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BEYOND INDIA @75 : GROWTH, INCLUSION AND SUSTAINABILITY

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Abstract

There have been many successes and failures in economic and social development of India in the last 75 years. The recent covid-19 pandemic had also an adverse impact on growth, employment, health and education etc. In this paper, issues and policies are discussed beyond India@75 for achieving growth, inclusion and development. As India is integrated with the world, global issues are also important for India's development. The country has to achieve higher growth with better macro policies, sectoral policies, increase in investment rate, higher investment on infrastructure, use of technology, increase in exports, better performance of banking and other financial institutions to improve credit to different sectors of the economy. These policies with effective implementation are needed to achieve 7 to 8% growth per annum and achieve $ 5 trillion and $10 trillion economy faster Rising inequalities across regions, income groups, social groups, gender, rural-urban are the major problems in Indian society. The biggest inequality in India has been the slow progress in social indicators and human development inspite of high economic growth. Quality of employment, health and education is a major concern. Inequality in both outcomes and opportunities have to be reduced. Another important strategy refers to social policy. Universal basic services in health and education should be the agenda for action. Equality of opportunity is important. Thus, there are strong social, political and economic reasons for reducing inequalities. Similarly, issues relating to sustainability and climate change are becoming more important now than before at both global and national levels. Land, water, energy, common property are some of the natural resources that needs to be sustained over time. India should fulfil its commitments made in COP26 at Glasgow in 2021. The country also should undertake climate change adaptation and mitigation policies faster than before. In a large federal country like India, it is important to have larger role for states in achieving these goals. The spirit of 'Cooperative Federalism' has to be followed.

Keywords: Economic growth, inequalities, health, education, agriculture, industry, services, technology, climate change, sustainability.

JEL Code: D63, E2, E5, E6, E24, I14, I24, I31, I32, Q1, Q54

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There have been many successes and failures in economic and social development of India in the last 75 years. The recent covid-19 pandemic had also an adverse impact on growth, employment, health and education etc. In this paper, issues and policies are discussed beyond India@75 for achieving growth, inclusion and development. As India is integrated with the world, global issues are also important for India's development. The country has to achieve higher growth with better macro policies, sectoral policies, increase in investment rate, higher investment on infrastructure, use of technology, increase in exports, better performance of banking and other financial institutions to improve credit to different sectors of the economy. These policies with effective implementation are needed to achieve 7 to 8% growth per annum and achieve \$ 5 trillion and \$10 trillion economy faster Rising inequalities across regions, income groups, social groups, gender, rural-urban are the major problems in Indian society. The biggest inequality in India has been the slow progress in social indicators and human development inspite of high economic growth. Quality of employment, health and education is a major concern. Inequality in both outcomes and opportunities have to be reduced. Another important strategy refers to social policy. Universal basic services in health and education should be the agenda for action. Equality of opportunity is important. Thus, there are strong social, political and economic reasons for reducing inequalities. Similarly, issues relating to sustainability and climate change are becoming more important now than before at both global and national levels. Land, water, energy, common property are some of the natural resources that needs to be sustained over time. India should fulfil its commitments made in COP26 at Glasgow in 2021. The country also should undertake climate change adaptation and mitigation policies faster than before. In a large federal country like India, it is important to have larger role for states in achieving these goals. The spirit of 'Cooperative Federalism' has to be followed.

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INTRODUCTION[1]

This year India is celebrating its 75th year of independence *Azadi ka Amrit Mahotsav*. This gives an opportunity to reflect on achievements and challenges facing the country and also discuss on 'future of India' i.e. Beyond India @75. There have been many successes and failures in independent India. Before independence, the British Prime Minister Winston Churchill said that India would not survive as a cohesive entity if it became independence. On this Churchill proved to be wrong as India maintained national unity in the last 7 and half decades. At the time of independence, there was lot of hope and confidence in India's future. At that time, Jawaharlal Nehru reminded the country that the tasks ahead included 'the ending of poverty and ignorance and disease and inequality of opportunity' and building a 'prosperous, democratic and progressive' nation.

The country totally transformed in the last 75 years. India has multiple regions, religions, languages, cultures and lifestyles. Unity in diversity is what makes the country unique. The biggest achievement since independence is the continuation of democracy although it is not perfect. These three pillars of our democracy viz., legislature, judiciary and executive have done well in the last 75 years but there are many challenges. For example, an impartial and efficient judiciary is indispensable for genuine democracy. However, legal protection tends to remain beyond the effective reach of most, especially the poor. This has to be corrected in the years to come.

Turning to economic development, India has done reasonably well in economic growth and macroeconomic stability in the last 75 years. From a stagnant economy in the pre-independence period, we moved to an economy that grows; we had 3.5% average growth till the end of 1970s and 5% growth in the 1980s. Economic reforms were introduced in 1991 by the government under PV Narasimha Rao. The successive governments have strengthened the reforms later. Economic growth was 6% in the 1990s and 7 to 8% in 2000s and beyond. Recently it declined from 8% in 2017-18 to 4% in the pre-COVID year of 2019-20. Social indicators also improved significantly since independence. Life expectancy improved from 32 years in 1951 to 69.7 years in 2019. Similarly literacy rate increased from 18% to 78% during the same period. However, if we compare the progress with other BRICS countries India lags behind. The infant

[1] Waheeduddin Khan memorial lecture delivered at the Centre for Economic and Social Studies, Hyderabad.

mortality per 1000 live births in India is 32.0 as compared to 7.9 in China, 11.0 in Brazil and 5.8 in Russia. Bangladesh has improved some of the social indicators faster than India. In 1950s and 1960s, India and China were similar in economic and social progress. But now China's progress is almost two to three times to India in many indicators. India's GDP with $ 2.7 trillion is much less than China's $11.8 trillion.

In the last 75 years, there has been slow progress in five areas and need policy focus in India. These are: (a) infrastructure development; (b) accelerating labour intensive manufacturing; (c) education and skill of workers; (d) improve social sector development; and (e) sustainable development.

There will be several discussions on India@75 in the next one year. The objective of this paper is to discuss the issues and policies that are needed beyond 2022 for future economic and social development of India. The focus on all these issues will be on growth, inclusion and sustainability.

2. GLOBAL CHALLENGES

India is more globally integrated now as compared to 1991 when reforms started. The share of trade (exports+imports) increased from 15% in 1991-92 to 46% in 2011-12 although it declined to 27% in 2019-20. There are many challenges at global level such as climate change, urbanization, migration, technologies like automation, increased inequality, changes in political factors like the US and China policies, Brexit and protectionism. Few of these challenges are given below.

(a) *Geo-political challenges*: The old bipolar world (USA/Russia) has reduced while the new bipolar world (USA/China) has emerged in recent decades. There are uncertainties of transition from old power centric (USA) to new bi-polar world. India's outreach will be constrained by the dramatic rise of China. We also have turmoil in the West Asia and uncertainties in the East like Korean peninsula and South-China Sea. Belt and Road initiative (BRI) massive infrastructure building by China is mostly driven by long-term geopolitical goals. India also had boarder conflicts recently.

(b) *International Trade and protection*: There have been trade wars between USA and China. The growth rate of global trade has declined in recent years. Global trade in goods and services has grown by 3% since 2012. This is less than half the rate seen the previous 30 years. Between 1985-2007, trade grew twice as fast as GDP. Since then, global trade and GDP are at the same pace. Recent anti-globalisation measures, tariff protections by different countries may have adverse impact on trade further.

(c) *Technology*: Automation, robotics, 3D printing, digitisation and artificial intelligence (AI) may have impact on employment although efficiency and productivity may be enhanced. World Robotics are growing at the rate of 15% per annum since 2008. Five markets (China, South Korea, Japan, USA and Germany) have 74% supply. Some estimates show that by 2033 probability of computers replacing 90% accountants, 89% of taxi drivers, 43% of economists, lawyers, managers may be expected. According to the World Bank President's assessment, 69% of jobs in India and 77% of China's jobs are under threat due to automation. We are in the techno-economic paradigm of Information and Communication Technologies and digital age. Gig workers and platform workers are increasing with uberisation.

(d) *Increasing inequalities*: There are a number of studies by IMF and World Bank on inequality at global level. Recent Fiscal Monitor of IMF focuses on tackling inequality (IMF 2017). The conclusions of this study are the following[2].

Inequalities within countries increased significantly. In the last three decades, 53% of the countries have seen an increase inequality with some countries showing an increase in Gini coefficient exceeding two points. Developed countries (e.g. USA, Europe) experienced sizable rise in inequality driven mainly by the growing income of the top 1 per cent. Emerging market and developing economies show diverse trends in inequality. For example, Eastern Europe and Central Asia recorded rise in inequality during the post- communist transition years and decline later. Similarly inequality in Latin America rose during 1980s and 1990s before declining sharply afterwards. In Africa and Asia the Gini coefficient increased in some countries while declined in some other countries. The key source of inequality at global level has been technological change favouring higher skills. In Western Europe and the USA, technological progress has also translated into reduction of middle class jobs, a phenomenon known as polarisation. Country specific factors relate to economic development, stability and domestic policies including financial integration, redistributive fiscal policies, and liberalisation and deregulation of labour and product markets are also important determinants of inequality trends within countries. Changes in income inequality are reflected in other dimensions like wealth inequality. The rise of top incomes along with high saving rates led to growing wealth inequality. In the United States and many other countries, rising concentration of wealth held by 1 per cent of the population is responsible for increase in wealth inequality. A recent study (Ghuman and Sharma, 2021) discusses the changes in global unemployment and inequality between 1991 and 2019. The analysis reveals that the rate of unemployment and incidence of inequality have either increased or remained stubbornly high in almost all the countries under study.

(e) *Climate Change:* The latest report of IPCC released in August 2021 has shown evidence that human influence has warmed the atmosphere, land and evidence. It also found that

[2] A study by Dabla-Norris et al (2015) from IMF also examines trends in inequality of income and opportunities at global level. Also see a World Bank study (2016) which examines latest trends in inequalities in income/consumption across the world. On inequalities in Asia and Pacific countries see Kanbur et al (2014). Also see Rao (2021) on global inequalities.

temperature has already risen by 1.07 degrees Celsius since pre-industrial levels, and that widespread, pervasive and unprecedented impacts are in evidence across the world. The recent G20 meeting in Italy also discussed climate change issue and targets ‘net zero’ emissions by middle of the Century. COP26 meetings in Glasgow have also given some targets. The climate change is real and growing threat to food and agriculture, manufacturing and services which have to change to adapt and mitigate the impacts of climate change.

These global challenges may have impact on India’s economic, social and sustainable development.

Now we turn to issues, challenges and policies for ‘future of India’ in terms of growth, inclusion and sustainability.

3. ECONOMIC GROWTH, MACRO POLICIES, TRADE AND FINANCE

3.1. **Economic Growth**

The Government has mentioned that India would achieve $5 trillion economy by 2024-25. According to government projections, GDP in current prices is Rs. 222.9 trillion in 2021-22. The $5 trillion is Rs.375 trillion in current prices. In other words, we need 68% increase in GDP in three years. We may achieve it by 2026-27 if we assume 11% nominal growth (7% real +inflation of 4%) – 2027-28 with 10% nominal growth and 2028-29 with 9% nominal growth.

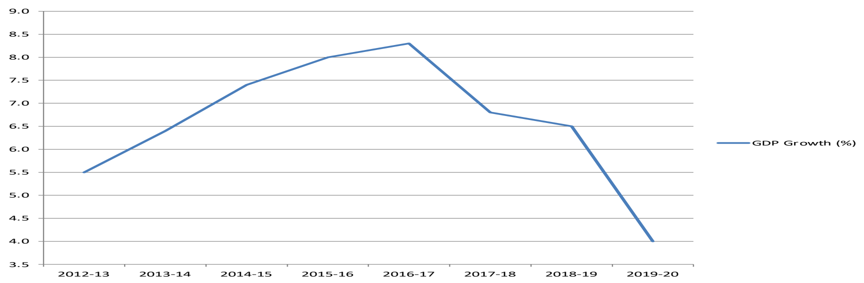
India also wants to be $10 trillion economy by 2030. Much more efforts are needed to achieve this goal because even in pre-covid period, the economy was slowing down (Table 1 and Fig 1).

Table 1. GDP Growth 2012-13 to 2021-22: All India

Year	GDP growth (%)
2012-13	5.5
2013-14	6.4
2014-15	7.4
2015-16	8.0
2016-17	8.3
2017-18	6.8
2018-19	6.5
2019-20	4.0
2020-21	-7.3
2021-22	9.5 (projection)

Source; National Accounts Statistics, GOI

Fig. 1. GDP Growth 2012-13 to 2019-20.



Source: National Accounts Statistics, GOI

The sources of growth from demand side are private consumption, government consumption, investment and net exports. The period 2003-4 to 2007-08 recorded the best GDP growth of 8 to 9% per annum before the financial crisis. Global growth was also high during this period. From 2008-09 to 2010-11, growth was maintained but with a cost of high combined fiscal deficit of 8 to 9%. Inflation was also high during this period. From 2011-12, the growth rate increased from 5.2% to 8% in 2015-16. In 2016-17, inspite of demonetization growth rate was high at 8.3%. Then subsequently the growth rate declined to 6.8%, 6.5% and to 4.0% respectively in 2017-18, 2018-19 and 2019-20. On the supply side, the reasons for decline in the decade of 2011-20 compared to earlier decade are the decline in the growth of industry including manufacturing and construction and services while agriculture maintained its growth. Obviously, for increase in growth in future, progress in both demand side and supply side is needed. India needs to have 7 to 8% growth in future to increase revenue which can be used for investment and social sector. Some analysts say India's medium term growth could be around 6%.

3.2. Macro policies

Theory : There have been significant developments in macro economic theory. Main schools of macro economics are : (a) Keynesian economics; (b) Resurgence of neo-classism including Milton Friedman's quantity theory; (c) New classical economics and real business cycles theory; New Consensus Macroeconomics (NCM) (Nachane, 2018). According to Nachane (2018), NCM sets the tone for much of the macroeconomic policy (particularly monetary policy) followed by advanced economies in the period 1990 to 2005. The empirical models on NCM failed to anticipate the global financial crisis and its severity. After the crisis, Queen Elizabeth questioned the economists at the London School of Economics.

Another question is whether the theory of developed countries is useful for Indian economy. Take the case of inflation. There are several reasons why Indian economy is different for example say the USA. Therefore, the question is whether theory of inflation of US will work for India. Mechanically using Phillips curve or whether Taylor's rule for monetary policy may not work for developing countries. For example, India also adopted developed countries 'inflation targeting' as monetary policy strategy. Some people question this and say that monetary policy should have broader mandate like inflation, growth, employment and financial stability. We have to think these types of issues while formulating hypothesis and doing research. Theory also should be suitable to a developing country problem.

Policies : Appropriate macro policies such as trade, fiscal and monetary policies should promote growth employment by providing appropriate policies and institutions[3]. Monetary stimulus in advanced countries helped preventing worse outcomes. In response to the global crisis developed countries reduced short term lending rates. These measures prevented a larger fall in employment. However, the extended period of low interest rates and unconventional monetary policy measures seem to have adverse effects on employment by encouraging capital intensive industries (ILO, 2014). In other words, monetary policies might have indirectly contributed to observed weaknesses in labour market and increased inequality.

Fiscal Policy: Growth and redistribution in favour of poor can be made through fiscal policies. Taxes, expenditures and subsidies are the major instruments of fiscal policy. Some advocate measures such as redistribution of assets and wealth in favour of the poor via higher tax rates for the rich. In order to reduce inequalities, richer sections have to pay much more taxes. The tax/GDP ratio has to be raised with a wider tax base and removing exemptions for corporates. One of the distortions in India is that the share of direct taxes is much lower than that of indirect taxes. It is known that indirect taxation is regressive in nature. Fiscal instruments like public investment in physical and social infrastructure can be used to reduce inequality. Generally developed countries use counter-cyclical and developing countries follow pro-cyclical. Using the data for the period 1950-51 to 2007-08 Krishnan and Vaidya (2013) examined whether Indian fiscal policy is pro-cyclical or counter-cyclical. The results show that fiscal policy has been generally a-cyclical over the period of study. Graduating from an a-cyclical fiscal stance to a counter-cyclical stance is an important challenge that the Indian economy will have to face in the coming decades.

Are we too conservative in monetary and fiscal policies in India? Goyal (2017) divides macroeconomic policy into two types. Type 1 takes supply side approach where all available factors of production determine potential growth, while demand affects only inflation, not output. This is the usual monetarist view. Type II takes demand side approach. The demand need not be inflationary. This is closer to Keynesian theories or the labour view that values the creation of employment. But, this approach differs in bringing in structural emerging market features which are not normally included in Keynesian theories. India's recent macroeconomic policy has tended towards that of Type 1. According to Goyal (2017), a comparison of Type I

[3] See Nayyar (2017) on the crucial role of employment for reducing inequalities.

and Type II policies show that the latter would lead to better growth and inflation outcomes in the Indian context.

Macro policies, in general, should enhance strong aggregate demand, raise productive investment and improve access to finance in order to raise growth, employment and reduce inequalities.

3.3. International Trade

In order to obtain 8 per cent growth, among other things, India has to tackle the stagnation in exports although there has been a revival in exports in recent months. It is well known that rise in exports is one of the main engines of growth and also useful for employment creation. When India had high growth, during 2000-2011, exports grew very fast at the annual rate of 21% and 24% respectively for goods and services. However, exports of goods completely stagnated with an annual growth rate of almost 0% during 2012-19 while the growth rate of services exports declined noticeably to 5.9%. India accounts for less than 2% of the world exports of manufactures while the share of China is a whopping 13%.

India's exports of goods and services as percentage of GDP increased consistently from less than 9% in 1991 to 25% in 2012 but declined to 19% in 2019. Between 2012 and 2019, imports of goods and services as a percentage of GDP also declined from 31% to 21%. The decline of India's trade openness since 2012 is not a compulsion imposed by the conditions prevailing in rest of the world as world trade to world GDP ratio remained unchanged at around 30% during this period.

However, more recently, the Covid-19 pandemic has impacted world trade negatively.. Trade volume growth may rebound to 7.2% in 2021 but will remain well below the pre-crisis trend.

Another worrying aspect of India's export performance during the post reform period was the failure in raising the share of labour-intensive products in the export basket. This is an anomaly for a labor abundant country like India. The relatively fast growing commodity groups in India's export basket are capital and skill intensive (such as pharma, auto, and software) while the traditional labor intensive groups (textile, garments, footwear etc) recorded lackluster performance. As reported in the last year's Economic Survey, the share of traditional unskilled labour-intensive industries in India's non-oil merchandise exports declined by almost one half from 30.7 per cent in 2000 to 16.3 percent in 2018. The reform process since 1991 mostly focused on product market liberalization while rigidities in the factor markets (labour and land) remain largely unaddressed. In other words, reforms have not been comprehensive enough to remove the bias towards capital and skill intensive industries. Rigidities in the factor market is also one of the major reasons for India being cut off from global value chains (GVCs) in labour intensive industries and product lines. The government has announced performance linked incentive (PLI) scheme for 10 sectors which include pharmaceuticals, electronics/technology products, telecom and networking products and solar cells. By incentivising production, the scheme is supposed to spur investment.

The post-covid situation provides a big opportunity for India. There is a growing realization among multinational companies that capacities cannot be concentrated in one place. Potential realignment of global value chains in the near future may provide an opportunity for India to attract big multinational companies. However, one problem in recent years is that India's trade policy has become more protectionist in nature. Import tariffs have increased significantly during the last few years. India's import tariff rates (MFN based average) increased from the lowest ever level of about 12% in 2008 to 15% in 2019. For the year 2018, China's import tariff rate was 9.6% compared to India's 13.5%. India may miss the emerging opportunity if protectionist policies are followed at this juncture. India has not joined Regional Comprehensive Economic Partnership (RCEP) due to 'the China factor" and geopolitical considerations. East and Southeast Asia accounts for more than 50% of world exports in network products – group of products such as electronics, electrical machinery, telecommunication equipment, automobile etc where GVCs are most prevalent. Therefore, it is very important to integrate our industries with the value chains in Asia. It is in our interest to sign free trade agreements with countries in East and South East Asia. We may have to revisit our position with respect to RCEP and negotiate with RCEP countries to our advantage There are several opportunities for India to occupy the space vacated by China to boost exports.

3.4. Growth and Links with Financial Sector

one sector of the economy that is required to play a crucial role for growth and equity is the financial sector. Credit in Indian economy is only 50% of GDP as compared to 100% and 150% in many other countries. The need of the hour is to keep credit flowing to all categories of economic agents- firms, households etc., to increase economic activities. In a bank dominated economy, actions taken by banks would be crucial in addressing the economic challenges. Banks also play a vital role as institutional participants in the debt market. Over the last few years, India has been dealing with the Twin Balance Sheet (TBS) problem in the banking and corporate sectors. This was a consequence of high levels of non-performing assets (NPAs) with inadequate capitalised banking system, combined with over-leveraged and financially weak firms in the private corporate sector.

The government and the banking regulator (RBI) took a series of steps to address the crisis including Prompt Corrective Action framework and directing banks to trigger the Insolvency and Bankruptcy Code (IBC, 2016) against defaulting firms and accept large haircuts. Some of these measures arguably led to a rise in the risk aversion in the banking system. The credit growth was high during 2011-12 to 2015-16. Later we had demonetization in 2016-17. Although investment declined consumption maintained growth in 2016-17 and 2017-18. Credit growth continued. However, the financial system faced another blow when a large non-banking financing company (NBFC), IL&FS (Infrastructure Leasing and Financial Service) defaulted on its debts in September, 2018. This sent shockwaves through the banking system as well as the debt markets the two biggest funding sources for the NBFC sector. Banks continued lending, primarily encouraged by the RBI and the government, but this lending was limited to a handful of highly rated NBFCs. Credit off-take during 2019-20 was low with non-food credit growth at 6.1%. It was less than half of 14.4% growth in the corresponding period of the previous year.

Policies have to be framed for solving the twin balance sheet problem. On banking, recapitalisation of public sector banks, solving NPA problem, following insolvency and bankruptcy code are some of the solutions. Privatisation of banks may help but that may not be the solution. But it is not the ownership. Good corporate governance for both public and private banks is important. Demand for financial services is increasing with increase in digital payments and also insurance services are rising. Digitisation and technology in financial sector is increasing. As artificial intelligence (AI) is increasingly considered the new engine of growth in the modern age, different financial sectors—investment banks, retail banks and insurers—have been incorporating it into their systems. The transformative nature of these technologies will be profound .

What will be the future of the banking? According to the present RBI governor, there are four distinct sets of banking landscapes which are emerging. These are: (a) the first set will be dominated by a few large Indian banks; (b) Second, there will be several mid-sized banks; (c) Third set is small private sector banks, small finance banks (SFBs), regional rural banks and cooperative banks; (d) The fourth segment would consist of digital players who may act as service providers directly to customers.

India is on the way to becoming Asia's top financial technology (Fin Tech) hub with 87% Fin Tech adoption rate against the global average of 64%. The growth rate of Indian Payment systems like UPI and Adhar Enabled payment services(AePS) has been phenomenal with 55% growth. Thus, the financial sector performance is crucial for the future of India.

4.INFRASTRUCTURE DEVELOPMENT

In a recent book Rodrik et al (2017) discuss about two challenges for countries like India. The "structural change challenge" is focused on moving resources from traditional low-productivity activities into modern, more productive industries or activities. The "fundamentals challenge" relates to development of broad capabilities such as infrastructure and human capital. We can't have higher growth without tackling this fundamental challenge.

Generally it is said that we need three things for higher growth. These are : infrastructure, infrastructure and infrastructure. This will help both cyclical and structural factors. Late IG Patel indicated in the early 2000s that we should aim only for 6% GDP growth till we improve infrastructure. Hope we have not come back to IG Patel growth rate of 6% or below in the medium term. In one of his speeches, YV Reddy also mentioned that infrastructure could be a constraint for higher growth. A lot of progress has been made in all infrastructure sectors. However, almost all indicators score poorly if one looks at India's urban and rural infrastructure particularly compared with South East Asian countries and China.

Infrastructure can have significant impact on manufacturing activity. Golden Quadrilateral highway road project connecting Delhi, Mumbai, Chennai and Kolkata started during PM Atal Bihari Vajpayee Government. One study by Ghani etal (2014) examined the impact of this project on manufacturing activity. It resulted in 49% overall output increase from initial levels for the average district. For instance, moderate density districts like Surat in Gujarat or Srikakulam in Andhra Pradesh registered a more than 100% increase in new output and new establishment counts after the Golden Quadrilateral.

However, the investment rate has been declining in recent years. The investment rate as per cent of GDP declined from 39% in 2011-12 to 32.2% in 2019-20 (Table 2). Gross fixed capital as per cent of GDP also showed a reduction from 34.3% to 28.8%. Similarly, savings rate also declined from 35% to 30%. Decline in investment and savings were more in household sector than corporate sector (Rangarajan and Srivastava, 2020).

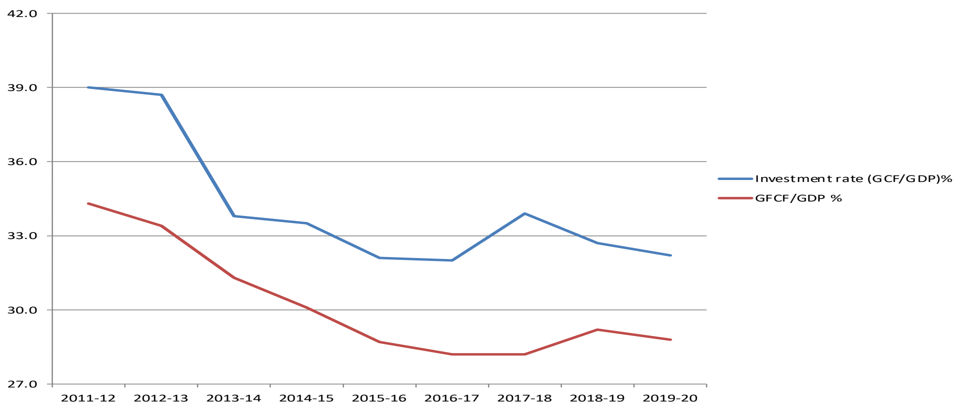
Private investment has to be improved in the next few years. Public investment is equally important. This can be done without compromising too much on fiscal deficit targets. Disinvestment, reducing non-merit subsidies, removing exemptions, increasing tax base, shifting from revenue to capital expenditures etc. are some of the measures for raising government investment. The government seems to be fast tracking public capex and encouraged public sector enterprises (PSEs) to invest more.

Table 2. Investment and Fixed Capital as % of GDP: 2011-12 to 2019-20

Years	Investment rate (GCF/GDP)%	GFCF/GDP %
2011-12	39.0	34.3
2012-13	38.7	33.4
2013-14	33.8	31.3
2014-15	33.5	30.1
2015-16	32.1	28.7
2016-17	32.0	28.2
2017-18	33.9	28.2
2018-19	32.7	29.2
2019-20	32.2	28.8

Source: National Accounts Statistics, GOI

Fig 2: Investment and Fixed capital Ratios



Source: National Accounts Statistics, GOI

The government outlined in August 2020 an infrastructure project pipeline worth more than Rs 102 lakh crore to be implemented over the next five years, which, will serve as one of the key drivers of faster economic growth and the government's ambition of turning India into a $5 trillion economy by 2024-25. In this pipeline, the energy sectors make up the lion's share of 24%, followed by roads (19%), urban development (16%) and railways (13%). The shares of rural and social infrastructure projects, which include health, education and drinking water, is 8% and 3%, respectively. Private companies will account for 22%-25% of the investments and the balance will come from the Centre and the states in equal proportions. Recent budget 2021-22 also focuses on infrastructure in three ways: Firstly, by creating the institutional structures; secondly, by a big thrust on monetizing assets, and thirdly by enhancing the share of capital expenditure in central and state budgets. Government also announced National Bank for financing infrastructure and Development (NaBIFD) chaired by veteran banker KV Kamath. Recently, the government has unveiled a four-year National Monetisation Pipeline worth an estimated Rs 6 lakh crore. It aims to unlock value in brownfield projects by engaging the private sector, transferring to them revenue rights and not ownership in the projects, and using the funds so generated for infrastructure creation across the country.

Focus on infrastructure by the government is important as it is a key driver for 'Future of India.' Of course all these plans on infrastructure depends on the effective implementation and appropriate models of infrastructure creation and also on generating required finance.

5.STRUCTURAL CHANGE: AGRICULTURE, INDUSTRY AND SERVICES

India's development trajectory so far stands out among other countries as the economy has transformed from agriculture to services by passing the industrial route. There is a disconnect between the shares of GDP and shares of employment across sectors. In terma of GDP, there has been structural change from agriculture to services. In terms of employment, agriculture is still the largest employer at 46% (Table 3)

Table 3: Shares of GDP and Employment in sectors (%)

Sectors	GDP Share(%) in constant prices		Employment Share (%)	
	2004-05	2019-20	2004-05	2019-20
Agriculture	19.0	18.0	56.4	45.6
Industry	28.0	27.0	18.2	23.4
Services	53.0	55.0	25.4	31.0

Source: National Accounts Statistics and NSS Surveys on employment

Of particular concern is the inability of manufacturing to absorb labour. The share of manufacturing in employment is only 11% in 2019-20. There are two sources of productivity. One is productivity increase in within sectors. Second one is shifting workers from low productivity sectors to high productivity sectors. India has to focus on both sources to raise growth and quality of employment.

5.1. Agriculture

There has been significant progress in the country's agricultural development since Independence, from a food-deficit country to a country self-sufficient in food. However, the Green Revolution also led to water-logging, soil erosion, groundwater depletion and the unsustainability of agriculture. Current policies are still based on the "deficit" mindset of the 1960s. The procurement, subsidies and water policies are biased towards rice and wheat. Three crops (rice, wheat and sugarcane) corner 75 to 80 per cent of irrigated water. Diversification of cropping patterns towards millets, pulses, oilseeds, horticulture is needed for more equal distribution of water, sustainable and climate-resilient agriculture.

The narrative of Indian agriculture has to be changed towards more diversified high-value production, better remunerative prices and farm incomes. It must be inclusive in terms of women and small farmers; it must be nutrition-sensitive, environment friendly and sustainable.

The incomes of farmers have to be increased for taking care of their needs and also as a source of demand for non-agriculture. The Situation Assessment Surveys of NSSO show that the average monthly income of agricultural households in current prices increased from Rs. 2115 in 2003 to Rs. in 10218 in 2018-19 (Table 4). The share of cultivation in total income is the highest at 46% in 2003 and 48% in 2013. But, the share declined to 37% in 2018-19. The share of income from animals rose from 4.3% in 2003 to 15.5% in 2018-19. The share of wage income increased and it is the highest source of income for agricultural households in 2018-19.

The income shares for non-farm business declined over time. In fact, the income from cultivation between 2013 and 2018-19 declined if we adjust with inflation.

Table 4 Average Monthly Income of Agricultural Households in current prices: NSS Surveys 2003, 2013 and 2018-19

	Income (in Rs.) current prices			Share in total income (%)		
	2003	2013	2018-19	2003	2013	2018-19
Cultivation	969	3081	3798	45.8	47.9	37.2
Animals	91	763	1582	4.3	11.9	15.5
Wages	819	2071	4063	38.7	32.2	39.8
Non-farm business	236	512	641	11.2	8.0	6.3
Leasing out of land	--	--	134	--	--	1.3
Total	2115	6426	10218	100.0	100.0	100.0

Source: Situation Assessment Surveys of NSO (National Statistical Office)

Another source of farmer's income is the All India Rural Financial Inclusion Survey of NABARD. This survey also provides information on income of agricultural households and non-agricultural households for the year 2015-16. This survey shows that 35% income of agricultural households is from cultivation, 34% from wage labour, 16% from salaries and 8% from livestock (Table 5). The share of cultivation and livestock together was 43% in NABARD survey as compared to 60% in NSS Survey of 2013.

Another interesting finding is that only 23% of rural income is from agriculture (cultivation+livestock) if we consider all rural households (Table 5). Around 44% of income is from wage labour, 24% from government/private service and 8% from other enterprises. It shows that income from non-farm sector is the major source in rural areas.

Table 5. Average Monthly Income of Agricultural Households in current prices: NABARD survey 2015-16

Source of Income	Agricultural Households		All (agri+non-agri) households	
	Income (in Rs.)	Share in income%	Income (In Rs.)	Share in Income%
Cultivation	3140	35.2	1494	18.5
Livestock	711	8.0	338	4.2
Other enterprises	489	5.5	679	8.4
Wage Labour	3025	33.9	3504	43.5
Govt/pvt.service	1444	16.2	1906	23.7
Other sources	122	1.4	138	1.7
Total	8931	100.0	8059	100.0

Source: NABARD (2018)

It also reveals that agricultural households do not depend only on farm income but they depend on multiple sources for their livelihoods. The above findings show that both agriculture and non-agriculture are important for raising income of agricultural households. There is a need for diversification within agriculture. Government of India introduced three farm laws as part of agricultural reforms. These reforms are important but it should be left to the states to implement them.

Small farmers require special support, public goods and links to input and output markets. Many technological and institutional innovations can enable them to increase incomes through diversification, and benefit from value chains. Best institutional practices have to be followed in agricultural marketing. Farmer producer organisations help get better prices for inputs and outputs for small holders. The ITC's E-Choupal is an example of technology benefiting small farmers. Similarly, women's empowerment is important particularly for raising incomes and nutrition. Women's cooperatives and groups like Kudumbashree in Kerala would be helpful. One of the successful examples of a value chain that helped small holders, women and consumers is Amul (Anand Milk Union Ltd) created by Verghese Kurien. Such innovations are needed in other activities of food systems.

Another issue is hunger and malnutrition in India. According to the NFHS-4 survey, around 38 per cent of the country's children reported stunting in 2015-16. The NFHS-5 shows that under-nutrition has not declined in many states even in 2019-20. Similarly, obesity is also rising. A food systems approach should focus more on the issues of undernutrition and obesity. Safe and healthy diversified diets are needed for sustainable food systems.

EAT-Lancet Commission (2019) recommends a healthy and sustainable diet given the constraints on the planet, is not affordable for the majority of the population in India. A recent study of the Tata-Cornell Institute For Agriculture and Nutrition (Gupta et al, 2021) shows that the cost of the EAT-Lancet dietary recommendations for rural India ranges between $3 and $5 per person per day. In contrast, actual dietary intake at present is valued at around $1 per person per day. The gap is much more for meat, fish, poultry, dairy and fruits. In fact, even in rural areas, processed foods like potato chips and biscuits are cheaper and available as compared to fruits and vegetables. Even if they are available, these items are expensive for common people. Animal-sourced foods are still needed for countries like India. For instance, per capita consumption of meat is still below 10 kg in India as compared to 60 to 70 kg in the US and Europe.

The sustainability of food systems is equally important. Estimates show that the food sector emits around 30 per cent of the world's greenhouse gases. This is going to be crucial in the years to come due to climate change. Sustainability has to be achieved in production, value chains and consumption. Climate-resilient cropping patterns have to be promoted. Instead of giving input subsidies, cash transfers can be given for farmers for sustainable agriculture.

Finally, the role of non-agriculture is equally important for sustainable food systems. Some economists like T N Srinivasan argued that the solution for problems in agriculture was in non-agriculture. Therefore, labour-intensive manufacturing and services can reduce pressure on agriculture. Income from agriculture is not sufficient for small holders and informal workers. Strengthening rural MSMEs and food processing is part of the solution. Industry has to help in producing healthy processed food.

In September 2021, the UN Secretary-General has convened the Food Systems Summit, which aims for a transformation of global food systems in order to achieve the Sustainable

Development Goals (SDGs) by 2030. There are five action tracks to achieve the objectives. These are: Ensure access to safe and nutritious food for all; shift to sustainable consumption patterns; boost nature-positive production; advance equitable livelihoods; build resilience to vulnerabilities, shocks and stress[4]. According to the Food and Agriculture Organisation (FAO, 2018), "food systems encompass the entire range of actors involved in the production, aggregation, processing, distribution, consumption and disposal of food products that originate from agriculture, forestry or fisheries, and parts of the broader economic, societal and natural environments in which they are embedded". At the global level, there is a proposal to have an International Panel on Food and Nutritional Security (IPFN) — an "IPCC for food," similar to the panel on climate change. The UN food systems summit this month is a great opportunity to boost policies for achieving SDGs. Science and technology are important drivers to achieve these goals. India also has to transform its food systems, which have to be inclusive and sustainable for higher farm incomes, nutrition security and to take care of adverse climate change effects.

5.2. Manufacturing and Services

India does not have the luxury of following China's development experience of manufacturing. In this context, 'Make in India' campaign is in the right direction. The aim is to create 100 million jobs by 2022. As shown by Ghosh, (2016) labour intensive manufacturing is important for quality job creation particularly increase in organized sector[5]. It is important to examine the prospects of manufacturing particularly in job creation in the light of East Asian experience and in the present context of global protection.

A study by Ramaswamy and Agarwal (2013) strongly suggests that the services sector would be an unlikely destination for the millions of low-skilled job seekers. The study argues that India needs to focus on the manufacturing sector to provide large scale employment. Manufacturing has the capability because it has stronger backward linkages, unlike the services sector. We cannot afford to neglect manufacturing at this stage of development. The policy signals have to clearly say that we stand to support manufacturing activity in a big way. Labour intensity of organised manufacturing sector has to be improved aoart from increasing productivity of MSME (Micro, small and medium sized enterprises) and unorganised manufacturing.

Inequalities are high in services which is an heterogeneous sector. Trade, hotels, transport and communications are labour intensive with lower wages while financial and professional services are capital intensive with higher wages. Most of the employment is created in the informal services with lower wages.

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[4] See von Braun et al (2021) for seven priorities on food systems

[5] On manufacturing in South Asia, see Verick (2015)

However, it is also argued that one has to include services in ‘Make in India’ program for creation of employment. We already examined above the prospects for exports in India. Both manufacturing and services have to be developed together.

A study by Chanda (2017) deals with the interdependence between services and manufacturing and argues that a vibrant service sector should be seen as an enabler for the manufacturing sector and not as a competitor to manufacturing. Value-added contribution of the service sector to India’s gross exports was close to 50% in 2011, significantly greater than the share of services exports in total exports based on balance of payments data. Contribution of the service sector to manufacturing exports is dominated by traditional services. Modern services such as IT, R&D and business services are not significantly contributing to manufacturing exports.

In its three year action plan (Niti Ayog, 2017) also indicates that India has the advantage of walking on two legs: manufacturing and services. It offers specific proposals for jumpstarting some of the key manufacturing and services sectors, including apparel, electronics, gems and jewellery, financial services, tourism and cultural industries and real estate. Among other things, it recommends the creation of a handful of Coastal Employment Zones, which may attract multinational firms in labour-intensive sectors from China to India.

There are lot of opportunities for India in service sector. Can you think of top 10 global service brands? These are the names come to our minds: Facebook, google, Airbnb, amazon, linkedin, mckinsey, master card, visa, fedex covering hospitality, consulting firms or even food and beverages like Starbucks. What is common about all of them? Most of the names come from the USA. What is that Americans are focusing on which Europeans, Asians, Indians, Japanese do not focus? It is basically products and scaling, customer centricity and marketing. Brand and customer centricity are important. India can also think of more business in service sector

6. CHALLENGES IN EMPLOYMENT AND SKILLS

Expanding productive employment is central for higher economic growth, sustained poverty reduction and food security as labour is the main asset for majority of the poor. It is also known that a high output elasticity of employment generally ensures that growth is egalitarian. However, inspite of its importance, the concern for employment in development thinking has been pushed aside particularly in the last two decades. It is important to place the employment issue at the centre of the national and international agenda. This is also crucial for the success of Sustain Development Goals (SDGs).

Some positive trends in employment

Before going to challenges, we discuss here few positive trends in Indian labour market.

First, the share of regular wage/salaried employees has increased by 5 percentage points from 18 per cent in 2011-12 to 23 per cent in 2017-18 while the share of casual labours declined by 5 percentage points during the same period (GOI, 2020)[6].

Second, the share of organized sector in employment rose from 13.7 per cent in 2004-05 to 19.2 per cent in 2017-18 although the share of organized employment in total increased from 7.5 per cent to only 10.0 per cent.

Third, there seems to be structural transformation in rural areas from agriculture to industry and services. As shown in table 6, the share of non-farm employment in total for males increased from 19 per cent in 1977-78 to 47 per cent in 2018-19 while for females it rose from 12 per cent 29 per cent. It is interesting to see that the shares of manufacturing and services in rural employment are more or less similar. This is true for both males and females.

Table 6 : Structural transformation in rural Areas: Workers

	Male				Female			
	Agricu Lture	Industry	Services	Non-farm (industry +services	Agricu Lture	Industry	Services	Non-farm (industry +services
1977-78	80.6	8.8	10.5	19.3	88.1	6.7	5.1	11.8
1993-94	74.1	11.2	14.7	25.9	86.2	8.3	5.6	13.9
2004-05	66.5	15.5	18.0	33.5	83.3	10.2	6.6	16.8
2011-12	59.4	21.9	18.6	40.5	74.9	16.8	8.4	25.2
2017-18	55.0	23.2	22.0	45.2	73.2	13.6	13.2	26.8
2018-19	53.2	23.5	23.2	46.7	71.1	13.4	13.6	29.0
2019-20	55.4	23.1	21.6	44.7	75.7	13.0	11.2	24.2

Source: Periodic Labour Force Survey 2017-18, National Statistical Office.

Fourth, the shares of agriculture in total employment (rural+urban) in 2017-18 shows that some states have already undergone structural transformation. Table 7 shows that the share of agriculture in Kerala was only 20 per cent while the share in Punjab, Haryana and Tamil Nadu was less than 30 per cent. In other words, some states have high development of manufacturing and services. On the other hand, states like Chattisgarh (67.4%), Madhya Pradesh (60.4%) and Rajasthan (49.6%) have high shares of agriculture in total employment.

Table 7: Transformation of workers Across States: Rural+Urban, 2017-18

States	Share of Agriculture in Total workers		States	Share of Agriculture in Total workers	
	%	Rank		%	Rank

[6] GOI (2020), "Economic Survey, 2019-20", Ministry of Finance, New Delhi

Kerala	19.6	1	Jharkhand	46.3	10
Punjab	26.5	2	Andhra Pradesh	47.4	11
Haryana	27.6	3	Maharashtra	47.8	12
Tamil Nadu	27.8	4	Odisha	48.7	13
West Bengal	36.6	5	Uttar Pradesh	48.8	14
Gujarat	42.6	6	Rajasthan	49.6	15
Bihar	45.2	7	Madhya Pradesh	60.4	16
Karnataka	45.9	8	Chattisgarh	67.4	17
Assam	46.0	9	All India	44.2	-

Source: Estimated based on the numbers given by Mehrotra and Parida (2019)

Challenges of employment in India's labour market

The most important challenge is how to increase the quality of employment and skill development. The challenges of employment are the following.

(1)Decline of women in employment: The work participation rates have decreased for both men and women (Table 8). However, the decline was much faster for women particularly in rural areas. Moreover, the participation rates of women are low and declining. These rates are only 22 per cent for women compared to 71% for men in 2017-18. It increased in 2019-20 but it was less than 30%.

Table 8: Work participation rates (15 years and above)

Years	Male			Female		
	Rural	Urban	Total	Rural	Urban	Total
2004-05	84.6	76.3	82.2	48.5	22.7	41.6
2009-10	81.2	74.0	79.1	37.2	18.3	31.8
2011-12	80.0	74.1	78.1	35.2	19.5	30.5
2017-18	72.0	69.3	71.2	23.7	18.2	22.0
2018-19	72.2	68.6	71.0	25.5	18.4	23.3
2019-20	74.4	69.9	73.0	32.2	21.3	28.7

Source: Periodic Labour Force Survey, 2017-18, National Statistical Office, Delhi.

In fact, 34 million women have dropped out of labour force during the period 2011-12 to 2017-18. It is true that the share of women attending educational institutes has increased over time. At the same time, the share of women attending domestic duties has also risen during this period. But, there seems to be a demand problem in the economy. Dropping out of labour force by the poor and women may be more discouraged worker problem. In other words, they drop out of work force as they perceive that jobs are not available. There are constraints for women in the male-dominated society but demand for work is important for their participation. There is a need to increase the participation rates of women which are much lower than many other Asian countries including Bangladesh. Former IMF Chief Christine Lagarde said that increase in women's participation rates would raise GDP by 40 per cent in India.

But, women's 'work and 'non-work may be misleading. Time use surveys indicate women's unpaid work as home makers and care givers is quite high. Some estimates show that if we monetize unpaid work of women, it amounts to around 16 lakh crores per annum (Nandi and Hensman, 2015).

(2) *Challenge of generating employment:* According to some estimates, India has to generate around 13 million productive jobs per annum if the Lewis turning point is to be reached by 2035 (Ghosh, 2019). If the number of agriculture workers is to remain the same as in 2018 and if unemployment and surplus labour are to fall to zero by 2035, employment in non-agriculture excluding construction will have to increase from 209 million in 2018 to 419 million in 2035 (Ghose, 2019).

(3) *Structural challenge, focus on manufacturing:* As mentioned in the previous section, there is hardly any disagreement on the fact that India needs to aim at higher growth of productive employment and decent work, and that the manufacturing sector is critical to growth. In the post-Covid-19 scenario, India may get opportunity to focus on global value chains and exports in manufacturing. Service sector also need to be promoted as both manufacturing and services contributes 60 per cent of GDP.

(4) *Youth unemployment:* The overall unemployment has increased from 2.2% in 2011-12 to 6.1% in 2017-18. But, youth unemployment has risen from 6.1% to 17.8% during the same period. Rising unemployment is also associated with increase in education. The proportion of youth attending educational institutions has increased at a faster rate from 23% in 2004-05 to 38.5% in 2017-18 for young males while for young females the proportion almost doubled from 15.8% to 30.3% during the same period (Mehrotra and Parida, 2019). The youth with education and skills will have higher unemployment as they can remain unemployed and search for suitable jobs. One of the main problems for the agitations by the people like the Marathas in Maharashtra, Patidars in Gujarat, Jats in Haryana and Kapus in Andhra Pradesh relates to youth unemployment and aspirations of these castes to move to quality employment. Central and State governments have to be sensitive to youth employment problem.

(5) *Labour market inequalities:* Similar to some of the developing countries, Indian labour market has the characteristics of high dependence on agriculture, domination of informal sector, virtual absence of unemployment insurance or social wage, the problem of 'working poor', large share of self-employed, gender bias and seasonal migration. Another peculiar characteristic is that caste, tribe, kinship etc. remain important determinant of access to quality employment.

(6) *High share of informal sector*: India has one of the highest number and proportion of informal workers in the world. Around 91 per cent (422 million) of the total were informal workers in 2017-18. In other words, only 9% of the total workers in India are formally employed and enjoy regular jobs. It is interesting to note that out of 80 million organized sector

workers, 51% were informal workers in 2017-18. It shows that even in organized sector, the contractual employment has been increasing faster. There is some increase in formal sector but it does not compensate for the losses among the poor and women. In order to reduce inequalities in income and wage gaps, policies have to focus on improving productivity of informal sector and providing decent jobs.

(7) *Migrant Labour*: Internal migrants and international migrants are discriminated in the labour market. The short term internal migration is generally distressed one. India and other South Asian countries to gulf region contributed bulk of the South-South migration. As ILO (2014) says that the increase in South-South migration has coincided with the increased incidence of abuse and exploitation of low skilled workers particularly in the gulf countries. Asian migrant workers in the gulf are vulnerable to exploitation and face significant abuse of workers' rights, including forced overtime, delayed wages, poor working and living conditions, and limited access to health care. Similarly, internal migrants also face several problems in Indian cities as shown by the experience of these workers during the lockdown period of Covid-19.

(8) MSMEs : Micro, small and medium enterprises as a whole form a major chunk of manufacturing in India and play an important role in providing large employment and exports. The policies have to give a positive bias towards MSMEs so that they can be a driver for employment generation. Short and long-term initiatives are required specifically for the development of MSMEs.

(9) *Automation and technology*: India has to be ready to approach a fourth industrial revolution. It may lead to some disruption in the established sectors and may lead to some pressures on employment. Although presently robotics and other technological problems are more in developed countries, India should be ready for facing the impact of robotics and AI on employment. Optimists say that net employment may rise with fourth industrial revolution including robotics. For example, Microsoft CEO Satya Nadella says that artificial intelligence can be made more inclusive and inequalities can be reduced.

(10) *Skill development*: India has demographic dividend advantage as many young people enter the labour force. The young people is an asset only if it is (a) educated (b) skilled and (c) finds productive employment. This “demographic dividend” comes at a time when the rest of the world is ageing. Some estimates show that only 2.3% of India’s workforce has undergone formal skill training compared to United Kingdom’s (UK) 68%, Germany’s 75%, USA’s 52%, Japan’s 80% and South Korea’s 96% (Niti Ayog, 2017). According to the Periodic Labour Force Survey (PLFS) 2017-18 only 13.5% of workforce in the productive age group of 15-59 years has received training (2.26% formal vocational training and 11.27% informal training). Under the Skill India Mission, the Government of India implements the Pradhan Mantri

Kaushal Vikas Yojana. (PMKVY) 2016-20. Under PMKVY, around 6.9 million candidates have been trained throughout the country by November 2019 (GOI, 2020).

For having structural change from agriculture to non-agriculture and from unorganised to organised, education and skill improvement are needed. Government initiatives on skill development have so far yielded in slow progress. The approach seems to be more in the form of increasing skills from supply side. It must be noted that many successful East and South east countries also focused on general higher education including science. If the focus is on general quality education, skill development can increase from the demand side. More innovative methods may be required to improve skills faster. In order to promote quality employment and skills, among other things, the country needs to invest more in physical infrastructure and human capital.

Covid-19 and Unemployment: Estimates by the Centre for Monitoring Indian Economy (CMIE) show that unemployment has increased from 8.4% to 27% in the first few months of the Covid-19 last year. There was a loss of 122 million jobs. Out of that small traders and casual labourers lost 91 million jobs. In the second wave, unemployment increased to 14.5% in the same month and it is high in rural areas also. Around 22.7 million people lost jobs in April and May in 2021. Even after recovery now, the employment rate is 2 percentage points less than the pre-covid-period – around 10 million jobs. Therefore much more efforts are required on employment in future including recovery of the jobs due the pandemic.

7.POVERTY, INEQUALITY AND SOCIAL SECTOR

7.1. Poverty and Inequality

There are two conclusions on the trends in poverty. First one is that a World Bank study by Datt et al (2016) shows that poverty declined by 1.36% points per annum in post-1991 compared to that of 0.44% points per annum prior to 1991. Their study shows that among other things, urban growth is the most important contributor to the rapid reduction in poverty even in rural areas in post-1991 period.

Second one is that within the post-reform period, poverty declined faster during 2004-2012 as compared to 1993-2005 period. It has been argued that inspite of higher GDP growth, the rate of reduction in poverty has been slower. However, this was true till the early 2000s. Poverty declined only 0.74 percentage points per annum during the period 1993-94 to 2004-05. But, as shown in Table 9, poverty declined by 2.2 percentage points per annum during the period 2004-05 to 2011-12. It is the fastest decline of poverty compared to earlier periods.

Table 9: Changes in Poverty : All India estimates based on Tendulkar Committee methodology

	Rural	Urban	Total	Rural	Urban	Total
1993-94	50.1	31.8	45.3	328.6	74.5	403.7
2004-05	41.8	25.7	37.2	326.3	80.8	407.1
2011-12	25.7	13.7	21.9	216.5	52.8	269.3
Annual decline 1993-94 to 2004-05 percentage points	0.75	0.55	0.74			
Annual decline 2004-05 to 2011-12 percentage points	2.32	1.69	2.18			

Source: Planning Commission, press release, 2013

Multi-dimensional poverty: Even the trends given by multi-dimensional poverty are similar to that of estimates of consumption-based poverty. UNDP and Oxford University report on Global Multidimensional Poverty Index (MPI) 2018 report covers 105 countries. The MPI is based on 10 indicators: Health, child mortality, years of schooling, school attendance, cooking fuel, sanitation, drinking water, electricity, housing and assets. This report has specifically discussed the case of India. It is well worth quoting the opening paragraph: "India has made momentous progress in reducing multidimensional poverty. The incidence of multidimensional poverty was almost halved between 2005/6 and 2015/16, climbing down to 27.5 per cent. The global Multidimensional Poverty Index (MPI) was cut by half due to deeper progress among the poorest. Thus within ten years, the number of poor people in India fell by more than 271 million — a truly massive gain". This is indeed high praise. The report also says that the poorest groups had the biggest reduction in MPI during the period 2005/6 to 2015/16, indicating they have been "catching up".

Poverty in 2017-18

The government has not officially released the NSS data on consumer expenditure for the year 2017-18. Subramanian (2019) examined the 'leaked' NSS draft report and estimated rural poverty ratio for the year 2017-18. Table 10 shows deterioration in all the welfare indicators. Mean consumption and mean consumption of food declined while rural poverty rose from 31.2% in 2011-12 to 35.1% in 2017-18. But, officials say that there are problems with the consumption data of 2017-18.

Table 10. Estimates of Rural Poverty for 2011-12 and 2017-18.

Indicators	2011-12	2017-18
Mean consumption (Rs.)	1429.96	1304.07
Mean consumption on food (Rs.)	756.45	711.78
Head count ratio (Rangarajan Committee poverty line of Rs.972 in 2011-12)	31.15%	35.10%
No.of poor (in millions)	270.43	322.21
Head count ratio if official poverty line is increased by 20%	42.29%	52.31%

Source: Subramanian (2019)

7.2. India is the second highest income inequality country in the world, lower than only South Africa

In India, consumer expenditure from NSS (National Sample Survey) is generally used to estimate inequality. As shown in Table 11, consumption Gini coefficient is 0.36 in 2011-12 (Fig 3). On the other hand, inequality in income is high with a Gini coefficient of 0.55 while wealth Gini coefficient is 0.74 in 2011-12 (Table 11). Income Gini is 20 points higher than consumption Gini while wealth Gini is nearly 40 points higher than consumption Gini. Thus, inequality in income and wealth is much higher than that of consumption[7]. Inequality in consumption and wealth is lower in rural areas as compared to urban areas. However, inequality in income is higher in rural than urban areas.

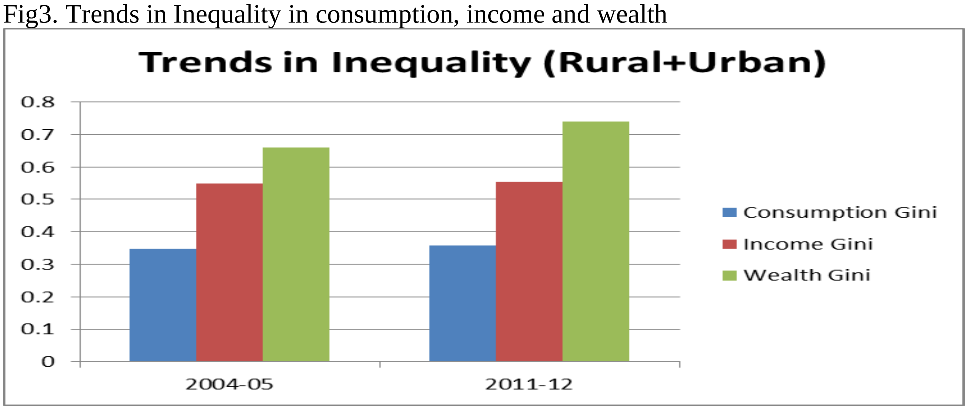
Table 11. Consumption, Income and Wealth Inequality in India: Rural, Urban and Total, 2011-12

Sector	Total	Rural	Urban
Consumption Gini	0.359	0.287	0.377
Income Gini	0.553	0.541	0.506
Wealth Gini *	0.740	0.670	0.770

*Refers to 2012

Sources: Himanshu (2015) for Consumption Gini; Income Gini coefficients are Estimated from the data of Indian Human Development Survey (IHDS); Anand and Thampi (2016) for wealth Gini coefficients

Fig3. Trends in Inequality in consumption, income and wealth



Source: Same as Table 1

[7] India has made tax data public recently by releasing it for the year 2011-12 (assessment year 2012-13). But, it is very small sample to look at overall income inequalities.

Many studies have shown that inequality in consumption increased in the post-reform period[8]. Most of the studies show that it increased marginally in rural areas while it rose significantly for urban areas. Table 12 provides trends in inequality in consumption, income and wealth. It shows consumption and income Gini increased marginally between 2004-05 and 2011-12. However, wealth inequality increased significantly from 0.66 to 0.74 - by 8 points during the same period.

Table 12: Trends in Inequality (Rural+Urban)

Sector	1993-94	2004-05	2011-12
Consumption Gini	0.300	0.347	0.359
Income Gini	--	0.548	0.553
Wealth Gini *	0.650	0.660	0.740

*Wealth Gini refers to 1991, 2002, 2012
Source: Same as Table 11

Regional Inequalities in Income and Wealth

Income and wealth inequalities are high in all the major states of India with significant regional disparities in levels and trends (Tables 13 and Fig. 4). Income inequality is the highest in Gujarat (0.61) followed by Chattisgarh (0.60), West Bengal (0.57), Haryana (0.57) and Madhya Pradesh (0.56) in 2011-12 (Table 3, Fig 4). It is the lowest in Jammu&Kashmir (0.46) followed by Tamil Nadu (0.47), Kerala (0.47). Income inequality increased significantly between 2004-05 and 2011-12 in Chattisgarh, West Bengal, Himachal Pradesh and Punjab. On the other hand, it declined in Southern states (Kerala, Tamil Nadu, Karnataka) and Jammu& Kashmir.

Inequality in wealth is very high across all the major states ranging from gini coefficient of 0.80 in Maharashtra to 0.55 in Jammu&Kashmir in 2012 (Table 14). Apart from Maharashtra, wealth inequality is high in Punjab, West Bengal, Madhya Pradesh and Tamil Nadu. In contrast to income inequality, Southern states (Tamil Nadu, Andhra Pradesh, Karnataka and Kerala) showed high wealth inequality. Again, unlike income inequality, wealth inequality increased significantly in almost all the states between 2002 and 2012.

Table 13: Income Inequality (Rural+Urban) based on India Human Development Survey: 2004-05 and 2011-12

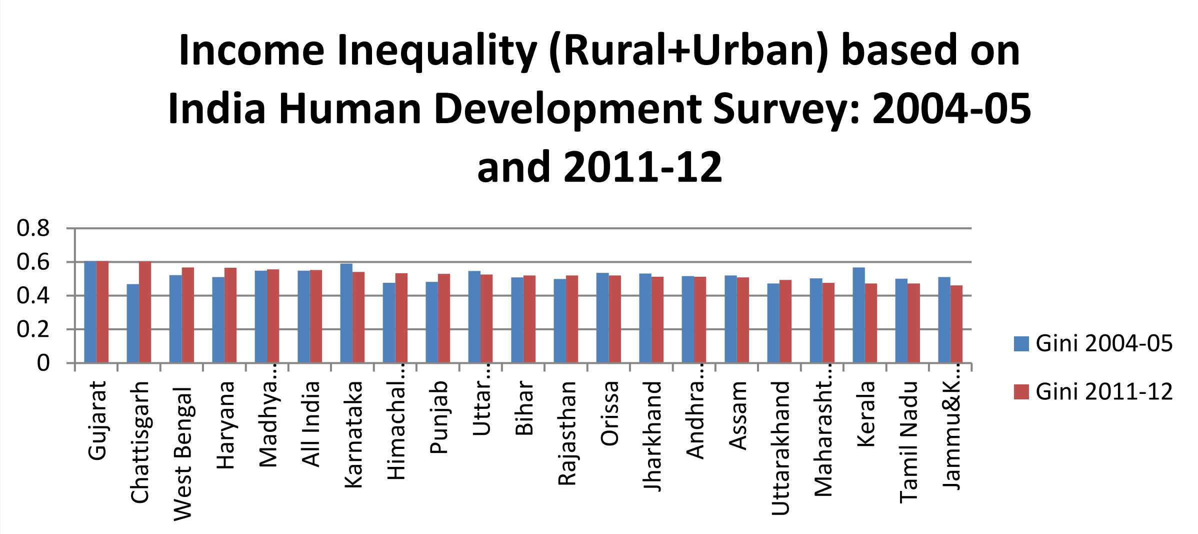
States	Gini 2004-05	Gini 2011-12	Rank	States	Gini 2004-05	Gini 2011-12	Rank
Gujarat	0.606	0.606	1	Orissa	0.535	0.520	12
Chattisgarh	0.469	0.604	2	Jharkhand	0.532	0.513	13
West Bengal	0.522	0.567	3	Andhra Pradesh	0.517	0.512	14
Haryana	0.511	0.565	4	Assam	0.521	0.508	15
Madhya Pradesh	0.549	0.556	5	Uttarakhand	0.473	0.493	16
Karnataka	0.591	0.541	6	Maharashtra	0.504	0.476	17
Himachal Pradesh	0.476	0.533	7	Kerala	0.568	0.473	18
Punjab	0.483	0.530	8	Tamil Nadu	0.501	0.472	19

[8] For example, see Subramanian and Jayaraj (2016), Radhakrishna (2015), Radhakrishna and Mishra (2020) Himanshu (2015, Dev and Ravi (2008).

Uttar Pradesh	0.546	0.526	9	Jammu&Kashmir	0.511	0.462	20
Bihar	0.509	0.521	10	**All India**	**0.548**	**0.553**	
Rajasthan	0.499	0.521	11				

Source: Estimated from the data of India Human Development Surveys 2004-05 and 2011-12[9].

Fig 4. Income Inequality Across States



Source: IHDS

Table 14: Wealth Inequality (Rural+Urban)

States	Gini 2002	Gini 2012	Rank	States	Gini 2002	Gini 2012	Rank
Maharashtra	0.68	0.80	1	Kerala	0.63	0.64	12
Punjab	0.68	0.75	2	Uttarakhand	0.60	0.64	13
West Bengal	0.64	0.75	3	Chattisgarh	0.61	0.64	14
Madhya Pr	0.60	0.74	4	Uttar Pradesh	0.59	0.63	15
Tamil Nadu	0.71	0.74	5	Rajasthan	0.55	0.63	16
Andhra Pradesh	0.72	0.72	6	Himachal Pradesh	0.54	0.62	17
Haryana	0.68	0.71	7	Jharkhand	0.55	0.61	18
Assam	0.52	0.69	8	Odisha	0.61	0.60	19
Gujarat	0.65	0.69	9	Jammu&Kashmir	0.52	0.55	20
Bihar	0.60	0.67	10	**All India**	**0.66**	**0.74**	**--**
Karnataka	0.65	0.67	11				

Source: Anand and Thampi (2016

Covid-19 and Inequality

India has to address the issue of rising inequalities for achieving higher sustainable growth and well-being of larger population. Inequalities were increasing earlier also but the first and second waves of the pandemic have widened them further. The 'State of Working in India 2021' report of Azim Premji University revealed that poverty and inequality increased during the first wave. According to this report, the pandemic would push 230 million into poverty. CMIE data shows decline in incomes and rising unemployment during the second wave. In the week ended May 16, 2021, around 93% of households reported a loss of income compared to a year ego. The recent RBI Bulletin says that the impact of the second wave appears to be U-

[9] Estimates sent to me by Kartikeya Naraparaju, Faculty, IIM, Indore

shaped. “In the well of the U are the most vulnerable -blue collar groups who have to risk exposure for a living and for rest of society to survive: doctors and healthcare workers: law and order: and municipal personnel: individuals eking out daily livelihood: small business, organized and unorganized – and they will warrant priority in policy intervention”.

The impact seems to be k-shaped during the first wave. The share of wages declined as compared to that of profits. Large part of the corporate sector could manage the pandemic with many listed companies getting higher profits. On the other hand, the informal workers including daily wage labourers, migrants, MSMEs etc. have suffered a lot with loss of incomes and employment. The impact in post-second wave is also K-shaped with rising inequalities.

British economist Atkinson says ‘Inequality is in the forefront of public debate. Much is written about the 1 per cent and the 99 per cent, and people are more aware of inequality than even before. ..But if we are serious about reducing income inequality, what can be done? How can heightened public awareness be translated into policies and actions that actually reduce inequality?” (Atkinson, 2015, p.1). Therefore, finding solutions is important.

Dev (2018) examined inequality, employment and public policy. This study discusses several policies such as redistribution, macro policies**,** sectoral policies, employment issues, social policy(education, health), social protection, hunger and malnutrition, gender disparities, corruption, power, climate change for reduction in inequalities.

In a recent paper, Ro (2020) examines rising income inequalities in India and the key role of socio-economic factors. He also examines inequalities at global level and says globalization per se may not increase inequalities if policies to reduce inequalities are simultaneously followed. According to him “In India, the prevailing inequitable socioeconomic structure and the influence exerted by the socio-economically privileged sections on economic policy-making as well as implementation, and not globalisation *per se,* are responsible for the rise in income inequalities. The experience of several countries which embarked upon globalisation by simultaneously pursuing policies to reduce inequalities shows that the rise in income inequalities is avoidable. The political and economic drivers of declining income inequality include deepening of democracy, new social movements, expansion of education and social safety nets, and an increase in government transfers to the poor. While some of the most atrocious social inequalities have been reduced in India, the idea of equality continues to encounter serious difficulties. Forging unity between the like-minded political parties around the demands for social justice and protection of environment is critical to achieving inclusive development” (p.1, Rao, 2020)[10].

In the context of inequalities, we examine here issues and policies in social sector and social protection.

[10] Also see Rao (2014) and Rao (2018) on inclusive growth. On inequalities, see Basu and Stiglitz (2016)

7.3. Social Sector

We have discussed earlier structural changes from low productive sector to high productive sectors. But, this is not enough. Fundamentals change in terms of growth in human capital is equally or more important for reduction in inequalities. We should also ensure universal basic services.

Education, health: Equity in quality

Reduction in inequality of opportunity is important for promoting equity. "The distinction between inequality of opportunity and inequality of outcome can be particularly useful in guiding public policy. Equality of opportunity is not only intrinsically important but also a critical condition for a prosperous society. Public policy must be put in place to reduce or eliminate inequality of opportunity. Governments must work hard to promote equality of opportunity and to ensure that everybody has equal opportunity to participate in the growth process and benefit from its fruits. To the extent that inequality of parents' income leads to inequality of opportunity for children, this inequality needs to be overcome by interventions to assure equal access to public services and to markets for all in society." (Kanbur et al, 2014).

There are six issues in India's social sector in general and health and education in particular. These are: (a) low levels of human development indicators; (b) slow progress in these indicators; (c) significant regional, social and gender disparities; (d) slow growth in public expenditures in social sector (only 1.2% of GDP spent on health) (e) poor quality delivery systems in both health and education; (f) issues in privatization of health and education services.

As Dreze and Sen (2013) say the nature of Indian inequality can be distinguished from some of the other countries like China. Aggregate inequality may be similar between India and China. However, the poor in India can't afford even basic necessities. Also access and quality public services in education, health care etc. are missing for the poor. "For both these reasons, inequality in India takes the terrible form of a massive disparity between the privileged and the rest, with a huge deficiency of the basic requirements for a minimally acceptable life for the underdogs of society. The basic facilities of usable school, an accessible hospital, a toilet at home, or two square meals a day, are missing for a huge proportion of the Indian population in a way they are not in, say, China" (p.280, Dreze and Sen, 2013).

Equity in quality education is the key for raising human development and reduction in inequalities in labour market. A study by Cain et al (2014) on India shows that increase in returns to education account for a large part of the increase in urban inequality during 1993-94 to 2004-05. Increase in returns to education has been particularly higher in education intensive services (such as communications, finance, insurance, real estate and other business services) and education intensive occupations (professional/technical, managerial/administrative, and clerical occupations). A lack of focus on quality of education and health will create further exclusion of disadvantaged sections like SCs, STs, minorities and women[11].

Is Government bad in running schools and hospitals?

One major issue relates to roles of public and private sectors in education and health. It is true that the quality of public institutions have to be improved. However, the World Development Report 2018 shows that their research on education across 40 countries does not find any difference in the learning outcomes of children with similar family backgrounds in both private and public schools. This, the World Bank challenges the perception in India that private schools deliver better outcomes than public schools. Several research studies on education have shown strong impact of remedial instruction programs on learning outcomes[12]. A lack of focus on the quality of education and health will create further exclusion for hitherto excluded groups.
Kerala's experience shows that public schools and hospitals are not inferior to those of private sector. In fact, good quality public schools and healthcare can also raise the quality of private sector. Niti Ayog is thinking of advocating universal health insurance. But, this will not solve the problem in health as we need universal health care.

Health and education achievements are essential for human capital. Yet the country's progress on both these aspects leaves much to be desired. We also have great quality dichotomy in both these sectors. There are islands of excellence that can compete internationally in education while vast majority of them churn masses of children with poor learning achievement and unemployable graduates. One has to fix this dichotomy in heath and education. Few years back, the Deputy Prime Minister of Singapore cautioned about school education in India. He says "schools are the biggest crisis in India today and have been for a long time. Schools are the biggest gap between India and East Asia. And it is a crisis that cannot be justified"[13]. Skill deficiency of workers is well known.. Promotion of technology and knowledge economy will add to growth. One can't have 'demographic dividend' for growth with low human capital. In order to have structural change from agriculture to non-agriculture and from unorganized to organised, education and skill development are needed. Women's labour participation rates have been low and declining. Raising women's human capital and participation rates can improve economic growth. We may also not achieve high human capital and productivity with 36% of our children suffering from malnutrition.

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[11] On education, see Radhakrishna (2020)

[12] See Banerjee et al (2017)

[13] First Lecture of Niti Ayog's 'Transforming India" initiative, August 26, 2016

7.3. Social Protection

India has long experience in these programmes like MGNREGA, National Rural Livelihoods Mission (NRLM), public distribution system (PDS), nutrition programmes like mid-day meal schemes, ICDS, etc. In the last few years, the government has done well in providing universal access to cooking gas or liquified petroleum gas (LPG) connections under the Pradhan Mantri Ujjwala Yojana), and electricity through the Pradhan Mantri Sahaj Bijli Har Ghar Yojana, and/or universal cleanliness programmes like the Swachh Bharat Abhiyan, and inclusive financial programmes like the Pradhan Mantri Jan Dhan Yojana and the MUDRA).

There are some gaps in the social protection programmes. Some of the poor are excluded due to Aadhaar enabled services. This problem has to be tackled. The social protection programmes have to be strengthened with more allocations. In India there has been a lot of discussion on Universal basic income (UBI)[14]. There is a consensus for cash transfers directly giving to farmers, women, old age population etc, a kind of Quasi UBI. It is true that a universal scheme is easy to implement. The issue with targeted programmes is the problem of identification and exclusion.

In order to avoid the identification problem (Rangarajan and Dev, 2021) suggested three proposals to meet the objective of providing minimum basic income to poor and vulnerable groups in both rural and urban areas. These are:

(a) first, give cash transfer to all women in both rural and urban areas above the age of 20 years;

(b) second, expand the number of days provided under National Rural Employment Programme from 100 to 150 in rural areas.

(c) third launch National Employment Guarantee Scheme in urban areas including skill improvement.

In all these proposals, there is no problem of identification. A combination of cash transfer and an expanded employment guarantee scheme can provide minimum basic income.

8. SUSTAINABLE FUTURE AND CLIMATE CHANGE

In the recent COP20 meeting at Glasgow, Prime Minister Narendra Modi announced that India will aim to **attain net zero emissions by 2070**. Net zero, or becoming carbon neutral, means not adding to the amount of greenhouse gases in the atmosphere. China has announced plans for carbon neutrality by 2060, while the US and EU aim to hit net zero by 2050.PM Narendra Modi also announced that India will draw 50% of its consumed energy from renewable sources by 2030, and cut its carbon emissions by a billion tonnes by the same year.

India wants Commitments of developed countries on providing finance, transfer of technology and emission reductions due to historically high consumption patterns.

[14] See Bardhan (2016)

India presently depends on 70% of their energy requirements on coal and this sector also provides employment. It may take some time to reduce dependence on coal. Clean technology has to be developed for coal to reduce emissions.

What are the policies needed to face the impact of climate change for agriculture? Economic Survey 2017-18 says that India needs to spread irrigation against a backdrop of rising water scarcity and depleting groundwater resources. India pumps more than twice as much groundwater as China or United States (GOI, 2018). There is a need to review of power and water subsidies.

Agriculture is the sector most vulnerable to climate change. Consistent warming trends and more frequent and intense extreme weather events such as droughts have been observed. It is well known that we need adaptation and mitigation strategies regarding impacts of climate change[15].

Climate-smart agriculture: FAO (2010) discusses strategies needed for climate-smart agriculture. It is defined as agriculture that sustainably increases productivity, resilience (adaptation), reduces/removes GHGs (mitigation), and enhances achievement of national food security and development goals.

It provides examples of climate-smart production systems such as soil and nutrient management, water harvesting and use, pest and disease control, resilient eco systems, genetic resources etc. It also discusses about efficient, harvesting, processing and supply chains. Efficient harvesting and early processing can reduce post-harvest losses and preserves food quantity, quality and nutritional value of the product (FAO, 2010). This approach also ensures better use of co-products and by-products, either as feed for livestock, to produce renewable energy in integrated systems or to improve soil fertility.

The report says that agriculture in developing countries must undergo a significant transformation in order to meet the related challenges of food security and climate change. Effective climate-smart practices already exist and could be implemented in developing country agricultural systems. For small holders, climate smart agriculture offers a triple-win strategy: (a) improving small holder productivity for nutrition crops; (b) help small holders to adapt to climate change; (c) mitigate agriculture’s contribution to climate change (Nwanze and Fan, 2016)[16].

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[15] Also see Alagh (2017)

[16] See Babu et al (2017)

There is a need for an effective climate resilient agriculture (CRA) in India[17]. Three main issues are discussed here.

First, there is a need for diversified cropping systems in view of climate related risks. For example, cultivation of pulses can be an important strategy for CRA. Pulses are legumes which improves soil fertility. Thus, diversification to pulse cultivation can lead to win-win situation in terms of attaining self-sufficiency and raising soil fertility[18].

Second one is MGNREGA which can be used for drought proofing and CRA. Agricultural and livelihood vulnerability indices developed showed reduction in vulnerability due to implementation of works under MGNREGA and resulting environmental benefits (Esteves et al, 2013). A study on MGNREGA works in Maharashtra shows 87% of the works exist and function and over 75% of them are directly or indirectly to agriculture (Narayanan et al, 2014). These works included land levelling (10%), wells (77%), farm ponds (9%), bunding (12%), irrigation channels (5%), and trenches (5%). A majority of the water works on common lands comprised check dams, followed by bunds and dykes. MGNREGA thus can help as an important strategy for CRA. Crop insurance is another instrument which can be used as one of the strategies for CRA. In this context, *Pradhan Mantri Fasal Bhima Yojana(PMFBY)* introduced by the Central government can be used more effectively.

The third issue relates to the role of research and extension system in promoting climate resilient agriculture. Research leads to development of climate resilient technologies and extension system will promote them among farmers. There have been some initiatives recently. For example, the National Initiative of Climate Resilient Agriculture (NICRA) was initiated in 2011 by ICAR. The project has made significant initial impact and was well received in most of the districts. Technologies such as on-farm water harvesting in ponds, supplemental irrigation, introduction of early maturing drought tolerant varieties, paddy varieties tolerant to sub-mergence in flood prone districts, improved drainage in water logged areas, recharging techniques for tube wells, site specific nutrient management and management of sodic soils, mulching, use of zero till drills were enthusiastically implemented by the farmers in NICRA villages across the country (ICAR, 2016). Much more research and extension are needed to have effective CRA particularly in the current environment of climate risks.

Conservativation agriculture: It is developed as an alternative to conventional production systems.The spread of conservation agriculture (CA) is largely concentrated in the rice–wheat system in the Indo-Gangetic Plains of the country. The zero-till wheat after rice is the most

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[17] Indian government has formulated National Mission for Sustainable Agriculture (NMSA) for enhancing agricultural productivity especially in rainfed areas focusing on integrated farming, water use efficiency, soil health management and synergizing resource conservation. This is also being used for climate change adaptation.
[18] On pulses see Joshi et al (2017)

widely adopted conserving agricultural technology in the Indian Indo-Gangetic Plains. Thus it has become the predominant CA based cropping system. Zero-till wheat has the advantage of significant costs savings and potential yield increase (GOI, 2017). There are many benefits due to conservation agriculture. These are (a) enhance livelihood security; (b) reduce soil erosion; (c) more carbon sequestration; (d) enhance resource use efficiency; (e) improve soil health; and (f) minimize green house gas emissions (GOI, 2017)

Zero Budget Natural Farming (ZBNF): This natural farming has been promoted by Subhash Palekar[19]. Nearly 5 million farmers seem to have adopted ZBNF so far. It does not use fertilisers and pesticides. It only uses natural resources like soil, water, air and, cow urine. Unlike the chemical farming, the ZBNF does not add to green house gas emissions. The Government of Andhra Pradesh through Rythu Sadhikara Samstha(RySS), Department of Agriculture has introduced Zero Budget Natural Farming (ZBNF) in 2016 as an alternative to chemical based agriculture. Andhra Pradesh has become the first state to adopt ZBNF in 2016. The name of the programme now is changed to Andhra Pradesh Community Managed Natural Farming (APCNF). This programme now covers 6 million farmers and 8 million hectares[20]. It is important to scale up ZBNF to different parts of India to improve incomes, environment, adapt and mitigate to climate change.

Vegetarian vs. non-vegetarian food and climate change

Studies have shown that meet and dairy consumes lot of resources and contributes greenhouse gas emissions. Lot of grains are used as feedstock for livestock. “Livestock has the world’s land footprint and is growing fast, with close to 80% of the planet’s agricultural land now used for grazing and animal feed production, even though meat delivers just 18% of our calories” (p.1,The Guardian, 2018). In a report, experts warn that Europe must halve meat and dairy consumption by 2050 to reduce GHG emissions. It also advocates taxes and subsidies to discourage livestock products harmful to health, climate or the environment (The Gaurdian 2018). In the case of India, meat and livestock will increase with rising incomes. Vegetaianism helped to some extent consuming less natural resources. The per capita meat and dairy consumption in India is not as high as those of developed or some of the developing countries. However, India has to keep in mind that it has to adopt sustainable practices regarding meat and livestock items.

Consumption and climate change: There are two types of inequalities regarding consumption patterns and impact on climate change. First one is inequality in consumption patterns between advanced countries and developing countries. The developed countries have historical responsibilities. Second one is inequalities in consumption patterns between rich and poor in

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[19] For details on ZBNF, see http://www.palekarzerobudgetspiritualfarming.org/

[20] see https://apcnf.in/

India. The consumption of the rich in India is more or less equal to the rich of the advanced countries. The rich in India have to contribute much more for sustainable development and climate related issues.

Urban areas

The problem is much more severe in urban areas with alarming rates of congestion and pollution along with unhealthy population. There is a need to focus on impending crises in air and water pollution, waste management and urban congestion. Recently, government has been taking measures to reduce pollution levels and face climate change challenges. *Namami* Ganga mission is one example of government's initiatives. Also, the existing environmental regulations in the country are among the most stringent laws exist elsewhere. However, their implementation and enforcement has been inadequate. This has resulted in continued deterioration of environment including air and water pollution. Delhi's air pollution goes to emergency levels every year due to crop residue burning in Punjab and Haryana. But, we have to suggest alternatives to the farmers. Industrial, vehicle and construction pollution is more responsible for Delhi's deteriorating air pollution. One can learn less from Beijing and Shanghai cities in China on reducing air pollution and waste management.

Among various reasons for limited success of environmental policies are, institutional failure and general apathy. "Not in my backyard' attitude of people is equally responsible for pollution problems. On the one hand, the regulating authorities should, keep in mind that 'prevention is better than cure' by playing a pro-active role and, on the other hand, people should cooperate each other and get involved in tackling environmental issues.

9. CONCLUSION

There have been many successes and failures in economic and social development of India in the last 75 years. The recent covid-19 pandemic had also an adverse impact on growth, employment, health and education etc. In this lecture, issues and policies are discussed beyond India@75 and Covid-19 for achieving growth, inclusion and development. As India is integrated with the world, global issues are also important for India's development. The country has to achieve higher growth with better macro policies, sectoral policies, increase in investment rate, higher investment on infrastructure, use of technology, increase in exports, better performance of banking and other financial institutions to improve credit to different sectors of the economy particularly to priority sector. These policies with effective implementation are needed to achieve 7 to 8% growth per annum and achieve $ 5 trillion and $10 trillion economy faster

Rising inequalities across regions, income groups, social groups, gender, rural-urban are the major problems in Indian society. The biggest inequality in India has been the slow progress in social indicators and human development inspite of high economic growth. One example is that nearly 35% of our children suffer from malnutrition. Quality of employment, health and education is a major concern. Inequality in both outcomes and opportunities have to be reduced. Another important strategy refers to social policy. As Rodrik et al (2017) mention there are two challenges. One is 'structural change challenge' which focuses on shifting resources from traditional sector to high productive sectors. Second one is 'fundantals chanllenge' faced by policy makers in developing countries to develop broad capabilities such as human capital and infrastructure. Both the challenges are important. But 'funadamentals challenge' is crucial for achieving the first challenge also. Investments in social infrastructure, health, education, affirmative action and provision of public services can lead to the creation of egalitarian society. Public sector has to play an important role in providing human development along with private sector. Universal basic services in health and education should be the agenda for action. Equality of opportunity is important. While the governments have implemented policies that unleashed the country's tremendous growth potential, it should also embark on a process of social transformation that ends discrimination on the basis of caste, class and gender. Reducing gender inequalities can improve growth and inequality.

Politically, for having a stable and democratic society, one needs to have equitable approach. Large sections of the society can't be ignored. We have both 'State failure and 'market failure' in the case of equality and justice. Both these failures have to be corrected. If we do not have tolerant and inclusive society, it can generate severe social tensions. Thus, there are strong social, political and economic reasons for reducing inequalities.

Similarly, issues relating to sustainability and climate change are becoming more important now than before at both global and national levels. Land, water, energy, common property are some of the natural resources that needs to be sustained over time. India should fulfil its commitments made in COP26. The country also should undertake climate change adaptation and mitigation policies faster than before.

In a large federal country like India, it is important to have larger role for states in achieving these goals. The spirit of 'Cooperative Federalism' has to be followed. Apart from states, *panchayats* and urban local councils should also have equal role in development. Similarly economic reforms and the goals of development have to keep in mind the socio-political factors. We also need reforms in judiciary, civil services and police. Strengthening institutions and governance is crucial for achieving the goals of development.

It is true that public policy has a major role but other stake holders like private sector, civil society and other citizens have equal role in helping to achieve growth, inclusion and sustainable development. Some innovative thinking and new ideas are also needed in keeping with the aspirations of the people. Achieving higher economic growth is important. But, growth without inclusion and sustainability will not be useful for the future of India's development.

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