Chapter 1
Impact of Covid-19 on Macroeconomic Developments: Recession, Recovery and Assessment

Manoj Panda

Abstract This chapter examines the macroeconomic developments covering the recession and recovery in India during Covid-19. It begins with a brief introduction of the global environment since the outbreak of Covid-19 and the spread of the pandemic during March 2020 to March 2023. It discusses the closure of production units following the lockdown and the government's policy response to ameliorate the adverse effects. It examines the macroeconomic developments during fiscal 2020–21, the year of recession when GDP witnessed an absolute fall by 5.7%. It documents the impact of recession on sectoral value added, unemployment, consumption, investment, fiscal and trade parameters during the recession. It also briefly describes the movements of these variables during 2021–22, the year of recovery and 2022–23, the year of global conflict. Next, the chapter makes an assessment of the policy measures and the likely impact of recession on different income groups and incidence of poverty. It hints at reorienting certain macroeconomic and human development policies to equip the economy and the people to meet a pandemic like situation in future.

Keywords COVID-19 · GDP · Recession · Recovery · Inflation · Unemployment

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1.1 Introduction

1.1.1 Global Environment

It is now a little more than three years since the outbreak of Covid-19 that was declared as a pandemic by the World Health Organization in March 2020. With more than 763 million reported cases and 6.8 million deaths globally by early April 2023, the pandemic has turned out to be one of the deadliest events in human history. Most of the countries enforced lockdowns of varying length and intensity prohibiting movement of people and closing down production units for months. The worldwide health crisis caused by the virus induced the deepest global recession since the end of World War II and the global economy witnessed an absolute contraction of 3.3% in the year 2020.[1] Fortunately, the scientific community succeeded in developing vaccines towards the end of 2020. Although the virus is still spreading in April 2023, the effect has become milder in a large part of the world due to vaccination of a sizeable proportion of the population and development of natural immunity in human bodies. The year 2021 saw economic activities resuming gradually and global GDP recovered with a growth of 6.0% in 2021.

In the beginning of 2022, there was optimism about a strong prospect for high global growth at 5.8%. Possibility of inflation due to accommodative stand during Covid was expected to be fought by tightening monetary conditions. The Soviet–Ukraine war in Europe, however, soon changed the scenario to lower growth and higher inflation compared to those expected earlier. The global supply disruptions for commodities compounded by sanctions against Russia led to fuel and food shortages. A high inflation rate not seen for four decades was fought with continuous raising of interest rates by the Federal Reserve System in the United States causing capital flight to home country. In a globalized financial system, several other major economies were left with no choice but to follow the high interest rate regime of the US. Failure of Silicon Valley Bank, a medium sized bank in the US and loss of confidence in Credit Suisse, a major global investment bank, created turmoil in the financial market, though regulators controlled the crisis swiftly in both cases. These developments had adverse effects on global economic growth and the IMF brought down its global growth estimate to 3.4% growth for 2022 and predicts 2.8% in 2023. Global inflation was high at 8.7% in 2022 and is likely to be 7.0% in 2023 as against 4.7% in 2021. World trade volume grew by 5.1% in 2022 and is expected to rise by 2.4% in 2023. Re-emergence of Covid in the first quarter of 2023 in several major economies has added to the uncertain environment.

Against this backdrop, this chapter examines the macroeconomic developments covering the recession and recovery in India during the Covid years and the challenges ahead to better equip India to meet emergency situations such as Covid and international conflict. Section 1.2 briefly traces the spread of the virus in India during

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[1] The global numbers here are from International Monetary Fund's World Economic Outlook, October, 2022 and April, 2023.

March 2020 to March 2023. Section 1.3 examines the macroeconomic developments during the recession in the financial year 2020–21, recovery in 2021–22 and global conflict in 2022–23. The focus of discussion of this chapter is the year 2020–21 when the major impacts of Covid were felt. The years of recovery and the conflict are covered in brief. Section 1.4 deals with an assessment and future challenges. Finally, Sect. 1.5 concludes.

1.2 The Spread of COVID-19 in India

Covid-19 was detected in India in the last week of January 2020 and started spreading rapidly towards mid-March 2020. The daily new cases of infection depicted in Fig. 1.1 below clearly indicate three major waves of varying intensity lasting for a few months each over a period of 3 years since March 2020. The daily cases peaked at over 41,000 in May 2021 during the second wave followed by another peak at 34,000 in January 2022. Total cumulative reported cases in India have been 44.7 million compared to the global total of 761.4 million by March 2023. Of the total affected, 98.8% recovered and the reported fatality rate of 1.2% is a bit above the global average of 0.9%.[2] The 7-day rolling average of affected cases has varied between 100 and 1500 during December 2022 and March 2023 and the prevalence of the virus has possibly taken an endemic form. More than half a million lives have been lost due to the virus. Large section of surviving lives faced unprecedented difficulties and challenges.

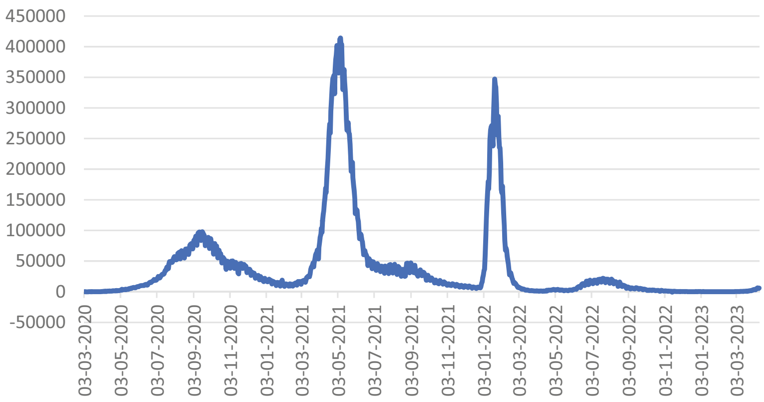

Fig. 1.1 Daily Covid cases in India. *Source* Author's graph based on WHO database

[2] According to an estimate made by WHO, excess mortality during the Covid period was at least 3.3 million as against 1.8 million reported Covid mortality in 2020. It indicates total number of deaths during the pandemic compared to those expected under normal conditions and thus includes deaths directly due to the virus and indirectly due to disruptions in essential health services, travel restrictions, reduced affordability etc. (https://www.who.int/data/stories/the-true-death-toll-of-covid-19-estimating-global-excess-mortality).

In order to contain the rapid spread, a nation-wide lockdown was announced in India during March 25 to May 31 in 2020 which involved closure of all workplaces except permitted essential services and agricultural activities. The lockdown was strict in the beginning but gradual relaxation later led to reopening of economic activities in a phased manner, though local restrictions in select containment zones continued. In the initial weeks of the strict lockdown, migrant workers started returning to their homes due to lack of job and limited income support by the employers. In the absence of normal transport facilities, some inter-state migrants walked hundreds of miles to reach their homes in other states. The size of this reverse migration was beyond expectation by the administration which responded late for making adequate arrangements.

Different variants of the virus evolved due to mutation, which spread at varying speeds. Both infection and death rates were larger during the second wave in March–June 2021 raising concerns regarding shortage in medicines and oxygen supply. A health crisis of this nature and scale had not been seen in living memory. There was no nation-wide lockdown during the second wave, but state and local governments declared containment zones depending on the extent of infection in various localities. Industrial and commercial enterprises were also prepared to deal with local lockdowns by the time the second wave arrived. As a result, the second wave was not as damaging to the economy as the first one.

This deadly wave was successfully tackled within a few months. The Central and the state governments had to manage a huge task in which they did not have earlier experience. It was a learning exercise even for the health care workers who risked their lives. The densely populated urban slums were a major challenge to prevent rapid rise in infections.

The scientific community soon succeeded in developing vaccines to fight the disease. In the first week of January 2021, the Indian drug regulating agency permitted the emergency use of two vaccines: Covishield[3] and Covaxin[4] produced by two Indian companies. Government of India decided to supply the vaccines free of cost to priority groups such as those engaged in health care and other essential services, and senior citizens. After about 3 months, all adults were eligible to take the vaccine and open market sale at regulated price was permitted. The internet-driven Aadhar identity cards supplied to citizens were a big help in monitoring the vaccination process. There was possibly some avoidable delay in Indian policy decision on the availability of the vaccines compared to some other countries in its peer group. Finally, the vaccination process turned out to be a successful and affordable one. By March 2023, as many as 220 crore vaccines have been administered either as a first or second dose according to government statistics. This was no small achievement in a country of 140 crore population with most of the population living in rural areas. Vaccination generally

[3] The Oxford–AstraZeneca developed Covishield vaccine was produced by the Serum Institute of India (SII) that is credited with production of the world's largest number of doses of different vaccines used in 170 countries.

[4] Covaxin was indigenously developed by an Indian firm Bharat Biotech in collaboration with the Indian Council of Medical Research and the National Institute of Virology.

prevented the disease and, in some cases where it did not prevent the infection, it limited the intensity of the disease. People also developed some kind of natural immunity over time. As restrictions were gradually removed, economic and social activities resumed in a limited manner after the first wave and became more or less normal in many spheres by mid-2022 except for a few touch-intensive non-essential activities.

1.3 Macroeconomic Impact

During the lockdown and local restrictions, the lifestyle as well as workstyle of people got distinctly changed due to confinement at home involving only limited permissible mobility. All economic activities came to a standstill during April–May of 2020 except for some essential services like health care, food supply, water, electricity, banks and law and order. Almost the entire information technology related sectors provided facilities for work from home (WFH) to employees. Other sectors like government and private offices, schools and other educational institutions followed WFH quickly. Several retail shops and restaurants adopted delivery at home mode during the restrictions and many continued even after the restrictions were removed. Online purchases saw many-fold expansion in urban and rural areas.

The society as well as the economy were hard hit posing challenges to both lives and livelihoods. As elsewhere, Indian policy makers too had to make a difficult choice on the trade-off between lockdown and livelihood. Absence of lockdown increased the risk of virus infection, associated health costs, and risk of fatality, while sacrifice of livelihood meant severe economic costs for different sections which in turn might include higher morbidity and mortality. After the experience of the strict lockdown for over two months till May 2020, Government of India revealed its preference on life versus livelihood trade-offs by gradually relaxing the lockdown and shifting from nation-wide lockdown to local confinement zones in the hotspots. Apart from encouraging economic activities, the gradual exposure helped in building up of natural immunity of the people.

The major macroeconomic impact of the pandemic could be traced by examining the linkages of the key macroeconomic variables as depicted in Fig. 1.2. The lockdown due to the pandemic led to closure of the production units except for essential services. It meant workers losing their jobs or working at a lower remuneration in many sectors and got reflected in fall in income of households providing labour or capital services. Fall in income led to reduced consumption demand which in turn led to reduction in capacity utilization and investment outlay. Prices of goods and services were the result of interaction of supply (domestic production and imports) and demand (consumption, investment and exports).

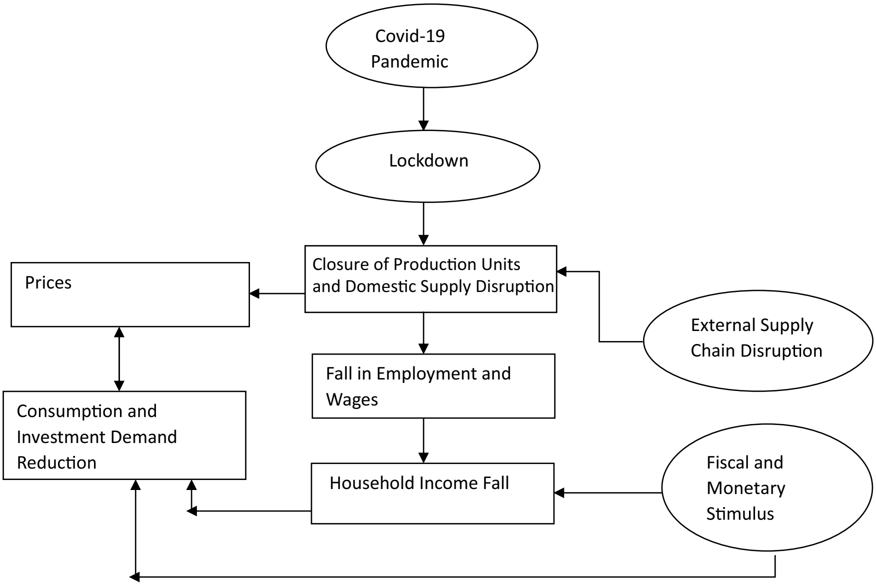

Fig. 1.2 Flow Diagram indicating major effects of lockdown

1.3.1 Recession

Prior to the pandemic, the Indian economy was already in a slow-down mode for a few years due to sluggish investment and exports (Fig. 1.3). Under this situation, the health emergency due to Covid and the consequent strict lockdown had grave adverse effects on the economy. India recorded a contraction in GDP by −5.7% in the 2020–21 fiscal year.[5] There were substantial variations in GDP growth from one quarter to another directly related to the intensity of the lockdown across quarters. GDP contraction was severe by −24.4% (year-on-year) in Q1 2020–21 and moderated to −7.4% in the following quarter. Economic growth reverted to a positive zone in the second half of 2020–21 with 0.5% in Q3 and 1.6% in Q4. Obviously, the stricter the lockdown was, the worse was the GDP impact. India turned out to be one of the worst cases in terms of GDP loss in the quarter of April–June 2020.[6] By cross country comparison, apart from India, Argentina, Italy and United Kingdom experienced large contractions in GDP due to stringent lockdowns during this period, though China and Turkey stood out as exceptions to this rule.

[5] Fiscal year 2020–21 refers to April 2020–March 2021 in India and so on.

[6] See, for example, Report on Currency and Finance (RBI, 2022).

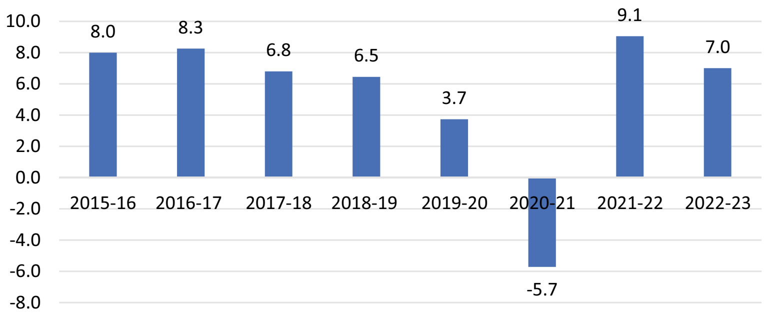

Fig. 1.3 Real GDP Growth Rate in India since 2015–16. *Note* 2nd revised estimate for 2020–21; 1st revised estimate for 2021–22 and 2nd advanced estimate for 2022–23. *Source* Author's graph based on data from the National Statistical Office

1.3.2 Policy Measures

As elsewhere, several measures were adopted in India by the Cetral and State governments and the Reserve Bank of India (RBI) to provide support to different vulnerable sections of people and save the economy from collapsing. Soon after the imposition of the lockdown, the Central government announced a Rs. 1.7 trillion (0.85% of GDP) package in the last week of March 2020 to provide safety net for the poor and the unorganized workers who were likely to be the most affected due to the lockdown. The RBI ensured liquidity by reducing policy rates and cash reserve requirements considerably. As the pandemic persisted, the package of measures was progressively widened in the following months. In May 2020, the Finance Minister announced a package referred to as *Atmanirbhar Bharat*[7] or Self-reliant India. It was more comprehensive on both fiscal and monetary measures and contained elements of even economic reforms. Some key features of the measures are[8]:

1. A safety net programme called the Pradhan Mantri Garib Kalyan Yojana (the Prime Minister's Plan for Welfare of the Poor) was to help the poor with food and some money in their hands for meeting other basic needs. It included, among other things, (a) free distribution of 5 kg wheat or rice and 1 kg of pulses every month to 80 crore ration card holders in addition to their entitlements under National Food Security Act (NFSA)[9] to draw ration at subsidized rate, (b) some monetary benefits to old age pensioners and widows, (c) extension of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) to include migrant

[7] During the pandemic, the phrase *Atmanirbhar* has been used in a wider sense of referring to policies to offset the economic impact of Covid by food distribution, production and distribution of vaccines and personal protection equipment (PPE) for health care workers. It was also used at times for new initiatives in areas like industry, education and defence.

[8] Dev and Sengupta (2022) describe the policy measures in greater details.

[9] NFSA was enacted in 2013 with a target to cover 62% of India's population. In 2020, 80 crore ration card holders constituted 58% of total population.

workers with additional allocation of Rs. 922 billion, (d) liberal insurance for health workers, and (e) budgetary allocation for certain relief to informal sector workers.

2. A second set of measures was meant for helping certain economic activities and contained (a) credit guarantee for collateral-free bank loans of Rs 3 trillion to micro, small, and medium enterprises (MSMEs), (b) government investment of Rs. 100 billion in funds that in turn would invest Rs. 500 billion in equity capital of MSMEs, (c) micro food enterprises needing technical upgradation to attain food standards, (d) development of fishing harbours, cold chain and market infrastructure, (e) improvement of infrastructure for cattle feed, fishing harbours, cold chain, and markets; (f) bearing part of the provident fund cost of MSME employees, and (g) a partial credit guarantee for non-banking financial companies where the government would bear the first 20% of loss. Budgetary allocations were also made to support several schemes related to agriculture and allied sectors such as agricultural and husbandry infrastructure, fishermen development, animal disease control plan, herbal cultivation, beekeeping, and supply chain for fruits and vegetables.
3. A reform package was also announced involving amendments to essential commodities act to enable better price realization by producers and promote competition in the agricultural market. The farming community in Northern India apprehended that government would eventually withdraw from procurement of food grains at minimum support price being implemented through Agricultural Produce Market Committee and went on protest for several months. Finally, the agricultural market reform measure was not implemented.
4. The Government further enhanced support measures during the second wave for safety net to vulnerable sections of the population and for reviving various economic activities to help growth and generate employment. Though the nature of relief measures were similar to earlier period, the overall package of Rs. 6.3 trillion was larger than that announced earlier.
5. The state governments on their part were responsible for ensuring food distribution, transferring cash to the vulnerable groups, providing medical services to the covid patients, building up of additional health infrastructure and supplying essential goods in the market. They also topped up the relief package as per the need of the states and took decisions on local containment zones.
6. In addition to the fiscal measures, the Reserve Bank of India (RBI) announced monetary policy measures to preserve financial stability. These measures included reduction in repo rate, reverse repo rate, and cash reserve ratio in order to inject liquidity in the system. RBI also deferred payment of interest on working capital and permitted banks to decide on moratorium on payment of instalments on loans. These monetary measures amounting to about 8% of GDP provided relief to stressed business and individuals during the lockdown.

1.3.3 Sectoral Growth

Turning to sectoral breakdown of GDP growth, two sectors that witnessed positive growth in 2020–21 are (i) agriculture and allied 3.3%, (ii) finance, real estate and professional services 2.2% (Table 1.1). Agriculture and banks were treated as essential services and large segments of professional services related to information technology could work from home or anywhere. Sectors most adversely affected were trade, hotels, transport and communication at −20%. Growth dropped considerably in two labour intensive sectors: textiles, apparel and leather products by −18.4%, and construction by −7.3%. Contact intensive sectors like tourism were hard hit and did not fully recover even by the end of 2022.

1.3.4 State-Wise Variations

Fall in income was regionally widespread. Percentage change in real gross state domestic product (GSDP) for major states[10] in India in 2020–21 depicted in Fig. 1.4 shows that most of the state economies contracted by 4%–6% in 2020–21. The southern state of Kerala and western state of Maharashtra experienced the highest fall in income at −9.2% and −7.6% respectively. As may be seen from the figure, three major states—West Bengal, Tamil Nadu and Andhra Pradesh—succeeded in preventing a fall in their state income and recorded marginally positive growth. Factors accounting for inter-state variations included incidence of infection, strictness of movement restrictions, extent of work from home facilities and share of exempted sectors in GSDP.

1.3.5 Unemployment

Returning to the national level, the lockdown and uncertainty created by the Covid resulted in rise in the unemployment rate. Quarterly urban unemployment rate depicted in Fig. 1.5 shows that unemployment rate rose to a record 21% for both males and females during the quarter from April to June 2020. It started falling thereafter but rose again during the second wave by 3–4 percentage points. It remained high for almost two years. The livelihood problem was thus acute for a large segment of labour force participants. However, PLFS annual unemployment data available for both rural and urban areas in Table 1.2 do not indicate such a rise primarily because most people cannot afford to remain unemployed for 'most part of the year'.

[10] These major states account for 98% of the total income.

Table 1.1 Sectoral real growth in gross value added

	Sector	Annual growth rate (%)				
		2018–19	2019–20	2020–21	2021–22 (1st revised estimate)	2022–23 (2nd advanced estimate)
1	Agriculture, forestry, and fishing	2.1	5.5	3.3	3.5	3.3
2	Mining And Quarrying	−0.8	−1.5	−8.6	7.1	3.4
3	Manufacturing	5.4	−2.9	−0.6	11.1	0.6
3.1	Food products, beverages and tobacco	20.7	−4.1	3.7	n.a	n.a
3.2	Textiles, apparel and leather products	6.8	−2.1	−18.4	n.a	n.a
3.3	Metal products	2.1	−0.9	1.8	n.a	n.a
3.4	Machinery and equipment	8.9	−4.5	−6.3	n.a	n.a
3.5	Other manufactured goods	0.2	−2.5	7.2	n.a	n.a
4	electricity, gas and water supply	7.9	2.2	−3.6	9.9	9.2
5	Construction	6.5	1.2	−7.3	14.8	9.1
6	Trade, hotel, transport and communication	7.2	5.9	−20.2	13.8	14.2
7	Financial, real estate and professional service	7.0	6.7	2.2	4.7	6.9
8	Public administration, defence and other services	7.5	6.3	−5.5	9.7	7.1
9	Gross value added (at basic prices)	5.8	3.8	−4.8	8.8	6.6
	Gross domestic product (GDP)	6.4	3.7	−6.6	9.1	7.0

Source National Statistical Office, 2022: National Accounts Statistics (https://mospi.gov.in/publication/national-accounts-statistics-2022) and NSO, 2023: Second Advance Estimate for 2023–24; n.a. indicates not available (as of March 2023)

1.3.6 Consumption and Investment

The income and employment loss led to contraction in absolute terms in all components of domestic final demand—private consumption, government consumption, and investment in 2020–21 (Fig. 1.6). Government consumption contraction was the least by less than half a percent. Overall private consumption fell by more than 5%,

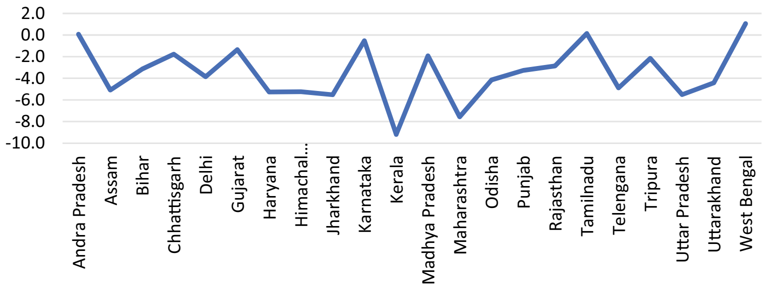

Fig. 1.4 Growth in Gross State Domestic Product in Major Indian States in 2020–21 (%). *Source* Reserve Bank of India

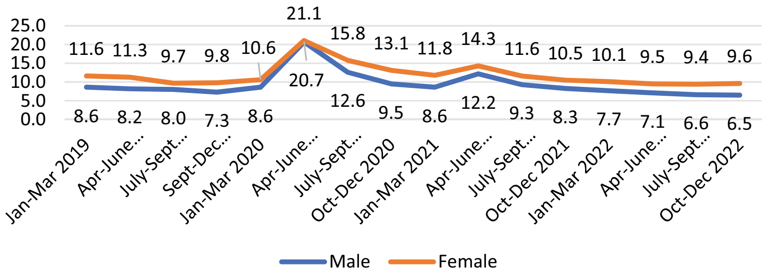

Fig. 1.5 Unemployment rate: urban 2019–2022 (for 15 years and above; current weekly status). *Source* Author's graph based on data from Periodic Labour Force Survey (PLFS) Quarterly Bulletin (MoSPI)

Table 1.2 Unemployment rate for 15 years and above

	Male	Female	Person
2017–18	6.1	5.6	6.0
2018–19	6.0	5.1	5.8
2019–20	5.0	4.2	4.8
2020–21	4.5	3.5	4.2
2021–22	4.4	3.3	4.1

Source PLFS Annual Report 2021–22

though the low-income groups were protected to some extent by free food distribution. Gross investment contracted by above 8% due to closure of construction activities and uncertainty in demand. Gradual revival of sales in housing market was aided by low interest rates, discounts and lower stamp duty.[11]

While real private consumption expenditure dropped, household savings rose. Financial savings of households increased by one-third from Rs. 24 lakh crore to 32 lakh crore in the form of currency, bank deposits and insurance. Precautionary motive

[11] See, RBI annual Report 2020–21 for more details.

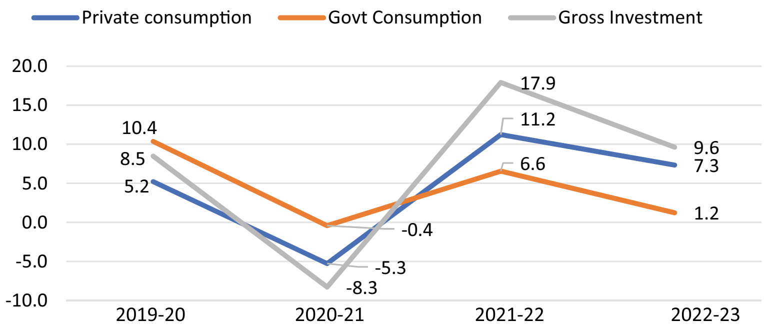

Fig. 1.6 Annual real growth in consumption and investment (%). *Source* Author's graph based on data from National Statistical Office Feb 2023

to hold liquidity for job uncertainty and possibility of sudden health-related expenditure dominated household behaviour during the pandemic. A section of population that did not experience income loss had reduced opportunity to incur discretionary expenditure. Government capital expenditure, which fell in the first half of 2020–21, rose substantially in the second half.

1.3.7 Foreign Trade

In the external sector, merchandise exports fell to USD 292 billion in 2020–21 from 313 billion in 2019–20 (Fig. 1.7). A sharper fall in imports compared to exports had a positive effect on narrowing down the trade deficit in 2020–21. Merchandise trade activities were directly affected by restrictions imposed in the home country as well as those in partner countries. Service exports, especially those related to information technology, have shown resilience and have been a source of support for the overall balance of payments. But travel and transportation restrictions resulted in a fall of exports and imports of other services. Loss of jobs for Indians working abroad in host countries, particularly in Gulf countries, affected inward remittance income during the pandemic.

1.3.8 Fiscal Parameters

On the fiscal front, government revenue receipts as a proportion of GDP of the Central government as well as consolidated governments of Centre and States fell implying revenue contracted to a larger extent than GDP. Total expenditure by the Central government rose by 4.3% of GDP to reach 17.7% in 2020–21 and total disbursement of Centre and states together rose by 5.1% of GDP. This got reflected in a rise in

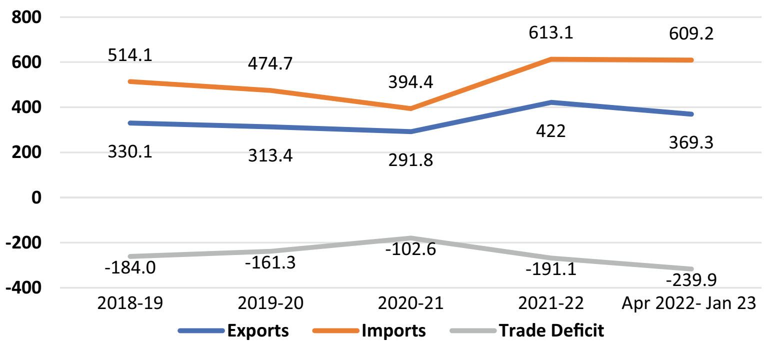

Fig. 1.7 Merchandise exports and imports (USD billion). Economic Survey and Press Information Bureau (for 2022–23)

fiscal deficit of the Central government by 4.5% to touch 9.2%, while consolidated deficit was as high as 13.1% of GDP.

1.3.9 Inflation

CPI inflation for the year 2020–21 was 6.2% driven by food as well as non-food prices due to several factors such as panic purchase during lockdown, supply disruptions, transport cost, and non-availability of labour prevailing from time to time. The month-to-month variation in prices was large in both upward and downward directions (Fig. 1.8). The average prices remained above 6% for several months after the breakout of the Covid, came down below 6% after November 2020, and started rising again after October 2021. There were even distress sales for certain items like poultry and products for a few months due to rumours in social media of association with the virus. The RBI reduced the policy repo rate from 5.15 to 3.35% during March and May 2020 to contain the financial distress of citizens and enterprises which provided stability in the monetary system. The cash reserve ratio, which had remained unchanged for 8 years, was lowered by 1 percentage point to inject liquidity.

1.3.10 Recovery in 2021–22

The containment of the virus supported by fiscal and monetary policies helped in the recovery of the aggregate economy in FY 2021–22. Growth in aggregate economic activities as measured by the GDP turned out to be 9.1% (Fig. 1.3) which meant that GDP more than recovered the pre-pandemic level in 2019–20. Agriculture and allied sectors recorded a 3.5% growth in 2021–22 and food grains production reached

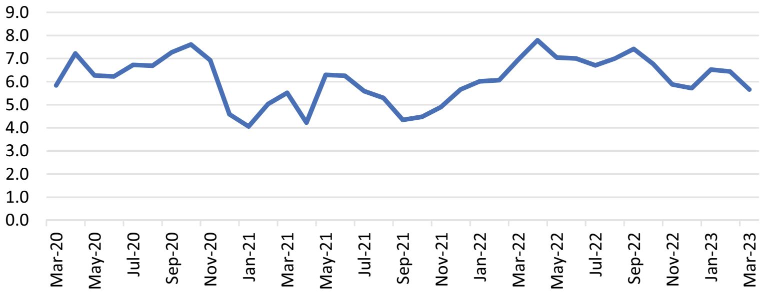

Fig. 1.8 Consumer price inflation (rural and urban combined)

a record 315 million tons. Manufacturing value added grew by 11.1% growth in 2021–22 after 2 years of negative growth (Table 1.1). Other sectors which led the recovery are construction (14.8%) and trade, hotel, transport and communication (13.8%). Normalcy did not fully return to the contact-intensive sectors like tourism and discretionary consumption spending revived slowly. Available GSDP data for major states shows that several states like Andhra Pradesh, Bihar, Madhya Pradesh, Odisha, Rajasthan, and Telangana recorded double-digit growth in 2021–22.[12]

Gross investment grew by 17.9% in 2021–22 after experiencing negative growth in the previous year (Fig. 1.6). Exports picked up to USD 422 billion in 2021–22 from USD 292 billion in 2020–21 (Fig. 1.7). Imports, however, grew by a larger amount from 394 to 613 billion, thus nearly doubling the trade gap. The governments attempted to restore fiscal balance slowly. An additional revenue receipt of 2.7% of GDP and expenditure reduction of 0.6% contributed to fiscal deficit reduction from 13.1% of GDP in 2020–21 to 10.3% in 2021–22 for Centre and states together (Table 1.4).

CPI inflation was 5.5% for the year as a whole in 2021–22. In the last quarter, it exceeded the upper bound of 6% assigned to the Monetary Policy Committee (MPC). But, in order to revive growth, the MPC maintained the status quo on the policy repo rate as well as an accommodative stance.

1.3.11 Global Conflict 2022–23

According to virologists, a virus normally takes an endemic form after about 3 years and Covid too was thought to be tending towards that stage by many experts in public forums. However, its recurrence tendency in late 2022 and early 2023 in some countries again caused concerns leading to lockdowns, especially in China, and reminded us that the virus might remain a mild disruptor for some more time. But the global growth scenario saw new problems triggered by the Russia–Ukraine war in 2022. Both the pandemic and the war compounded the problems in global

[12] RBI (2022): Handbook of Statistics on Economies of States.

Table 1.4 Fiscal parameters of central government and consolidated government (% of GDP)

Items	2018–19	2019–20	2020–21	2021–22	2022–23 (provisional)	2023–24 (BE)
Central government						
Revenue receipts	8.2	8.4	8.3	9.2	8.5	8.7
Tax revenue (net of states' share)	7.0	6.8	7.2	7.7	7.5	7.7
Total expenditure	12.3	13.4	17.7	16.0	15.3	14.9
Revenue expenditure	10.6	11.7	15.6	13.5	12.4	11.6
Capital expenditure	1.6	1.7	2.2	2.5	2.9	3.3
Fiscal deficit	3.4	4.7	9.2	6.7	6.4	5.9
Central and state governments						
Revenue receipts	20.0	19.2	18.6	20.7	21.3	n.a
Tax receipts	17.3	16.1	16.1	17.0	17.6	n.a
Non-tax receipts	2.7	3.1	2.5	3.7	3.7	n.a
Capital receipts	6.5	9.4	13.7	9.7	9.5	n.a
Total disbursements	26.6	27.0	32.1	31.5	31.0	n.a
Gross fiscal deficit	5.8	7.2	13.1	10.3	9.4	n.a

Economic Survey 2022–23 and Budget 2023–24. Combined state data for 2023–24 are not yet available

supply chain during the year. Rise in fuel and food prices due to trade disruptions caused concerns about the cost of living in many parts of the world. Several developed economies persistently experienced high inflation rates after about 4 decades of low inflation regime. International organizations monitoring global growth scenarios are pessimistic about global growth for the next two years, 2023 and 2024.

Advanced official estimate[13] for India is hopeful that GDP is likely to grow at 7.0% in 2022–23 (Fig. 1.3). Other agencies like IMF, World Bank and RBI predict the GDP to grow between 5.9% and 6.8% for the year as a whole. This meant that GDP is expected to expand in 2022–23 at around the pre-Covid trend despite the disruptions. The war seems to have affected the Indian economy with a lag since growth in second half of the financial year is estimated to be 4.5% i.e., less than half of 9.4% in the first half of 2022–23.

Agricultural sector is likely to grow at 3.3%. Manufacturing sector has suffered considerably in 2022–23 and its growth is estimated to come down to just 0.6% from a double-digit figure in the previous year (Table 1.1). Trade, hotel, transport and communication are estimated to accelerate further and construction is also likely to

[13] Second Advanced Estimate for 2023–24 by the National Statistical Office released in February 2023.

witness a high growth rate. The deceleration in GDP growth in 2022–23 is likely to affect both consumption as well as investment (Fig. 1.6).

The fiscal situation is likely to improve further during 2022–23 with fiscal deficit of Centre and states improving by about 1 percentage point to remain at 9.4% of GDP (Table 1.4). During the first 10 months of 2022–23, imports bill has nearly touched the yearly figure of the previous year while exports are 13% below (Fig. 1.7). These trends are likely to further widen the trade gap for the year as a whole.

India has also been affected by global inflation in 2022. Inflation as measured by CPI started rising from October 2021 onwards and stayed consistently above 6% during January 2022 to October 2022 (Fig. 1.8) prompting RBI to trigger tight monetary policy measures. Although the global conflict has created major challenges for the Indian economy on the trade, investment, and price fronts slowing down the post-covid recovery process, India is counted among the fasted growing economies during 2022–23.

1.4 Assessment and Challenges

It is by now well recognized that the Indian economy has performed better than most other comparable economies. A quick recovery of GDP from its deepest fall in 7 decades strengthens the faith in the long-term resilience of the economy to meet inevitable shocks from time to time. The total fiscal and monetary support as a percentage of GDP was almost similar to the global average of 15%.[14] The total government expenditure as well as fiscal deficit for Centre and States together rose to 32.9% of GDP in 2020–21 from 27.0% in 2019–20 and correspondingly fiscal deficit increased to 13.3% in 2020–21 compared to 7.2% in the previous year. These numbers indicate that the fiscal support provided in India during the pandemic was relatively small at about 6% of GDP due to limited fiscal space. Using a fiscal multiplier value[15] of 1.2, the expansionary fiscal policy of 6% of GDP would have neutralized about 7.2% of adverse GDP impact. In other words, GDP contraction due to the pandemic could have been about 13% without the fiscal support instead of actual drop of 5.7%.

In retrospect, it looks like the revival of growth as soon as possible was a primary consideration for the government in its Covid management. The emphasis on infrastructure related capital expenditure in budgetary allocation was an appropriate instrument for this purpose. Investment expenditure has got a larger multiplier effect and is

[14] RBI Annual Report 2020–21.

[15] Various simulation exercises using CGE models indicate that the Keynesian fiscal multiplier varies between 0.7 and 1.5 depending on the environment and instrument used (Kumar & Panda, 2009). Since government used various income generating means such as food distribution, employment generation, direct transfer, and infrastructure investment during Covid pandemic, an average fiscal multiplier of 1.2 may be used. It will be interesting to carry out a detailed study on the GDP impact of the stimulus instruments used in India with relevant closure for the specific environment of 2020–21.

consistent with the growth priority (Panda, 2020). Apart from creating employment, it also induces private investment playing a complementary role. India remained a relatively attractive destination for capital flows influencing the stock market prices.

RBI's unprecedented monetary measures provided a lifeline to the economy and prevented disruptions in the monetary and financial system. India adopted a flexible inflation targeting (FIT) regime in 2016 that stipulated the objective of monetary policy as "primarily to maintain price stability, while keeping in mind the objective of growth". The mandated CPI inflation rate is within the range of $(4 \pm 2)\%$. The introduction of the FIT regime did make monetary policy transparent and credible to the economic agents and decision makers. The RBI responded very well in liquidity management during the Covid period in 2020 and 2021. But, our understanding of monetary operations would improve if we know the extent to which RBI's policy rate decisions helped growth by arresting further decline.

The accommodative monetary policy got reversed in 2022 as a result of high inflation by upward revision of policy interest rates in several rounds. Monetary policy rate hike typically impacts growth with a lag of 3–4 quarters. Again, a question arises regarding the extent of growth being sacrificed to achieve lower inflation. The literature speaks of the concept of the sacrifice ratio that refers to the percentage of cumulative GDP loss that an economy bears for each percentage point reduction in trend inflation. Only a few studies have attempted to estimate the sacrifice ratio on the Indian data and they differ hugely varying between 0.5 to 6.7 contingent on the state of economy, time period considered and method used.[16] Our understanding of evidence-based trade-offs between growth and price stability must improve to help the society and policy makers strike the right balance.

In the current environment, Indian economy is expected to grow at about 6.5% in FY 2023–24. We can expect a further acceleration of GDP to an average growth rate of 7% with restoration of global environment.[17] In the context of Covid, a question naturally arises: if India will overcome the GDP shock of 2020–21 in the medium run, say by 2030–31. The recovery process was such that GDP level in 2021–22 was about 11% lower compared to a pre-Covid long term trend of 7%. A recovery of this order over 7–8 years is unlikely to happen unless the Indian economy grows at 8.5% or more.

Government's Make in India initiative aimed at boosting the manufacturing sector with certain incentives in selected industries of strategic nature. It had also provided large tax incentives to the investors a year before the pandemic. While the manufacturing sector did perform well in 2021–22, its performance in 2022–23 has been very poor. The incentives do not seem to have helped in reducing large fluctuating behaviour of the sector observed over the years. Survival in a competitive world must be at the core of any medium run supporting scheme.

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[16] An early attempt by RBI (2002) placed the sacrifice ratio at +2.0; other estimates are: Kapur and Patra (2003) between 0.5 and 4.7 depending on alternative measures of inflation, specifications and time period, Dholakia (2014) between 1.7 and 2.1 for disinflation period and 2.8 for inflation period, Mitra and Sanyal (2015) got 2.8 for expansionary phase and 2.3 for contractionary phase, Goyal and Goyal (2019) obtained 6.7 during 2011–17.

[17] CRISIL (2023) estimates GDP growth of 6.8% during FY24 to FY28.

Digital India initiative focuses on creating digital infrastructure, delivering services digitally and promoting the digital literacy. The pandemic forced unprecedented changes in the pattern of employment and income generation process in some sectors where work from home became the norm and continued even after normal economic activities resumed. Some technology related start-ups became billion-dollar companies in a short period making use of the opportunities to innovate services using information technology such as financial transactions, food delivery, entertainment and online class rooms. A section of urban population, particularly the youth, got employed in this emerging system.

1.4.1 Distribution

On the distributional front, the natural question is: did thelow-income groups suffer more during the pandemic compared to others? Large number of urban workers in the MSMEs, which account for most non-agricultural employment and a good proportion of exports, lost their jobs during the lockdown. The sudden declaration of a strict lockdown forced workers to return home initially without transport facilities. Had about one week's advance notice been given, migrant labourers would have returned home in an organised manner. When the lockdown was relaxed or lifted, several MSMEs found it difficult to reopen due to financial problems. Some migrant labourers, who had returned to their villages, were scared of resuming work in the urban areas.

A large section of domestic help, mostly women accounting for about 9% of the women workforce, could not hold on to their work during the lockdown. In a sample survey of domestic workspaces in Ahmedabad and Kolkata, Ghatak and Sarkar (2023) state that only 23% of the domestic workers could get compensation for absence from work during the national lockdown. They mention that many employers helped in terms of paid leave and items like mask, sanitizer and soap in the beginning of the lockdown but as the duration continued beyond a month, employers gradually stopped paying the wages. Several housing societies and even employers put additional entry requirements on domestic workers in addition to those put by the public authorities.

The government's policy to expand help to the poor, however, turned out to be of great help to households at the bottom end of the pyramid. Subsidized distribution of food through the public distribution system (PDS) has been an important element of India's food security policy for the low-income groups for several decades. The National Food Security Act (NFSA) made food distribution a legal entitlement in 2013 and stipulated public provision of 5 kg of food grains per person per month[18] to about 62% of the population at a very subsidized price. After the outbreak of the pandemic, free distribution of essential food items in addition to their entitlements

[18] The very poor were entitled to 35 kg of grains per month per household.

under NFSA considerably ensured food security of poor households in both urban and rural areas. This helped to avoid the possibility of a large-scale hunger problem.

Government procures food grains from the market at minimum support price to build up stocks and distributes grains from the stocks under PDS. Market intervention for procurement has come under criticism by several researchers on efficiency grounds since grain stocks have been in excess of requirement year after year. Government stocks of grains rose by 4 MT even during the pandemic year 2020–21 despite increased distribution. Attempt to improve competition in food grains market was given up due to farmers' protest in northern India. The procurement programme needs review to improve efficiency keeping in mind the food security objective through the PDS mechanism.

Evaluation studies using telephonic survey data have pointed out that about 80% of households having PDS ration cards did receive the food grains distributed by the government (Dreze & Somanchi, 2021). Further, an enhanced outlay of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) helped to maintain some minimum earnings for manual workers. Employment under MGNREGS reached a peak with 45.9 million persons[19] in June 2020. Afridi et al. (2021) point out that the capacity of the local government at the village level 'to quickly translate funds into jobs' played a critical role in job creation.

People and health experts did not know the nature of the unprecedented health crisis and its spread. Lockdown and health measures were taken in the beginning anticipating the maximum possible risk. As the disease spread and experience gained during the initial months, responses on balancing 'life and livelihood' got calibrated.

1.4.2 Poverty

India houses the maximum number of poor people in the world, but the incidence of poverty was falling over the years driven by growth in per capita income and consumption. Dasgupta et al. (2021) found an increase in the head count ratio of poverty by 3 and 2 percentage points in rural and urban areas respectively due to Covid, implying a setback to the declining trend. Yet, based on the yardstick of $1.9 a day poverty line, India might be able to achieve the income poverty target set by the United Nation's Social Development Goals (SDG1) by 2030. It is, however, somewhat lower than the Indian Government's accepted poverty line recommended by the Tendulkar Committee (Planning Commission, 2009), and considerably lower than the poverty lines suggested by the Rangarajan Committee (Planning Commission, 2014) which is more relevant for a low middle income country. Based on the official poverty lines, the SDG1 target cannot be met by 2030 without strengthening the pro-poor policies.

[19] Economic Survey 2021–22, p. 371.

1.4.3 Dealing with Another Pandemic like Situation

We may now turn to certain medium to long term issues which might better equip India to deal with another pandemic or similar emergency situations. Level of per capita income is one major, though not exclusive, indicator of the capability of society to cope with a health emergency or a lockdown condition. Apart from enhancing capability of individuals, a higher per capita income also increases government's revenue and its ability to spend on public health services. India's GDP recorded an average growth rate of about 7% in the post reform period 1992–2019 to reach USD 3.2 trillion recently. Given its population of 1.42 billion, the per capita GDP is only $2300 or about a fifth of the world average. Many analysts feel that India can attempt for a GDP growth path of 7–8% for about 2–3 decades. This seems feasible taking into consideration its investment rate, labour force and its distribution by working age and skill, productivity, and technology adoption.

Several multinational companies are locating their production units in India to cater to Indian and global demand. Post Covid, India is being looked upon as an alternative to China for their production centres by some leading global players such as Apple. Many Indian industries are also competing well at the global level providing goods and services at attractive prices. India emerged as one of the leading players in outsourcing of information technology enabled services during the last three decades. Its internet and mobile network has penetrated into villages and many, though not all, students in villages had access to online teaching during the pandemic. Online financial services have also spread rapidly during the last 5–7 years. Given these conditions, India should endeavour towards a maximum feasible growth path so that growth setbacks due to a pandemic or an international conflict can be overcome quickly.

Covid has provided an opportunity to invest in improving the quality of health and education services for strengthening human capital and in turn productivity of labour force. Since economic growth and human development are interlinked, the increase in health expenditure during Covid should be continued with emphasis on primary and secondary health services to achieve the health-related SDG goals. Learning abilities of children, particularly in low-income groups, have fallen during Covid due to online classes and its improvement needs special attention.

India decided not to join certain regional free trade agreements on strategic grounds. But it has signed about a dozen free trade agreements separately including those with Australia and United Arab Emirates in 2022 and one with United Kingdom seems to be in an advanced stage. It needs to be pursued more aggressively, along with arrangements with several major players in global trade to enable producers in India to take competitive advantage of emerging trade scenarios. Since the government has been advocating for an efficient and competitive economy with a global presence, it should desist from using *Atmanirbhar Bharat* argument for import substitution. Any moderate protection given to certain industries should have performance conditionalities attached with an exit clause after about 5 years. The government's emphasis on infrastructure development even during Covid, for highways and railways connecting major industrial centres to users and ports, indicates its commitment at helping reduction in transportation cost and improving competitiveness.

Infrastructure development to build up cold storage and quick transportation of perishable agricultural goods is already getting policy attention and needs to be continued. Attempts to reform Agricultural Produce Market Committee (APMC) rules during the Covid period was aborted due to farmers' protest in the North–West part of the country. A fresh look is needed for promoting competition in agricultural sector with initiatives by the state governments considering regional diversities.

1.5 Conclusions

The global community faced an extraordinary situation in the wake of the Covid-19 pandemic. India's approach to manage the pandemic was broadly similar to other countries. The choice between lockdown and livelihood during the Covid waves was a difficult one for policy makers and it is going to attract the attention of scholars for deeper analysis in the coming years. The relaxations made after a brief period of strict lockdown were balancing acts between life and livelihood. Democracy and associated institutions certainly helped to understand the ground realities better for policy adaptations.

India was fortunate to develop and produce vaccines within the country. The rapid spread of the pandemic was checked with the administration of the vaccines to a sizeable section of population by the end of 2021. GDP contraction of 5.7% in 2020–21 was recovered with 9.1% growth in 2021–22. The Central and State Governments attempted to protect the vulnerable sections of society even as they focussed on infrastructure development and growth sustainability. The Central Bank maintained the lifeline of the economy through liquidity injection and safeguarded the financial stability. The conflict arising from Russia–Ukraine war in 2022 disrupted the global supply chain leading to slow down of the global economy. The international environment will possibly remain very uncertain in the near future. The gloomy global economic scenario of 2022 is likely to persist in 2023 and 2024.

India needs to learn lessons from the pandemic and equip itself for any future health or other emergency situation. A major factor determining capability is the level of per capita income and there should be no relaxation of our resolve to attain the maximum feasible growth in an efficient and sustainable manner. Even as it does so, the pandemic has taught us to further strengthen our efforts to improve human development through investment in health and education. Growth and human development are interlinked and one feeds the other. India will hopefully succeed in managing the post pandemic evolving future.

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