDICATORS AS DETERMINANTS OF SOVEREIGN CREDIT RATING CHANGES

- Past episodes of rating changes have no or weak correlation with macroeconomic indicators. However , there is no clear pattern between changes in GDP growth and sovereign credit rating changes
- India's Fiscal Deficit (as per cent of GDP) for Central and State Governments in relation to sovereign credit ratings changes during 1998-2020: All sovereign credit ratings upgrades occurred in years that witnessed lower fiscal deficit as compared to the previous year.
- India's general government debt (as per cent of GDP) in relation to sovereign credit ratings changes during 1998-2019: Most sovereign credit rating upgrades occurred in years that witnessed higher or similar level of general government debt (as per cent of GDP) as the previous year.
- India's overall debt (as per cent of GDP) in relation to sovereign credit ratings changes during 1998-2019: Most credit ratings upgrades occurred in years that witnessed higher overall debt as compared to the previous year.
- India's consumer price inflation (annual per cent change) in relation to sovereign credit ratings changes during 1998-2020: The pattern of correlation between inflation and changes in sovereign credit ratings is not clear.
- India's current account deficit (as per cent of GDP) in relation to sovereign credit ratings changes during the period 1998-20: The pattern of correlation between sovereign credit rating changes and current account deficit is not clear.

It may be seen that during years of India's sovereign credit rating changes, the average performance of macroeconomic indicators was better than or similar to the previous year. The average performance of macroeconomic indicators further improved or was similar in the year after the sovereign credit rating change

POLICY IMPLICATIONS

- The Survey questioned whether India's sovereign credit ratings reflect its fundamentals, and found evidence of a systemic under-assessment of India's fundamentals as reflected in its low ratings over a period of at least two decades.

- India's fiscal policy must, therefore, not remain beholden to such a noisy/biased measure of India's fundamentals and should instead reflect **Gurudev Rabindranath Thakur's** sentiment of a mind without fear. In other words, India's fiscal policy should be guided by considerations of growth and development rather than be restrained by biased and subjective sovereign credit ratings.
- While sovereign credit ratings do not reflect the Indian economy's fundamentals, noisy, opaque and biased credit ratings damage FPI flows. Sovereign credit ratings methodology must be amended to reflect economies' ability and willingness to pay their debt obligations by becoming more transparent and less subjective. Developing economies must come together to address this bias and subjectivity inherent in sovereign credit ratings methodology to prevent exacerbation of crises in future.

The pro-cyclical nature of credit ratings and its potential adverse impact on economies, especially low-rated developing economies must be expeditiously addressed. India has already raised the issue of pro-cyclicality of credit ratings in G-20. In response, the Financial Stability Board (FSB) is now focusing on assessing the pro-cyclicality of credit rating downgrades

Chapter 4 - Inequality and Growth: Conflict or Convergence?

In this chapter, the Survey examines if inequality and growth conflict or converge in the Indian context in an effort to identify the correct policy objective for India.
By examining the correlation of inequality and per-capita income with a range of socio-economic indicators, the Survey highlights that both economic growth and inequality have similar relationships with socio-economic indicators. Unlike in advanced economies, in India economic growth and inequality converge in terms of their effects on socio-economic indicators. **This chapter finds that economic growth has a far greater impact on poverty alleviation than inequality**.

The Economic Survey suggests that given India's stage of development, India must continue to focus on economic growth to lift the poor out of poverty by expanding the overall pie. It notes that this policy focus does not imply that redistributive objectives are unimportant, but that redistribution is only feasible in a developing economy if the size of the economic pie grows.

- In the advanced economies, Data by Wilkinson and Pickett (2009), Atkinson (2014) and Piketty (2020) show that in the advanced economies, higher inequality leads to adverse socio-economic outcomes but income per capita, a measure that reflects the impact of economic growth, has little impact. Some commentary, especially in advanced economies post the Global Financial Crisis, argues that **inequality is no accident but an essential feature of capitalism**.

INEQUALITY AND SOCIO-ECONOMIC INDICATORS

- The index of health outcomes correlates positively with both inequality and income per capita across the Indian states. However, across the advanced economies, inequality correlates negatively with the index of health and social outcomes while income per capita correlates positively.
- Same result using the index of education, life expectancy, infant mortality and crime respectively.
- Data suggests that neither inequality nor income per capita among Indian states correlate strongly with drug usage; however, inequality correlates strongly with drug usage in the advanced economies.
- Inequality and income per capita correlate similarly with other socio-economic outcomes across the Indian states. While birth and fertility rates decline with inequality and income per capita, death rates do not correlate with either inequality or income per capita.

The Economic Survey suggests a **weak positive (0.33) relationship between the two inequalities in India**, I.e., the **inequality in the ownership of asset** (measured by the Gini coefficients based of assets) and **inequality of consumption** (measured by the consumption-based Gini). This implies that the states with greater consumption inequality are the ones facing greater asset inequality as well.

- In Indian states, asset inequality is much higher than consumption inequality.
- Inequality of consumption is what matters the most rather than inequality of assets or inequality of income. The permanent income hypothesis posits that individuals and households attempt to smooth their consumption over time by borrowing or saving. Thus, while the income of an individual varies from year to year, consumption is more permanent as individuals tend to smooth their consumption over time.

IS PERFECT EQUALITY OPTIMAL?

Having established that inequality and income per capita do not diverge in their relationship with socio-economic outcomes in India, now it is worth asking: is perfect equality optimal?

In most cases, **inequality of opportunity is much more objectionable than inequality of outcomes,** as individuals' opportunities are influenced by endowments that are related to parents and other adults, peers, and a variety of chance occurrences throughout their lifetimes.

- Perfect equalization of outcomes ex-post, i.e., after the efforts have been exerted to obtain those outcomes, can reduce individuals' incentives for work, innovation and wealth creation.
- For a developing country such as India, where the growth potential is high and the scope for poverty reduction is also significant, a **policy that lifts the poor out of poverty by expanding the overall pie is preferable as redistribution is only feasible if the size of the economic pie grows rapidly**.

INEQUALITY AND POVERTY – RELATIONSHIP

Inequality needs to be distinguished from poverty. Inequality refers to the degree of dispersion in the distribution of assets, income or consumption. Poverty refers to the assets, income or consumption of those at the bottom of the distribution.

- Poverty could be conceptualized in relative terms or in absolute terms. People feel themselves to be poor, and think others to be poor if they have substantially less than what is commonplace among others in their society. Poverty, in this view, is **relative deprivation.**
- If the poverty is conceptualized in **relative terms**, there is no need to distinguish it from inequality. A relative measure of poverty is indeed a measure of inequality.
- If poverty is conceptualized in an **absolute sense**, that is, focusing on the absolute levels of assets, income or consumption of those at the low end of the distribution, then increases in inequality may be accompanied by reduction in poverty.

Distributive justice – **John Rawls** argued that the most reasonable way to decide upon a fair distributive principle is to imagine that you must make this decision knowing you will be born into the world but not knowing anything about what your assets and characteristics – intelligence, personality traits, parents, neighborhood, gender, skin colour, etc. – will be. Rawls referred to this hypothetical scenario as the "original position."

- He suggested that in such a situation a rational person would choose a distributive principle requiring that any increase in inequality increase the income of those at the bottom.
- However, experimental evidence suggests that the maximin principle is not how people in the "original position" would choose. Most people do not choose based on this distributive principle. Instead, they choose a principle in which the average income is maximized with a floor under the incomes of those at the bottom.
- In this view, as long as the poor have "adequate" incomes, an increase in the incomes of the rich need not benefit the poor to be considered just. The results of such experiments suggest that **(absolute) poverty should be of greater concern than inequality**.

RELATIVE IMPACT OF ECONOMIC GROWTH AND INEQUALITY ON POVERTY IN INDIA

Given the above discussion, which highlights that poverty alleviation through growth must remain the economic focus for India, this section examines whether income per capita or inequality impacts poverty the most in India.

- Statistical data shows that the association between MPI and poverty has been positive. It indicates that improvement in poverty also alleviates poverty measured along multiple dimensions and vice versa.
- World Bank (2000) find that India could achieve sustained decline in poverty during 1970s-1990s only when the GDP growth picked up from 3.5 per cent in the initial years.
- Rise in the growth of mean consumption was responsible for approximately 87 per cent of the cumulative decline in poverty, while redistribution contributed to only 13 per cent.
- Analyzing six decades of data from 1957 to 2012 for India, find that growth reduced poverty, and their association has acquired more strength after the 1991 reforms. It also finds that the pattern of growth has changed significantly after 1991.
- Poverty is concentrating more and more in urban areas, as now one-in-three poor is living in urban areas, which was about one-in-eight in the early 1950s. In the post-liberalisation period urban growth and non-agricultural growth has emerged as a major driver of national poverty reduction including rural poverty.

CHAPTER SUMMARY

- The relationship between inequality and socio-economic outcomes, on the one hand, and economic growth and socio-economic outcomes, on the other hand, is different in India from that observed in advanced economies.
- By examining the correlation of inequality and per-capita income with a range of socioeconomic indicators, including health, education, life expectancy, infant mortality, birth and death rates, fertility rates, crime, drug usage and mental health, the Survey highlights that both economic growth – as reflected in the income per capita at the state level –and inequality have similar relationships with socio-economic indicators.
- Unlike in advanced economies, economic growth and inequality converge in terms of their effects on socio-economic indicators in India.
- Economic growth has a far greater impact on poverty alleviation than inequality.
- Given India's stage of development, India must continue to focus on economic growth to lift the poor out of poverty by expanding the overall pie.
- Redistribution is only feasible in a developing economy if the size of the economic pie grows.

ForumIAS

Chapter 5 - Healthcare takes centre stage, finally!

INTRODUCTION

- The recent **COVID-19 pandemic** has emphasised the importance of healthcare sector and its inter-linkages with other key sectors of the economy. The ongoing pandemic has showcased how a healthcare crisis can get transformed into an economic and social crisis.
- The health of a nation depends critically on its citizens having access to an **equitable, affordable and accountable** healthcare system. Health affects domestic economic growth directly through labour productivity and the economic burden of illnesses (WHO 2004).

CHALLENGES

- **Uncertainty/variability of demand:** The need for health care is driven often by factors that cannot be controlled or predicted. This is also coupled with the nature of demand, which is **inelastic** especially for emergency care.
- **Information asymmetry:** In healthcare markets, the patients rarely know the value of the information until after it is purchased and sometimes never at all. When little information is available on the quality of a product prior to purchase, and the quality of the product is uncertain, **quality deteriorates to the lowest level in an unregulated market**. This lead to loss of consumer faith and resultant under-investment in healthcare.
- **Hyperbolic tendencies:** People tend to indulge in risky behavior that may not be in their self-interest. Examples include smoking, eating unhealthy food, delay in seeking care, not wearing masks or keeping social distancing in the context of the pandemic. **Such individual behavior may create negative externalities for the entire healthcare system** through higher costs and poorer outcomes.
    - India has very low rate of screening for cancers among women in the age bracket of 15-49 years at 22 per cent for cervical cancer, 10 per cent for breast cancer and 12 per cent for oral cancer when compared to 62 per cent, 59 per cent and 16 per cent respectively in OECD Countries

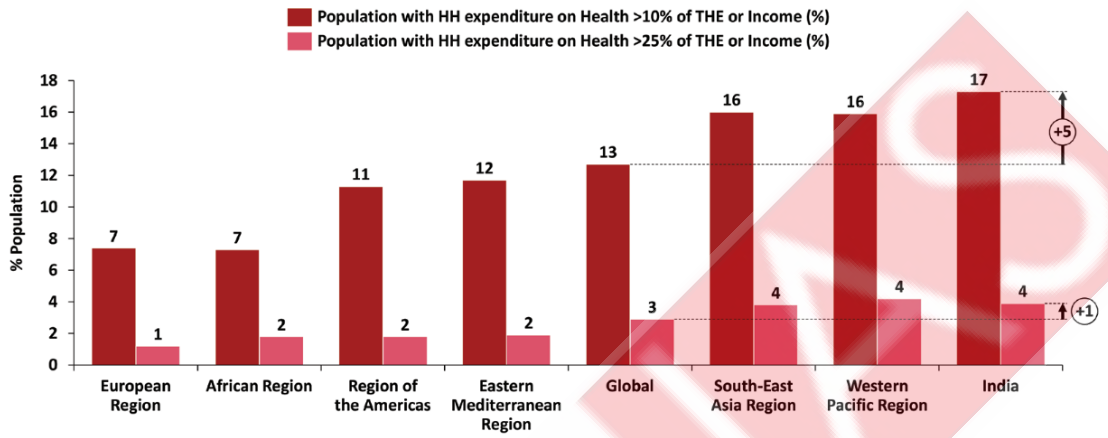
COVID-19 AND INDIA'S HEALTHCARE POLICY:

- **Better healthcare infrastructure is no insurance against communicable disease:** Positive correlations are onserved between total number of cases and deaths with respect to health expenditure per capita implying better health infrastructure. So, better health infrastructure is no guarantee that a country would be able to deal better with devastating pandemics like Covid-19.
    - **As the next health crisis could possibly be drastically different from COVID-19,** the focus must be on building the healthcare system generally rather than a specific focus on communicable diseases.

ISSUES FACED BY INDIAN HEALTHCARE

- **Poor health outcomes:** India continues to underperform in comparison to other Low and Lower Middle Income countries. On quality and access of healthcare, India was ranked **145th** out of 180 countries (Global Burden of Disease Study 2016).
- **Poor health outcomes:** India still needs to improve significantly on metric such as IMR(32) and MMR(145). Countries such as China, Bangladesh, Bhutan, Cambodia, etc. have improved much more.

- **Low access and utilisation:** At 3-4 per cent, the hospitalisation rates in India are among the lowest in the world; the average for middle income countries is 8-9 per cent and 13-17 per cent for OECD countries.
- **High out-of-pocket health expenditures:** As shown in the figure below, India has one of the highest levels of OOPE in the world.



- **Low budget allocations for healthcare:** As health is a state subject in India, spending on healthcare by states matters the most when examining government healthcare spending. **According to National Health Accounts, 2017, 66 per cent of spending on healthcare is done by the states.** India ranks 179th out of 189 countries in prioritization accorded to health in its government budgets (consolidated union & state government).
    - The state expenditure on healthcare is highly variable across states and is not fully explained by the income level of the state. Thus, the richer states are spending a lower proportion of their GSDP on healthcare.
- **Low human resources for health:** World Health Organization (WHO) identified an aggregate density of health workers to be 44.5 per 10,000 population. WHO also specified a lower range of 23 health workers per 10,000 population to achieve 80 per cent of births attended by skilled health professionals. Although aggregate human resources for health density in India is close to the lower threshold of 23, the **distribution of health workforce across states is lop-sided.**

UNREGULATED PRIVATE ENTERPRISE AND HIGH LEVEL OF MARKET FAILURE

- **Private sector dominates in total healthcare provision:** Around 74 per cent of outpatient care and 65 per cent of hospitalisation care is provided through the private sector in urban India.
- **A large proportion of deaths** in India manifests due to poor quality of healthcare than due to insufficient access.
- **Readmissions** typically impose a heavy burden on patients and their families and on health systems in general as a result of unnecessary care. In general, readmissions are costlier than original admissions.
- **The problem of asymmetric information in healthcare** is also reflected in the substantial variation in costs for treating the same disease between public and private sector.

TELEMEDICINE

- Impressive growth has been seen in the adoption of telemedicine in India since the outbreak of the COVID-19 pandemic.
- **eSanjeevani OPD** (a patient-to-doctor tele-consultation system) has recorded almost a million consultations since its launch in April 2020. Similarly, a 500 per cent increase in online consultations (varying from 200 to 700 per cent across different specialties) in just three months.

POLICY SUGGESTIONS

- The COVID-19 pandemic has emphasised the importance of healthcare, whereby a healthcare crisis transformed into an economic and social crisis. Considering the same and in striving to achieve the SDG target of Universal Healthcare Coverage, **India must take steps to improve healthcare accessibility and affordability** in the country.
- **The next health crisis may not possibly involve a communicable disease.** Therefore, India's healthcare policy must continue focusing on its long-term healthcare priorities. Simultaneously, to enable India to respond to pandemics, the health infrastructure must be agile.
    - For instance, every hospital may be equipped so that at least one ward in the hospital can be **quickly modified to respond to a national health emergency** while caring for the normal diseases in usual times. Research in building such health infrastructure can guide how to build such flexible wards.
- The ongoing COVID-19 pandemic has helped showcase the role of technology-enabled platforms as an alternate distribution channel for remote delivery of healthcare services. These technology platforms coupled with digitisation and the promise of **artificial intelligence at-scale**, have led to a drastic uptake in the utilisation of telemedicine for primary care and mental health.
- **The success of telemedicine** critically hinges on having decent level of health infrastructure and Internet connectivity nationwide. Both Central and the State governments need to invest in telemedicine on a mission mode to complement the government's digital health mission and thereby enable greater access to the masses.
- **From a financial perspective**, India has one of the highest levels of OOPE in the world, contributing directly to the high incidence of catastrophic expenditures and poverty. A negative correlation exists between the level of public spend and OOPE both across countries and states. Increase in ublic spending generate substantial "bang for the buck" in reducing the OOPE.
    - An increase in public spend from 1 per cent to 2.5-3 per cent of GDP – envisaged in the National Health Policy 2017 – can decrease the OOPE from 65 per cent to 30 per cent of overall healthcare spend.
- **As a bulk of the healthcare in India is provided by the private sector**, it is critical for policymakers to mitigate information asymmetry in healthcare, which creates market failures and thereby renders unregulated private healthcare sub-optimal.
    - Therefore, information utilities that help mitigate the information asymmetry can be very useful in enhancing overall welfare.
- **The National Health mission (NHM)** has played a critical role in mitigating inequity as the access of the poorest to pre-natal and post-natal care as well as institutional deliveries has increased significantly. Therefore, in conjunction to with **Ayushman Bharat**, the emphasis on NHM should continue.

Chapter 6 - Process Reforms

Indian administration system suffers from over regulation. For example, for a company to undergo voluntary liquidation in India, even when there is no dispute/ litigation and all paperwork is complete, it takes 1570 days to be stuck off from the Registrar of Companies. Over-regulation affects Ease of Doing business. Out of the total time taken, about 1035 days are taken for clearances by Income Tax, Provident Fund, GST departments and in taking back security refunds from various departments.

If we compare internationally, voluntary liquidation takes about 12 months in Singapore, 12- 24 months in Germany and 15 months in UK. In Germany, for very large and active companies, it takes 2-4 years.

Simple regulation need to be combined with transparent decision-making. In case where government needs to act in discretion, decision making must combine with three things, transparency, systems of ex-ante accountability (such as bank boards) and ex-post resolution mechanisms.

It is believed that India's regulatory problems are due to the lack of regulatory standards and poor compliance to process. However, International comparisons how that India ranks better than its peers on having regulatory standards in place and compliance to process. The real issue seems to be effectiveness of regulations caused by undue delays, rent seeking, complex regulations and quality of regulation. It is evident from the '**World Rule of Law Index'** published by the World Justice Project provides cross country comparison on various aspects of regulatory enforcement.

India's rank in different categories

category	***India's rank in 2020***
Due process is respected in administrative proceedings'(proxy for following due process)	45th out of 128 countries
Government regulations are effectively enforced'(proxy for regulatory quality/effectiveness),	104th
Administrative Proceedings are conducted without unreasonable delay (proxy for timeliness)	89th
Administrative Proceedings are applied and enforced without improper influence (proxy rent seeking).	107th

World Bank's Ease of Doing Business (EoDB) Report (2020) shows that despite making laudable progress in the overall Ease of Doing Business rank, India still lags behind in the sub-categories '**Starting a business**' and '**Registering Property'** where the country's rank is 136 and 154 respectively.

The report points out that this is due to the high number of procedures required to legally start and formally operate a company as well as the time and cost consumed to complete each procedure.

Large sample evidence across Indian states supporting the thesis that discretion increases with the amount of regulation. For example, stringency of labour regulation (measured as fine for violation of minimum wage) correlates negatively with the intensity of its enforcement (measured as average medium imprisonment for the same). They argue that countries with more stringent labour codes are less likely to enforce them.

WAY FORWARD

First, there is need to create simple regulation and complement the same by providing flexibility and discretion to the supervisor. For example, Government e Marketplace (GeM portal) has increased the transparency in pricing in government procurement. This has not only reduced the cost of procurement but has also made it easier for the honest government official to make prompt decisions.

Secondly, Ex-ante accountability need to be strengthened where the decision maker is hold responsible for decisions, Unlike Ex-post accountability where the decision maker is being holds them responsible for the outcome of the decision.

Thirdly, ex-post resolution mechanism need to be improved. For this, there is a need for efficient legal systems (i.e., courts and institutions) such as Insolvency and Bankruptcy Code (IBC), Debt Recovery Tribunals etc. The Judiciary is the most important institution for ex-post resolution. However, World Bank's Ease of Doing Business Report and World Justice Report focuses on Our incompetency in 'Enforcement of Contracts' and Dispute resolution.

World Banks' Ease of Doing Business Index makes following observations,

Time taken for Resolving a commercial Contract		
India	OECD high income countries	Singapore
1445 Days	589.6 Days	120 Days
Cost of Litigation		
India	OECD Countries	Bhutan
31 per cent of the claim value	21 per cent	0.1 Percent

Our poor performance in 'enforcement of contracts' is further supported by our rank in the World Rule of Law Index published by World Justice Project.

Particulars	**India's rank in 2020**
World Rule of Law Index	69^{th} out of 128 countries
People can Access and Afford Civil Justice	115
Civil Justice is not subject to unreasonable delay7	123
Civil Justice is effectively enforced	102
Alternative dispute resolution mechanism is accessible	88

Government has taken some steps to solve the problem

1) Labour Reform: There were over 100 state and 40 central laws regulating various aspects of labour. To rectify this, Government merged the existing 29 central labour laws into 4 labour codes. Namely, (1) Code on wages, (2) Industrial Relations Code (3) Code on Occupational Safety, Health & Working Conditions Bill, and (4) Social Security Code.
2) e, to reduce the compliance burden of the BPO industry, government announced new guidelines on OSPs on 5th November 2020. Under the new regulations, the registration requirement for OSPs has been done away with altogether and the BPO industry engaged in data-related work has been taken out of the ambit of OSP regulations.
3) Similarly, several other requirements, which prevented companies from adopting 'Work from Home' and 'Work from Anywhere' policies have also been removed. This has significantly liberalized the regulation for the BPO sector

4) Minimum Government and Maximum Governance
    a. Several autonomous organizations such as All India Handloom Board, All India Handicrafts Board, Cotton Advisory Board and Jute Advisory Board have been closed
    b. Approved merger of four of Central Government's film media units, namely Films Division, Directorate of Film Festivals, National Film Archives of India, and Children's Film Society, India into the National Film Development Corporation (NFDC) Ltd.

SUGGESTION

To enact Transparency of Rules Act:

Often a citizen has to follow a long paper trail of circulars and notifications to know the current requirement, the problem increases due to frequent changes in rules.

Under this act, all government departments will need to mandatorily place all citizen-facing rules on their website. Officials will not be able to impose any rule not explicitly mentioned on the website clearly. Further, all laws, rules and regulations will have to be presented as an updated, unified whole at all times.

This will bring transparency and simplify the understanding of regulations.

Chapter 7 - Regulatory Forbearance

Regulatory Forbearance refers to policy adopted by central bank and other government institutions which permits banks and financial institutions to continue operating even when their capital is depleted.
The RBI adopted Regulatory Forbearance in 2008 in the aftermath of 2008 Global Financial Crisis. It helped prevent bank failure contagion. The policy relaxed the norms for restructuring of stressed assets. It was no longer mandatory to downgrade the restructured asset as Non-performing asset and required no additional provisioning.
Restructured asset or loans are those which got extended repayment period, reduced interest rates, conversion of a part of loan into equity, provision of additional financing etc.
However, the policy should have discontinued when economy recovered in 2011, evident from GDP, IIP, export and credit growth.

EFFECT ON BANKS:

a) They restructured loans even for unviable firms. Because this improved appearance of Bank's account, showed inflated profit.
b) this also required Banks to pay increased dividend to its shareholders (including Governments in case of PSBs). As a result, Banks became severely under-capitalized.
c) Undercapitalization led banks to adopt risky lending practices and distorted incentive led to misallocation of credit.

The P. J. Nayak Committee (2014), constituted by RBI, highlighted the twin concerns stemming from the forbearance regime, the ever-greening of loans by classifying NPAs as restructured assets and the resultant undercapitalization of banks. It observed that the existing tier-I capital for public sector banks is overstated because of the regulatory forbearance which RBI provides on restructured assets. The report had estimated that if regulatory forbearance were withdrawn immediately in May 2014 and a prudent 70% provision cover were provided for restructured assets, tier-1 capital of the public sector banks would be written down by INR 2.78 lakh crores.

Effect on Corporates:

a) As they received easy money, firms invested in unviable projects. Lax of monitoring increased the injudicious credit supply.

Effect on Corporate Governance:

a) A borrowing firm's management's ability to obtain easy credit strengthened their influence, deteriorated the firm's established governance mechanism
b) Quality of firm's board degraded, misappropriation of resources increased.
c) Forbearance provides incumbent managers an opportunity to window-dress their balance sheet, show good performance during their tenure and thereby enhance post-retirement career benefits.

WAY FORWARD

An analysis of the regulatory forbearance and the resulting banking crisis offers key learnings for the current regime of regulatory forbearance following the Covid crisis.

1) forbearance represents emergency medicine that should be discontinued at the first opportunity when the economy exhibits recovery,

2) policymakers should lay out thresholds of economic recovery at which such measures will be withdrawn. These thresholds should be communicated to the banks in advance so that they can prepare for the same.
3) Regulatory forbearance should be accompanied by restrictions on zombie lending to ensure a healthy borrowing culture.
4) A clean-up of bank balance sheets through measures such as Asset Quality Review is necessary when the forbearance is discontinued.
5) A clean-up exercise should be accompanied by mandatory recapitalization based on a thorough evaluation of the capital requirements post an asset quality review.
6) There is need to enhance the quality of Banks and Financial institutions' governance to avoid ever-greening and zombie lending. The regulator may consider penalties on bank auditors if ever-greening is discovered as part of the toolkit of ex-ante measures. This would thereby create incentives for the auditor to conduct the financial oversight more diligently
7) Finally, the legal infrastructure for the recovery of loans needs to be strengthened de facto. The Insolvency and Bankruptcy Code (IBC) has provided the de jure powers to creditors to impose penalties on defaulters. However, the judicial infrastructure for the implementation of IBC – comprised of Debt recovery tribunals, National Company Law Tribunals, and the appellate tribunals must be strengthened substantially

Chapter 8 - Innovation: Trending Up but needs thrust, especially from the Private Sector

INTRODUCTION

- India entered the top 50 innovating countries for the first time in 2020 since the inception of the Global Innovation Index (GII) in 2007, by improving its rank from 81 in 2015 to 48 in 2020.
- India ranks first in Central and South Asia, and third amongst lower-middle-income group economies.
- The business sector in India contributes much less to gross expenditure on R&D (about 37 percent) when compared to businesses in each of the top ten economies (68 percent on average).
- India's gross expenditure on R&D at 0.65 percent of GDP is much lower than that of the top 10 economies (1.5-3 percent of GDP) primarily because of the disproportionately lower contribution from the business sector. Also, the government sector contributes the highest share of total R&D personnel (36%) and researchers (23%) amongst the top ten economies (9% on average).
- Indian resident's share in total patents filed 36%. (Top ten economies average is 62%)

WHY INNOVATION MATTERS?

- Solow model says output per worker mainly depends on savings, population growth, and technological progress.
- While the Solow model treats technological progress as exogenous; the new growth theory endogenizes technological progress and suggests several determinants of the same.
    1. human capital
    2. Search for new ideas by profit-oriented researchers.
    3. infrastructure
    4. improving quality of existing products
- Endogenous growth has also been explained using the Schumpeterian model of creative destruction (replacement of the old one through innovation)
- An increase of 10 percent in R&D investment has been associated with productivity gains ranging from 1.1 percent to 1.4 percent.
- The relation between innovation and the research sector received attention with endogenous growth models. Research showed that small enterprise R&D activities brought large returns to the national economy through new technologies.
- India must focus on improving its performance on institutions and business sophistication innovation inputs. These are expected to result in higher improvement in innovation output.
- As per Global Innovation Index data, there is a positive correlation between past innovation performance and current GDP per capita (India has performed below).

HOW DOES INDIA PERFORM ON INNOVATION?

- The GII is co-published by Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations
- India ranks 48th amongst 131 countries in terms of its innovation performance as measured using the Global Innovation Index.
- India entered the top 50 innovating countries for the first time since the inception of the index in 2007.

- GII has two sub-indices:
    1. The Innovation Input sub-index has five pillars:
        - Institutions
        - Human Capital and Research
        - Infrastructure
        - Market Sophistication
        - Business Sophistication
    2. The Innovation Output Sub-Index has two pillars:
        - Knowledge and Technological outputs
        - Creative outputs

Is India a positive outlier only because of its population?

- India is an innovation outlier in terms of its level of development (per capita GDP in PPP terms). India is the third-largest economy globally in PPP terms and the second largest in terms of population.
- It may be seen that population does not seem to be correlated to GII, Innovation Outputs, and Innovation Inputs. However, GDP seems to be positively correlated with innovation performance.
- This divergent performance for India in terms of the size of its economy and its level of development is a significant finding and warns against being complacent.

TRENDS IN INDIA'S INNOVATION PERFORMANCE

- India has consistently improved on GII from rank 81 in 2015 to rank 48 in 2020 where China has improved its rank from 29 to 14 during the same period.
- India needs a goal-oriented approach to reach up to its potential. For example, Medium-term and Long-term Plan by China to become an "innovation-oriented society" by the year 2020, and a world leader in science and technology (S&T) by 2050.

R&D expenditure in India

- Gross domestic expenditure on R&D (GERD) as a percent of GDP has a positive relationship with the level of development measured by GDP per capita on a PPP basis.
- When comparing India with top ten economies such as the USA, China, Japan, Germany, and France have higher than expected GERD for their level of development.
- Business sectors' participation in total GERD has a positive correlation between the level of development and GERD, while the government sector's participation in GERD is negatively correlated with development.
- In India, the Government contributes 56 percent of GERD while this proportion is less than 20 percent in each of the top ten economies. "Yet, India's GERD is much lower than that of the top ten economies because India's business sector contributes a much smaller percent to total GERD (about 37 percent).

India's performance on patents and trademarks

- The total number of patents filed in India has risen steeply since 1999, mainly on account of the increase in patent applications filed by non-residents.
- While patent applications filed by residents have increased steadily since 1999, they have risen at a much lower rate than patent applications by non-residents.

Non-Resident Indians and Innovation

- Around six percent of US-resident inventors listed at the European Patent Office in 2009 had an Indian name and surname.
- Large-scale out-migration of skilled workforce and students from India is not necessarily bad news for India's innovation aspirations. This could potentially result in the return of a higher-skilled workforce in the future. However, this would require an enabling environment that facilitates re-entry into the Indian job-market and high-tech research opportunities.

Is Indian innovation affected by access to finance?

- Industries that are more dependent on external finance, and are more high-tech intensive, exhibit disproportionally higher innovation in countries with well-developed equity markets.

REASONS:

1. No collateral requirements for equity financing and minimizes the risk of financial distress.
2. Rational expectations enable investors to extract relevant information about equilibrium prices.
3. Equity markets can facilitate this evaluation through information embedded in stock market prices.
4. Equity financing can be particularly well suited for innovative projects that are riskier.

- It also observed that developed credit markets appear to discourage innovation in industries that are more dependent on external finance and are more high tech-intensive.

  Reasons:

  1. Innovative firms may have limited collateral to deploy for debt financing by way of tangible assets, restricting their use of debt.
  2. Risk-averse banks under-invest in high-uncertainty innovative projects.

- Given that most of these large economies are more innovative than India and equity market development facilitates greater high-technology innovation, this potentially indicates that innovation in India needs to become more high-tech intensive.

IS INDIA EFFECTIVELY TRANSLATING INNOVATION INPUTS INTO INNOVATION OUTPUTS?

- It may be seen that India can effectively translate investments in innovation inputs to produce a higher level of innovation outputs. This implies that India stands to gain more from its investments into innovation than many other countries. With higher investments, it may be possible that this relationship between innovation inputs and innovation outputs becomes even more favourable for India.
- The improvements in institutions and business sophistication could lead to higher creative output performance. Higher income is also expected to lead to better performance in creative outputs and hence ranks closer to one in Innovation Output rank and Creative Output rank (thereby reflecting a negative correlation).

POLICY IMPLICATIONS

- India to become the third-largest economy in GDP current US$ in the near future. This requires boosting gross expenditure on R&D from 0.7 percent of GDP currently, to at least the average level of GERD in other top ten economies (GDP current US$) of over two percent.

- India's business sector needs to rise to the occasion and significantly ramp up its gross expenditure on R&D to a level commensurate to India's status as the fifth-largest economy in GDP current US$.
- Literacy, education, physical infrastructure, and policies enabling ease of doing business, as drivers of new firm creation and entrepreneurship, remain relevant in innovation in India.

CONCLUSION

- For India to become an innovation leader, it needs greater thrust on innovation.
- The business sector's contribution to total R&D personnel and researchers also lags behind that in other large economies. This situation has prevailed despite the tax incentives for innovation has been more liberal than other economies.
- India's innovation ranking is much lower than expected for its level of access to equity capital. This points towards the need for India's business sector to significantly ramp up R&D investments.
- Indian residents' share in total patents filed in the country stands at 36 percent. This lags behind the average of 62 percent in other largest economies. Resident share in patent applications must rise for India to become an innovative nation.
- India must focus on improving its performance on institutions and business sophistication innovation inputs. These are expected to result in higher improvement in innovation output.

Chapter 9 - Jay Ho: Ayushman Bharat's Jan Arogya Yojana (JAY) and Health Outcomes

INTRODUCTION:

Public Goods are not adequately provided by the market and thus must be supplied by the government. Thus, provisioning for public goods and ensuring their supply is one of the most important functions of government like universal healthcare. Governance, therefore, entails effective delivery of public goods and services to the vulnerable sections of the society. Most importantly provision of public goods that generate long-term gains to the economy and society is one of the most important aspects of governance in a democratic polity.

- Healthcare being a public good, the Government of India approved the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PM-JAY) in 2018 a step towards universal health coverage. Beneficiaries included approximately 50 crore individuals across 10.74 crores of poor and vulnerable families, which form the bottom 40 percent of the Indian population. The households were included based on the deprivation and occupational criteria from the Socio-Economic Caste Census 2011.
- The scheme provides for the healthcare of up to Rs. 5 lakh per family per year. The scheme provides for secondary and tertiary hospitalization through a network of public and empanelled private healthcare providers. [It is 5 lakh per family on a family floater basis which means it can be used by one or all the members of the family.]
- According to the study conducted by Economic survey, the evidence suggests the following points:
    1. Low-cost care has a higher frequency compared to expensive procedures eg. Rs. 10,000-15,000 claims are on a higher side than more expensive procedures.
    2. General medicines have been the major standard medical treatment.
    3. Dialysis service unlike other general medicine care did not see a steep fall at the onset of Covid-19 or during the lockdown.
    4. General care-seeking exhibits a V-shaped recovery.

Facts on Progress so far of PM-JAY:

- 32 states and UTs implement the scheme.
- 13.48 crore E-cards have been issued.
- Treatments worth Rs. 7490 crores have been provided (1.55 crore hospital admission)
- 24,215 hospitals empaneled.
- 1.5 crore users have registered on the scheme's website.

Positive correlation between Health insurance coverage and health outcome

- Example of Thailand which brought universal health coverage through insurance in 2001 which helped it in becoming the first Asian country to eliminate HIV transmission from mother to child in 2016.
- Studies in United states find a close correlation between health insurance coverage, poverty, and health.

Now we will try to understand the impact of PM-Jay on health outcomes as it was implemented in 2018, so will try to compare the health indicators measured by National Family Health Survey 4 (in 2015-16) and 5 (in 2019-20). We will try to understand the impact by comparing between states that implemented PM-JAY and those that did not.

Comparing West Bengal (which did not implement PM-JAY) vs its neighbors (that implemented PM-JAY that is Sikkim, Assam, and Bihar joined)

- **Sex Ratio at birth:** In the case of West Bengal, it improved by 1.35% while in the case of 3 neighbors there was an improvement of 6.28%.
- **School Enrolment:** In the case of women with 10 years or more schooling improved in all the states though in West Bengal it was better. But in case of men with 10 years or more schooling it was better in the case of neighboring states compared to West Bengal.
- **Health insurance coverage:** In case of neighboring states, it improved by 89% while in case of West Bengal it decreased by 12%.
- **Mortality rates:** Infant mortality rate declined by 20% for west Bengal compared to 28% for the neighboring states. Under-5 mortality rate declined by 20% for West Bengal, neighbors witnessed a 27% reduction. Neonatal mortality rate 30% for West Bengal and 31% for the neighboring states.
- **Family Planning:** The usage of at least one family planning method improved in all the four states compared, though the impact has been felt in states that implemented PM-JAY. Neighboring states recorded a decline of 37% in unmet need for spacing between consecutive kids while West Bengal did not witness any decline (By unmet need for spacing between consecutive kids, we mean those who want to stop or delay childbearing but not using any methods of contraception). People informed about family planning increased in West Bengal compared to neighboring states though people informed about side effects of current method was higher in neighboring states compared to West Bengal.
- **Registered pregnancies:** It increased in neighboring states by 3% compared to West Bengal which increased by 1%.
- **Postnatal care:** The neighboring states witnessed slightly higher utilization of maternal and childcare services at 13% when compared to West Bengal at 11%. Percentage of institutionalized births increased in all the 4 states.
- **Child vaccination and Vitamin supplements** also increased in the neighboring states compared to West Bengal.
- **Childhood diseases:** Children with diarrhea who received ORS doubled in the neighboring states compared to West Bengal.
- **Awareness about HIV/AIDS:** Proportion of women with comprehensive knowledge and awareness of HIV/AIDS increased by 4 times in neighboring states compared to West Bengal.
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Comparing all states that adopted PM-JAY versus those that did not

- **Health Insurance Cover:** It increased by 54% in states that adopted PM-JAY and decreased by 10% in states that did not.
- **Mortality Rates:** Neonatal mortality decreased by 22% compared to 16% in states that did not adopted PM-JAY. Similarly, Infant Mortality rate decreased by 20% compared to 12% in states that did not adopt PM-JAY.
- **Family Planning:** Non PM-JAY states recorded a decline of 15% in unmet need for spacing between consecutive kids while of PM-JAY states it declined by 31%.

On the same lines as discussed above there was a significant improvement in other health parameters like Awareness about HIV/AIDS, postnatal care, Childhood disease and others in states that adopted PM-JAY compared to states that did not adopted PM-JAY.

CONCLUSION

The improvement in the health outcome discussed above stemmed directly from enhanced care enabled by insurance coverage, others represent spillover effects due to the same. The focus of the chapter strong positive effects on healthcare outcomes of the Pradhan Mantri Jan Arogya Yojana (PM-JAY) – the ambitious program launched by the Government of India in 2018 to provide healthcare access to the most vulnerable sections.

Chapter 10 - The Bare Necessities

Access to “the bare necessities” such as housing, water, sanitation, electricity and clean cooking fuel are a sine qua non to live a decent life. A family’s ability to access bare necessities – such as housing, water, sanitation, electricity and clean cooking fuel – have therefore been regarded as an important barometer of economic development in academic and policymaking circles.
This chapter examines the progress made in providing access to “the bare necessities” by constructing a Bare Necessities Index (BNI) at the rural, urban and all India level.

The Sustainable Development Goals (SDGs) focus on providing “the bare necessities” to all: **Goal 6** focuses on access to clean water and sanitation to all while, **Goal 7** inter alia aims to provide universal access to electricity and clean cooking fuel.

Government Schemes for Bare Necessities

Scheme	Objective	Targets and achievements
Swachh Bharat Mission-Rural and Urban	SBM-Rural - attain Open Defecation Free (ODF) India by 2nd October, 2019 by providing access to toilet facilities to all rural households in the country. SBM-Urban - achieve 100 per cent Open Defecation Free (ODF) status and 100 per cent scientific processing of the Municipal Solid Waste (MSW) being generated in the country	**SBM-rural** - • More than 10 crore toilets built across rural India. • The programme has ensured that no one is left behind and to achieve the overall cleanliness in villages. • Phase II of SBM(G) from 2020-21 to 2024-25 is being implemented focusing on ODF sustainability and Solid & Liquid Waste Management (SLWM) **SBM-Urban** - • 4,327 Urban Local Bodies (ULBs) have been declared ODF so far. • Construction of more than 66 lakhs individual household toilets and over 6 lakhs community/ public toilets, far exceeding the Mission’s targets. • Mission is now focusing on holistic sanitation through its ODF+ and ODF++ protocols with a total of 1,319 cities certified ODF+ and 489 cities certified ODF++ as on date. • 68 per cent of waste generated per day is being processed.
Pradhan Mantri Awaas Yojana (PMAY)	PMAY intends to provide housing for all in urban and rural areas by 2022.	**PMAY (Urban)** - 109.2 lakh houses have been sanctioned out of which 70.4 lakh houses have been grounded for construction of which 41.3 lakh have been built. **PMAY (Gramin)** - Since 2014-15, construction of approx. 1.94 crore rural

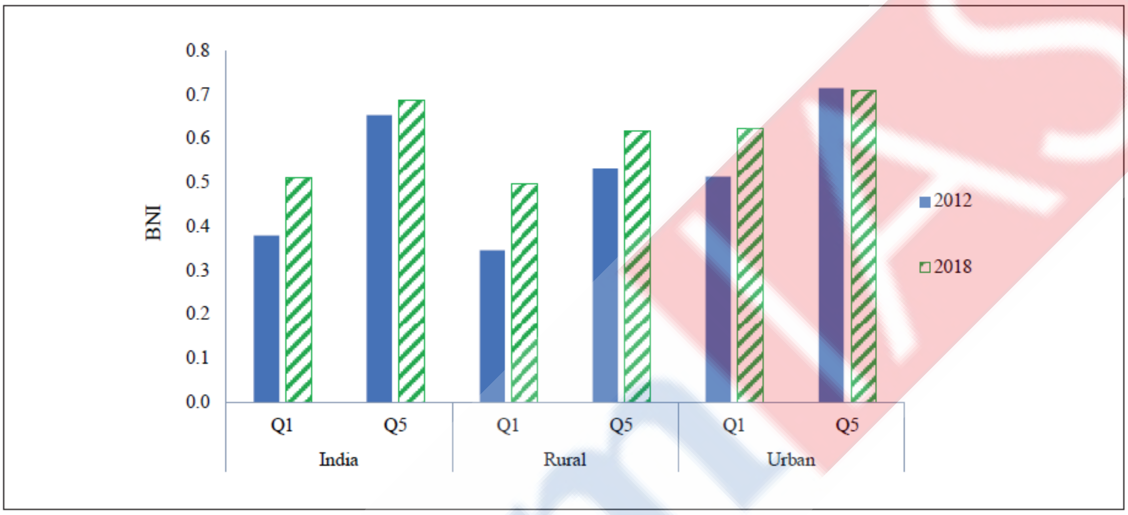
		houses have been completed, out of which 1.22 crore houses have been constructed under the revamped scheme of PMAY-G and 0.72 crore under erstwhile Indira Awaas Yojana scheme
Jal Jeevan Mission (JJM)	Provide functional tap water connection (FTWC) every rural household by 2024 and get assured supply of potable piped water at a service level of 55 litres per capita per day regularly on long-term basis by ensuring tap water connections.	Upto 16th January, 2021, so far about 3.2 crore of rural households have been provided with FTWC since the launch of the Mission. Keeping with 'no one is left out' principle, 18 districts in the country have become 'Har Ghar Jal districts' whereas 57,935 villages have also become 'Har Ghar Jal Gaon'.
Sahaj Bijli Har Ghar Yojana – Saubhagya	To achieve universal household electrification by providing electricity connections to all willing un-electrified households in rural areas and all willing poor households in urban areas in the country, by March, 2019.	All States have declared electrification of all households on Saubhagya portal, except 18,734 households in Left Wing Extremists (LWE) affected areas. Additionally, around 19 lakh households across 7 states have been identified and are being electrified.
Pradhan Mantri Ujjwala Yojana (PMUY)	To provide clean cooking fuel to poor households with a target to provide 8 crore deposit free LPG connection. This connection is provided in the name of an adult woman member of a poor family	Under PMUY, a target to provide 8 crore new LPG connections has been achieved in September, 2019, 7 months in advance of the target date of 31st March, 2020.

To measure the progress in the delivery of "the bare necessities", the Survey develops a composite index called the **Bare Necessities Index (BNI).**
The BNI summarizes 26 indicators on **five dimensions viz., water, sanitation, housing, micro-environment, and other facilities**. The BNI has been created for all states for 2012 and 2018 using data from two NSO rounds viz., 69th and 76th on Drinking Water, Sanitation, Hygiene and Housing Condition in India.

- Compared to 2012, access to "the bare necessities" has improved across all States in the country in 2018. Access to bare necessities is the highest in the States such as Kerala, Punjab, Haryana and Gujarat while it is the lowest in Odisha, Jharkhand, West Bengal and Tripura.
- The improvements are widespread as they span each of the five dimensions viz., access to water, housing, sanitation, micro-environment and other facilities.
- Inter-State disparities in the access to "the bare necessities" have declined in 2018 when compared to 2012 across rural and urban areas. This is because the States where the level of access to "the bare necessities" was low in 2012 have gained relatively more between 2012 and 2018.

- Access to "the bare necessities" has improved disproportionately more for the poorest households when compared to the richest households across rural and urban areas.
- The improvement in equity is particularly noteworthy because while the rich can seek private alternatives, lobby for better services, or if need be, move to areas where public goods are better provided for, the poor rarely have such choices.
- Improved access to "the bare necessities" has led to improvements in health indicators. Similarly, we also find that improved access to "the bare necessities" correlates with future improvements in education indicators.

Figure 6: Improving Equity in Access to Bare Necessities



Source: Survey calculations.

DRINKING WATER ACCESSIBILITY INDEX

The sub-index for access to drinking water, drinking water accessibility index, is composed of sub-dimensions viz., the principal source of drinking water, distance from source of water, nature of access, and method of taking out water.

- Access to drinking water to households in most of the States has improved in 2018 compared to 2012, in rural as well as in urban areas, (except for Andhra Pradesh in Rural and Andhra Pradesh and Himachal Pradesh in urban areas).
- Regional disparities have increased in 2018 when compared to 2012 despite such disparities declining in urban areas (Figure 8). This is because these disparities have increased in the rural areas.
- The Jal Jeevan mission must therefore focus on reducing the disparities in the rural areas as the reduction in such disparities will reduce the disparities across India.

SANITATION INDEX

Indicators used in the sub-index are percentage of households by access to latrine for exclusive use, the type of latrine viz., piped sewer system, septic tank, twin leach pit, single pit. These indicators show physical as well as quality of access to sanitation.

- sanitation access has improved for all States in rural areas and for most of the States in urban areas in 2018 compared to 2012.
- Regional disparities in access to sanitation has declined as the states having low access to sanitation in 2012 have gained more.

- However, inter-State difference in access to sanitation are still large, especially in rural areas. The level of access to safe sanitation has increased in lowest income quintile, both in rural as well as in urban areas.

HOUSING INDEX

The housing index measures not only the structure of house (in terms of Pucca or Katcha), but also the quality of house in terms of type of dwelling unit (independent or not) and condition of structure (Good or not).

- Access to housing has improved in all States, except urban areas in few States.
- The inter-State disparities have also declined as the States having low level in 2012 have gained more. However, the gaps in the levels across states have been large, especially in rural areas.
- The improvement in access to housing has also been disproportionately greater for the lowest income group when compared to the highest income group, thereby enhancing equity in access to housing in 2018 vis-à-vis 2012.

MICRO-ENVIRONMENT INDEX

The micro-environment index measures the percentage of households who are living in a dwelling unit with access to drainage, without problems of flies/mosquitoes, and efforts made by local bodies/State government to tackle problem of flies/mosquitoes.

- Micro-environment, as measured by the index, has improved in 2018 for all States, except for Assam in rural and Odisha and Assam in urban areas, as compared to 2012.
- Regional disparities have declined sharply in urban areas in 2018 vis-à-vis 2012, though it was increased in the rural areas.
- The micro-environment is much better in urban areas when compared to the rural areas, and the rural-urban gaps are large.
- The access to microenvironment in 2018 has improved especially to the lowest income quintile in rural as well as in urban areas.

OTHER FACILITIES INDEX

Other facilities' index captures the availability of kitchen, kitchen with a water tap, good ventilation in house, access to bathroom, attached bathroom, electricity use, the types of wiring used instead of temporary electric wiring, and type of fuel used for cooking (LPG or others).

- Access to Other-facilities for a household has improved for all States in 2018 compared to 2012 for rural as well as in urban areas except for Himachal Pradesh in urban.
- The inter-states disparities in terms of these facilities have also declined, especially in the urban areas.
- The equity in access to other facilities has improved in rural and urban areas.
- The gaps are still high across the State in rural, between rural and urban in States, between income groups, and between rural and urban in income groups.

Research studies support that the access to bare necessities through its possible linkages can positively impact health and educational indicators.

HEALTH OUTCOMES

- Swachh Bharat Mission, has led to a decrease in diarrhea and malaria cases in children below five years, still births and new-borns with weight less than 2.5 kg. Similar effects have been noticed on child survival of safe sanitation through the decline in open defecation.
- Access to improved sanitation also reduces the risk of contracting diarrhoea.
- Access to the piped water and sanitation is critical in reducing the child mortality substantially.
- The distance and time spent on fetching water from the source is found to affect under-five child health and increase the risk of illness.
- Access to clean cooking fuel improves child health. Studies have found a significant trend for higher infant mortality among households that cooked with a greater proportion of biomass fuel.
- Close association between household air pollution and mortality among children aged under-five, possibly because of respiratory illnesses, support the case for providing clean cooking fuel through government programmes.

EDUCATION OUTCOMES

- Water hauling, a daily activity, consumes substantial time and effort of a household. It is found that water hauling activity is negatively associated with the girls' school attendance.
- Access to latrine in schools substantially increases enrolment of pubescent-age girls.
- There is a strong correlation between electricity consumption per capita and higher scores on the education index.

CHAPTER SUMMARY

- Compared to 2012, access to "the bare necessities" has improved across all States in the country in 2018. Access to bare necessities is the highest in the States such as Kerala, Punjab, Haryana and Gujarat while it is the lowest in Odisha, Jharkhand, West Bengal and Tripura.
- The improvements are widespread as they span each of the five dimensions viz., access to water, housing, sanitation, micro-environment and other facilities. Inter-State disparities in the access to "the bare necessities" have declined in 2018 when compared to 2012 across rural and urban areas. This is because the States where the level of access to "the bare necessities" was low in 2012 have gained relatively more between 2012 and 2018.
- Access to "the bare necessities" has improved disproportionately more for the poorest households when compared to the richest households across rural and urban areas. The improvement in equity is particularly noteworthy because while the rich can seek private alternatives, lobby for better services, or if need be, move to areas where public goods are better provided for, the poor rarely have such choices.
- Using data from the National Family Health Surveys, we correlate the BNI in 2012 and 2018 with infant mortality and under-5 mortality rate in 2015-16 and 2019-20 respectively and find that the improved access to "the bare necessities" has led to improvements in health indicators.
- Similarly, improved access to "the bare necessities" correlates with future improvements in education indicators. Thrust should be given to reduce variation in the access to bare necessities across states, between rural and urban and between income groups, on bare necessities. The schemes, inter alia, Jal Jeevan mission, SBM-G, PMAY-G, may design appropriate strategy to reduce these gaps.

- A BNI based on large annual household survey data can be constructed using suitable indicators and methodology at district level for all/targeted districts to assess the progress on access to bare necessities.