

COVID-19 and the Indian Economy: Constructing Roadmaps to an Inclusive Recovery



Mitali Nikore, Charmi Mehta, and Akshay Kanikar

Abstract The COVID-19 pandemic has driven the highest share of economies into recession in modern times and is expected to bring about the largest contraction in global GDP per capita since World War II. The uncertainty it has spawned is driving governments and institutions into a conundrum, as they are tasked with charting out a course for recovery is immense. While India's GDP contracted 7.3% in FY 2020–21, COVID-19 deepened and exposed the fault lines of the economy. The authors highlight the phase of slowdown in India prior to the pandemic and how COVID-19-related lockdowns reinforced the slowdown. They demonstrate historical trends for a set of indicators for three sectors: agriculture, manufacturing, and services and display the extent of damage that the pandemic induced economic slowdown caused while also identifying underlying factors that existed pre-COVID. Finally, the authors present a macro-economic outlook covering trends and linkages across demand drivers, employment, and investment. They conclude with a roadmap for inclusive growth advocating strategies that seek to advance equality of access, sustainability of resources, and state capacity for governance.

Introduction

The COVID-19 pandemic has caused unprecedented damage to the global economy, pushing over 160 countries into recession, the highest in the history of recorded economic data [1]. Several differences exist in the challenges posed by the pandemic when compared to previous crises like the Global Financial Crisis in 2008. First,

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there were regions (East Asia and Pacific, South Asia, and Sub-Saharan Africa) that managed to maintain or marginally grow their gross domestic product (GDP) even during the crisis year of Financial Year (FY)09.¹ In 2020, however, every region suffered slowdowns. Second, recovery trajectories are likely to diverge. All regions (barring developed nations where the crisis originated in 2008) experienced growth in FY10, but recovery post-2020 is expected to be slower and uneven. Finally, the magnitude of the pandemic's impact and associated uncertainty complicate a return to normalcy.

COVID-19 has severely impacted lives and livelihoods. Over 4.4 million deaths occurred globally and are rising. An estimated, 130 million people were pushed back into poverty. And, there is an ensuing global recession. Countries relied on fiscal packages to power economic activity through 2020, as vaccine precarity kept demand revival expectations low. Consequently, successful vaccine trials made returning to normalcy the target for 2021. The global economy is poised to grow at 5.6% in FY21 [2]. There were strong rebounds by China and the US, but output is still expected to remain at pre-COVID-19 levels, largely due to emerging market economies where slow vaccination rates are holding up recovery.

No different from the rest of the world, India was also hit hard by the pandemic. Long drawn lockdowns magnified the ongoing economic slowdown. Of the four instances of national income decline seen in India (FY58, FY66, FY73, and FY80), FY80 was the worst at a 5.2% contraction [3]. This steep GDP plunge of 23.4% for the April-June, 2020 quarter and with the overall economy contracting by 7.3% in FY21, makes 2020 the year that underwent the severest economic contraction in the country's history. Sustained vaccine shortages in early 2021 meant that both the health of dense, unvaccinated populations and economic hardships from a prolonged pandemic were neglected.

After an urban centered first wave,² India faced a devastating second wave which affected most of rural India. In this chapter, the authors study the impact of COVID-19 on the economy in the context of India's pre-pandemic economic slowdown. Even as India's vaccination program offers a path to ease the health crisis, there is a need to actively address the pandemic's medium-term economic impact to spur green, resilient, and inclusive growth while safeguarding macro-economic stability [4]. The authors also highlight concerns regarding imbalanced growth while illustrating the lack of inclusivity in economic opportunities and threats posed by climate change.

¹ Financial year (FY): A 12-month period beginning on 1st April and ending on 31st March. For instance, FY04 indicates the period 1 April 2003–31 March 2004.

² Time periods for the first and second wave are as follows: First wave—Mar–June 2020; Second wave—Mar–June 2021.

Methodology

This chapter follows a mixed methods approach. Secondary data analysis was undertaken to capture historical trends for macro-economic indicators. All India time series data over the last seven decades (1950–2018) was analyzed to examine trends across the Gross Domestic Product (GDP), consumption, investment, public investment, exports, and imports. This data was obtained from numerous sources such as the Ministry of Statistics and Program Implementation (MOSPI), Government of India (GOI), the Center for Monitoring Indian Economy (CMIE), Economic Outlook Database, and the States of India Database.

Studies by Dvara Research, Azim Premji University (State of Working India Report-2021), Information Handling Services (IHS) Markit Economics, and Pew Research Center on the impact of COVID-19 on India's economy were used to demonstrate the same. Extensive analysis by Nikore Associates on gendered and differential employment statistics is also referenced. A literature review, complemented by consultations with agricultural bodies, industry groups, non-governmental organizations (NGOs), and sector experts assisted in contextualizing the findings and developing a progressive policy outlook.

Unearthing Realities—A Review of India's Macroeconomic Performance Since Liberalization

The culmination of demand supply shocks, mobility restrictions, and a high degree of uncertainty makes recovering from COVID-19 the greatest defining challenge of the 2020s decade so far [1]. Multilateral organizations like the World Bank, Asian Development Bank (ADB), and the International Monetary Fund (IMF) are constantly revising their growth outlooks, due to vaccine-coverage being slower than anticipated and consecutive infection waves. Table 1 shows wide-ranging estimates. Even the January 2021 estimates are unable to predict growth and recovery trajectories.

The pandemic emerged as a health crisis that placed great strain on public and personal resources in India. Wage laborers and temporary workers bore the brunt of unemployment as mobility restrictions constrained their ability to overcome joblessness. Successive waves brought to the fore deep inequalities within society, caused by rising income inequality and a shrinking middle class [5]. Poverty is estimated to have more than doubled with numerous estimates forecasting 75–230 million Indians falling into poverty post the first wave of the pandemic, thereby reversing decades of efforts toward poverty reduction [6–8]. This, combined with a large informal workforce, poor public health indicators, and a collapsing health infrastructure left the average Indian extremely vulnerable to pandemic induced shocks [9].

As the pandemic continued, the world was also grappling with climate disasters caused by global warming and catalyzed by human impact. India, alongside the rest of the world, must now not only recover from the pandemic, but must also do so

Table 1 Estimates of Indian growth: FY21

		Estimate 1	Estimate 2	Estimate 3	FY21 outlook	GDP growth (actual)
		(Jan'20)	(June'20)	(Sept'20)	(Jan'21)	
ADB	FY21		−4	−9	4	−7.3
	FY22		5	8	6.2	?
World Bank		(Jan'20)	(June'20)	−	(Jan'21)	
	FY21	5.8	4.2		−6.4	−7.3
	FY22	6.1	−3.2		2.3	?
IMF		(Jan'20)	(June'20)	(Oct'20)	(Jan'21)	
	FY21	5.8	−4.5	−10.3	−8	−7.3
	FY22	6.5	6.0	8.8	11.5	?

Source Asian Development Outlook (ADB figures), Global Economic Prospects (World Bank figures), and World Economic Outlook (IMF figures) release

sustainably to meet its Intended Nationally Determined Contributions (INDC) and net zero targets.

Growth in GDP and Per Capita Income

India's GDP grew six times post-liberalization from USD 507 billion in 1990 to USD 2.9 trillion in 2019 [10]. During the same period, per capita-gross national income (PC-GNI) only grew 3.5 times from USD 574 in 1990 to USD 2131.8 in 2019 [10]. This growth was primarily the result of two high growth spells: FY04 to FY08 and FY14 to FY17 (Fig. 1). The first spell of growth was powered by exports and investments which grew at an average rate of 17.8% and 15.3%, respectively. The second growth spell of FY12 and FY17 was driven by Private Final Consumption Expenditure (PFCE).

GDP growth had been declining between FY17 and FY20 reaching 4% prior to COVID-19 induced shocks. This was primarily attributed to governance and policy shocks such as demonetization. Although secondary to structural shocks, cyclical trends of lean economic activity based on seasonality and business cycle flows also impacted growth [11].

India's GDP drastically declined by 23.4% in Q1 of FY21 as an immediate effect of COVID-19 related mobility restrictions resulting from nationwide lockdowns (Fig. 2). Recovery stagnated through FY21. Strong rebounds in consumer spending through a surge in automobile sales, fuel consumption, exports, and core imports enabled a V-shaped recovery with 20.1% growth in Q1-FY22 despite a coinciding second wave [12].

Trends in growth rate of GDP and PC-GNI at constant prices (2011–12) (in percentage)

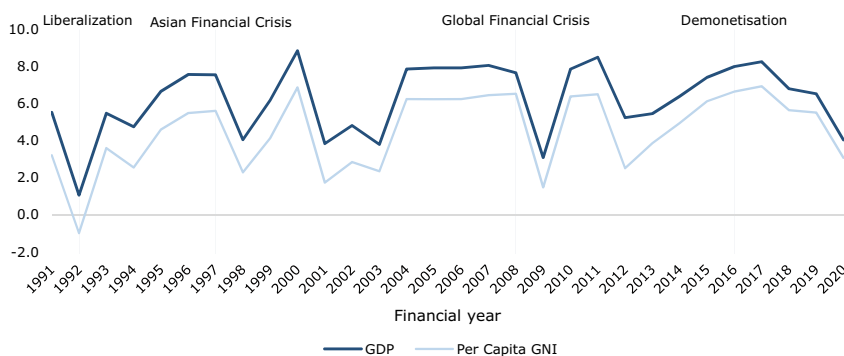


Fig. 1 Trends in growth rate of GDP and PC-GNI at constant prices (2011–12) (in percentage). *Source* Ministry of Statistics and Program Implementation, Government of India [10]

Trends in growth rate of quarterly GDP at constant prices 2011–12 (in percentage)

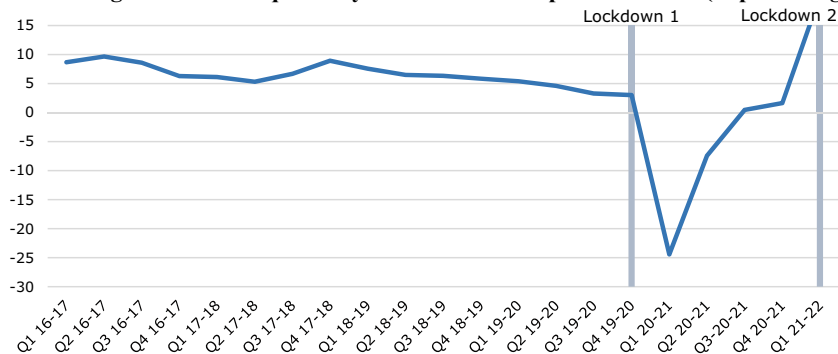


Fig. 2 Trends in growth rate of quarterly GDP at constant prices 2011–12 (in percentage). *Source* Ministry of Statistics and Program Implementation, Government of India [10]

Sectoral Time Series Trends

The economic impact of COVID-19 was not experienced equally across all sectors of the Indian economy. The share of agriculture and industry in overall Gross Value Added (GVA) declined between FY04 and FY21, with the service sector overtaking the erstwhile dominant sectors (Table 2). Service-led growth was aided by liberalization, privatization, and globalization (LPG)-era reforms from 1991 onwards [13], which eased the influx of Foreign Direct Investment (FDI) and private sector growth to create a favorable business ecosystem (Tables 3 and 4).

Despite its shrinking share in the GVA, agriculture, which employs 48.3% of all Indian households, was largely insulated from the debilitating impact of the first national lockdown. Proactive and timely exemptions from lockdown restrictions

Table 2 Sectoral share in GVA and growth rates over the years (in percentage)

		First growth spell	Post-global financial crisis (GFC)	Second growth spell	Pre-COVID-19	Pre-COVID-19	COVID-19 Years
		FY 04–08	FY 09–13	FY 14–18	FY 19	FY 20	FY 21
GVA	Growth rate	7.7	6.4	7.1	5.9	4.1	−6.2
Agriculture	Share in GVA	19.3	18.2	18.2	17.6	18.4	20.2
	Growth rate	4.5	3.1	3.9	2.6	4.3	3.6
Industry	Share in GVA	32.3	32.7	29.9	29.0	26.7	25.9
	Growth rate	7.9	7.4	6.8	5.3	−1.2	−7.0
Services	Share in GVA	48.3	49.1	52.0	53.4	55.0	53.9
	Growth rate	7.9	7.4	8.3	7.2	7.2	−8.4

Note Shares are in current prices and growth in constant 2011–12 prices

Source Calculations based on Ministry of Statistics and Program Implementation data [10]

facilitated uninterrupted cropping making agriculture the only sector to show positive growth across all quarters (Fig. 3), successfully riding out shocks from the first wave and recording a 3.6% growth (year-on-year (Y-o-Y)) in FY21 [14, 15].

On the other hand, industry and service sectors were severely impacted owing to mobility restrictions and the contact intensive nature of services (Fig. 3). Overall, the growth in industry declined by 7.0% and the growth in services declined by 8.4% in FY21. Mining saw negative growth across FY21 and manufacturing saw capacity utilization falling to 47.3% in Q1 FY21 (Y–o–Y) [16]. Trade, hotels, transport, and communication shrank by a massive 48.1% in Q1 FY21, with an estimated 30–35% of restaurants closing permanently by the end of the second wave [17]. The hospitality sector, severely damaged by the pandemic, also showed significant growth from the previous quarter. The industry and services sub-sectors bounced back only in Q3 and Q4 of FY21 [10].

Comparing Q1-FY22 (June 2021) growth to the average Q1-growth over FY15-FY21, reveals that all three sectors were performing below FY17 and FY18 levels (Fig. 4). Sub-sector level analysis illustrates that that mining, manufacturing, construction, hotels, and transport suffered the greatest declines and were most susceptible to growth shocks.

Table 3 Sectoral share in GVA and growth rates over the year for industry sub-sectors over the years (in percentage)

		First growth spell	Post-global financial crisis (GFC)	Second growth spell	Pre-COVID-19	Pre-COVID-19	COVID-19 Years
		FY 04–08	FY 09–13	FY 14–18	FY 19	FY 20	FY 21
Mining and quarrying	Share in GVA	3.2	3.2	2.5	2.2	1.9	1.6
	Growth rate	5.2	0.01	4.9	0.3	–2.5	–8.5
Manufacturing	Share in GVA	17.8	17.9	16.6	16.4	14.7	14.4
	Growth rate	9.6	6.4	8.3	5.3	–2.4	–7.2
Electricity and other utility services	Share in GVA	2.6	2.3	2.6	2.6	2.6	2.7
	Growth rate	7.1	5.8	7.3	8.0	2.1	1.9
Construction	Share in GVA	8.8	9.4	8.2	7.9	7.4	7.2
	Growth rate	12.8	6.4	4.3	6.3	1.0	–8.6

Note Shares are in current prices and growth in constant 2011–12 prices

Source Calculations based on Ministry of Statistics and Program Implementation data [10]

The Services Purchaser's Manufacturing Index (PMI)³ nosedived to its lowest level of 5.4 in April 2020 recovering to 56 only in March 2021, indicating dismal prospects for the sector in the near future (post the first wave) [18]. The Index of Industrial Production (IIP) for Core 8⁴ also reached record lows in April 2020 recovering to pre-COVID-19 levels only in February 2021.⁵

³ The Services PMI provides investors an insight into business conditions and economic trend for markets within the sector. IHS Markit Economics carries this out by surveying about 350 PSEs. A PMI reading over 50 indicates growth and that under 50 suggests contraction as compared to the previous month.

⁴ The Eight Core Industries comprise 40.27% of the weight of items included in the Index of Industrial Production (IIP). They are coal, crude oil, natural gas, refinery products, fertilizers, steel, cement, and electricity.

⁵ Economic Survey 2020–21 calculations based on Ministry of Statistics and Programme Implementation and Office of Economic Advisor's data.

Table 4 Sectoral share in GVA and growth rates over the year for services sub-sectors over the years (in percentage)

		First growth spell	Post-global financial crisis (GFC)	Second growth spell	Pre-COVID-19	Pre-COVID-19	COVID-19 years
		FY 04–08	FY 09–13	FY 14–18	FY 19	FY 20	FY 21
Trade, hotels, and transport	Share in GVA	18.0	17.4	18.3	18.7	18.9	16.4
	Growth rate	9.4	7.3	8.8	7.1	6.4	–18.2
Financial and real estate services	Share in GVA	18.6	19.1	20.5	20.6	21.2	22.1
	Growth rate	7.6	6.1	8.7	7.2	7.3	–1.5
Public administration	Share in GVA	11.7	12.6	13.2	14.1	14.9	15.4
	Growth rate	6.3	10.2	7.2	7.4	8.3	–4.6

Note Shares are in current prices and growth in constant 2011–12 prices

Source Calculations based on Ministry of Statistics and Program Implementation data [10]

Growth Drivers of the Economy

Consumption⁶ and investment⁷ have been the major drivers of India's growth over the last fifteen years. The average share of private final consumption expenditure (PFCE) in GDP stood at 58% in the 2010's decade, while that of investment was 34%. However, these have been in decline since FY12. The share of government final consumption expenditure (GFCE) remained flat, averaging 11%, while the average share of exports was 21.5% for the same period.

The Global Financial Crisis of 2008 resulted in accumulation of corporate debt and over leveraged financials. The impact of this was worsened by the twin balance sheet crisis that exposed growing non-performing assets of the banking sector, together reducing the scope for corporate borrowings. Table 5 shows the tapering of investments and exports post FY09 as a result of both crises.

Following the COVID-19 crisis, PFCE contracted by 9.1% in FY21 (Table 5). PFCE showed negative growth in the first three quarters of FY21, recovering marginally in Q4 (Fig. 7). Most notably, per capita consumption expenditure (PCCE) fell below FY18 levels (Fig. 8). Government expenditure was the only component of the GDP which registered positive growth at 2.9% for FY21, crucially aiding recovery.

⁶ Consumption is indicated by 2 variables: Private final consumption expenditure (PFCE) and Government final consumption expenditure (GFC).

⁷ Investment is indicated by gross fixed capital formation (GFCF).

Sectoral Impact of COVID-19: trends in quarterly growth rates (Y-o-Y) of sectoral GVAs at constant prices (2011-12) for the year FY20 and FY21 (in percentage)

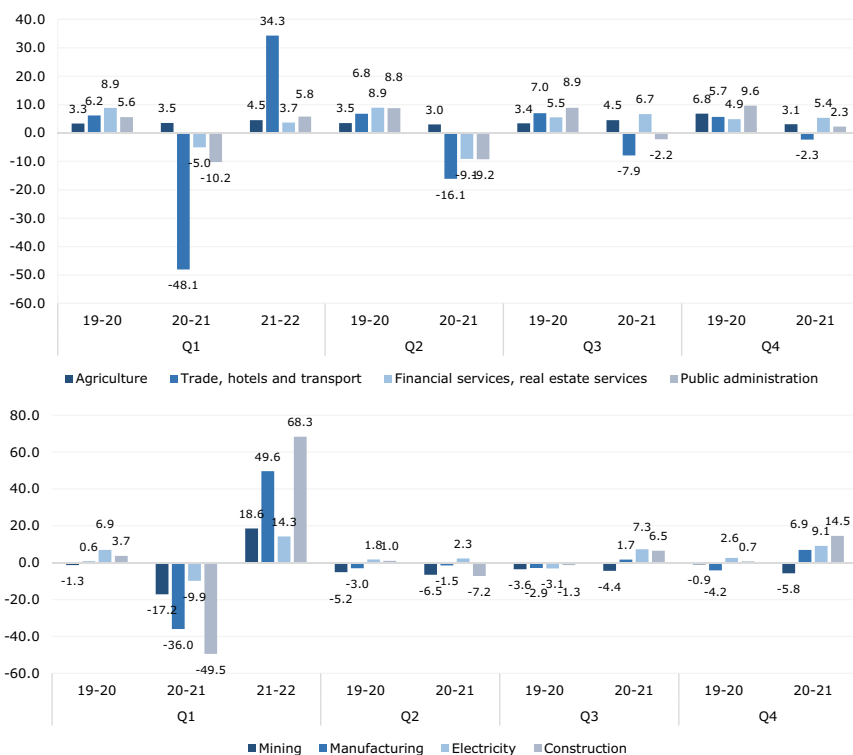


Fig. 3 Sectoral Impact of COVID-19: trends in quarterly growth rates (Y-o-Y) of sectoral GVAs at constant prices (2011–12) for the year FY20 and FY21 (in percentage). *Note* Year-on-year growth rates are calculated, compared to previous year’s same quarter figures. *Source* Ministry of Statistics and Program Implementation, Government of India [10]

Gross fixed capital formation (GFCF)⁸ declined by 47.7% in Q1 FY21 and contracting overall by 10.1% in FY21 (Table IV, Fig. 6). Announcements of new domestic investment projects fell by 23.5% in FY21 (Fig. 9), where barring Q2, all quarters saw this fall on a Y-o-Y basis (Fig. 10). Revival in investments will depend on an upswing in demand and capacity utilization which were below 70% throughout FY21 [15].

⁸ Domestic investment is a measure of the amount of money that domestic businesses invest within their own country, whereas foreign investment involves capital flows from one country to another, granting the foreign investors extensive ownership stakes in domestic companies and assets. Here, the changes in investments refer to both domestic and foreign investment combined.

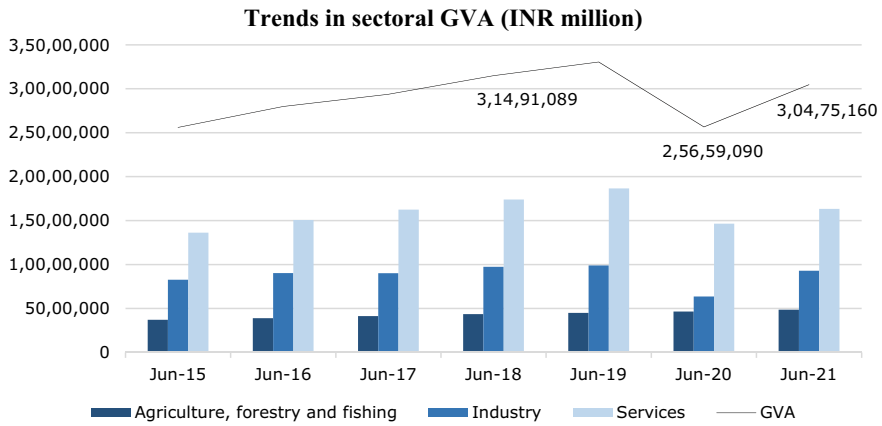


Fig. 4 Trends in sectoral GVA (INR million). *Source* Ministry of Statistics and Program Implementation, Government of India [10]

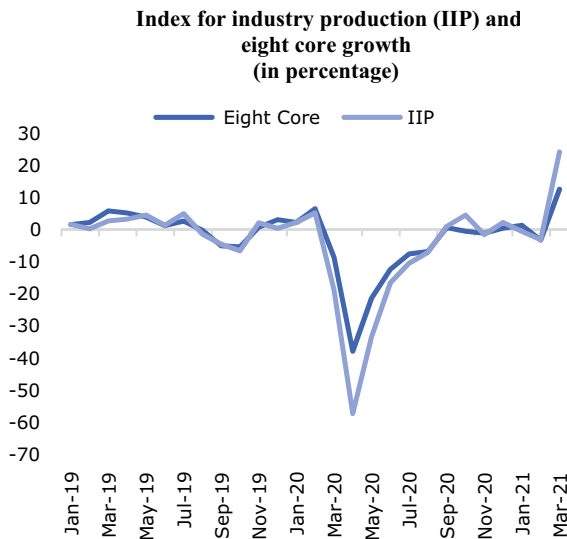


Fig. 5 Index for industry production (IIP) and eight core growth (in percentage). *Source* Economic Survey 2020–21 calculations based on Ministry of Statistics and Program Implementation and Office of Economic Advisor’s data [10]



Fig. 6 Services purchasing managers' index (PMI) (in percentage). *Source* Press Release, IHS Markit Economics, August 2021 [19]

Though domestic investment was weak, India emerged as a preferred investment destination for foreign investors attracting USD 81,722 million foreign direct investment (FDI) flows in FY21. This figure was up 10% from the previous year, of which FDI equity inflows grew by 19% [21]. Singapore was the highest equity FDI investor, followed by USA, Mauritius, and UAE [21]. Computer software and hardware saw the highest equity FDI inflows followed by construction, services, and infrastructure sectors. Among states, Gujarat (35.6%), Maharashtra (26.3%), Karnataka (12.5%), Delhi (8.9%), and Tamil Nadu (3.8%) received an overwhelming majority of the equity FDI inflows [21] (Fig. 11). Gujarat and Maharashtra were the first ones to recover in speed and volume while other states experienced gradual FDI inflows.

Imports and exports contracted by 40.9% and 21.9%, respectively in Q1 FY21 remaining negative through Q2 and Q3 and only recovering in Q4 (Fig. 12). Overall, imports shrank more than exports in FY20 generating a current account surplus equal to 0.9% of GDP. Trade deficit in goods widened from 1.9% of GDP in Q1 FY20 to 4.4% in Q1 FY21 while the trade surplus in services grew by 8.1% (Y-o-Y) in Q1 FY21, down from double digit growth a year earlier [22].

When comparing Q1-FY22 (June 2021) growth to the average Q1-growth across FY15-FY21, it was evident that consumption and investment in FY21 were below FY15 levels. Even in FY22, these levels remained below those of FY18 (Fig. 11). Exports and imports, on the other hand, recovered, remaining just below FY19 levels despite disruptions associated with the second wave.

Table 5 Components of GDP and growth across the years (in percentage)

		First growth spell	Post-global financial crisis	Second growth spell	Pre-COVID-19	Pre-COVID-19	COVID-19 Years
		FY 04–08	FY 09–13	FY 14–18	FY19	FY20	FY21
GDP	Growth rate	7.9	6.0	7.4	6.5	4.0	−7.3
PFCE	Share in GDP	57.8	56.0	58.6	59.4	60.5	58.6
	Growth rate	6.2	5.8	7.2	7.6	5.5	−9.1
GFCE	Share in GDP	10.3	11.0	10.5	10.8	11.2	12.5
	Growth rate	5.8	7.6	6.7	6.3	7.9	2.9
GFCF	Share in GDP	36.9	39.1	32.3	32.1	30.7	29.3
	Growth rate	15.3	7.2	4.6	9.7	2.3	−10.1
Exports	Share in GDP	18.9	23.2	21.2	19.9	18.4	18.7
	Growth rate	17.8	10.3	2.7	12.3	−3.3	−4.7
Imports	Share in GDP	21.4	28.9	23.9	23.7	21.0	19.2
	Growth rate	20.0	12.6	1.7	8.6	−0.8	−13.6

Note Shares are in current prices and growth in constant 2011–12 prices

Source Calculations based on Ministry of Statistics and Program Implementation data [10]

Impact on Employment

COVID-19 shocked a country where approximately 83% of the labor force works in the unorganized sector in low-productivity, low-income jobs. Despite rapid economic growth over the last two decades driven by high-skilled service sectors, India did not witness significant employment growth. Since the economic reforms of 1991, employment in the informal sector as compared to the formal sector had widened. Besides the agriculture sector, the construction sector created the second highest number of jobs. During the COVID-19 crisis, millions of informal and casual laborers were among the worst affected groups as they were unskilled and without social security safety nets.

As India recovers from the lasting effects of COVID-19, policy priorities are shifting from securing health to reviving economic growth. India needs to avoid a

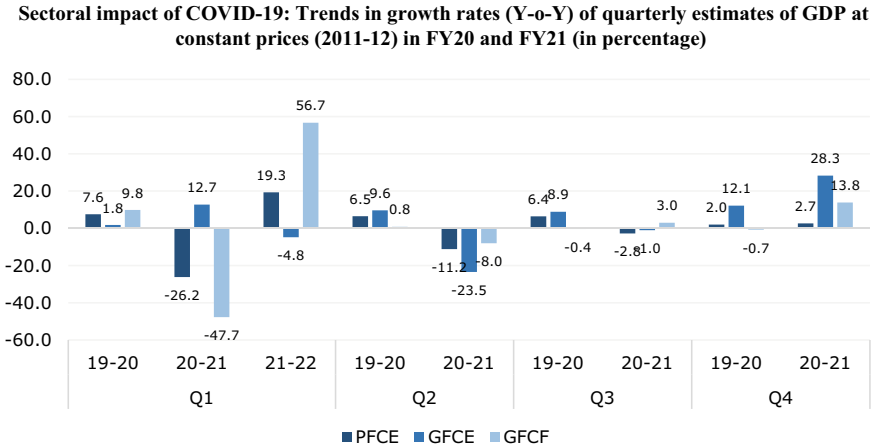


Fig. 7 Sectoral impact of COVID-19: Trends in growth rates (Y-o-Y) of quarterly estimates of GDP at constant prices (2011-12) in FY20 and FY21 (in percentage). *Note* Year-on-year growth rates are calculated compared to previous year’s same quarter figures. *Source* Ministry of Statistics and Program Implementation, Government of India [10]

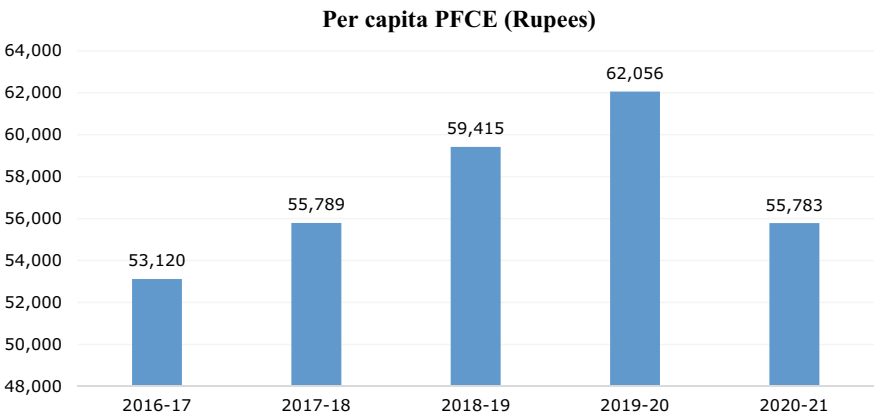


Fig. 8 Per capita PFCE (Rupees). *Source* Ministry of Statistics and Program Implementation, Government of India [10]

K-shaped recovery in which white collar sectors bounce back while other sectors are left to languish. The focus must shift to expanding the formal job market and enhancing social security for informal workers.

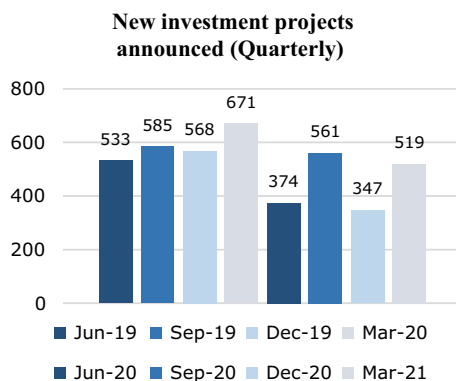


Fig. 9 New investment projects announced (Quarterly). *Source* Economic Outlook Database 2020–21, Center for Monitoring Indian Economy (CMIE) [20]

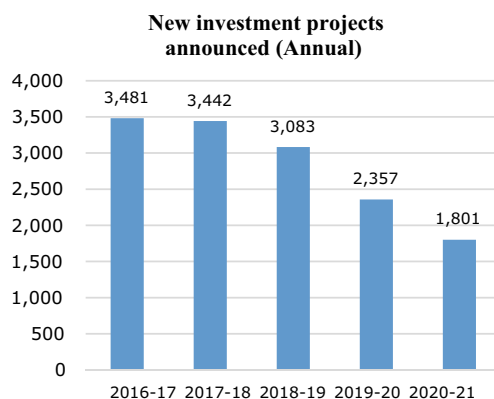


Fig. 10 New investment projects announced (Annual). *Source* Economic Outlook Database 2020–21, Center for Monitoring Indian Economy (CMIE) [20]

Pre-COVID-19 Employment Structure

Between 1977 and 2017, India's economy witnessed a surge in output from services (39% to 53%) and a decrease from agriculture (39% to 20%) and industry (33% to 27%) [23]. Structural changes in sectoral outputs were complimented with cross-sectoral shifts in employment. However, this structural transformation⁹ was far greater for men as compared to women (Fig. 14) [24].

⁹ Structural transformation in the context of a developing country involves two distinct processes—a decline in the share of agriculture in employment (and a rise in non-farm work) and a decline in the share of the informal sector (and a rise in the scale of production).

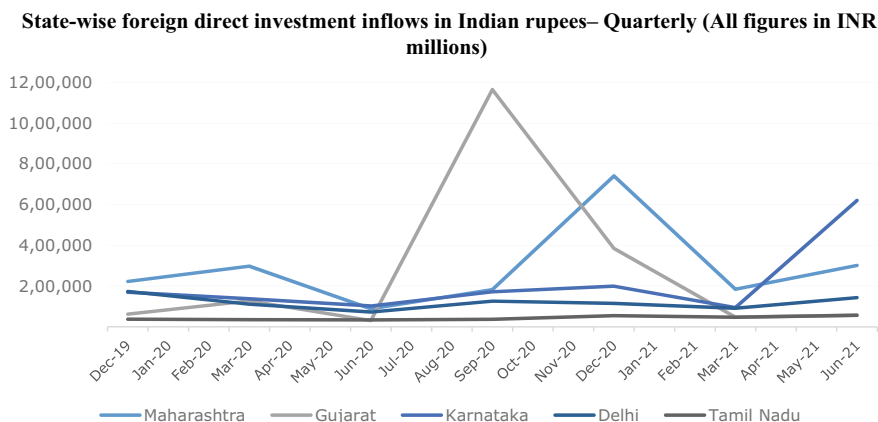


Fig. 11 State-wise foreign direct investment inflows in Indian rupees– Quarterly (All figures in INR millions). *Source* Department for Promotion of Industry and Internal Trade, Ministry of Finance 2021 [21]

Sectoral impact of COVID-19: Quarterly trends for exports and imports within GDP at constant prices (2011–12) in FY20 and FY21 (in percent)

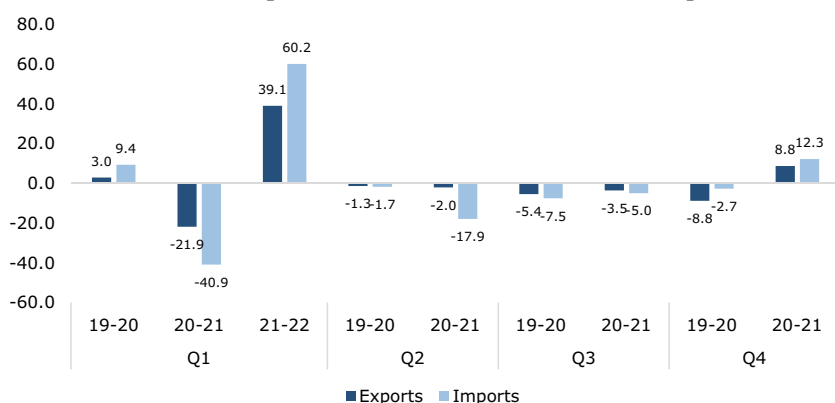


Fig. 12 Sectoral impact of COVID-19: Quarterly trends for exports and imports within GDP at constant prices (2011–12) in FY20 and FY21 (in percent). *Source* Ministry of Statistics and Programme Implementation, Government of India [10]

In the 15 years between 1994 and 2010, women received less than 19% of all new employment opportunities generated in India’s ten fastest growing occupations [25]. This had profound implications for rural women, for whom the proportion of employment in agriculture fell by just 13% in the last 42 years (88.1% in 1977–78 to 75.7% in 2019–20), while it reduced by 25% for rural men (80.6–55.4%) for the same period. Construction and hospitality absorbed a large proportion of rural males.

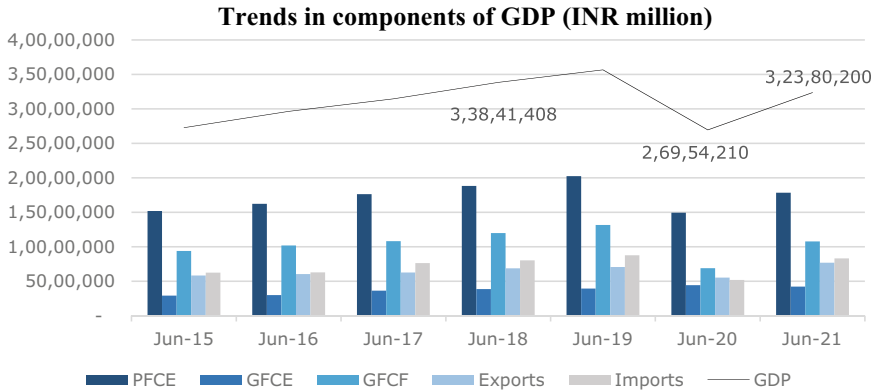


Fig. 13 Trends in components of GDP (INR million). *Source* Ministry of Statistics and Programme Implementation, Government of India [10]

Employment trends from FY77 to FY19, by area, gender, and sector (in percentage)

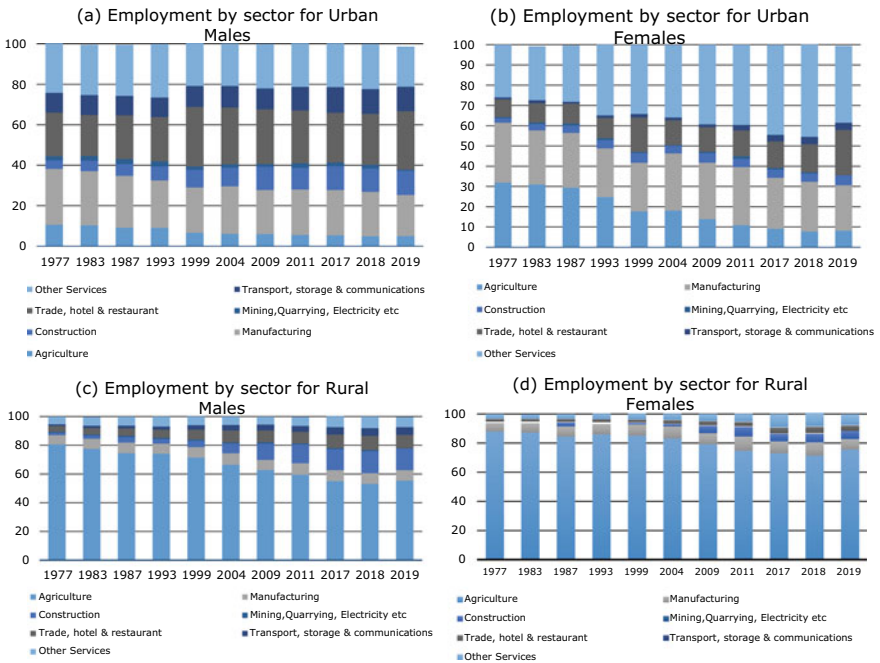


Fig. 14 Employment trends from FY77 to FY19, by area, gender, and sector (in percentage). *Source* Ministry of Statistics and Program Implementation, Government of India [10]

The unavailability of steady employment opportunities and social stigma restricted rural women to agriculture [26].

Thus, the absolute increase in female employment primarily occurred in low productivity sectors (agriculture being one such example). If women had access to the same work opportunities as men, the absolute increase in female employment would have been upto three times higher for this period [27].

The influx of youth in the job market from FY12 to FY18 [28] highlighted the dearth of non-agricultural jobs for this group as 30–59-year-old men took up 92% of all new non-agricultural jobs, disadvantaging women and young job seekers.

Impact of COVID-19¹⁰

Following the nationwide lockdown, the labor force contracted from 433 to 369 million i.e., by 14.7% between March and April 2020. The labor force recovered to March 2020 levels only in February 2021 (427 million), before contracting to 425 million in April 2021 due to the second wave of COVID-19. Recovery from the second wave was observed in August 2021 (434 million), a labor force figure which matched pre-COVID-19 levels in March 2020.

About 113.6 million persons lost their jobs as the number of employed individuals contracted from 396 million in March to 282 million in April 2020. By September 2020, the number of employed individuals were back to March levels at 398 million. The impact of the second wave was felt between April and May 2021, when the number of employed persons shrank by 15 million. The recovery was quick. The total number of employed individuals was back at 398 million in August 2021. The unemployment rate rose to 23.5% in April 2020 compared to 8.8% in March 2020. Unemployment gradually declined, recovering to March 2020 levels by July 2020 and declining further to 7.4% by August 2020. Following the second wave, unemployment rose again in May 2021 (11.8%). However, it recovered soon thereafter. In August 2021, the unemployment rate stood at 8.3%.

Impact on Employed Persons by Gender and Area

Of the 113.6 million workers who suffered job losses between March and April 2020, 15.4 million were women. The proportionate fall for women was higher as 37.1% of women lost their jobs, versus 27.7% men. Unlike the first wave, women bore not only a higher proportion but also a higher number of absolute job losses during the second wave. About 7.4 million persons suffered job losses in April, 2021, 5.4 million women versus 1.9 million men. Thus, women suffered 73% job losses (Fig. 15).

¹⁰ This section utilizes Center for Monitoring Indian Economy (CMIE) data.

Total number of employed persons during 2019-2021, by area and gender (in millions)

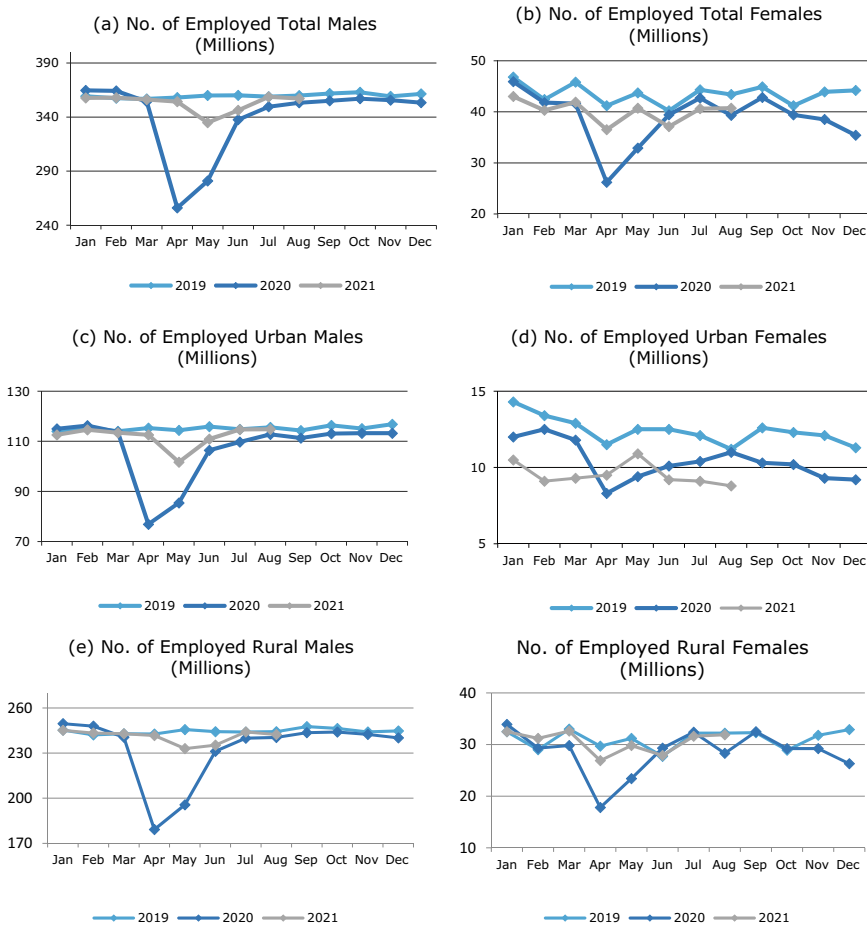


Fig. 15 Total number of employed persons during 2019–2021, by area and gender (in millions). *Source* Center for Monitoring Indian Economy (CMIE) Economic Outlook [20]

Urban female employment fell from 11.8 million in March 2020 to 8.3 million in April 2020, a drop of 29.2%¹¹ versus 32.4% for urban men. By March 2021, the number of employed urban women was also 20.9% lower than in March 2020, whereas the corresponding decline was only 0.3% for urban men. Rural female employment shrank by 40.2% versus 25.5% drop for rural men. Box 1 presents the results of consultations held with women’s groups, enterprises, farmer producer organizations, and informal workers on the impact of COVID-19 on their employment.

¹¹ The change in employment between two months has been calculated in relative sense using the rate of change formula: $\left\{ \left\{ \frac{\text{previous month}}{\text{current month}} \right\} * 100 \right\}$

Box 1**Impact of COVID-19 on working women: Women's perspective**

Women's overrepresentation in the sectors hardest hit by the pandemic, such as accommodation, food services, and the manufacturing sector, led them to suffer disproportionate job and income losses during COVID-19. Nikore Associates conducted consultations during the first and second waves with over 50 NGOs and community-based organizations (CBOs) that work to empower women.

In rural areas, women working in the agriculture sector were displaced due to the reverse migration of men to the city. Even if they held onto their jobs, it was difficult for them to sell their produce due to disrupted supply chains.

The presence of male relatives and children at home (due to closure of workplaces and schools) led to an increase in unpaid care work for women. The double burden of household chores and office work led to difficulties for women entrepreneurs and women in the corporate sector. For example, self-help groups (SHGs) mobilizer in Telangana shared that the women in her community were unable to attend trainings and SHG meetings owing to domestic work.

Women employed in the urban, informal sector faced prolonged income losses negatively impacting their family income. For example, a CBO in Madhya Pradesh revealed that families were reluctant to employ domestic helpers due to the fear of virus transmission. Flower vendors in Tirupati lost their livelihoods due to the absence of devotees at the temple.

Finally, the pandemic broadened the gender digital divide. As most activities shifted to the online sphere, consultations showed that low ownership of smartphones and a lack of digital literacy affected the economic participation of women. For example, a Mumbai based NGO shared that large family sizes necessitated mobile sharing. Coupled with financial constraints that limited the purchase of internet packages, male members of the family were given preferential treatment for usage of these facilities, leaving women behind.

Impact on Employed Persons by Occupation Groups

Between March and April 2020, small traders and wage laborers were the worst affected group, losing 79 million jobs, of which 59 million were in rural areas and 19 million in urban areas. Among salaried workers, 14 million jobs were lost, of which 10 million were in rural areas. About 18 million fewer urban business persons were employed, while 3 million fewer rural business persons were employed. While urban farmers increased by about 2 million, a similar number of rural farmers lost their jobs.

As trade and mobility restrictions eased, employment for small traders, wage laborers, and farmers recovered and crossed March 2020 levels by July 2020. In comparison, recovery in the business sector was slow as jobs could only recover above the March level by August 2020. On the other hand, urban salaried workers reached March 2020 employment levels only in January 2021, while rural salaried workers remained below March 2020 level even a year later.

Farmers faced the immediate impact of the second wave, where six million farmers lost their jobs between March and April 2021. Urban salaried employees were least affected by the second wave and their employment actually grew, whereas 3 million rural salaried employees lost their jobs. Impact on the business sector reflected in May 2021 as businesspersons fell to 68 million as against 74 million in March 2021. Impact on small traders and wage laborers was felt in June 2021 when 20 million lost jobs between March and June 2021. Of these, about 17 million were from rural areas (Fig. 16).

Impact on Employed Persons by Industry Groups

The number of persons employed in the industry sector contracted by 66.7% between March 2020 (96 million) to April 2020 (32 million). About 15 million persons lost their jobs in the agriculture sector (10%) compared to 33 million (22.1%) in the service sector (Fig. 17).

Recovery in the agriculture sector was swift as compared to the service and industry sectors. Agriculture recovered above the March 2020 level by June 2020 while the industry sector matched March 2020 level only by September 2020 and the services sector recovered only by October 2020.

The impact of the second wave was observed in the agriculture sector between February and March 2021 when the number of employed fell by 14 million. In the service sector, employed persons shrank by 10 million compared to 14 million in industry between April and May 2021. Recovery in agriculture and services was quick as they could reach March 2021 levels by May/June 2021. However, employment in the industry sector could not recover to February/March 2021 levels even by August 2021.

When considering industry sub-sectors, it can be seen that real estate and construction suffered the deepest job losses between March to April 2020 with employment contracting by 87.3% from 55 to 7 million. The manufacturing sector saw the number of employed individuals contract by 44.7%. Within manufacturing, the number of employed individuals contracted in cement and construction (57.3%), textile and leather (42.5%), and handicraft (38.1%) between March and April 2020. The real estate and construction sectors recovered soon as the number of employed persons matched March 2020 levels by July 2020. The impact of the second wave was observed in May 2021 as the number of employed people contracted in mining (<1 million), manufacturing (3 million), real estate, and construction (12 million)

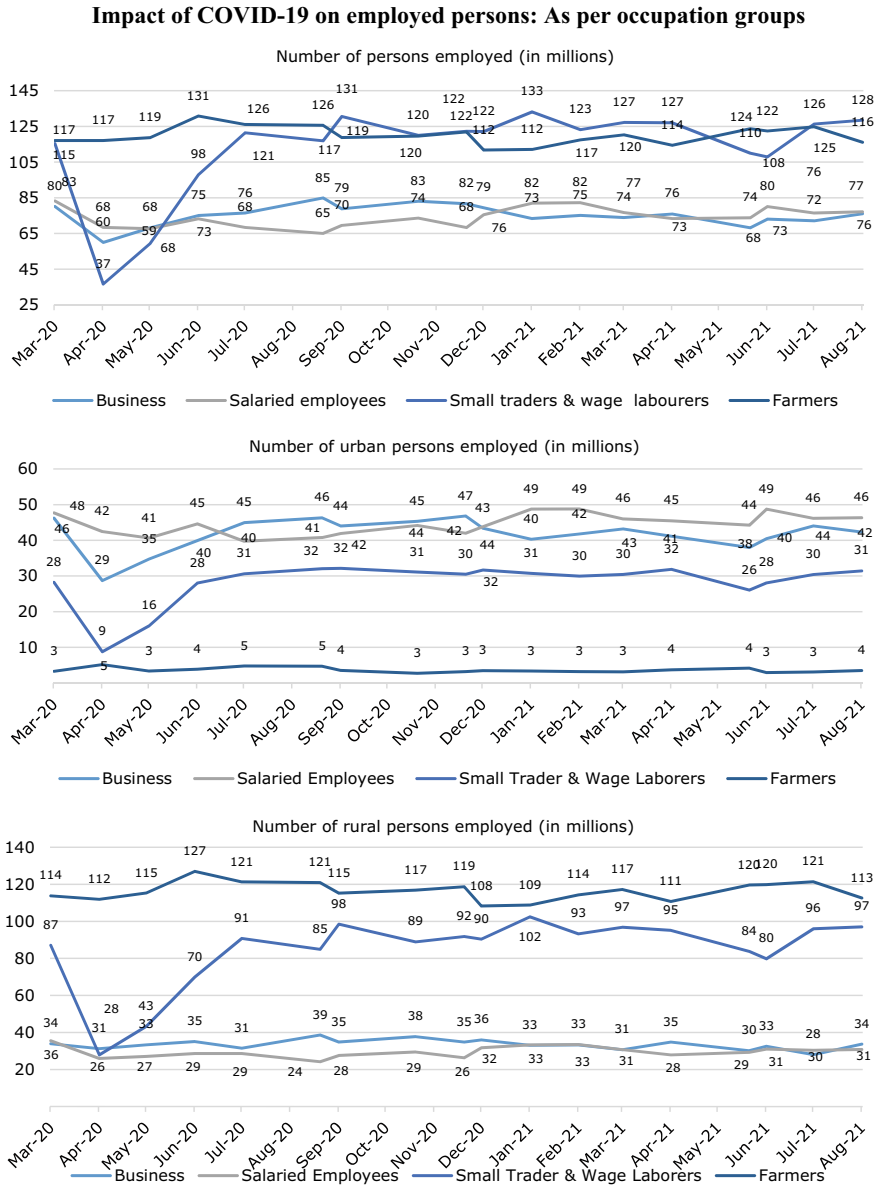


Fig. 16 Impact of COVID-19 on employed persons: As per occupation groups. *Source* Center for Monitoring Indian Economy (CMIE) Economic Outlook [20]

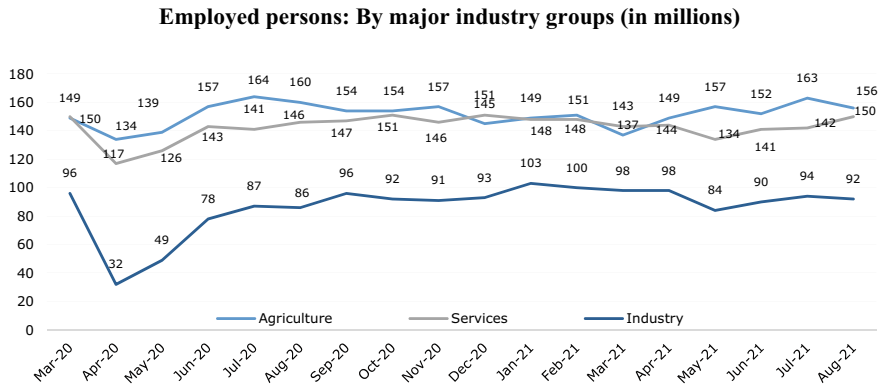


Fig. 17 Employed persons: By major industry groups (in millions). *Source* Center for Monitoring Indian Economy (CMIE) Economic Outlook [20]

between April and May 2021. Notably, manufacturing did not recover to March 2020 levels even by August 2021 (Fig. 18).

Alternatively, among the sub-sectors of the services sector, it can be noted that employment in the hotel and tourism industry contracted by 40.7%, education by 28.1%, and wholesale and retail trade contracted by 20.2% between March and April 2020. Employment in the wholesale and retail trading industry recovered above March 2020 levels by August 2020, whereas the hotel and tourism industry could only recover by October 2020. Employment in the education sector continues to be lower in August 2021 than in March 2020. Following the second wave, employment in wholesale and retail trade fell by 13.9% and in the hotel and tourism industry by

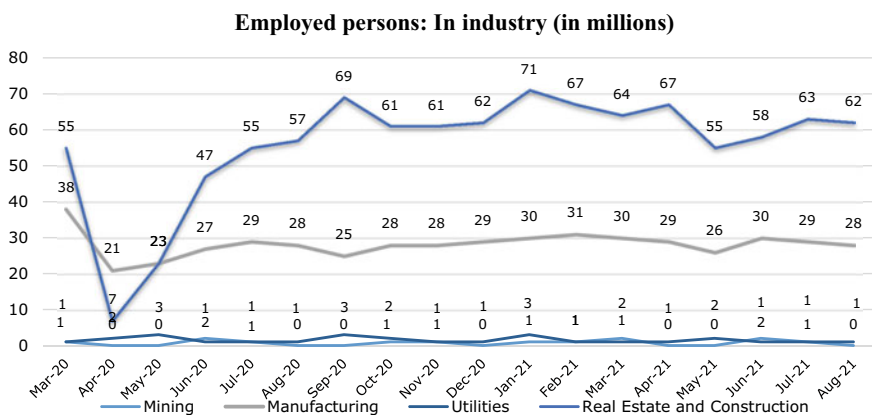


Fig. 18 Employed persons: In industry (in millions). *Source* Center for Monitoring Indian Economy (CMIE) Economic Outlook [20]

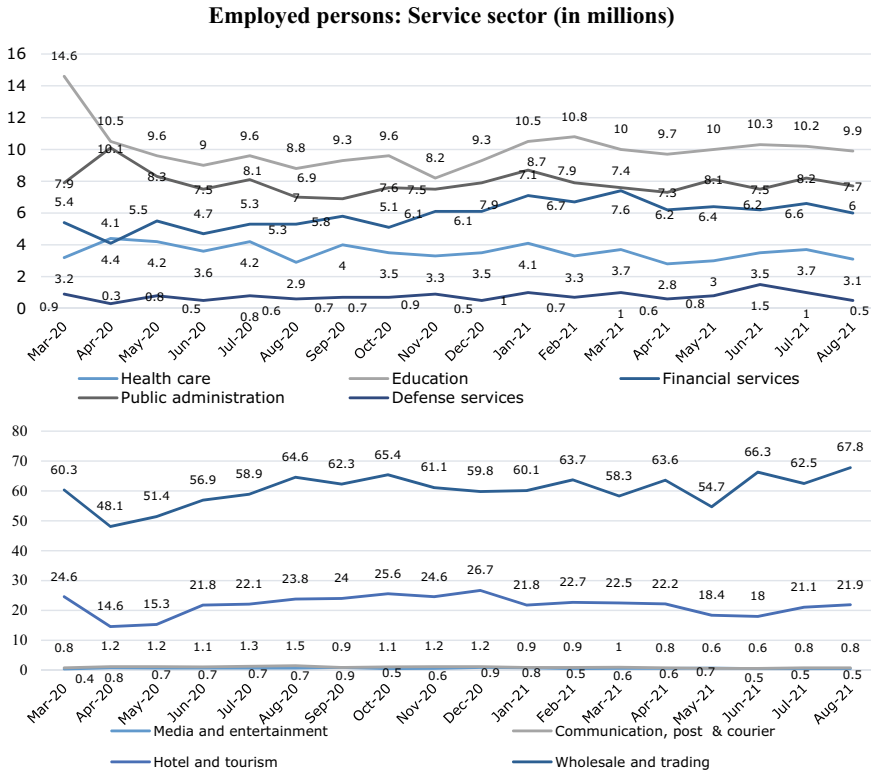


Fig. 19 Employed persons: Service sector (in millions). *Source* Center for Monitoring Indian Economy (CMIE) Economic Outlook [20]

17.1% between April and May 2021. However, employment in both sectors recovered by June 2021 (Fig. 19).

The wholesale and retail trading industry recovered above March 2020 levels by August 2020, (64.6 million in August compared to 60.3 million in March), whereas the hotel and tourism industry could only recover by October 2020, 25.6 million in October compared to 24.6 million in March.

The impact of the second wave was observed on the number of employed individuals in wholesale and retail trading (contraction of 8.9 million) and the hotel and tourism industry (contraction of 3.8 million) between April and May 2021. However, recovery was rapid as hotel, tourism, wholesale, and trading sectors added to the job market.

Micro, small, and medium enterprises (MSMEs) were among the worst hit in both the manufacturing and services sub-sectors; they suffered heavy job losses. Box 2 presents a closer look at the industry perspective of the impact on MSMEs.

Box 2**Impact of COVID-19 on MSMEs—Industry perspective**

Pre-COVID, the MSME sector faced a lack of cost competitiveness and many small firms were stuck in cycles of low productivity and informality. The sector was already struggling with demonetization, GST, and a slowing economy when COVID-19 hit.

The pandemic dealt a heavy blow to MSMEs stunting their growth and exacerbating pre-existing issues. The size and scale of MSMEs led to lower bargaining power resulting in delayed payments for goods and services supplied. This malaise continued to plague the growth of the sector in spite of legal remedies. Further, delayed payments resulted in a working capital crunch. Thus, MSMEs had to utilize cash reserves to resolve payment issues with difficulties in borrowing from formal sources.

The Global Alliance for Mass Entrepreneurship LEAD micro-enterprise survey found that 57% of micro-enterprises had no cash reserves, while 65% had to dip into personal savings to manage their operations [29]. Another issue plaguing MSMEs was order cancellations [30]. This added to the inventory stock and to the cost of managing piled up inventory, further leading to working capital constraints.

An April 2020 survey by The Federation of Indian Chambers of Commerce & Industry (FICCI) found that 73% of MSME businesses reported a drop in orders, while 50% indicated that their inventory levels were up by over 15% [30]. The pandemic also disrupted the expansion plans of MSMEs. Many had to restructure their operations and plan a new trajectory for growth. Plans for their future also remained uncertain due to the lack of safety nets.

While some MSMEs used creative methods such as technological upgrades to survive, many had to shut down due to disrupted supply chains and transformed consumer habits; 30–40% of MSMEs in India may cease to exist as the pandemic continues [31].

Personal Protective Equipment (PPE) manufacturing emerged, on the other hand, as a key growth driver for MSMEs. Nearly 1,100 indigenous manufacturers from textile clusters across India pivoted toward PPE manufacturing. This led to India emerging as the second largest manufacturer of PPE in the world within just two months of the onset of the pandemic—with a daily production rate of over 500,000 kits by May, 2020 [32].

Change in average monthly household per capita income during November 2019 to October 2020 (in percentage)

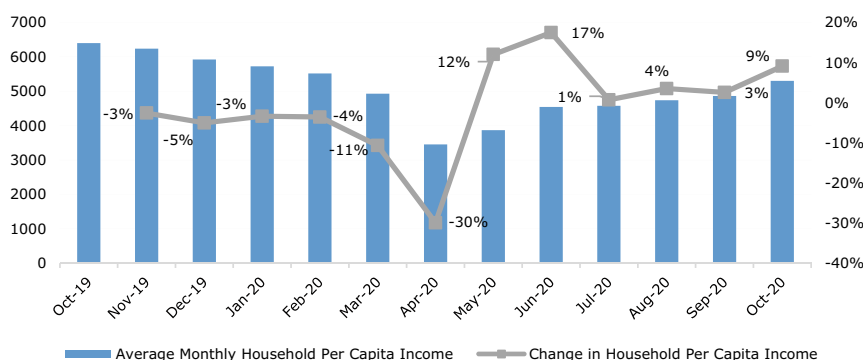


Fig. 20 Change in average monthly household per capita income during November 2019 to October 2020 (in percentage). *Source* State of Working India 2021 calculations based on CMIE-CPHS data [33]

Impact of COVID-19 on Incomes

Average monthly household per capita income (PCI) showed a declining trend even before the COVID-19 lockdown, falling from INR 6,401 in October 2019 to INR 4,929.6 in March 2020. Per capita income then fell sharply to INR 3,453.6 in April 2020. It only recovered by October 2020 (Fig. 20).

While the permanent salaried class was shielded, with their monthly incomes dropping only 5%, casual workers saw their monthly income shrink by 13% in 2020. This was the outcome of lay-offs and no social security safety nets. Similarly, the incomes of self-employed and temporary workers also shrank by 18% and 17% (Fig. 21).¹²

Mobility restrictions and shortage of essentials due to disrupted supply chains had an immense impact on the prices of essential commodities. Rising inflation and higher cumulative income losses among the vulnerable workforce segments worsened the effects of income disparity creating a survival crisis (Fig. 22).

¹² Temporary salaried workers are predominantly support staff, industrial workers and non-industrial technical employees as compared to permanent salaried who are engaged in primary activities of the firm. Casual/daily wage workers are those depending on freelance jobs. Self-employed are those not drawing salaries from another entity.



Fig. 21 Change in monthly earnings in 2019–20 by employment category (in percentage). *Source* State of Working Capital 2021 calculations based on CMIE-CPHS data [33]

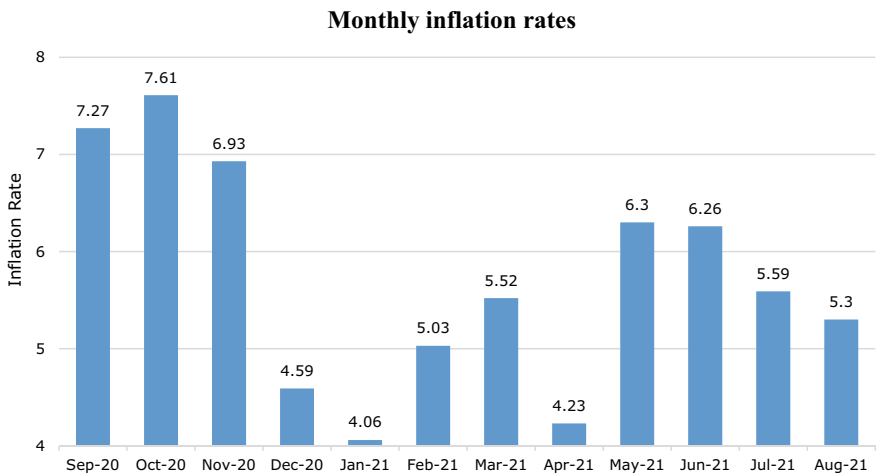


Fig. 22 Monthly inflation rates. *Source* Ministry of Statistics and Program Implementation, Government of India [10]

Poverty and Increasing Inequality

Rising Poverty

Between FY10 and FY11, the proportion of the population earning less than USD 1.90/day fell from 63% to 22.5%. India was among the only four countries which halved their Multidimensional Poverty Index (MPI) value in a span of

Table 6 Estimates for number of people pushed into poverty in 2021

Organization	Region	Poverty line	Number of poor
World Bank	South Asia	USD 1.9/day	49–56 million
Asian Development Bank	Asia	USD 1.9/day	75–80 million
Azim Premji University	India	INR 375/day	230 million

Note Extreme poverty is measured as the number of people living on less than USD 1.90 per day; 2017 was the last year with official global poverty estimates

Source Poverty and Shared Prosperity 2020, PovcalNet for Global; State of Working India 2021, Azim Premji University, Author's calculations based on Consumer Pyramids Household Survey (CPHS) data by the Center for Monitoring Indian Economy (CMIE) for India [40–43]

10 years (FY06–FY16) with the greatest drop of 273 million in its number of multi-dimensionally poor people [34, 35]. The infant mortality rate¹³ dropped from 66.7 per 1,000 live births in 2000 to 28.3 in 2019 and literacy rates rose as access to primary and secondary schooling accelerated. Secondary school enrollment increased from 45% in 2000 to 74% in 2019 [10]. This facilitated inter-generational impacts on education and healthcare.

Post-COVID-19, however, initial estimates suggest that South Asia and India in particular will witness rising poverty. The World Bank estimates that global poverty¹⁴ will rise for the first time in twenty years, with South Asia contributing to 49% of this increase [36]. Estimates from the Asian Development Bank show that number of poor are set to increase by 75–80 million across Asia [37]. Researchers from the Azim Premji University estimated that poverty in India was expected to drop by 5% in rural areas and 1.5% in urban areas between 2019 and 2020, lifting approximately 50 million people above the national minimum-wage threshold-line of INR 375/day [38, 39]. Instead, the pandemic led to an anticipated rise in poverty by 15.6% in rural areas and 19.7% in urban areas, respectively pushing an additional 230 million persons into poverty [39] (Table 6).

Growing Income Inequalities

India's growth experience has been in line with cross-country evidence¹⁵ wherein income inequality has risen in good and bad times.¹⁶ The share of national income accruing to the top 10% of the population increased from 36% in 1992 to 57% in

¹³ Deaths per 1,000 live births of children under one year of age.

¹⁴ As per the USD 1.90/day line.

¹⁵ OECD three-part flagship series on trends, causes and remedies to growing inequalities.

Part 1—Growing unequal? (2008).

Part 2—Divided we stand: why inequality keeps rising (2011).

Part 3 – In it together: why less inequality benefits all (2015).

¹⁶ Incomes of the richest 10% when compared to the poorest 10% stood at a ratio of 7:1 in the 1980's, growing to 8:1 in the 1990's, and to 9:1 in the 2000s.

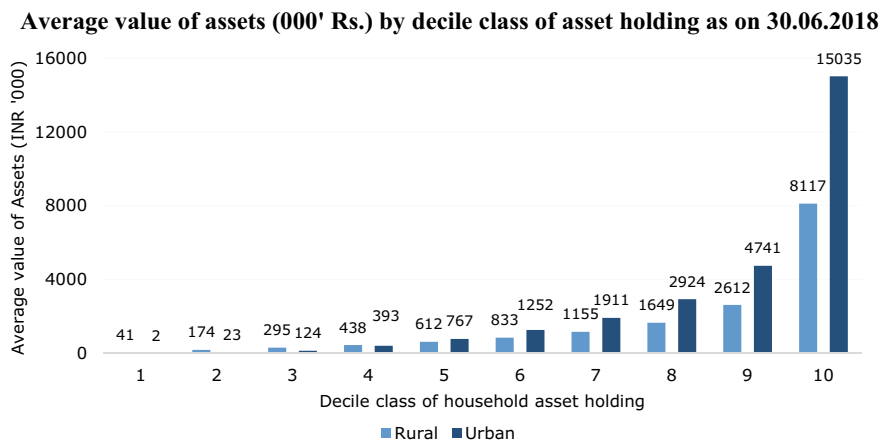


Fig. 23 Average value of assets (000' Rs.) by decile class of asset holding as on 30.06.2018. *Source* All India Debt and Investment Survey, NSSO 2019–20 [48]

2019. In the same period, the share of the middle 40% fell from 46 to 30% and that of the poorest 50% dropped from 21 to 12%—indicating polarized post-liberalization growth [18, 46]. As of 2019, the richest 10% in India owned over 50% of the total assets, whereas the bottom 50% owned 10%. The average value of assets owned also demonstrates exceptionally large disparities not just between the top and bottom decile classes, but also between decile 8 or 9 and decile class 10 (Fig. 23).

Following this trend, income equality and divergence also increased post-COVID-19, and the middle classes were among the worst affected. India's middle class is estimated to have shrunk by 32 million in 2020 (Fig. 24) [42]. This roughly accounts for 60% of the global reduction in the number of people in the middle-income categories (incomes of USD 10–20 a day) [5, 6]. On average, 84% of Indian households reported declines in incomes in May 2020. Households in second and third quintiles, whose monthly per capita incomes ranged between INR 3,801 and INR 5,914 and between INR 5,914 and INR 8,142 were the worst hit, with 91–93% of respondents in these categories reporting a loss of income, higher than the proportion (85%) in the INR 0 and INR 3,814 categories [43].

The cumulative loss of income was more severe for lower-income households those that fall within higher income categories. The percentage of households reporting zero income post the onset of the first wave increased drastically by 10.1% in April 2020 and 8.3% in May 2020 [45] (Fig. 25).

Evidence regarding the differential impact on urban versus rural households was mixed. Bertrand, Dizon-Ross, et al. (2020) found that rural households were disproportionately impacted with 88% of rural households reporting a fall in income under the lockdown compared to 75% of urban households in May 2020 [43]. On the

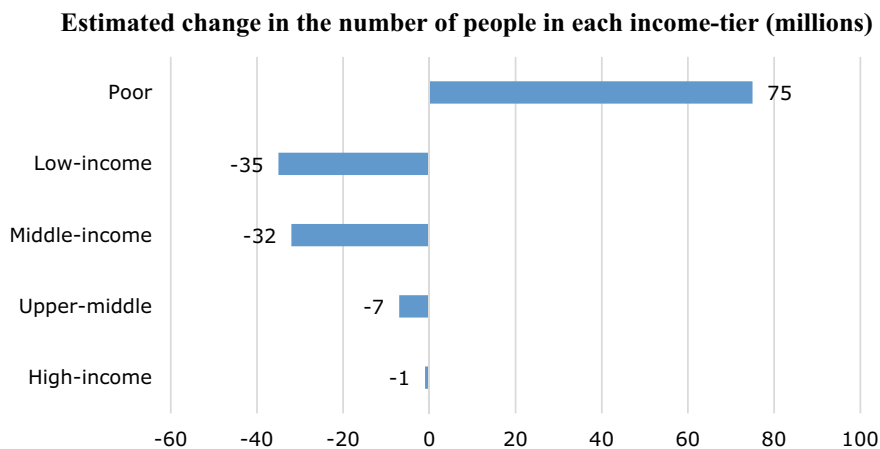


Fig. 24 Estimated change in the number of people in each income-tier (millions). *Source* PEW Research Center Analysis of data from the World Bank PovcalNet Database [41]

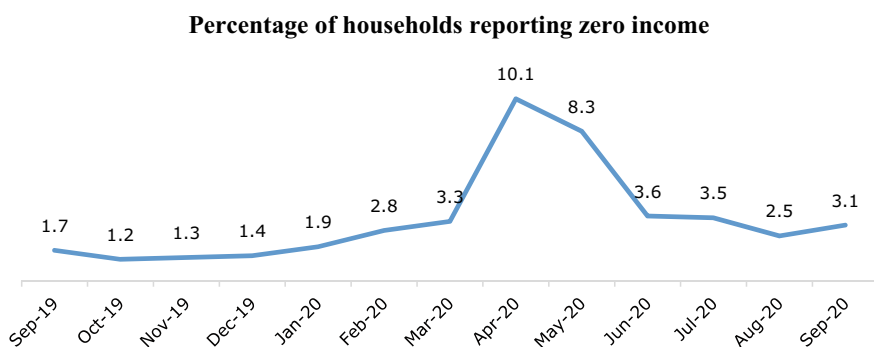


Fig. 25 Percentage of households reporting zero income. *Source* Household savings in the time of COVID-19, Dvara Research, 2021 [45]

other hand, the first COVID-19 and Livelihoods in India Phone Survey (CLIPS)¹⁷ conducted by Azim Premji University in April and May 2020, found that 83% of urban versus 73% of rural households were consuming less food than before and 64% of urban versus 35% of rural households did not have enough money to purchase a week’s worth of essentials [44].

Overall, between March to October 2020, a 10% decline in mobility was associated with a 7.5% decline in household income across states. There was a fall in aggregate income with 90% of the decline stemming from reduced earnings and

¹⁷ In Azim Premji University CLIPS (panel of 2,778 respondents from vulnerable households across 12 states); 90% respondents reported that households had suffered reduction in food intake due to lockdown.

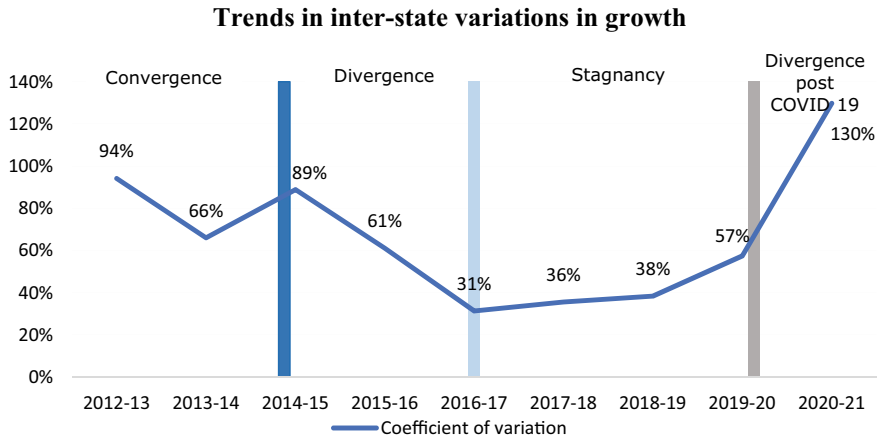


Fig. 26 Trends in inter-state variations in growth. *Source* CMIE, States of India

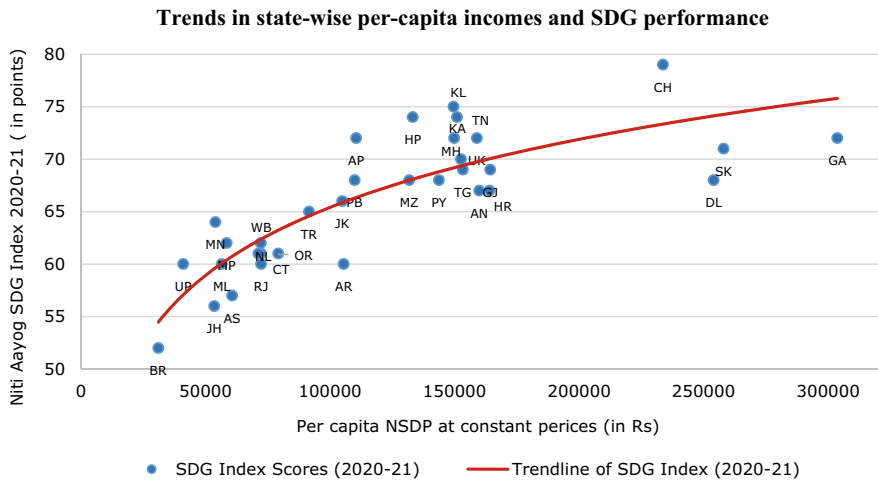


Fig. 27 Trends in state-wise per capita incomes and SDG performance. *Source* SDG Index NITI Aayog [52], Ministry of Statistics and Programme Implementation [10]

10% from job losses. This suggests that while most workers could return to their jobs eventually, they had to settle for lower wages. Households adjusted to the pandemic by borrowing, reducing food intake, and selling assets [40]. Moreover, the second CLIPS survey in October-December 2020 found that for 60% of households, food intake had not recovered to pre-lockdown levels.

The divides witnessed in income and asset holdings distribution are an indication of growing disparity and imbalances in growth patterns: across states, regions, gender,

and income classes. This evidence breaks down notions of the trickle-down effect working for the benefit of all.

A Roadmap to Recovery: Key Principles to Ensure an Inclusive Agenda

The pandemic had a catastrophic impact on the economy reversing decades of policy and action on sectoral transformation, job creation, and poverty alleviation. Though the second wave prompted international institutions to downgrade India's growth prospects for FY22, recent GDP estimates show a record high growth rate of 20.1% in Q1-FY22. Even though this is a result of a low base year, it is an indication of the country embarking on a path of recovery.

However, even as GDP growth partially recovered, recuperation in employment was slow and uneven. Of the ~ 20 million jobs lost on account of COVID-19, ~17 million were from rural areas compared to ~2 million from urban areas. Over 10% of the affected rural services workforce still faces income losses. As a response, the job market shifted toward informalization. Laid off workers moved to more precarious and informal forms of employment, indicated by nearly half of the formal salaried workers moving to informal work over FY20-FY21. It is critical that the growing informal workforce is protected through restructuring their debt and improving their access to formal credit and employment.

The number of households earning zero incomes rose, accompanied by huge losses for low- and middle-income groups. As a result of savings being dented to afford treatment, borrowings of poorer households were at a much higher multiple of their pre-pandemic incomes compared to richer households¹⁸ [35].

Predictions for the future hinge on the coverage achieved by vaccination drives. So far about 25% of the total adult population has been fully vaccinated. However, the pace significantly improved in the latter half of 2021 [49]. Bearing this in mind, the next section aims to highlight three key principles that place inclusivity at the heart of the recovery agenda, as the Center and the States embark on economic revival post-COVID-19.

Promoting Balanced Growth and Attainment of Sustainable Development Growths (SDGs) Across States

An analysis of state level growth trends over the last two decades (1990–2020) demonstrates a high variation of economic growth across states. Madhya Pradesh,

¹⁸ For instance, median income of bottom 25% in Feb 2020 was 4,000 and the loan that they had taken to finance their food, health etc. was 12,000. Whereas top 25% households with median income of 18,000 took loans on average of 30,000.

Maharashtra, and Gujarat recorded the highest growth rates over the last decade, while the densely populated states of Uttar Pradesh, Bihar, Punjab, and Rajasthan among others recorded below national averages for the same period. This continued post-pandemic resulting in the Y-o-Y inter-state variation¹⁹ at an unprecedented rate of 130% [50].

States are entering a post-COVID-19 phase having differential resources and capacities to recover from the effects of the pandemic. The contraction of economic activity meant that states had close to zero growth in revenue and an enhanced burden of expenditure [51]. High-income states and those with greater institutional capacity had an advantage, as recovery driven growth tends to be concentrated in these states. This is indicated by the fact that the high-income states attracted a greater chunk of incoming FDI post the first lockdown [21]. Similar trends were also evident from the *NITI Aayog* Sustainable Development Goals (SDGs) Index, which demonstrated that high-income states of Maharashtra, Gujarat, Tamil Nadu, Karnataka, Kerala, Himachal Pradesh, Telangana, and Uttarakhand outperformed others in the achievement of the SDGs [52].

Consequently, there is a need to ensure that channels for inter-state convergence are provided by the central government in the form of interregional capital mobility and redistribution of incomes aided by renewed grants to low-income states [54]. Centrally planned schemes like the Smart Cities Mission and the Aspirational Districts Program provide an impetus to growing cities, incentivizing states to improve. An upgradation of these schemes can either expand the scope of work undertaken, or widen the coverage of urban areas and districts covered, to incentivize participation of lower-income states.

There is a strong focus on long-term infrastructure development through central government initiatives such as the National Infrastructure Investment Pipeline (2020–2025), the National Industrial Corridor Development Program (with industrial projects identified till 2027), the National Maritime Vision 2030, and the National Rail Plan 2050. However, it needs to be ensured that the investments made by the public sector and leveraged by the private sector reach underserved districts and do not remain concentrated in specific geographies.

To tackle the issues of social inequity, enabling access to and mobilizing public and private investments in sectors like healthcare and education are vital. For education, expanding the coverage of telecom infrastructure and subsidized data plans for people in rural and remote areas can help address digital divides [56]. For healthcare, higher allocations are required to expand rural healthcare capacities to contain the spread of contagious diseases, provide emergency care, and reduce rates of infant,

¹⁹ The coefficient of variation (relative standard deviation) is a statistical measure of the dispersion of data points around the mean. The standard formula for the coefficient of variation is expressed in the following way:

$$\text{Coefficient of Variation} = \sigma/\mu \times 100\%$$

Where:

σ – the standard deviation.

μ – the mean.

maternal, and neonatal mortality [52]. Universal health coverage, including financial risk protection and access to quality essential health services, medication, and vaccines for all, are some measurable ways to achieve this [53]. Enhancing the state of preparedness across states is critical. Investing in well-established oxygen logistics systems, and healthcare backup facilities, especially in rural areas, would help the readiness for emergency time responses [55].

Facilitating Gender-Inclusive Economic Recovery

An analysis of data over the last seven decades shows that women's work is largely informal, invisible, and labor-intensive [57]. Women's labor and work force participation declined and consistently remained below that of men. There was an exodus of women from the labor force, particularly in rural areas. There is a preponderance of women in traditional sectors with low labor productivity such as agriculture, handicrafts, handlooms, and textiles. Despite improvements in education, rising household incomes, liberalization, and increased linkages with global value systems, the exodus of India's women from the labor force continues.

In this context, the COVID-19 pandemic came as a shock resulting in massive job losses for women—especially informal workers—and the slower recovery of women-led micro-businesses. It also increased domestic work, deepened gender digital divides, exacerbated gender-based skills and educational gaps, and placed millions of female health workers at risk. It is essential to take concerted policy action to bring women back to work, not only because bridging these gender gaps can add USD 770 billion to India's GDP by 2025 [58], but also because financial independence is a key tool for breaking the cycles of violence, discarding antiquated social norms, and ensuring that women have a voice.

To chart a gender-sensitive socioeconomic recovery in India, governments, the private sector, media, and the social sectors should work along three common areas: (i) expand gender budgets at the central and state levels; (ii) invest in creating a care work economy; and (iii) enhance efforts to boost women's workforce participation.

India's Gender Budget between 2005–06 and 2020–21 remained in the range of 4–6% of the total expenditure and less than 1% of GDP. In 2021–22, despite the disproportionate impact of COVID-19 on women, the Gender Budget fell to 4.4% of the total budgetary expenditure and 0.7% of GDP. Progress on gender budgeting at the state level remains uneven. Moving forwards, the Central Government should undertake a gender needs assessment study to recalibrate the total fiscal envelope available for the Gender Budget, broaden allocations across ministries, and target finances toward emerging priority areas post-COVID-19. Gender audits of centrally sponsored schemes (CSSs) and flagship programs such as the *Atmanirbhar Bharat Abhiyan* should be undertaken to signal the importance of reporting gender impacts. In addition, the Gender Budget Statement should include measurable outcome and output indicators and their annual progress should be reported. Most importantly, the

collection of gender disaggregated data should be mainstreamed as a basic minimum requirement across dashboards of all CSSs [59].

India spends less than 1% of its GDP on care work, infrastructure, and services including pre-primary education, maternity, disability and sickness benefits, and long-term care [60]. A medium-term plan to increase public investment in Care Economy Infrastructure offers India a credible instrument to meet multiple policy objectives including job creation for women, enabling gender inclusive economic growth, and reducing gender-based income inequalities. Estimates suggest that investing an additional 2% of the GDP in the Indian healthcare sector has the potential to create 11 million additional jobs, nearly a third of which would go to women [61]. Investing in care infrastructure can also prevent ‘occupational downgrading’ so that women become less likely to end up with lower pay when looking for flexibility or part-time roles owing to care work responsibilities. Recognizing *anganwadi* workers (AWWs), auxiliary nurse midwives (ANMs), accredited social health activists (ASHAs), and domestic help (among others) as formal sector workers would allow their economic contribution to be counted in the GDP. Investment in care infrastructure and services can also be in the form of public private partnerships (PPPs) to develop and leverage the expertise of the private sector.

Governments can work to increase the proportion of women in the workforce. They can establish gender-based employment targets for urban public works, introduce wage subsidies to incentivize hiring women in small enterprises, increase preferential procurement from women’s enterprises, and introduce gender targets across skills training institutions so that a pipeline of workers is created across varied job roles. Corporate entities should track the proportion of women employed at different levels of seniority and in different job roles. Government and private sector organizations must increase investment in the care economy and support measures to bridge the gendered digital divide including distributing mobile handsets and improving digital literacy programs for girls. Employers, community organizations, and the media should promote the anthem of making men equal care work partners.

Transitioning to a Green Economy

Unless immediate cuts on global greenhouse gas emissions are enforced, limiting warming close to 1.5 °C or even 2 °C is beyond reach. The Intergovernmental Panel on Climate Change’s (IPCC’s) Sixth Assessment Report of 2021 reveals that the average surface temperature of the earth will cross 1.5 °C above pre-industrial levels by 2040 and 2 °C by the middle of the century without a sharp reduction of emissions. This is the first time that the IPCC has reported that the 1.5 °C warming is inevitable even in a best-case scenario. Reaching global net zero emissions by 2050 is the minimum required to keep the temperature rise to 1.5 degrees Celsius. It signals a code red situation for the pace of climate change in 2021. However, the world has already depleted 86% of its available carbon budget. This has catastrophic implications for the warming of seas and sea level rises, rainfall patterns, and agriculture disadvantaging

those unable to afford means of individual resilience and creating millions of potential climate refugees [62].

India submitted an ambitious nationally determined contribution statement (INDC) in 2015 targeting a reduction in the emissions intensity of its GDP by 33–35% by 2030 from 2005 level [63]. In line with these targets, numerous sectoral interventions that promote greening of the economy were introduced in the last few years such as the PM- *Krishi Sinchai Yojana* for micro-irrigation and groundwater conservation [64], PM-*KUSUM* for solar pump subsidization and the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) scheme for greater integration of electric vehicles in transport systems [65]. Improved agricultural practices like crop suitability studies, flood management protocols, and crop insurance schemes are now widespread enhancing agricultural resilience.

Moving forward, climate resilient sectoral plans should become the norm with environmental considerations being woven into every area of policy rather than an isolated policy or legal measure. Sustainable development must be integrated into mainstream economic urban and rural governance.

The integration of environmental goals in strategic planning, budgeting fiscal and financial sector policy coupled with SDG aligned budgeting—known as green budgeting—can help with better alignment of government spending on environmental objectives and incentivizing green industries and infrastructure [66].

The agricultural sector has huge opportunities for micro-irrigation systems to improve water efficiency with the support of institutions among the nodal departments implementing PMKSY schemes [64]. Providing subsidies in this area would encourage more farmers to adapt to these systems thereby revitalizing groundwater conservation efforts. The dependence of rural economies on agriculture requires improved practices that include crop suitability studies, flood management protocols, and crop insurance schemes to minimize the damage done and faced by agriculture. This can be further augmented by harnessing big data to improve information availability and accuracy of monitoring and prediction systems.

While coal was used to meet Indian energy demands over the last few decades, transition toward reduced usage requires significant public investment and long-term planning in order to develop comprehensive guidelines for the systematic closure of coal assets, local restoration, and skills training to optimize renewable energy consumption and to mobilize financial resources to transform energy production and consumption patterns. In order to swiftly move away from coal, funding is required to support coal dependent communities to repurpose former coal production facilities and decommission polluting coal fired power plants [67].

Additionally, India's public procurement market (20–25% of its GDP) holds great potential as a sphere of interaction between the public and private sectors. Enhanced green standards and procurement conditions can be built into contracts to incentivize the private sector to upgrade manufacturing practices and transition towards low emission, water efficient industrial processes. Green public procurement can, therefore, assist in the larger transition toward green manufacturing [68].

Similarly, infrastructure sub-sectors including housing, waste management, and transport are important areas for climate action. The uptake of electric vehicles in the market has already been prioritized with nineteen states releasing mobility plans that focus on emission cuts and with incentives for those producing and purchasing electric vehicles (EVs) [69]. Corporate entities should begin to abide by environmental, social, and corporate governance (ESG) accounting standards that enable them to monitor their impact on the environment. Government and private sector organizations must increase investment in the green economy and support measures to enable transitions for MSMEs and traditional manufacturers.

Concluding Comments

India's GDP grew six times post-liberalization from USD 507 billion in 1990 to USD 2.9 trillion in 2019 [10]. For the same period, per capita-gross national income (PC-GNI) only grew 3.5 times from USD 574 in 1990 to USD 2131.8 in 2019.

Of the four instances of growth decline seen in India over the last few decades (FY58, FY66, FY73, and FY80), FY80 was the worst at a 5.2% contraction. However, with the overall economy contracting by 7.3% in FY21, 2020 has become the year of the most severe economic contraction in the country's history. The impact of the pandemic induced slowdown was uneven bringing about growth divergence and resulting in disproportionate job and income losses among the poor, women, and other disadvantaged groups.

The services sector led the contraction with growth in gross value-added decelerating by 8.4% in FY21. The industry showed a GVA contraction of 7%, with construction showing the largest decline at 8.6% and manufacturing declining by 7.2%. Agriculture was the sole sector to show positive growth of about 3.6%, cushioning some of the harsh macro-economic shocks through FY21, despite its shrinking share in output for the last two decades. The sector also absorbed returning urban migrants and the transitory unemployed workforce in 2020, providing a safety net to a vast majority of the population.

Consumption and investment were the major drivers of India's growth over the last fifteen years. However, in FY21, private final consumption expenditure contracted by 9.1%, and gross fixed capital expenditure by 10.1%. The increase in government expenditure (by 2.9%) and reduction in imports (by 13.6%) could not stem the overall impact of the massive fall in these growth drivers. However, despite weak domestic investment, foreign direct investment flows rose to their highest levels over the last fifteen years, signaling a positive outlook for recovery.

The human impact of the COVID-19 crisis is best gauged by studying its impact on labor markets. For nearly 1.5 years, labor markets were in a flux with workers losing jobs owing to the two waves of the pandemic. Following the nationwide lockdown, the overall size of the labor force shrank from 433 to 369 million, i.e., by 14.7% in April 2020 and nearly 114 million persons lost their jobs. The labor force recovered to March 2020 levels by February 2021. But contraction was witnessed

again following the second wave. Recovery from the second wave was seen only in August 2021, when both labor force and employment levels were slightly higher than in March 2020.

Women were among the first to lose their jobs and the last to get rehired. In April 2020, women formed about 14% of the job losses even though a higher proportion of women lost their jobs. However, in April 2021, women suffered 73% of the overall job losses. Small traders and wage laborers suffered the highest job losses during the first wave, while farmers were the worst affected during the second wave.

The pandemic also created reversals in the process of poverty reduction with estimates showing that upto 230 million Indians could fall back below the poverty line of INR 375/day (USD 4.97/day) in 2020. Moreover, the share of national income accruing to the top 10% of the population increased from 36% in 1992 to 57% in 2019. During the COVID-19 pandemic, the richest 10% of Indians owned about 50% of total household assets. In this context, COVID-19 came as a shock which hit the middle classes and the poorest the hardest with estimates suggesting that 32 million middle-income persons (incomes of USD 10–20 per day) and 35 million low-income persons (incomes of USD 2–10 per day) could fall into poverty (below USD 2 per day).

The culmination of demand–supply shocks, mobility restrictions, and the unique defining feature—the extremely high degree of uncertainty made post-COVID-19 recovery the defining challenge of the 2020s decade. Over the past year, economists from across rating agencies, business houses, and even multilateral organizations revised their growth outlook for India (and other economies) multiple times because of this persistent uncertainty.

The recession will deepen if the process to bring the pandemic under control is prolonged as accumulated financial stress will trigger defaults and tougher recoveries [70]. While most advanced economies achieved this, long-term effects were apparent in emerging market economies that faced larger outbreaks. The future outlook for India is, therefore, largely dependent on how the pandemic evolves. Pathways to steady and uninterrupted economic recovery lie in the success and speed of the country's vaccination drive necessitating continued co-operation between central, state, district, and *panchayat* level agencies (as was displayed in 2021).

The second wave dissipated quicker than anticipated with the Indian economy displaying some resurgence. The GDP grew at record levels of 20.1% for Q1-FY22 as states lifted lockdowns and travel patterns returned to normal. The economic impact of a third wave, if it occurs, is expected to be limited now that vaccination programs are progressing as planned [22] and that nationwide serological surveys find that two-thirds of the population has some antibodies against the virus [71].

Looking forward, it is necessary not only to make up for these economic shocks, but also to resume the task of nation building. While the government has taken several measures by way of fiscal stimuli and interventions to improve health related outcomes to tide over the immediate crisis, a greater focus is required to reduce inequalities at several levels. First, inter-state divergence in economic growth and SDG performance needs to be bridged, with a great focus on ensuring that public investment is directed toward lower-income regions, especially in light

of constrained state fiscal resources post-COVID-19. Second, a gender-responsive economic recovery strategy is required to ensure an increase in women's representation in the workforce necessitating investments in the care economy for job creation. And finally, India needs a long-term transition plan toward a green economy which reduces dependence on fossil fuels and spurs new investments in renewable energy, electric vehicles, waste water management, green manufacturing, and climate resilient agricultural practices.

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Appendix 1: List of Definitions

Terminology	Definition
Decile class	A decile is a quantitative method of splitting up a set of ranked data into 10 equally large subsections
Gender budgeting	Gender Budgeting is a process of identifying gender specific barriers across all sectors of development
Intended Nationally Determined Contributions	Intended Nationally Determined Contributions are (intended) reductions in greenhouse gas emissions under the United Nations Framework Convention on Climate Change
Multidimensional Poverty Index	The global Multidimensional Poverty Index is an international measure of acute multidimensional poverty covering over 100 developing countries. It complements traditional monetary poverty measures by capturing the acute deprivations in health, education, and living standards that a person faces simultaneously
Twin Balance Sheet challenge	The twin balance sheet problem refers to the ballooning of debt on the books of corporate entities and the estimated INR 10 trillion of stressed assets that have piled up at banks because of the inability of borrowers to repay
Coefficient of variation	The coefficient of variation (relative standard deviation) is a statistical measure of the dispersion of data points around the mean

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Table 7 Breakdown of economic stimulus package

Economic Package (INR billions)	Monetary	Fiscal	Total
RBI Liquidity measures (Feb–April 2020)	8,016	0	8,016
<i>Pradhan Mantri Garib Kalyan Yojana</i> (March 2020)	0	1,700	1,700
Emergency support for health sector (March 2020)	0	150	150
Revenue lost due to tax concessions (March–May 2020)	0	78	78
<i>Atmanirbhar</i> Part 1 (MSME)	5,346	600	5,945
<i>Atmanirbhar</i> Part 2 (Migrants, street vendors, etc.)	3,065	35	3,100
<i>Atmanirbhar</i> Part 3 (Rural)	0	1,500	1,500
<i>Atmanirbhar</i> Parts 4 and 5 (reforms)	0	481	481
Total	16,427	4,544	20,970

Source Analysis by Nikore Associates (2021)

Table 8 Comparison between number of employed persons in FY21 by occupation (in millions)

Industry Group	Region	2020						2021					
		Mar	Apr	May	Jun	Jul	Aug	Mar	Apr	May	Jun	Jul	Aug
Business	Urban	46	29	35	40	45	46	43	41	38	40	44	42
	Rural	34	31	33	35	31	39	31	35	30	33	28	34
Salaried Employees	Urban	48	42	41	45	40	41	46	45	44	49	46	46
	Rural	36	26	27	29	29	24	31	28	29	31	30	31
Small Trader & Wage Laborers	Urban	28	9	16	28	31	32	30	32	26	28	30	31
	Rural	87	28	43	70	91	85	97	95	84	80	96	97
Farmers	Urban	3	5	3	4	5	5	3	4	4	3	3	4
	Rural	114	112	115	127	121	121	117	111	120	120	121	113

Source Center for Monitoring Indian Economy (CMIE) Economic Outlook [20]

Table 9 Comparison between number of employed persons in FY21 by industry groups (in millions)

Industry Group	Region	2020						2021					
		Mar	Apr	May	Jun	Jul	Aug	Mar	Apr	May	Jun	Jul	Aug
Agriculture	Urban	4.3	6.6	5.1	4.9	6.3	6.9	4.5	6.5	6.0	3.9	4.4	5.5
	Rural	145	128	134	152	158	153	153	142	151	148	159	150
Mining	Urban	1.0	0.0	0.2	1.3	0.00	0.00	1.0	0.0	0.1	1.4	1.0	0.0
	Rural	0.2	0.2	0.2	0.2	0.0	0.0	0.6	0.2	0.1	0.2	0.0	0.0
Manufacturing	Urban	21.0	12.4	11.0	17.7	13.8	14.4	17.6	17.4	13.6	17.9	16.6	16.5
	Rural	17.4	9.0	12.4	9.8	15.1	13.2	12.5	12.1	12.2	11.8	12.2	11.5
Utilities	Urban	0.8	1.0	1.8	0.81	0.74	0.89	0.74	0.76	1.85	0.47	0.57	0.6
	Rural	0.5	1.1	0.8	0.6	0.5	0.6	0.8	0.3	0.4	0.3	0.5	0.5
Real Estate	Urban	15.2	1.9	7.0	14.9	18.2	19.3	17.3	17.1	14.0	16.1	18.4	18.2
	Rural	39.7	5.5	15.9	32.2	37.3	37.9	47.1	49.9	41.5	41.6	44.7	44.3
Services	Urban	83.1	63.2	69.7	76.7	79.9	82.2	81.6	80.3	77.0	80.3	82.7	82.7
	Rural	67.4	53.4	56.1	65.9	61.5	63.6	61.6	63.8	57.5	61.1	59.2	67.7

Source Center for Monitoring Indian Economy (CMIE) Economic Outlook [20]

Table 10 Change in average monthly household per capita income during FY20

Month	Average household per capita income (INR)	Percent change (%)
Oct-19	6401.0	
Nov-19	6236.6	-3
Dec-19	5922.5	-5
Jan-20	5723.2	-3
Feb-20	5518.5	-4
Mar-20	4929.6	-11
Apr-20	3453.6	-30
May-20	3869.1	12
Jun-20	4545.7	17
Jul-20	4578.5	1
Aug-20	4739.8	4
Sep-20	4860.8	3
Oct-20	5303.8	9

Source State of Working India 2021 calculations based on CMIE-CPHS data [29]

Table 11 Change in monthly earnings in FY20, by employment category

Employment category	Monthly earnings (INR)		Percent change
	2019	2020	
Casual/Daily wage worker	9,135	7,965	-13
Self-employed	15,831	12,955	-18
Temporary salaried	11,422	9,441	-17
Permanent salaried	29,226	27,697	-5

Source State of Working Capital 2021 calculations based on CMIE-CPHS data [29]

Table 12 Change in monthly earnings in FY20 by employment category

India	Total	413	411	406	409	387
	Male	359	362	361	365	348
	Female	54	49	45	44	39
Urban	Total	132	132	130	129	121
	Male	115	117	117	118	111
	Female	17	15	14	12	10
Rural	Total	281	279	276	280	266
	Male	244	246	244	247	237
	Female	37	34	31	32	29
Years		2016-17	2017-18	2018-19	2019-20	2020-21

Source Center for Monitoring Indian Economy (CMIE) Economic Outlook [20]

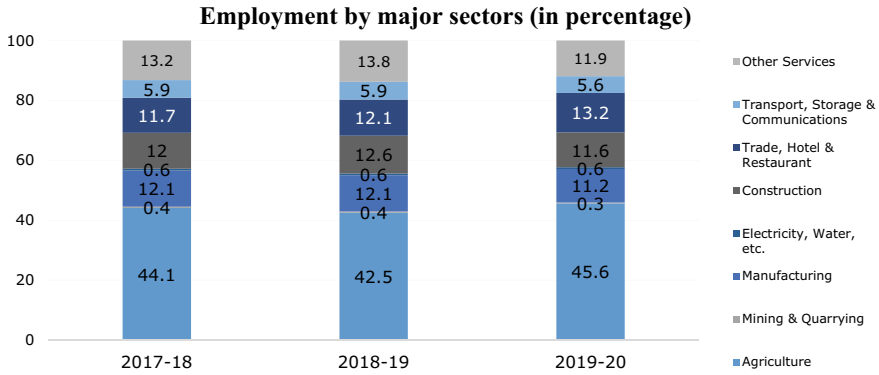


Fig. 28 Employment by major sectors (in percentage). *Source* Periodic Labor Force Survey (PLFS), NSSO 2019–20

Comparison between number of employed persons in FY21, by industry groups and area (bars in percentage, data-labels in millions)

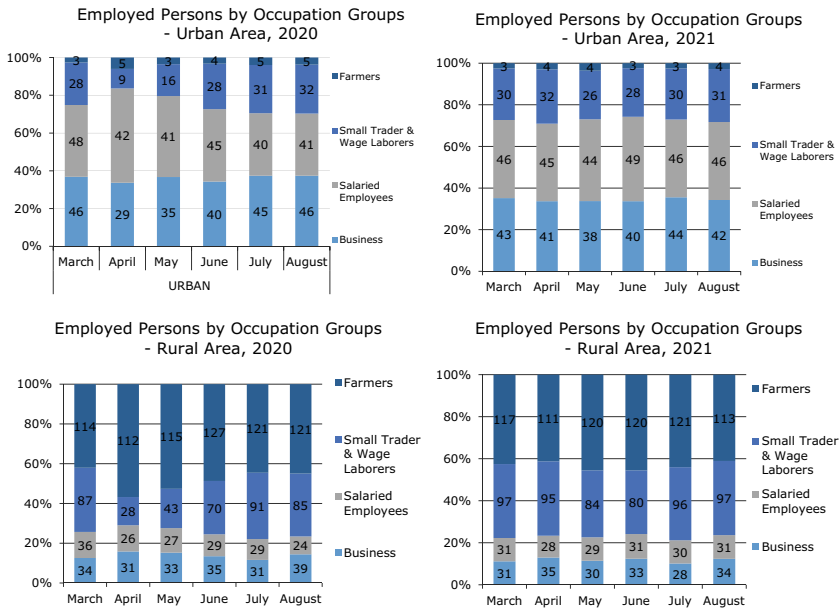


Fig. 29 Comparison between number of employed persons in FY21, by industry groups and area (bars in percentage, data-labels in millions). *Source* Center for Monitoring Indian Economy (CMIE) Economic Outlook [20]

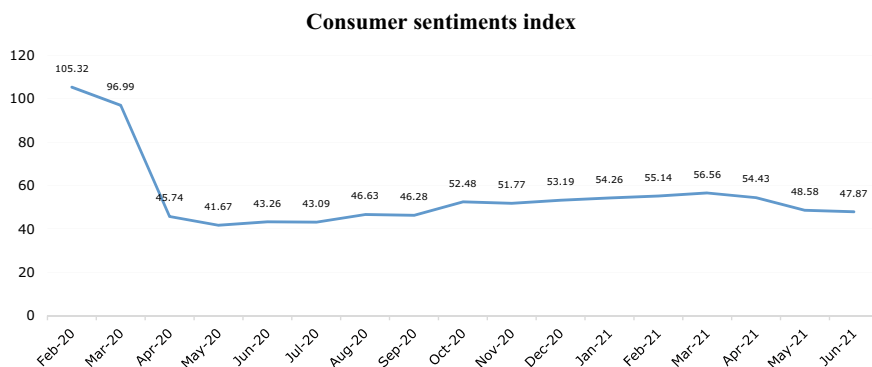


Fig. 30 Consumer sentiments index. *Source* Center for Monitoring Indian Economy (CMIE) Economic Outlook [20]

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