



Azim Premji
University

STATE OF WORKING INDIA

2019

Centre for Sustainable
Employment



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Azim Premji University
PES Campus
Pixel Park, B Block
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Azim Premji University was established in 2010, by the Azim Premji Foundation, with a clear social purpose of working towards a just, equitable, humane, and sustainable society. All of the University's programmes, teaching, research, and practice, work towards this purpose.

To contribute to the critical matter of India creating just and sustainable employment, the University has set up the Centre for Sustainable Employment (CSE), which conducts and supports research in areas of work, labour, and employment. The University is attempting to provide empirically grounded, analytical reflections on the state of work and workers in India, as well as to evaluate and propose policies that aim to create sustainable jobs. To this end the University also gives grants to create new knowledge in the above areas. It also hosts a working paper series to which contributions are invited from researchers, policy-makers, civil society actors, and journalists. The University's CSE website is an important part of this agenda. In addition to research papers and policy briefs, it hosts government reports, as well as data and statistics on the Indian labour market.

Website: <https://cse.azimpremjiuniversity.edu.in/>

Twitter: @working_india

Facebook: <https://www.facebook.com/centreforsustainableemployment>

Email: cse@apu.edu.in

State of Working India 2019

Lead Author:

Amit Basole

Contributing Authors:

Rosa Abraham
Mathew Idiculla
Arjun Jayadev
Seema Mundoli
Harini Nagendra
Rajendran Narayanan
Tejas Pande
Anand Shrivastava
Anjana Thampi
Jayan Jose Thomas
Srinivas Thurivadhanthai.

Research Assistance:

Janaki Shibu

Design:

Tejas Pande
Kshiraja Krishnan
Krithika Santosh Kumar

Outreach:

Tejas Pande
Kshiraja Krishnan
Manjusha Muthiah
Abhishek M.
Sachin Mulay
K2 Communications

Administrative Assistance:

Vargheese K. Antony

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Chapter 1

The Employment Question in India - Politics, Economics, and the Way Forward

The controversy over employment statistics should be seen in the context of the fact there is now a fully established politics of unemployment in India. This is a new development that needs to be understood.

1 / The Employment Question in India- Politics, Economics, and the Way Forward

Amit Basole and Arjun Jayadev

Centre for Sustainable Employment, Azim Premji University, Bangalore

We thank Rammanohar Reddy and Abhishek Shaw for comments.

An earlier version of this chapter appeared as an article on The India Forum. See <https://www.theindiaforum.in/article/employment-question-india>

1.1 / Introduction

State of Working India 2019 is being published close on the heels of the 2018 report. The principal reason for this is that this year's report aims to intervene in the debate over employment generation in time for the general elections to be conducted in April and May 2019. In this report we present an update on the jobs situation for the period between 2016 and 2018, and also present some ideas for employment generation.

The first few months of 2019 have been unusually eventful for labour economists and statisticians in India. The ongoing controversy over job creation received a fresh impetus early in the new year with Somesh Jha's Business Standard exposé of a new National Sample Survey Office (NSSO) report on employment. Jha reported the 'leaked' findings of the newly instituted Periodic Labour Force Survey (PLFS), which showed that unemployment rates had risen to an all-time high of 6.1 per cent in 2017-2018.¹ The leaked PLFS report came on the heels of considerable uncertainty about the state of labour statistics in the country.²

A two-part article by Amitabh Kant, CEO of NITI Aayog, in the Business Standard sought to discredit the PLFS based on arguments of a small sample size and incorrectly estimated absolute numbers.³ The rebuttal by former National Statistical Commission members offered a detailed response to the allegations made.⁴ Somesh Jha has continued to write a series of articles on various aspects of the leaked PLFS report, including labour force participation rates, unemployment among the educated and among various demographic groups, levels of formal work, and working hours.⁵

The government's response to the leaked findings was to delay the release of the PLFS report indefinitely and commission a study of employment generation under the Micro Units Development and Refinance Agency (MUDRA) scheme.⁶ Subsequently it has been reported that the MUDRA study will also not be released before the elections.⁷ Since the PLFS is supposed to be the new flagship labour force survey of the NSSO, it is not clear what this means for its future or indeed the future of labour statistics in India.

In the meantime, the only source of household level employment data is the Consumer Pyramids Survey of the Centre for Monitoring the Indian Economy (CMIE-CPHS). A module for identifying labour force status was added to this survey in 2016. We discuss the findings from this survey in Chapter Two, **What Do Household Surveys Reveal About Employment In India Since 2016?**

At one level, the reaction of the government is quite puzzling to those who follow labour statistics. An open unemployment rate of 6.1 per cent is neither startling nor unexpected. As we have discussed in State of Working India 2018, the Indian economy has for some period of time been underperforming in terms of providing a sufficient number of good, desirable jobs, and open unemployment rates have been rising over the last decade according to most credible sources. The figures in the government report might be seen as confirming a medium-term trend that labour economists have remarked upon for years.

At another level though, the panic may be justified. The controversy over employment statistics should be seen in the context of the fact there is now a fully established politics of unemployment in India. This is a new development that needs to be understood. The politics of unemployment is typically a feature of middle-to-high income countries, not low-to-middle income countries. Traditionally, the principal economic issue of broad spectrum political significance in India has been poverty, not unemployment. And there are still many who say that India's problem is low wages and low earnings, not unemployment.⁸ This is a variant of the line 'there are jobs, but they are not remunerative enough'. Such a statement is trivially true: as Economics 101 graphs so favoured by economists would show, at very low wages the demand for labour will exceed its supply. But precisely because it is trivial, one should ask the question: Why is it that workers are no longer willing to accept low wages? This is where India's changing labour market comes into the picture.

There have been some new developments, which when juxtaposed with older structural and cultural factors, can account for why this is happening in India, a lower middle income country with a per capita GDP one third that of China and half that of Indonesia. The 'precocious' part of the Indian labour market that resembles higher income countries, that has always been there to a limited extent, is now substantial and rapidly rising, and more to the point, it has spread throughout the country, including the rural areas. This has laid the material basis for a widespread politics of unemployment.

1.2 / Key demand and supply side factors

Without any claim to being a complete list, we discuss seven key factors on the supply side of the labour market and two crucial demand side factors.

a. High growth rates and aspirations: Sharply increased growth rates since around 2000 and the attendant creation of a culturally ascendant middle class have created an aspirational lifestyle. This means that for an increasing number of Indians, traditional occupations as well as petty informal work are less and less acceptable.

b. The youth bulge: Much has been written about India's 'demographic dividend' over the years and it is not necessary to dwell on this point here. We only note that India is a very young country, the median age being only around 28, compared even to China (37 years), leave alone western Europe (45 years). The connection between youth and aspirations is obvious.

c. The education wave: Youth today are much better educated than their parents. According to the 2015 Employment-Unemployment Survey of the Labour Bureau, workers with no formal education at all are now a mere 12 per cent of the labour force. The enrolment rate for secondary education reached 90 per cent in 2015. The enrolment rate for higher education (for those in the 18-23 age group) rose from 11 per cent in 2006 to 26 per cent in 2016. As a result, while graduates constituted only 6 per cent of the labour force in 2004, this was up to 15 per cent in 2015. In absolute terms that means nearly 70 million people. Further, these educated youth are no longer concentrated in the large cities (as was the case in the pre-1991 period). Rather they are spread across smaller towns and villages. They constitute a small but vocal and politically visible minority everywhere.

d. The dominance of 'general' degrees: College enrolment is reaching all-time highs, but the All India Survey of Higher Education indicates that of the 8 million students who graduate every year, only around 1 million receive professional degrees. The rest are graduates in the Arts, Science, or Commerce streams, whose education often does not prepare them for work in the modern economy.

e. Sub-standard degrees: Further, there is a well-known problem of quality of education in both general and professional streams, creating what is sometimes called an 'employability crisis'. While adequate official or national-level statistics are hard to come by, several private surveys have pointed to the fact that fresh graduates in India, even from the engineering and management programmes, need significant amounts of further training to become 'job-ready'.⁹ Companies are increasingly setting up training centres to bridge the gap between college and job requirements. We need to understand better how costs of training are being re-distributed between households, employers, and the government.

f. Caste: Caste has two major effects in this context, it creates powerful incentives on part of lower castes to move away from traditional occupations to ensure dignity and respect in society. At the same time it prevents upper castes from considering any occupations that have a manual component. This results in a huge supply of labour to white-collar and desk-oriented jobs ensuring that only those who do not have this option are left to work in other occupations and trades.

g. Gender: Gender norms, to the extent that they prevent women from working in paid employment, actually reduce unemployment numbers because these women remain out of the labour market. However, with increasing education levels, the number of women, who are not employed and not seeking employment but would work if work was available, is also increasing. And since gender norms impose structural constraints on their mobility, the type of work that they can undertake is restricted. This also contributes to higher unemployment among women than men. Indeed, recent household survey data from the Centre for Monitoring the Indian Economy (CMIE) as well as the Periodic Labour Force Survey indicate that unemployment rates are the highest among young, educated, women.

h. Collapse of public sector employment: The above supply-side factors, some of which are relatively new developments and others which are long-standing features of the Indian labour market, have interacted with two crucial demand side changes. First, the public sector has been a large employer in India when it

comes to formal or regular salaried jobs. Further, it is also a large employer of general purpose graduates. The slowdown in recruitment and systematic reduction in public sector employment has come at the same time that the supply of educated youth has increased. The intense hunger for government jobs is visible in the vast over-subscription to even the lowest paid forms of public employment, as well as in the large protests all over the country over extending the benefits of job reservations to communities such as the Gujjars, Marathas, Patels, Jats, and so on, that have been left out of the system till now. The culmination of this process is the 10 per cent job quota for all households whose income is less than ₹8 lakhs per year, covering the vast majority of Indian households.

i. Automation and AI: Second, the same processes of integration into the global economy that have delivered high growth rates, have also ensured that Indian firms have much less room to manoeuvre with respect to adoption of the latest techniques, many of which are capital-intensive and labour-displacing. The ability of the private sector to generate employment has been steadily falling across the globe, due to rapid and self-propelling advances in automation. This is particularly true of the manufacturing sector. As we showed in State of Working India 2018, in the early 1980s, one crore rupees of investment (in 2015 rupees) created around 80 jobs in the organised manufacturing sector. By 2015 this had fallen to less than 10 jobs. Sector-specific studies in IT and other service industries also indicate that many jobs are in danger of disappearing due to automation. While there is a lot of speculation and hype around AI and its job-displacing potential, it cannot be denied that this will be a crucial factor in determining the future of work in India and elsewhere.

The foregoing factors are clear to all observers of the Indian economy. The question is, of course, what can be done? It is clear that economic growth of the type we have experienced in the past two decades will not absorb surplus labour in adequate time to prevent social dislocation. At the same time, some of the older models of aiding structural transformation seem to have little political purchase. What are needed are several long-term and short-term measures which face these structural conditions as they exist currently. We discuss a few of these here. Public action and spending are strong elements of all these measures.

1.3 / Policy measures to address the crisis

1.3.1 / A national urban employment guarantee

At the same time as our towns and cities are facing a crisis of quantity as well as quality of jobs, there is also a crisis of the quality of life in urban areas due to ecological stress and lack of adequate public services. Water-bodies are rapidly being degraded, green spaces are disappearing, the quality of air is deteriorating, and common spaces are shrinking. Creating jobs, improving the capacity of urban local governance and supplying quality public goods and services requires serious public investment. But such investment also has the potential to pay for itself many times over.

India has been a leader in implementation of employment guarantee programmes via the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). It is time to think about extending this to urban areas also. Such an urban employment guarantee scheme will provide employment within town or city limits to all those who ask for it and thereby provide services to all residents, build our civic infrastructure, and restore the urban commons. This is an idea whose time has come judging from the fact that an urban jobs programme has been mentioned as part of a possible common minimum programme of opposition parties for the 2019 General Election, and the new Madhya Pradesh government has announced a 100-day urban job scheme, Yuva Swabhiman Yojana, after coming to power.¹⁰

In Chapter Three, **Strengthening Towns through Sustainable Employment: A Job Guarantee Programme for Urban India**, we propose a detailed programme that calls for providing 100 days of guaranteed work at ₹500 a day for a variety of works. It also provides for 150 contiguous days of training-and-apprenticeship at a stipend of ₹13,000 per month for educated youth. Here we give a brief idea of the types of works that can be undertaken.

a. Public works: Building, maintenance and upgradation of civic infrastructure like roads, footpaths, cycling paths, bridges, public housing, monuments, laying of cables, and other construction work.

b. Green jobs: Creation, restoration, and maintenance of urban commons, green spaces and parks, forested or woody areas, rejuvenation of degraded or waste land, cleaning of water bodies (tanks, rivers, nullahs, lakes). Works that can be undertaken here include water conservation and harvesting, flood control, micro-irrigation, enhancing urban greenery, preventing coastal and hillside erosion, disaster management, enabling urban agriculture for subsistence and so on.

c. Monitoring and surveying jobs: Gathering, classifying, and storage of information on environmental quality and other aspects of quality of public goods. This will require easy to use equipment for data collection and programmes for data entry. This can provide both temporary employment as well as valuable skilling and work experience for educated youth. Accordingly, these positions can be for a continuous period of 150 days in a year, and with a different set of people hired each year. The information from these monitoring and data collection could feed into prioritising the kind of works that need to be done.

d. Administrative assistance: Assisting municipal offices, local public schools, health centres etc. in administration or other ancillary functions, thereby freeing up the teaching or medical staff for core functions. These jobs can again be geared towards higher educated workers, who can avail of this opportunity to build administrative, managerial and record-keeping skills. These positions may also be for a continuous period of 150 days in a year.

e. Care work: Assisting regular public employees working in balwadis or creches, providing child-minding services for parents working longer hours, assisted care for the elderly and various services for differently abled, such as reading to the visually challenged, assisting those with hearing or mobility impairment to manage various activities, etc. The motivation here is that the urban poor with such needs often fend for themselves.

As can be seen, the programme would allow for the undertaking of a variety of works thereby providing jobs for people with a range of skills and education levels, as well as addressing a wide diversity of urban needs.

1.3.2 / Universal basic services

Tradable services such as information technology enabled services (ITES) or business process outsourcing have received a lot of attention in India's growth story. However, the non-tradable service sector, in particular the social segments, consisting of education, health, transportation and other public services, as well as hospitality, have significant potential for job creation as well as the capacity to deliver equitable and green growth. A 'universal basic services' (UBS) approach can be imagined that delivers human capital advances alongside job growth.

Over the years, India has underinvested in basic social services. Even for our current level of per capita GDP, public spending on these services is average at best and often below average. As a result Indians spend much more out-of-pocket on these services than citizens of other comparable countries. A bold public commitment to UBS will have the dual effect of supplying quality services while creating good jobs. A key condition for this is an investment in improved and increased public provision of healthcare, education, housing, security, transport, and utilities. This includes filling existing vacancies in the system, expansion of capacity, as well as regularising various forms of contract and 'volunteer' workers (such as ASHA and anganwadi workers). This will have multiple positive effects. Most importantly, the services would ensure a basic minimum quality of life for everybody regardless of their social or economic location.

In Chapter Four, **Creating Good Jobs through a Universal Basic Services Programme**, we argue that a well-executed UBS would go a long way in restoring public goods to their rightful place in society, creating decent work in the process.

1.3.3 / Rethinking industrial policy

India's experience with industrial policy (licensing, reservations, permits, subsidies and so on) during the planning years was mixed at best. The neoliberal period has seen outright hostility to industrial policy measures across the globe, barring a few such as tax breaks or the creation of special economic zones. The notable exception, of course, is China, which has continued the East Asian model of heavy state intervention in the economy.

As the work of Alica Amsden, Robert Wade, Ha-Joon Chang and others has shown, strategic industrial policy has played a key role in all the successful examples of industrialisation across the world, from the first wave industrialisers such as England to second-wave ones such as Germany and Russia, to later ones such as South Korea and Taiwan. More recently, Dani Rodrik has argued strongly in favour of industrial policy as a way out of the trap of premature deindustrialisation. These issues are discussed in Chapter Five, **How to Revive Indian Manufacturing: On the Need for Industrial Policy**, by **Jayan Jose Thomas**.

1.3.4 / Employment-oriented fiscal policy

Any suggestion of expanding public engagement is likely to be met with the question of fiscal sustainability. The Indian obsession with being seen as 'serious' and garnering a favourable credit rating from international ratings agencies comes often at the direct cost of employment policies and other valuable public expenditure.

There is precious little to suggest that Indian public debt is at very high levels, thereby necessitating public austerity. In the last 30 years, India's debt-to-GDP ratio reached a low of 66 per cent, a high of 85 per cent and is now near the low at 68 per cent.¹¹ In addition, the debt dynamics are particularly favourable at the current juncture. With the nominal growth rate exceeding the nominal interest rate and expected to do so for some time, debt-to-GDP ratios will erode purely from this effect. Central government primary deficits have almost disappeared.

Furthermore, as inflation becomes less of a concern (indeed the concern now appears to be missing the inflation target on the downside), one might expect that interest rates will decline further, increasing the speed with which the debt-to-GDP ratio will fall. Nor is there any reason to believe that current debt ratios are likely to retard growth (which is one of the reasons given in the NK Singh committee report to reduce the deficit further). As Arvind Subramanian, one of the members, pointed out, the period of the best growth in India (2003-2008) was also that with high public debt-to-GDP ratios. Finally, the last ten years have seen substantial corporate leverage increases and in the ongoing deleveraging, government expansion is perhaps the most fruitful way of accommodating private balance sheet contraction. All of these facts suggest ample space for fiscal expansion. This point is argued in detail by **Srinivas Thiruvadanthai** in Chapter Six, **Using Fiscal Policy to Alleviate the Job Crisis**.

India is at a crucial juncture in its economic development where timely public investment and public policy can reap huge rewards. At the same time, being in denial about the current realities and missing this window of opportunity can have large negative consequences in social and economic terms. Let us act together to ensure that it is the first eventuality that comes to pass.

Endnotes

1. https://www.business-standard.com/article/economy-policy/unemployment-rate-at-five-decade-high-of-6-1-in-2017-18-nss-survey-119013100053_1.html
2. https://www.business-standard.com/article/opinion/where-has-all-the-jobs-data-gone-119013001648_1.htm
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8. <https://indianexpress.com/article/explained/manish-sabharwal-problem-is-wages-not-jobs-minimum-salary-unemployment-indian-gdp-5106348/>
9. <https://economictimes.indiatimes.com/jobs/only-6-of-those-passing-out-of-indias-engineering-colleges-are-fit-for-a-job/articleshow/64446292.cms>
10. <https://www.deccanherald.com/national/urban-job-scheme-china-key-718743.html> and <https://time-sofindia.indiatimes.com/india/first-in-india-mp-rolls-out-100-day-urban-job-scheme/articleshow/68120057.cms?from=mdr>
11. <https://tradingeconomics.com/india/government-debt-to-gdp>

Chapter 2

What do Household Surveys Reveal about Employment in India since 2016?

In addition to rising open unemployment among the higher educated, the less educated (and likely informal) workers have also seen job losses and reduced work opportunities since 2016.

2 / What do Household Surveys Reveal about Employment in India since 2016?

Anand Shrivastava, Rosa Abraham, and Amit Basole

Centre for Sustainable Employment, Azim Premji University, Bangalore

We thank Janaki Shibu for assistance with data.

A shorter version of this paper appeared here: <https://factchecker.in/100-million-jobs-created-bjp-minister-data-show-job-losses/>

Executive Summary

1. India's labour statistics system is in transition.

The five-yearly employment-unemployment surveys conducted by the National Sample Survey Office (NSS-EUS), the last of which was in 2011-12, have been discontinued. The annual surveys conducted by the Labour Bureau (LB-EUS) have also been discontinued. The last available survey in this series is from 2015.

2. The government has not released the results of the new high frequency Periodic Labour Force Survey (PLFS) conducted by the NSSO.

3. In the absence of official survey data, we use data from the Consumer Pyramids Survey of the Centre for Monitoring the Indian Economy (CMIE-CPHS) to understand the employment situation between 2016 and 2018.

4. CMIE-CPHS is a nationally representative survey that covers about 160,000 households and 522,000 individuals and is conducted in three 'waves', each spanning four months, beginning from January of every year. An employment-unemployment module was added to this survey in 2016.

5. We find that the CMIE-CPHS estimates of the labour force participation rate (LFPR) and the workforce participation rate (WPR) for men are comparable to those from the LB-EUS survey, as well as the NSS-EUS. For women, these rates differ substantially across surveys.

6. Our analysis of CMIE-CPHS reveals that:

a. Five million men lost their jobs between 2016 and 2018, the beginning of the decline in jobs coinciding with demonetisation in November 2016, although no direct causal relationship can be established based only on these trends.

b. Unemployment, in general, has risen steadily post 2011. Both the PLFS and the CMIE-CPHS report the overall unemployment rate to be around 6 per cent in 2018, double of what it was in the decade from 2000 to 2011.

c. India's unemployed are mostly the higher educated and the young. Among urban women, graduates are 10 per cent of the working age population but 34 per cent of the unemployed. The age group 20-24 years is hugely over-represented among the unemployed. Among urban men, for example, this age group accounts for 13.5 per cent of the working age population but 60 per cent of the unemployed.

d. In addition to rising open unemployment among the higher educated, the less educated (and likely, informal) workers have also seen job losses and reduced work opportunities since 2016.

e. In general, women are much worse affected than men. They have higher unemployment rates as well as lower labour force participation rates.

2.1 / Introduction

India's labour statistics system has been under a cloud of uncertainty as it transitions from the quinquennial Employment-Unemployment Surveys (EUS) conducted by the National Sample Survey Organisation (NSSO) (the last of which was in 2011-12) to higher frequency, quarterly and annual Periodic Labour Force Surveys (PLFS). The move has been in the works since 2010. A pilot PLFS was conducted in 2012-13. The first full survey was carried out in 2017-18. In the meantime, the Labour Bureau (an entity under the Ministry of Labour and Employment, and distinct from the NSSO) conducted annual household surveys from 2009-10 to 2016-17. The most recent published results of the Labour Bureau Employment Unemployment Survey (LB-EUS) are for 2015-16.

The current government has not released the results of the last Labour Bureau survey (2016-17), nor the results of the PLFS, both of which have been cleared by the concerned authorities for public release. Thus we do not have official employment numbers based on nationally representative household surveys after 2015-16. The State of Working India 2018 also reports numbers only till that year.

Ordinarily, a two-year gap in such statistics would not matter much. After all, until 2011 these numbers were available only every five years.¹ But this time, there has been a tremendous amount of media attention given to this issue. What has changed? We have argued elsewhere that the Indian labour market has been undergoing rapid changes² over the last decade. This, together with major policy changes such as demonetisation and the introduction of the Goods and Services Tax (GST), have greatly increased the importance of jobs numbers for the 2016-2018 period.

Instead of releasing household level data on employment, the government has resorted to various other sector-specific sources of data such as the Employee Provident Fund Organisation (EPFO) database and the MUDRA database. Such administrative databases have the advantage of being high frequency and free from respondent/surveyor bias (if recorded accurately). However, their biggest disadvantage is that they do not cover the entire labour force. The EPFO database, for example, only has a stock of around 65 million workers, while the entire workforce is an estimated 450 million. Thus, increases in jobs numbers as per these databases may be overwhelmed by decreases elsewhere. For an economy like India, which still employs the majority of its workers via informal contracts, the net picture may be completely different from what is visible in the administrative data.

In the absence of official numbers from the PLFS, the only other household survey available for us to take stock of the employment situation going into the 2019 general election, is the Consumer Pyramids Survey of the Centre for Monitoring the Indian Economy (CMIE-CPHS). This survey is an ongoing nationally representative panel survey of around 160,000 households, conducted every four months. An employment-unemployment module was added to this survey in 2016. We use this survey to present some recent trends in employment. Since the CMIE-CPHS survey questionnaire is different from NSS/LB/PLFS surveys we also examine the comparability of the numbers obtained from CMIE to the government surveys.

Table 2.1: A comparison of labour market estimates from the three surveys

	LFPR	LFPR MALE	LFPR FEMALE	WPR	WPR MALE	WPR FEMALE	UR	UR MALE	UR FEMALE
2016-17 LB	52.8	76.8	26.9	50.7	74.3	25.3	3.9	3.3	6.1
2016 CMIE	46.8	74.8	15.6	43	70.7	12.1	8.2	5.5	22.4
2017-18 PLFS	49.8	75.8	23.3	46.8	-	-	6.1	5.8/7.1*	-
2017 CMIE	43.9	72.6	11.9	41.9	70.1	10.6	4.4	3.5	10.9
2018 CMIE	42.9	71.8	11	40.4	68.3	9.4	6	4.9	14.2

Sources and notes: LFPR – Labour Force Participation Rate, WPR – Workforce Participation Rate, UR – Unemployment Rate. Figures for 2016-17 LB and 2017-18 PLFS compiled from news articles by Somesh Jha (in Business Standard) based on leaked reports.

2016 CMIE figures authors' own calculations based on CMIE-CPHS
* Rural and urban rates given separately since a combined rate is not available. From news article by Jay Mazoomdaar (in The Indian Express) based on leaked 2017-18 PLFS report.

Table 1 presents the key ratios, the labour force participation rate (LFPR, percentage of working age people working or looking for work), the workforce participation rate (WPR, percentage of working age people working), and the unemployment rate (UR, percentage of those in the labour force who are looking for work) in the past two years as observed in the different surveys. Three points are worth noting:

1. Although the levels of WPR, LFPR and UR differ quite a bit between surveys, the trends are similar.
2. The levels match much better across surveys for men than for women.
3. LFPR and WPR are broadly similar across surveys, while there is greater variation in UR reported across surveys.

The principal point, that is robust to the choice of survey, is that there is a decline in the size of the labour force as well as the workforce, and a concomitant increase in the rate of unemployment, between 2016 and 2018. This is a matter of concern.

In the remainder of the article we ask three key questions:

1. How comparable are the CMIE numbers to the government numbers?
2. What have been the trends in employment and unemployment between 2016 and 2018?
3. Who are the unemployed in terms of demographic characters such as age, gender, education, and so on?

2.2 / How well do the three labour force surveys compare to each other?

The CMIE-CPHS covers about 160,000 households and 522,000 individuals. The survey is conducted in three 'waves' with each wave spanning four months, beginning from January. Each individual is surveyed in every wave, so that for every year, the employment and unemployment status is available for three points in the

year for every individual. To generate a annual sample, we randomly select one of the three observations for each individual.

We have conducted a detailed study of the comparability of the CMIE-CPHS survey with the LB-EUS and the NSS-EUS. Here we report the main conclusions. The interested reader is referred to the working paper for further information (See box).

LB-EUS and NSS-EUS are similar to each other in the definitions of employment used. But the two surveys differ in important respects from the CMIE-CPHS. The CMIE-CPHS identifies an individual as employed if he/she 'is engaged in any economic activity either on the day of the survey or on the day preceding the survey or is generally regularly engaged in an economic activity'. Individuals who were in some form of employment, but were not at work on that particular day of the survey due to various reasons such as illness, leave or holidays were still considered as employed when there was a reasonable surety of them going back to work. On the other hand the LB-EUS reports two definitions of employment. A person is identified as 'employed' under the Usual Principal Activity status if he/she spent a relatively long time either working or looking for work during the 365 days preceding the survey. If a person is not employed or looking for work for the majority of the year, but working for at least a month in the 365 day reference period (i.e. subsidiary status), then he/she is identified as employed as per Usual Principal and Subsidiary Activity status. The NSS-EUS adds to these, two more definitions known as the Current Weekly Status and the Current Daily Status. We do not discuss these here. See box (facing page) for details on differences in definitions of employment used across surveys.

Another, minor source of difference is that CMIE-CPHS begins in January 2016, while the last LB-EUS for which data are publicly available was conducted between April 2015 to December 2015. Thus, there is no overlap between the two surveys, but they are sufficiently close to each other to warrant comparison of the numbers.

How do the CMIE, NSS and LB differ in their methods in elucidating employment information?

The NSS-EUS schedule uses four different reference periods to arrive at four possible activity statuses - one year, one month, one week, and each day of the reference week. A person is identified as 'employed' under the **Usual Principal Activity** status if he/she spent a relatively long time either working or looking for work during the 365 days preceding the survey. If a person is not employed or looking for work for the majority of the year, but working for at least a month in the 365 day reference period (i.e. subsidiary status), then he/she is identified as employed as per **Usual Principal and Subsidiary Activity** status. Under **Current Weekly Status**, a person is identified as working if he/she worked for at least an hour during the 7 days preceding the survey. A person's activity status on each day of the reference way determines the **Current Daily Status**, where he is considered as working a full day if engaged for 4 hours or more, or a half day if less than 4 hours. However, unlike the other definitions, the CDS definitions demarcates a particular day as being 'working' or 'not working', not an individual. Hence CDS measures person days of employment rather than persons.

The Labour Bureau collects information on only two activity statuses - Usual Principal Activity Status and Usual Principal Subsidiary Status. The NSS-EUS or LB-EUS therefore, broadly identifies a person as either (i) employed, or (ii) unemployed i.e. did not work but was seeking and/or available for work, or (iii) not in the labour force - did not work and not looking for work.

The CMIE-CPHS identifies an individual as employed if he/she "is engaged in any economic activity either on the day of the survey or on the day preceding the survey or is generally regularly engaged in an economic activity". Individuals who were in some form of employment, but were not at work on that particular day of the survey due to

various reasons such as illness, leave or holidays were still considered as employed when there was a reasonable surety of them going back to work.

At first glance, the CMIE-CPHS approach may seem closest to the NSS current daily status. But as mentioned earlier, under CDS, the unit of observation is a day, rather than an individual. The CMIE-CPHS measure, on the other hand, uses the individual as the unit of measurement, rather than the day. At the same time, by allowing for individuals who are 'generally regularly employed' to also be identified as employed, the CMIE-CPHS definition is similar to the NSS-EUS UPS/UPSS approach.

Therefore, there is no definition of employment across NSS-EUS and LB-EUS that are perfectly comparable. Given this, we wanted to see if and how these definitional differences in identifying employment translate into differences in the measurement of employment. We first estimate a model using CMIE-CPHS that predicts an individual's employment status. Our hypothesis is that if the CMIE and NSS/LB-EUS definitions of employment are similar, then this model built using CMIE-CPHS should also (more or less) correctly predict the employment status in the NSS/LB data.

To begin with, an individual's economic activity status is typically dependent on their gender, age, educational level, the number of young children in the house and location (rural or urban). Within the CMIE-CPHS data, we estimate a model predicting an individual's economic status conditional on the above factors. Using this model, we then predict the activity status of an individual in the LB-EUS data. For any given individual, the model will estimate the probability that that individual is (i) employed, (ii) unemployed, or (iii) not in the labour force. We take that probability which is the highest

as the predicted activity status of that individual. Then, we match this predicted activity with his actual activity status (as per LB). An observation may be Matched, Employment Overpredicted, Employment Underpredicted, LFP overpredicted, or LFP underpredicted.

An observation is identified as 'Matched' if the predicted employment status using the CMIE model is the same as the actual employment status in LB-EUS. It is identified as 'Employment Overpredicted' if LB identifies an individual as unemployed, but the CMIE model identifies him as Employed. An observation is 'Employment Underpredicted' if in the LB-EUS data he/she is employed, but the CMIE model categorises him/her into Unemployed. An observation is "LFP Overpredicted" if the individual is categorised as being in the labour force as per the model, while in the actual data he/she is out of the labour force. A similar reasoning follows for the category "LFP Underpredicted".

The distribution of observations against these measures gives us an understanding as to what extent the predictions of the CMIE model overlap with actual observations, and where the source of differences lie – i.e., under-prediction or over-prediction. If the share of matched observations are high, this implies that similar factors determine activity status similarly, across LB and CMIE. This implies that definitional differences may not have a major impact on how an individual's employment status is identified.

Further details on if and how the results differ when (i) alternative definitions of employment are used, (ii) when additional variables are included in the regression estimations, or (iii) when a model is estimated on LB and then run on CMIE-CPHS are available in Shrivastava and Abraham (2019) .

Sources: Shrivastava, A. and Abraham, R. 2019. How Comparable are India's Labour Force Surveys: An Analysis of NSS, Labour Bureau and CMIE Estimates. CSE Working Paper No 2019-03, Azim Premji University, Bengaluru.

A person's employment status depends on their demographic characteristics such as age, gender, education, and rural or urban location. We would like to know the probability that a person with a certain set of characteristics, identified as employed or unemployed in CMIE-CPHS, would be similarly classified in the LB-EUS (even though that person does not exist in the latter). This is one way to find out how comparable the different surveys are. If the predicted employment status using parameters derived from CMIE-CPHS data is the same as the actual employment status in LB-EUS, we consider this a 'match'. The higher the percentage of matches, the greater our confidence that the two surveys are attributing an employment status to an individual similarly (See Box for further details of methodology).

For 80 per cent of individuals in the LB-EUS data, their surveyed employment status is identical to that predicted on the basis of CMIE- CPHS derived parameters. Strikingly, this number is the same as using CMIE-CPHS derived parameters on itself. Further, this success rate does not change if we use a different

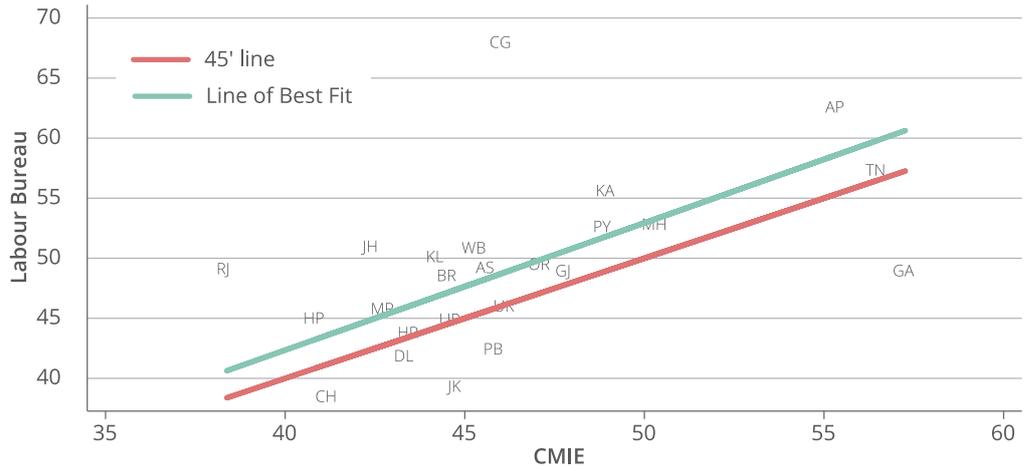
definition of employment (such as principal and subsidiary status instead of principal status).

However, the results are different for men versus women. When we look those 20 per cent of individuals whose status does not match across surveys, women are over-represented. In particular, the CMIE-CPHS model tends to underpredict women's labour force participation, i.e. it predicts women to be out of the labour force, when, in reality, they are either working or unemployed. Thus the model of labour supply does not work as well for women and both surveys miss some important factors that determine women's labour force or workforce participation.

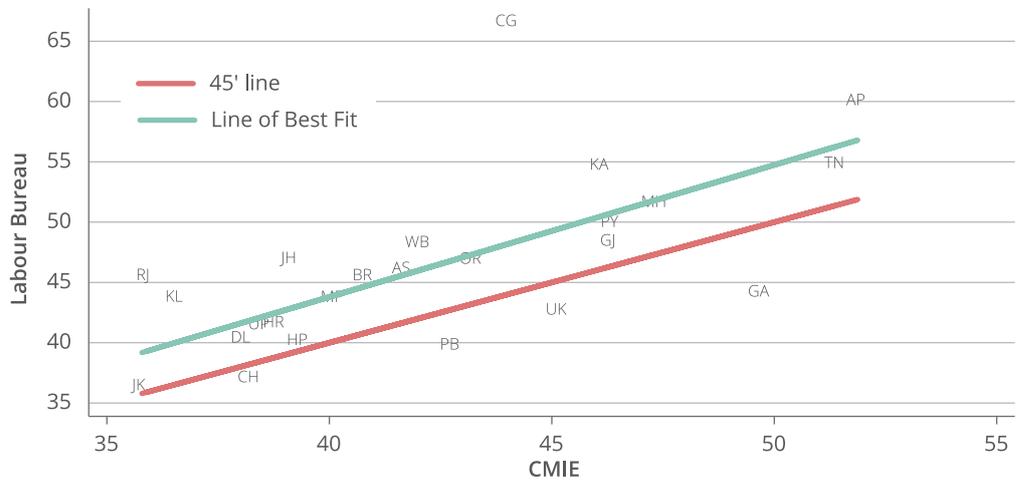
Another way to approach the question of comparability across surveys is to compare the state level estimates of various measures (LFPR, WPR), as obtained from the different surveys. We compare between CMIE-CPHS 2016 and LB-EUS 2015-16. We find that the LFPR and WPR estimates for men, from CMIE-CPHS and from LB-EUS matched pretty closely, but there were significant variations in the case of women's WPR and LFPR.

Figure 2.1:
State-level
comparisons
of LFPR and
WPR: CMIE-
CPHS and LB-
EUS estimates

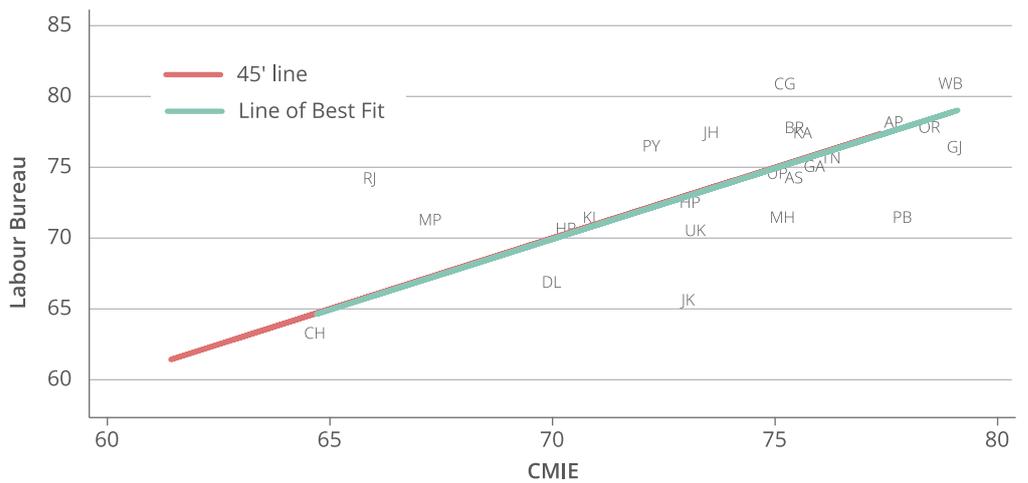
2.1a / Overall
LFPR



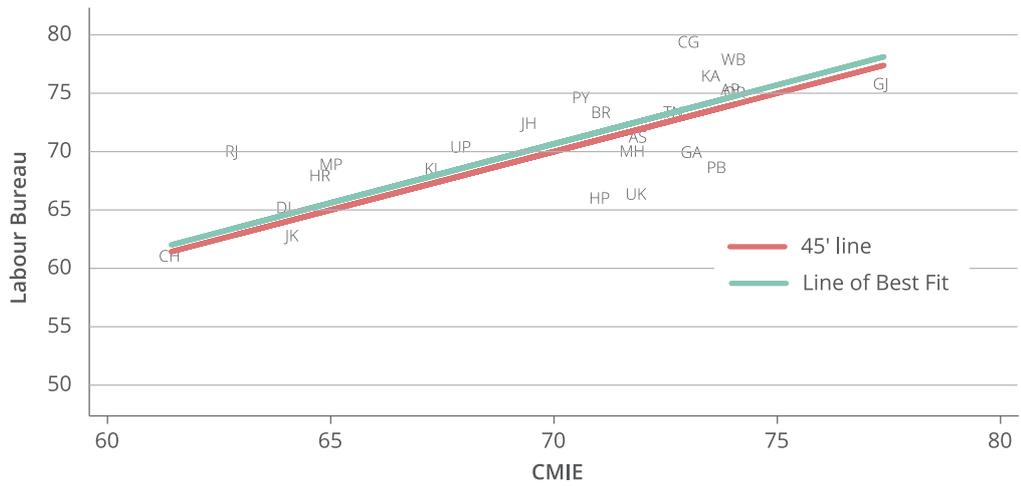
2.1b / Overall
WPR



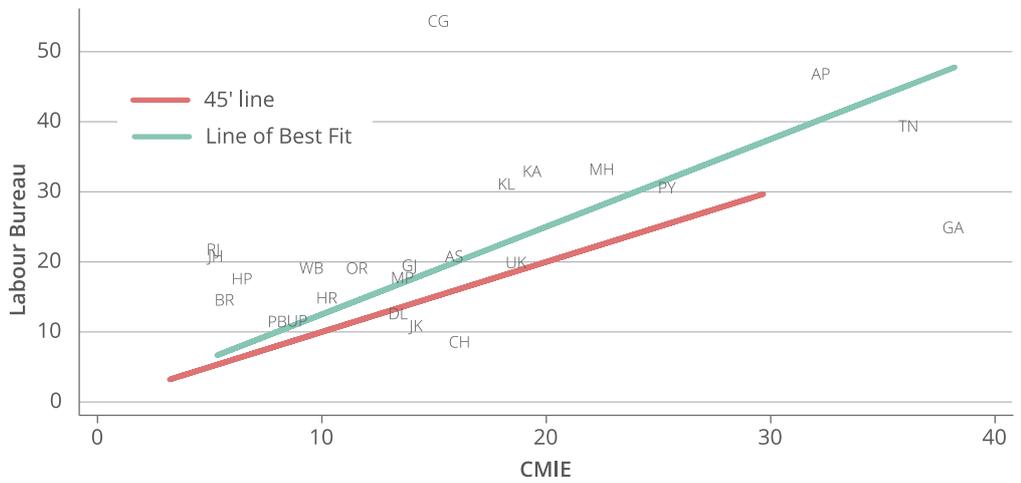
2.1c / Male
LFPR



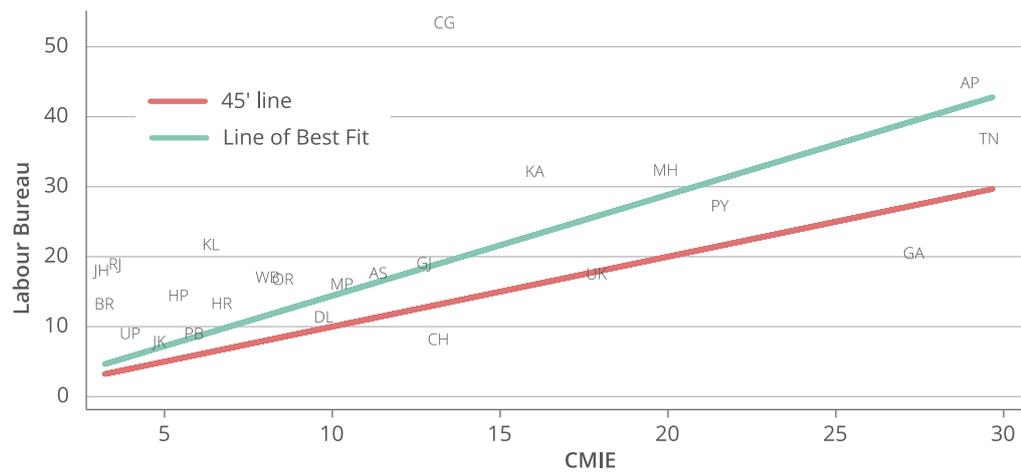
**2.1d / Male
WPR**



**2.1e / Female
LFPR**



**2.1f / Female
WPR**



Sources and notes: Author's calculations using unit-level data from CMIE-CPHS 2016, LB-EUS 2015. See Appendix for list of State codes

As can be seen in Figures 2.1a and 2.1b, the overall LFPR and WPR measured in the two surveys are correlated with each other, but there are some significant outliers as well. Further, in general the LFPR as measured by LB-EUS is around 6 percentage points higher than that measured by CMIE-CPHS. The corresponding figure for the WPR is 10 percentage points. This is seen in the line-of-best-fit being displaced upwards compared to the 45 degree line.

When we examine the two ratio separately for men and women, we find that the agreement between the two surveys is much better for the former. Figures 2.1c and 2.1d show the state-level variation for male LFPR and WPR respectively. Note that the scale is much narrower indicating smaller variation across states in this ratio. Also, significantly, the line of best fit and the 45 degree line lie on top of each other for male LFPR, and they are very close in the case of WPR (LB-EUS estimates are higher by about 0.9 percentage points). This shows that the two surveys are very close to each other in estimating these ratios for men.

The picture looks very different for women. Figures 2.1e and 2.1f show the state-level variation for female LFPR and WPR respectively. First, note the difference in scale compared to the earlier graphs. Second, it is clear that the scatter is much larger, with the two surveys differing from each other by as much as 25 percentage points on average in the case of the LFPR and 44 percentage points in case of the WPR.

Taken together, both the econometric analysis and analysis of state-level variations indicate that measures of women’s participation in the labour force are particularly sensitive to the way questions are asked in surveys, and predictions of women’s LFPR based on standard labour supply variables are much less reliable than those for men.

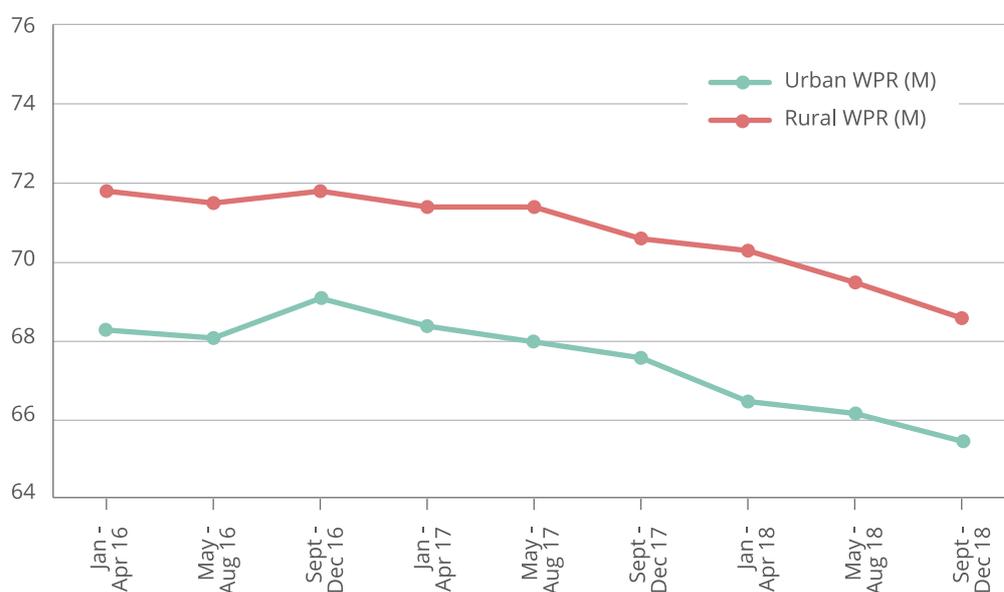
One last point to be noted is that, even though the LB-EUS, NSS-EUS, and CMIE-CPHS surveys are reasonably matched at the individual level (at least for men), and the trends in key parameters are similar (Table 2.1), they differ greatly when it comes to the absolute level of the unemployment rate. This is because the variations in the LFPR and the WPR are compounded in the calculation of the unemployment rate.

Keeping these caveats in mind, here we focus on male LFPR and WPR numbers estimated in CMIE-CPHS.

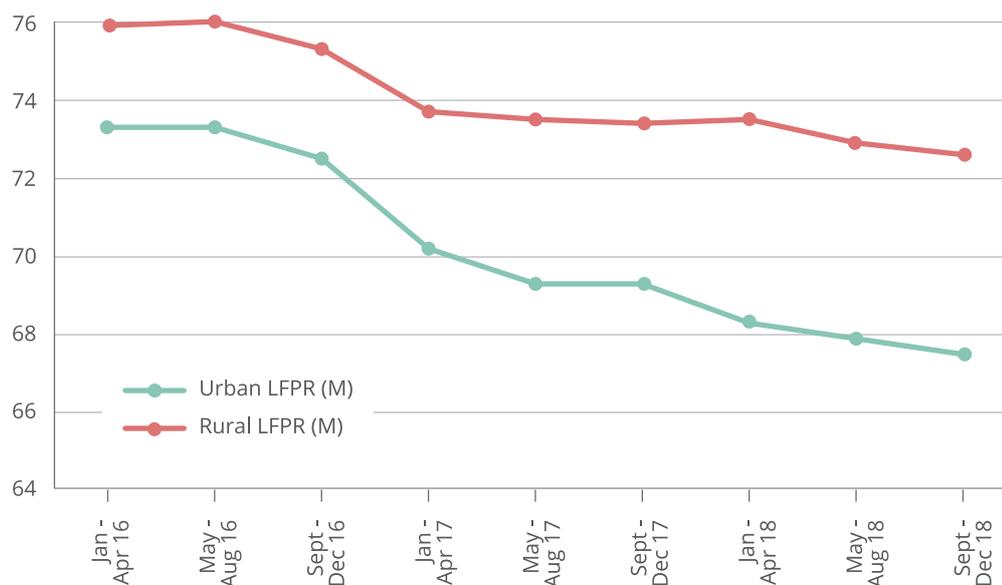
2.3 / What has happened to employment since 2016?

Being the only comprehensive household-level labour survey since 2015-16, a central question that can be answered with the help of the CMIE-CPHS data is how the employment situation has changed since early 2016. We now present the trends in the male labour force and workforce participation rates in rural and urban areas (Figure 2.2).

Figure 2.2:
Trends in the labourforce and work force participation rates in rural and urban areas since 2016 , for men.
2.2a / WPR



2.2b / LFPR



Sources and notes: Author's calculations using unit-level data from CMIE-CPHS, various waves

In Figure 2.2a we see the trends in LFPR and WPR for men over a period of three years starting from the first wave of 2016 (Jan to Apr 2016). The nine time periods on the horizontal axis correspond to the nine waves - three in each year. It shows that the labour force participation started to decline suddenly from the third wave of 2016 (September to December 2016) for both urban and rural men. The rate of decline slowed down by the second wave of 2017, but the general trend has continued and there has been no recovery. The timing of the start of the decline coincides with the demonetisation of high value currency notes in November 2016, although we cannot ascribe any causal link based only on these trends. The WPR follows a similar trend, though the rate of decline is not as sharp as for LFPR.

Between the third wave of 2016 and the third wave of 2018, the urban male workforce participation rate (WPR) fell by 3.6 percentage points from 69.1 per cent to 65.5 per cent. For the same period, the rural male WPR fell by 3.2 percentage points from 71.8 per cent to 68.6 per cent. All India (rural and urban) male WPR fell by 3.3 percentage points in this period.

What does a 3.3 percentage point decline in the WPR mean in terms of jobs lost? We can answer this question by drawing on the population estimates provided by the UN Department of Economics and Social Affairs.³ As per these data, the male working age population in India increased by 16.1 million between 2016 and 2018. Accounting for the increase in working age population, the decline in the WPR amounts to a

net loss of 5 million jobs during this period. Recall that this analysis applies to men only. When we take women into account, the number of jobs lost will be higher.

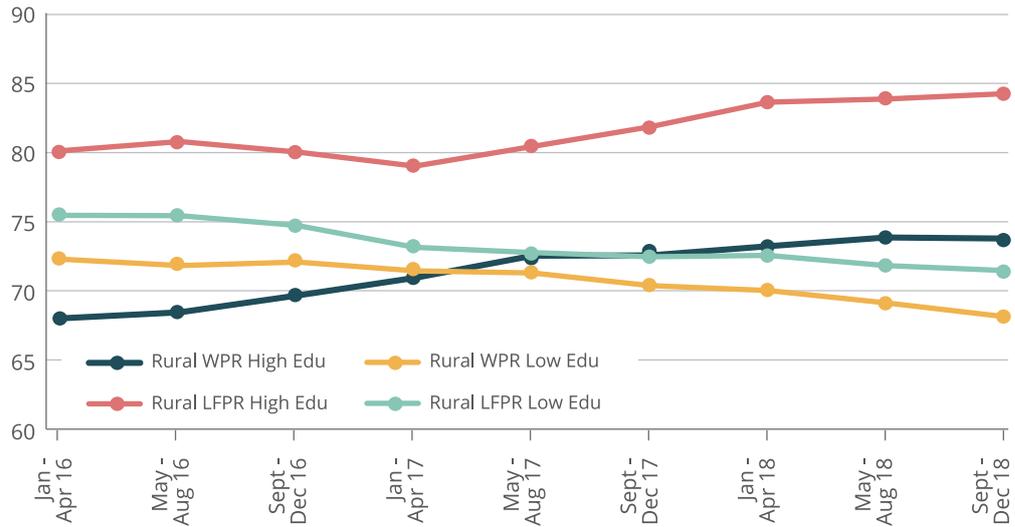
Broadly, these trends can be interpreted as saying that the proportion of working age men who are in employment continues to go down. This is the opposite of what one would expect with the 'demographic dividend' where the ratio of the working age group to the rest of the population increases, thus spurring higher growth. Whether or not this decline was caused by demonetisation, it is definitely a cause for concern and calls for urgent policy intervention.

Finally, we note that the recent decline in LFPR and WPR has affected men with different educational backgrounds differently. In Figures 2.3a and 2.3b, we show the disaggregated trends by education levels. While detailed data on the education level of surveyed individuals is available, here we group them into two broad categories for simplicity. The 'high education' group consists of men with a diploma or degree beyond Class 12.

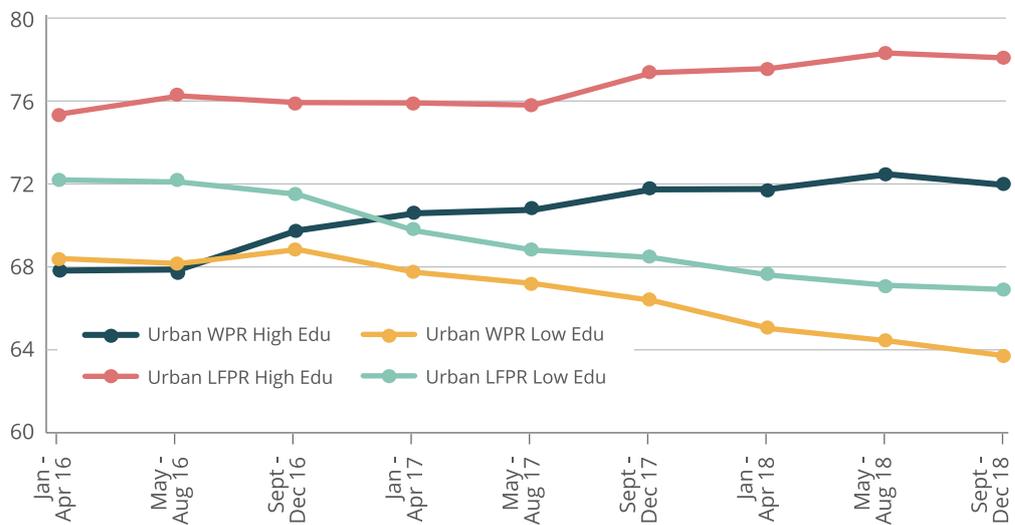
The graphs show that the decline in LFPR and WPR is largely driven by men with lower education levels, for both rural and urban areas. For example, at the beginning of the period under analysis, the WPR for both groups of men in urban areas was similar at around 68 per cent. By the end, the WPR for higher educated men had increased to 71.9 per cent while that for less educated men had fallen to 63.7 per cent.

Figure 2.3:
Men's LFPR and WPR by level of education

2.3a / LFPR and WPR for men with low and high education in rural areas



2.3b / LFPR and WPR for men with low and high education in urban areas



Sources and notes: Author's calculations using unit-level data from CMIE-CPHS, various waves

Clearly, there is a large differential impact by level of education. This is consistent with the idea that the informal sector, where we can expect the share of less educated men to be higher, was hit hardest by demonetisation as well as the introduction of GST. One question that may arise is, how can informal workers afford to remain out of the labour force? The answer may lie in the fact that a lower WPR does not necessarily mean a given person is fully out of work. Rather, it can be a result of the fact that work has become less regularly available, leading to a lower probability that the individual will be counted as part of the workforce in a survey.

As far as the educated are concerned, we can see that the gap between the LFPR and WPR is much higher for them than for the less educated. This indicates, as expected, that the levels of open unemployment are higher for this section of the population. We analyse the composition of the openly unemployed in the next

section. But the foregoing analysis shows that, in the current scenario, joblessness is not only a problem limited to the educated sections of the labour force. While open unemployment may still be low among the less educated, there has been a marked tendency to drop out of the labour force for this section, presumably due to loss of work opportunities. Any policy intervention that addressed the employment issue must address the needs of this less educated section of the labour force.

The point bears repeating: much of the current debate over jobs has focused on unemployment among the higher educated. While this is indeed a problem, we must also be aware of the fact that the last two years have not been good for the less educated sections of the labour force as well. And in absolute terms, this is a much larger number of people in the more vulnerable sections of society.

2.4 / Who are the unemployed?

The recently leaked PLFS data as well as several other anecdotal pieces of evidence suggest that open unemployment has been increasing in India. This is particularly true of the educated youth. Table 2.2 shows the long-run trend in the unemployment rate since 1999-00 for the entire labour force as well as for the higher educated.

Table 2.2: Unemployment rate, overall and among highly educated for the past two decades

Overall Unemployment Rate							
	NSS 55th	NSS 61st	NSS 68th	LB	LB	CMIE	CMIE
	1999- 2000	2004 -05	2011 -12	2011 -12	2015 -16	2016	2018
Overall	2.7	3.1	2.7	3.8	5.0	8.2	6.0
Male	2.9	2.7	2.4	2.9	2.9	5.5	4.9
Female	2.4	4.2	3.7	6.9	8.7	22.4	14.2

Unemployment Rate among Educated (Degree/Diploma beyond Class 12)							
	NSS 55th	NSS 61st	NSS 68th	LB	LB	CMIE	CMIE
	1999- 2000	2004 -05	2011 -12	2011 -12	2015 -16	2016	2018
Overall	10.3	10.7	10.3	9.0	15.2	16.2	12.7
Male	8.4	7.5	8.4	5.9	11.4	12.1	9.7
Female	21.1	24.3	21.3	25.8	30.6	40.1	34.0

Sources and notes: Author's calculation based on NSS EUS various rounds, LB-EUS various rounds, CMIE-CPHS. Unemployment Rate for Educated Unemployed for LB 2011 is for Graduates only since unit-level data is not available.

After remaining at around 2-3 per cent for the first decade, the unemployment rate has steadily increased to around 5 per cent in 2015 and then just over 6 per cent in 2018. Both the PLFS and the CMIE-CPHS report the overall unemployment rate to be around 6 per cent in 2018, double of what it was in the decade from 2000 to 2011.

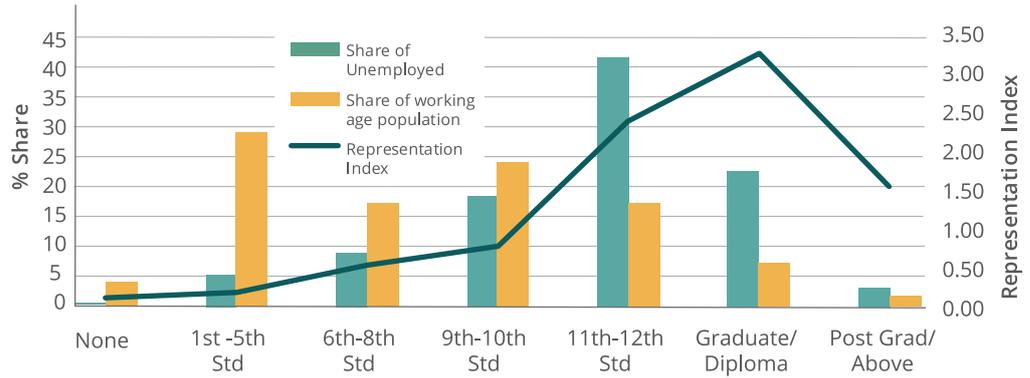
The overall unemployment is likely to be driven by what is happening to the educated section of the labour force. This is because it is this section which tends to aspire to a regular, formal sector job and who can 'afford' the luxury of being unemployed. Therefore, they are more likely to report as unemployed and looking for work rather than working at any available job in the informal sector. This is made clear in Table 2.2. During the entire time that the overall unemployment rate was around 3 per cent, the unemployment rate among the educated was 10 per cent. It has increased since 2011 to around 15-16 per cent.

Another important point to note is that both overall unemployment as well as unemployment among the educated tends to be much higher for women compared to men. This is true across all surveys (NSS-EUS, LB-EUS, PLFS, and CMIE-CPHS) and hence is likely to be a stable feature of the labour market, not driven by choice of survey questions or method.

We would like to know the demographic composition of the pool of unemployed workers, in particular, with respect to education and age. The rate of unemployment, as we noted earlier, is subject to a compounding of errors especially in the case of women, leading to large variations and loss of comparability across surveys. Instead of using the unemployment rate, we analyse the share of various demographic groups in the total pool of unemployed workers in 2018. For the purposes of this analysis, those who report being willing to work and are looking for work, are counted as being unemployed.⁴

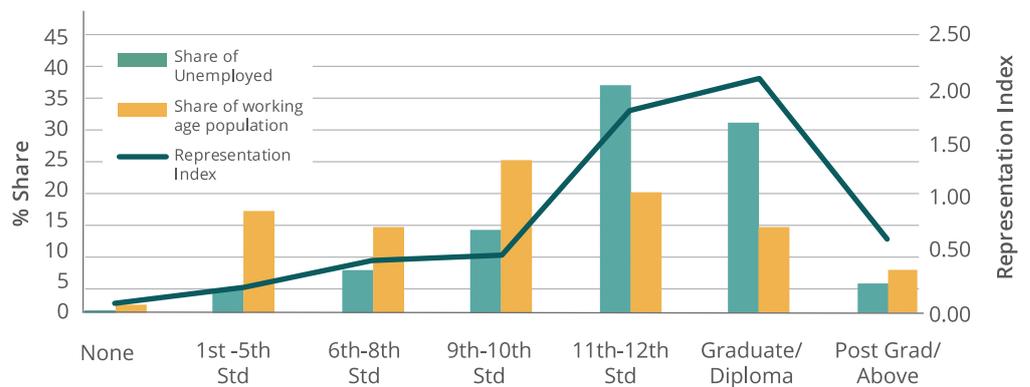
Figure 2.4 and 2.5 depict the share of various groups of workers disaggregated by education level and age in the pool of the unemployed relative to their share in the working age population. The ratio of these two shares (which we call the Representation Index) gives us a measure of over- or under-representation of that group in the unemployed. We do the analysis separately for rural and urban, male and female workers.

Figure 2.4:
Share of various education groups in the unemployed vis-a-vis their share in the working age population, 2018

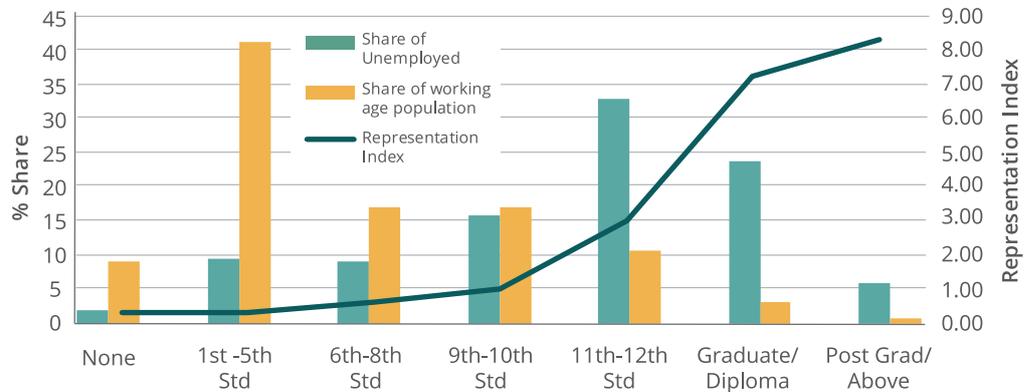


2.4a / Rural Men

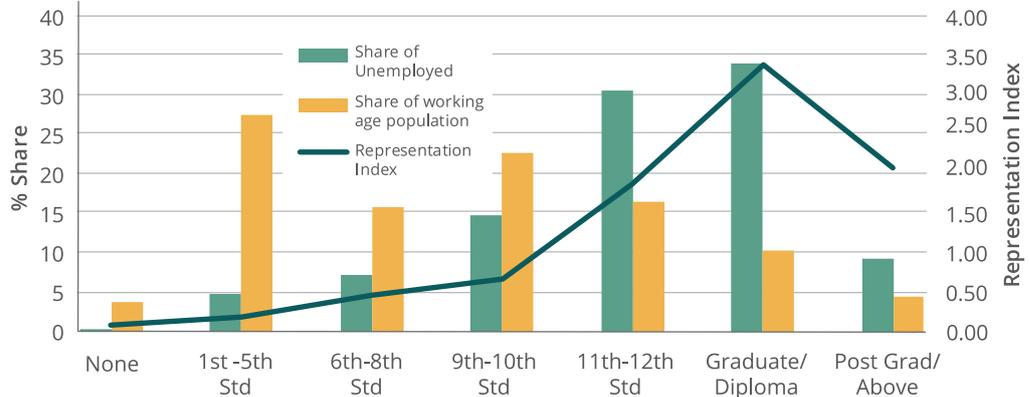
2.4b / Urban Men



2.4c / Rural Women



2.4d / Urban Women



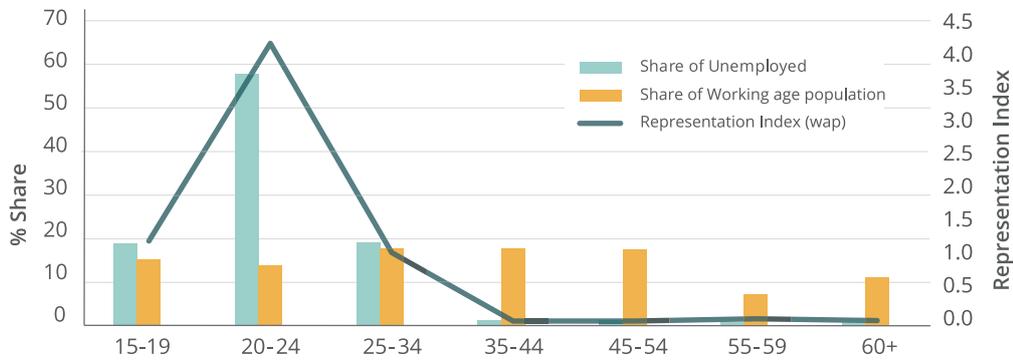
Sources and notes: Author's calculations using CMIE-CPHS 2018 unit level data.

Across all four slices (rural-urban, men-women), those who are educated beyond Class 10, and graduates in particular, are over-represented among the unemployed (Figure 2.4a to 2.4d). For example, among rural men, graduates are around 7 per cent of the working age population but over 20 per cent of the unemployed, giving a representation index of 3.3. Among urban women, graduates are 10 per cent of the working age population but 34 per cent of the unemployed, giving a representation index of 3.4. Among rural women, graduates form only a small 3.2 per cent of the working age population, but they make up 24 per cent of the unemployed (representation index = 7.4).

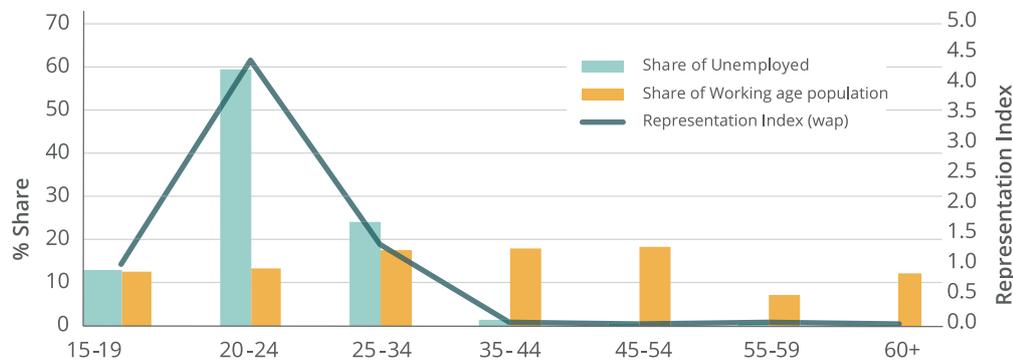
Similarly, across age groups, the age group 20-24 years is hugely over-represented (Figure 2.5a to 2.5d). Among urban men, for example, this age group accounts for 13.5 per cent of the working age population but a whopping 60 per cent of the unemployed. In fact the representation index for this group exceeds 4 for all the slices (rural and urban, men and women). Beyond this age group, particularly for women, the 25-34 years group is also over-represented among the unemployed.

Thus broadly speaking, open unemployment in India today is largely a concern for those under 35 years of age and those who are educated beyond Class 10, and particularly beyond Class 12.

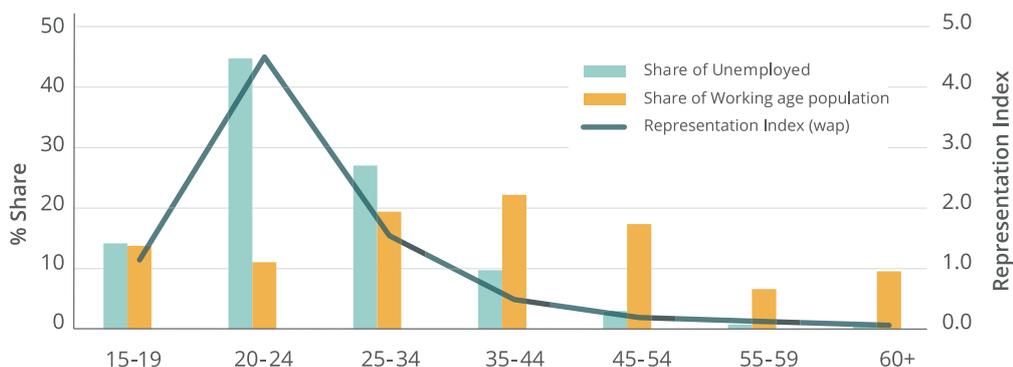
Figure 2.5: Share of various age groups in the unemployed vis-a-vis their share in the working age population, 2018



2.5a / Rural Men

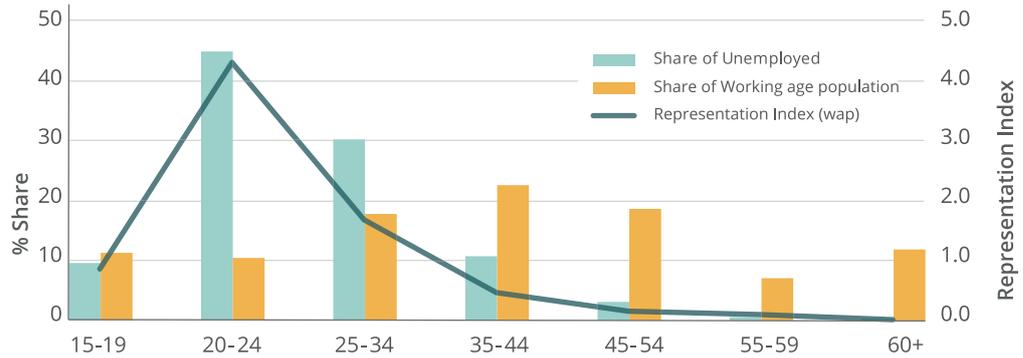


2.5b / Urban Men



2.5c / Rural Women

2.5d. Urban Women



Sources and notes: Author's calculations using CMIE-CPHS 2018 unit level data.

2.5 / Conclusion

The last three years have been one of great turmoil in the Indian labour market as well as in the system of labour statistics. While we await the official data from the 2017-18 PLFS, the CMIE-CPHS remains the only source of household employment data for this period. Here we have used this data to present a picture of the employment situation in India. Four big lessons stand out:

1. Unemployment, in general, has risen steadily post 2011, whichever household survey we examine (LB-EUS, PLFS, or CMIE-CPHS).
2. The higher educated and the young are vastly over-represented among the unemployed.
3. In addition to open unemployment among the educated, the less educated (and likely informal) have seen job losses and reduced work opportunities over this time period.
4. Women are worse off than men with respect to levels of unemployment as well as reduced labour force participation.

The numbers clearly demonstrate why unemployment has emerged as the primary economic issue in the general election of 2019.

Endnotes

1. The NSSO did release annual numbers from the "thin" rounds which had a sample size of around 30,000 households (as opposed to over 100,000 for "thick" rounds). But these were not used very frequently.
2. <https://www.theindiaforum.in/article/employment-question-india>
3. India's working age population (15+ years) increased from 950.8 million in 2016 to 983.1 million in 2018. Assuming a 50:50 male to female ratio in the working age population, we can arrive at estimated number of working age men. Applying the WPR to this number gives the size of the workforce for a given year. Source: United Nations, Department of Economic and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision, custom data acquired via website.
4. The NSS/LB survey identifies those who 'did not work but was seeking and/or available for work' as the unemployed. The CMIE, on the other hand, have two types of unemployed workers. There are those who are unemployed, willing and looking for a job, and those who were unemployed, willing but not looking for a job.

Appendix - State codes

AP	Andhra Pradesh
AR	Arunachal Pradesh
AS	Assam
BR	Bihar
CG	Chhattisgarh
CH	Chandigarh
DL	Delhi
GA	Goa
GJ	Gujarat
HP	Himachal Pradesh
HR	Haryana
JH	Jharkhand
JK	Jammu and Kashmir
KA	Karnataka
KL	Kerala
MH	Maharashtra
ML	Meghalaya
MN	Manipur
MP	Madhya Pradesh
MZ	Mizoram
NL	Nagaland
OR	Odisha
PB	Punjab
PY	Puducherry
RJ	Rajasthan
SK	Sikkim
TL	Telangana
TN	Tamil Nadu
TR	Tripura
UK	Uttarakhand
UP	Uttar Pradesh
WB	West Bengal

Chapter 3

Strengthening Towns through Sustainable Employment : A Job Guarantee Programme for Urban India

An urban job guarantee programme can promote sustainable development of Indian cities, build urban infrastructure and services, create local demand, spur local entrepreneurship, restore urban commons, build skills, address open unemployment and raise wages.

3. Strengthening Towns through Sustainable Employment: A Job Guarantee Programme for Urban India

Amit Basole, Mathew Idiculla, Rajendran Narayanan, Harini Nagendra, and Seema Mundoli

Amit Basole and Rajendran Narayanan are with the Centre for Sustainable Employment, Azim Premji University, Bangalore. Mathew Idiculla is with the Centre for Law and Policy Research, Bangalore. Harini Nagendra and Seema Mundoli are with the Centre for Urban Sustainability in India, Azim Premji University, Bangalore.

Contact: amit.basole@apu.edu.in.

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Executive Summary

1. We propose the creation of a National Urban Employment Guarantee Programme that strengthens small and medium-sized towns in India by providing urban residents a legal right to employment, improving the quality of urban infrastructure and services, restoring urban commons and ecology, skilling youth, and increasing the financial and human capacity of Urban Local Bodies.

2. The proposed programme seeks to address the following key problems:

- Underemployment and low wages in the informal urban workforce
- Migration to large cities from small and medium towns
- Poor quality of urban infrastructure and services
- Ecological degradation of urban spaces
- Shortage of human and financial capacities of Urban Local Bodies
- Unemployment and lack of skills in the educated labour force

3. Groups and organisations working on urban issues across India have many years of valuable experience solving these problems. We hope they find this proposal of interest and invite them to respond to it.

4. This programme should have a strong legal basis in the form of a National Urban Employment Guarantee Act which provides a statutory right to employment at specified wage rates and number of days. While it draws on some principles of the rights-based framework of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) 2005, the programme has a broader scope as it deals with varied forms of employment. We emphasise that the programme would not be at the cost of MGNREGA but rather the two would go hand-in-hand.

5. The programme should be applicable for all cities and towns with a population less than 1 Million (10 lakhs). It covers about 4000 Urban Local Bodies accounting for about 50 per cent of the urban population as per the 2011 census.

6. The proposal calls for providing 100 days of guaranteed work at ₹500 a day. It also provides 150 contiguous days of training and apprenticeship at a stipend of ₹13,000 per month for educated youth. The programme thus creates opportunities for urban informal workers as well as for educated youth, giving

the latter a chance to acquire work experience as well as skills while enabling them to address needs of their communities.

7. A large variety of works that require a range of education and skills may be undertaken through this programme. These include public works such as building and maintenance of roads, footpaths, and bridges; creation, rejuvenation, and monitoring of urban commons like water bodies, forest land, wetlands, and parks; monitoring, evaluation, and surveying of environmental quality, apprenticeship in municipal offices, public schools, and health centres; and provisioning of care for children and the elderly.

8. The relevant Urban Local Body (ULB), such as the Nagar Panchayat, Municipal Council, or Municipal Corporation, shall be the principal authority responsible for administering this programme. It shall identify projects, prepare annual works plans and implement the programme in a participatory manner by involving the ward committees and ward sabhas. The programme shall be administered by a set of dedicated staff starting from the level of the Ward.

9. To make it truly demand-driven, we propose that the annual estimated pool of Central government funds be transferred to the states at the beginning of each financial year. The state governments, in turn, would transfer the Central and the state share of the budget to the ULB so that funds are locally available. To ensure timely payment of wages, the wages would be disbursed in a decentralised manner at the local ULB.

10. We propose proactive transparency and accountability structures such as mandatory periodic social audits and public hearing through a designated independent unit, as well as a mandatory grievance redressal architecture. The programme includes a 'right to timely grievance redressal' which ensures that the grievances of workers are addressed through Grievance Redressal Councils at the Centre and state levels, and dedicated Grievance Redress Officers at the ULB.

11. The total estimated programme budget would range from 1.7 to 2.7 per cent of GDP depending on whether employment is guaranteed to one adult from every household or every adult resident. We estimate that between 30 to 50 million workers in India's small towns will be eligible for employment through this programme.

3.1 / Why an urban employment guarantee programme

3.1.1 / Rationale and benefits

India is facing a crisis of both quantity and quality of employment. Despite lack of recent official statistics, it seems clear, both from private data sources such as the Centre for Monitoring the Indian Economy (CMIE) as well as the leaked Periodic Labour Force Survey (PLFS) report of the National Sample Survey Organisation (NSSO), that the rate of open unemployment has steadily risen over the past few years¹. As per the PLFS 2017-2018, open unemployment stands at a historic high of 6.1 per cent, and unemployment among educated youth has reached 20 per cent. Unemployment in urban areas at 7.8 per cent is higher than the unemployment rate in rural areas (5.3 per cent) (Jha 2019a). In addition to this, Indian towns and cities continue to be plagued by the prevalence of low-wage, poor quality, informal work. PLFS data show that despite a rise in the prevalence of regular-salaried work, just over 50 per cent of the urban workforce remains either self-employed or in casual wage work (Jha 2019b).

At the same time that our towns and cities are facing a crisis of jobs, there is also a crisis of the quality of life due to ecological stress and lack of adequate public services. As malls, motorcycles, and mobiles proliferate, our streets are in disrepair, water-bodies are rapidly being degraded, green spaces are disappearing, the quality of air is deteriorating, and common spaces are shrinking (Mundoli, Unnikrishnan, and Nagendra 2017; Narain and Vij 2016). Thus, we see a dramatic divergence between the quality of private and public goods.

Centrally funded programmes like the Smart Cities Mission and Jawaharlal Nehru National Urban Renewal Mission (JNNURM) have disproportionately focused on development of bigger towns and cities (Zérah and Dennis 2017). Hence, it is important to re-focus our attention to improving the livelihoods and ecology of urban areas beyond India's major cities.

However, Urban Local Bodies (ULBs), which are largely responsible for developing and administering our

towns and cities, find themselves unable to carry out their core tasks adequately due to lack of financial as well as human resources. Most ULBs in India are severely understaffed and are unable to hire more workers since they are financially restrained (ASICS 2017). A centrally funded programme that covers the wages of different kinds of workers will allow the ULBs to fulfil tasks they are mandated to perform but are failing to, because of a shortage of financial and human capacity. Further, the present staff of most ULBs are not fully suitable for performing the tasks related to the renewal of urban commons and monitoring urban environment. This programme can generate a new set of 'green jobs' that can strengthen the capacity of ULBs as well as promote sustainable urban development.

Creating jobs, improving the capacity of urban local governance, and supplying quality public goods and services requires serious public investment. But if made to an adequate extent, such investment has the potential to pay for itself many times over. Not only does it directly improve welfare by raising incomes and creating assets, there are many positive spillover effects too, such as:

- It increases demand by raising incomes directly, and indirectly in the informal sector, by improving the fallback position of workers
- It provides a better trained workforce to the private sector by allowing educated young workers to acquire skills and improve their employability
- The work undertaken will create assets that improve the town's ecology and quality of public services, which have a direct impact on productivity and quality of life
- It creates a shared sense of public goods in which every resident has a stake.

While cities and towns do not yet have an equivalent of MGNREGA, India has a history of urban employment schemes. One of the most prominent central programmes in this regard was the Swarna Jayanti Shahari Rozgar Yojana (SJSRY) launched in 1997 which provided employment to the unemployed and underemployed urban poor through self-employment and wage employment.² The Urban Wage Employment Programme component of SJSRY covered those living below the poverty line in ULBs with less than 5 lakh population. The SJSRY was replaced by the National Urban Livelihoods Mission (NULM) in 2013.³ This

programme, and its subsequent version, laid more emphasis on self-employment and entrepreneurship than on wage employment. However, unlike MGNREGA, India's past urban employment schemes were not demand-driven and only a set of identified beneficiaries could avail their benefits.

More recently, the idea of an urban job guarantee has been gaining prominence in political and policy debates in India. According to news reports, an employment guarantee programme for urban areas has emerged as a core element of a possible Common Minimum Programme from the opposition parties for the 2019 General Election (Joy 2019). Further, the newly elected government in Madhya Pradesh recently announced a 100-day urban job guarantee scheme, the Yuva Swabhiman Yojana, which provides urban youth with varying educational qualifications with a wide set of jobs (Sirothia 2019). Since 2010, Kerala has also been running a programme called the Ayyankali Urban Employment Guarantee Scheme (AUEGS) which guarantees 100 days of wage-employment to an urban household for manual work.⁴

We are also witnessing a growing popularity of employment guarantee programmes across the world. For example, in the United States of America, employment guarantee is a core component of the 'Green New Deal', a set of policy proposals for addressing climate change and economic inequality, supported by several presidential candidates.⁵ It provides for a 'Green Job Guarantee' which enshrines 'a legal right that obligates the federal government to provide a job for anyone who asks for one and to pay them a liveable wage'. The Green New Deal proposes public expenditure of up to 8-10 per cent of GDP reflecting the scale of concerns as well as boldness of vision.

Further, an employment guarantee programme also strengthens the 'Right to Life' enshrined under Article 21 of the Constitution of India. As the Supreme Court of India has held in multiple cases, the 'Right to Life' is not restricted to mere existence but also includes the 'right to livelihood'⁶ and the 'right to live with human dignity.'⁷ In the last two decades several rights-based legislations have been introduced to further these constitutional ideals. In particular, the MGNREGA is a legislative realisation of the 'Right to Life' through a

'Right to Work'. A legally enforceable 'Right to Work' in urban areas appears to be a natural extension.

Finally, we note that the idea of a minimum or basic guaranteed income has gained traction in policy circles across developing and developed countries. The specifics differ from proposal to proposal but the key aspect is an unconditional cash transfer to some identified group of beneficiaries. While modalities of an income guarantee are worth debating, we believe that an employment guarantee has three key advantages over the former:

1. Employment guarantee schemes are generally self-targeting and demand-driven. In a country like India with scarce income data, an employment guarantee programme circumvents the complicated process of identifying beneficiaries.
2. Employment guarantee, such as the one proposed here, enables people to contribute productively to the creation of useful public goods and services.
3. An employment guarantee has the potential to foster active citizenry. It enhances engagement in democratic decision-making through public meetings and public hearings. On the one hand, it would increase people's political capacities in community building and on the other it strengthens local accountability.

3.1.2 / Lessons from MGNREGA

India has been a leader in the implementation of employment guarantee programmes with the MGNREGA that guarantees 100 days of work to any rural household that chooses to avail of it.

Critics of the programme argue that it is a waste of resources (Bhagwati and Panagariya 2014). However, there is evidence to suggest otherwise. In spite of the programme functioning at half its 100-day guarantee (average number of days worked per household has been around 45 days for the last five years) and despite the implementation challenges, it has had a far-reaching impact. Four broad positive aspects can be identified: an increase in rural incomes, gender and caste effects, community empowerment, and quality asset creation (Basole and Jayadev 2018). The popularity of the programme is also evident in the fact

that growing rural areas sometimes prefer to remain rural, rather than be re-classified as 'urban' in part to avail of MGNREGA benefits.⁸

MGNREGA has served as a lifeline for the poorest with one out of every three rural households having worked in the programme. In 2017-18, close to 80 million (8 crore) people worked under MGNREGA. Data from the Employment-Unemployment Survey of the NSS show an eightfold increase in participation in public works in 2009-10 over 2004-05, confirming the impact of MGNREGA and other public employment programmes.

Based on a large-scale randomised experiment in Andhra Pradesh, Muralidharan et al (2018) show that the incomes of MGNREGA workers increased by 13 per cent and that overall poverty fell by 17 per cent. The authors mention that these findings are in synchrony with the SECC data of 2011. Moreover, 90 per cent of the income gains, according to their study, can be attributed to an increase in market earnings due to a spill-over effect of a well-functioning MGNREGA. Klonner and Oldiges (2014) showed that the Act has increased consumption among SC/ST households during the agricultural lean season by as much as 30 per cent and reduced poverty by about 50 per cent. Using a different methodology, an NCAER Report (Desai et al 2015), shows that 32 per cent of poverty reduction for participants is due to MGNREGA employment. And that more than 14 million households would have become poor without MGNREGA'. Himanshu and Kundu (2016) and several references therein, demonstrate that after stagnating for at least three decades, the growth in real rural wages (especially agriculture) picked up in 2007-08 following MGNREGA's inception.

Being the first programme to ensure wage parity for both men and women, MGNREGA has played a significant role in improving women's participation in the labour force and increasing financial inclusion among them. According to the NCAER report cited above, about 45 per cent female MGNREGA workers were either not working or worked only on a family farm in 2004-05. MGNREGA was thus the first opportunity for women to be part of a paid workforce. In fact, in the last five years, more than 50 per cent of the MGNREGA works were done by women.

Azam (2012) shows that the daily wages for casual work for women increased by 8 per cent due to MGNREGA.

The planning of works for MGNREGA happens through a participation of the resident communities at the Gram Sabha (village councils). This, in turn, has given a platform and opportunity for the poorer and more vulnerable communities to engage in democratic participation. Veeraraghavan (2017) (and some references therein) shows the immense positive impact of MGNREGA both in terms of community participation among Adivasis and in terms of improved bargaining power of Dalits. The study goes on to repose faith that the State and society can collaborate and produce positive outcomes. According to the 2011 Government of India census, SC/ST households form about 30 per cent of the rural population and largely constitute the poorest sections in the society. Around 40 per cent of the total households employed under MGNREGA every year belong to SC and ST Households.

Over the years, there has been a significant increase in the list of admissible works to include vermiculture, fodder production for livestock, horticulture, poultry and cattle sheds, and others through convergence with several departments. More than 20 million different assets have been completed under MGNREGA. Assets studied by Tewari et al (2011) and Esteves et al (2013) show that they have reduced the vulnerability of agricultural production, water resources, and livelihoods to uncertain rainfall, water scarcity and poor soil fertility. In a survey of over 4100 assets and over 4800 users across Maharashtra, Narayanan et al (2014), show that farmers viewed water conservation and harvesting works through MGNREGA as enablers of crop production and expanding area under cultivation. There are numerous other academic papers corroborating the immense improvement in rural lives due to good quality asset production. For example, for an economic evaluation of assets, one can refer to Aggarwal et al (2012) and Bhaskar and Yadav (2015).

Thus, MGNREGA has had far reaching consequences for rural livelihoods, incomes, gender and caste upliftment, participatory democracy and agriculture. Such learnings from MGNREGA can be positively leveraged for an urban programme. They also strengthen the case for guaranteeing urban employment.

Lessons can also be drawn for an urban programme from problems observed in MGNREGA implementation. Low daily wages and lack of political will have led to severe subversion of the rights of MGNREGA workers. The implementation has faced several related challenges including inadequate funds (Narayanan and Pothula 2018), delayed payments (Narayanan et al. 2017), and leakages (Vivek et al. 2018). For example, the payment processes in MGNREGA have become highly technical and excessively centralised, leading to issues such as diverted payments (one person's payments going to somebody else's accounts), rejected payments, and locked payments. A centralised payment architecture has adversely affected workers' democratic rights (Aggarwal 2017; Dhorajiwala 2018; Dréze 2018; and Nandy 2019). More recently, Munjuluri et al (2019) analysed over 10 million Aadhaar Payments Bridge System transactions for MGNREGA wages in Jharkhand and found that in about 39 per cent of the cases the wages are redirected to a completely different account. Thus there are sufficient reasons from move away from such a centralised payments architecture. Moreover, a lack of adequate funds has meant that the programme has become supply-driven, in contravention of the demand-driven nature of the Act.

In Section 3.3.4, we propose simpler alternative payments process and offer an idea on how to make the urban employment programme a genuinely demand-driven one.

3.2 / How will an urban employment guarantee programme work?

We now elaborate on the key aspects of the proposed programme. We emphasise that this is only one possible manifestation and we invite a public discussion on the various proposed aspects.

3.2.1 / Which areas will be covered?

This programme will cover Urban Local Bodies with a population less than 1 Million (10 lakhs) as per the latest census. Previous national-level urban programmes like the Smart Cities Mission, Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Jawaharlal Nehru Urban Renewal Mission

(JNNURM) have been relatively more focused on bigger towns and cities. This programme is primarily intended for about 4000 small and medium towns with less than 1 million residents and thus keeps all the major metropolitan cities as well as most state capitals out of its purview.

As per the 2011 census, 377.1 million people lived in urban areas, which is 31 per cent of India's total population. Of these 323 million (27 per cent) lived in areas under an Urban Local Body (called Statutory Towns) and 54 million (4.5 per cent) lived in areas considered urban by the Census but administered by panchayats (called Census Towns). Census Towns would not come under the purview of the present programme since MGNREGA already covers all areas which do not have an Urban Local Body (ULB). In 2011, cities with a population of less than 1 million accounted for 162.3 million people, or about 50 per cent of the urban population (and 13.5 per cent of India's total population).⁹

The programme will cover three kinds of towns:

Type 1 Towns - These are small towns with a population up to 50,000. They are mostly areas transitioning from rural to urban and are often governed by Nagar Panchayats.

Type 2 Towns - These are medium-sized towns with a population between 50,000 and 300,000. In most states, these are governed by Municipal Councils.

Type 3 Towns - These are cities with a population between 300,000 and 1,000,000, having a Municipal Corporation.

For illustrative purposes, we provide a list of different towns and cities under the three categories in Appendix A.

3.2.2 / What types of work will be undertaken?

We propose that the programme will provide employment in a variety of works for people with a range of skills and education levels. Such works can address a wide range of issues in a variety of urban spaces such as streets, footpaths, bridges, tunnels, water-bodies (ponds, tanks, lakes), wells, wetlands, storm-water drains, canals, coasts and beaches, riversides, hill slopes and valleys, parks, protected

areas, forest land and wooded groves, government managed areas of worship, historical monuments and heritage structures, playgrounds and open spaces, areas along roads and railway lines, below high tension wires and flyovers, slums, government schools, anganwadis, colleges, hospitals, housing projects, and other unoccupied public lands.

Here is an indicative list of works. Appendix B provides a larger list of tasks and works that can be undertaken to promote urban ecological sustainability.

a. Public works: Building, maintenance and upgradation of civic infrastructure like roads, footpaths, cycling paths, bridges, public housing, monuments, laying of cables, and other construction work. These are already being carried out by ULBs but it can be expanded with more funds under the new programme.

b. Green jobs: Creation, restoration, and maintenance of urban common spaces, green spaces and parks, forested or woody areas, rejuvenation of degraded or waste land, cleaning of water bodies (tanks, rivers, nullahs, lakes). Work that can be undertaken here includes water conservation and harvesting, flood control, micro-irrigation, enhancing urban greenery, preventing coastal and hillside erosion, disaster management, enabling urban agriculture for subsistence and so on. These works will not only create jobs but will also improve the livelihoods of communities that are dependent on urban commons.

c. Monitoring and Surveying jobs: Gathering, classifying, and storage of information on environmental quality and other aspects of quality of public goods. This will require easy to use equipment for data collection and software for data entry. This can provide both temporary employment as well as valuable skilling and work experience for educated youth. Accordingly, these positions can be for a continuous period of 150 days in a year (5 months), and with a different set of people hired each year. The information from the monitoring and data collection could feed into prioritising the kind of works that need to be done.

d. Administrative assistance: Assisting municipal offices, local public schools, health centres and so on in administration or other ancillary functions, thereby freeing up the teaching or medical staff for core functions. These jobs can again be geared towards more educated workers, who can avail of this opportunity to build administrative, managerial and record-keeping skills. These positions may also be for a continuous period of 150 days in a year.

e. Care work: Assisting regular public employees working in balwadis/aanganwadis or creches, providing child-minding services for parents working longer hours, assisted care for the elderly and various services for the differently-abled, such as reading to the visually challenged, assisting those with hearing or mobility impairment to manage various activities and so on. This addresses the problem of the urban poor with such needs often having to fend for themselves. Lessons could be drawn from the Kerala model of community-based part-time volunteers for palliative care. Such jobs will also lead to much-needed skilling for care services, which are going to become much more important in the future.

As can be seen, the programme would allow for the undertaking of a variety of works thereby providing jobs for people with a range of skills and education levels, as well as addressing a wide diversity of urban needs. Programme funds cannot be used to hire workers for manual cleaning of sewers and other such legally prohibited tasks. Further, all work undertaken via the programme must ensure basic standards of equal pay for men and women, availability of child-care, proper worksite facilities such as availability of potable drinking water, first-aid services, shade facilities, toilets and so on.

3.2.3 / Who can get work?

A potential problem with an employment guarantee programme for urban areas is that it may increase migration from rural areas. If the aim of the programme is to create employment for urban residents, one way to ensure this is to restrict eligibility to those who can demonstrate domicile or resident status within the jurisdiction of the ULB via ration cards

or other official documents. Since towns and cities are likely to have long-term residents whose families may reside elsewhere, the programme may allow for such residents who can prove domicile status as per state laws, to apply.

We propose two possible variations of the scheme. In Scheme 1, one adult member from every household would be eligible to apply. In Scheme 2, every adult resident of the town would be eligible. The budgetary implications of each are discussed in Section 3.3.

A job card will be required to be eligible for this programme. The job card will also document any skills/education a worker may have, for example, mason, plumber, electrician, Bachelor of Arts in Psychology and so on. The job card would contain the following details about a worker - name, address, educational qualification, and specialised skills from a roster of possible skills. Once the job card details are entered in the programme implementation software, depending on the skill levels of the applicant, a set of possible job openings in the ULB would be available. Each time a person completes some work through this process, the job card would be updated along with the work details. The job card itself will act as the CV of the person for future work and skill building. There would be a provision that a job card holder must be able to get work within a stipulated time failing which an unemployment allowance would have to be paid.

Two broad types of workers can be identified.

Category 1: These are workers with varying levels of formal education up to Class 12 and informal skills, who currently work as construction labour and in other types of daily wage work, trades of various kinds such as masonry, painting, carpentry, plumbing, electrical works, gardening, child-care, elderly care, and so on. This is a considerable fraction of the urban and peri-urban workforce. The programme will raise their earnings as well as improve their conditions of work. Under Category 1 employment, the types of work undertaken can include standard public works as well as restoration of urban commons, and public provisioning of care. 100 days of work will be guaranteed.

Category 2: These are workers with a formal diploma or degree beyond the higher secondary certificate. These would include industrial training diplomas, various certificate courses in computing, English and so on, as well as Bachelors/ Masters degrees. Category 2 work may be envisioned in the form of an apprenticeship for a contiguous period of five months (150 days) in which the worker assists in the administrative tasks at Municipal Offices, Government Schools, Public Health Centres and so on, or is part of monitoring, evaluation, survey, or data-entry teams. The core idea for Category 2 work is to integrate a skilling programme within an employment guarantee programme. This will enable higher educated unemployed youth to gain work experience, acquire useful skills, and in the process earn some income.

To reiterate, Category 1 work is primarily aimed at addressing the issue of underemployment and low-wage informal work by providing additional employment opportunities with adequate wages and regulated working conditions. Work under Category 2 is primarily for providing some work experience, internship opportunities, and training to unemployed, educated youth. If the programme succeeds at attracting and skilling young people, they will also be able to use the certification from the programme to secure further opportunities in the private or public sector.

3.2.4 / How to seek and get employment

Works will be administered via the ULB (nagar panchayats, municipal councils, and municipal corporations). Each ULB will have a designated facilitation centre with at least three trained staff members to register employment. The registration of work demand, date of the receipt, and the list of works would be available at the facilitation centre. Depending on the existing skill levels of the applicant, a set of possible works would be available. For each category of work, a work ID would be generated with a tentative work plan containing the number of person-days of work required. The facilitation centre would

also have designated staff for registration of grievances. The aim is to strengthen urban local governance as well as assist ULBs in undertaking core functions.

3.2.5 / How will the programme affect the present ULB staff?

This programme seeks to address capacity gaps by augmenting the number of people working for the ULB. It seeks to supplement and not replace the present workforce employed at the ULB, either directly or through contractual arrangements. In case of existing permanent employees, the rollout of this programme will not affect their employment in any way. The vacancies for permanent staff of the ULB also cannot be filled by hiring under this programme. The workers employed under this programme will be paid by the ULB from the grants earmarked for the programme while the permanent employees will continue to be paid by the ULB through its regular sources of revenue.

For workers employed under contracts between the ULB and a private contractor, the rollout of the programme will not affect them while the contract is in force. In some cases, workers may be on short-term contract with contractors for performing specific tasks. Such workers would be eligible for this programme upon completion of the contract. When working under this programme the workers will be paid by the ULB from programme grants and not by the contractors. Each ULB can identify a list of contractual workers who are employed under short-term contracts so that they can be employed under this programme.

3.2.6 / Governance

The ULB is the principal authority responsible for administering this programme. The ULB shall be responsible for preparing the annual work plan, identifying the projects to be undertaken through this programme and implementing the identified projects and works. Each ULB will have a dedicated official in the form of a Chief Programme Officer who shall be responsible for administering the functions entrusted to the ULB. For Type 2 and Type 3 Towns, Additional Programme Officers may also be recruited by the ULB to administer this programme.

Furthering the idea of a decentralised and participatory form of democracy as envisaged by the 74th Constitutional Amendment, the ward can be empowered as the basic unit of governance vested with key functions.¹⁰ Each ward can have a Ward Officer whose sole responsibility will be to supervise all the work carried out under this programme. For Type 1 and Type 2 cities, based on the population of the ward, a Ward Officer may be made responsible for two or more contiguous wards. Additionally, based on the specific demands of each ULB, one or more engineers and other technical officers may be appointed for designing and supervising the projects undertaken through this programme.

Every ward of the ULB will have a Ward Committee (a constitutionally recognised body consisting of the elected councillor of the ward and other members from civil society) which will identify the work to be undertaken through the programme and review the progress in monthly ward committee meetings.¹¹ To ensure that the works under this programme are identified in a participative manner, the Ward Officer shall call for an annual meeting of the Ward Sabha to take inputs regarding the projects to be undertaken in the coming financial year. While the Ward Sabha consists of all adult members of the ward, this annual meeting is restricted to identifying the works under this programme and is hence specifically targeted at potential workers.

In case of Type 3 Towns, which have higher population in each ward, the Ward Officer may hold a set of Mohalla Sabha meetings instead of the Ward Sabha meeting to ensure that every person in the Ward has an opportunity to participate in the meeting. The works suggested by the Ward/Mohalla Sabha are to be noted down by the Ward Officer who presents it before the Ward Committee. The Ward Committee shall then identify the list of projects to be undertaken and prepare the budget estimates for the same in the form of a priority list. These will be submitted to the Chief Programme Officer at the ULB. The Chief Programme Officer can then make the Annual Works Plan and Budget based on demand from each ward and submit it to the council of the ULB for approval.

The ULBs shall be administratively answerable to the Urban Development Department of the concerned state government. Each state shall

constitute a Programme Director housed at the Urban Development Department who is responsible for the overall administration and monitoring of this programme across the state. The state government shall be responsible for collating, reviewing and approving the annual work plans of all ULBs and sending the estimate of expenses of the programme to the central government. In the central government a dedicated Ministry of Employment may be made responsible for reviewing and approving the state plans under this project as part of a national strategy to address the employment problem. If such a ministry is not created, the Ministry of Housing and Urban Affairs at the central level may be made responsible for the overall administration of this programme (Figure 3.1).

Figure 3.1 : Programme Structure



3.2.7 / Transparency and accountability

Transparency and accountability are twin pillars for successful implementation of any public programme. Section 4 of the Right to Information Act, 2005, concerning mandatory and proactive disclosure of information shall be strictly adhered to in the implementation of this programme. The programme design can draw from structures envisioned by the Central Employment Guarantee Council (CEGC) in 2010. CEGC is a statutory body for the implementation of MGNREGA and has laid down the 'Minimum Principles of Transparency' (CEGC Report 2010) that have been accepted by the Ministry of Rural Development.¹²

For the implementing agency, an online Monitoring and Information system (MIS) would be put in place to record the flow and detail of every transaction. All the work details, shelf of works, the measurements, the list of workers and so on would be presented through such an MIS. Again, there are important lessons to be learned from MGNREGA in this regard. As Aggarwal (2017) indicates, in many situations, the MGNREGA MIS has become the de-facto implementing agency and thus a convenient tool to subvert worker rights. Care should be taken that software code does not override legal code. Hence some of the MIS design principles of MGNREGA should not be replicated here.

A well-functioning programme of this nature and scale should actively involve consultation with workers to suggest ways to improve their capacities and access to information. Information systems should have a worker-centric, inclusive, and compassionate design to enhance participatory democracy. Thus, as a start, a critical feature of this programme is the design and development of a bottom-up, worker-centric, worker-consulted, Janata Information System (JIS) whereby a worker's job card would have an easily accessible virtual counterpart. Since workers are actively involved in the production of information, it would be a right for them to have a stake in information presentation and dissemination mechanisms and to have access to their own work records on demand.

Like a bank passbook, the job cards would get electronically updated with the essential demographic details, work details, wage details, and bank account

details at the facilitation centres. It will also act as a CV. As and when applicable, the job card would automatically be updated with the corresponding unemployment allowance and delay compensation (in the event of delays in wage payments) amounts due. Upon the completion of calculation of the total amount due to the worker, the job card would reflect the same for that corresponding work. As a back-up, workers will have the right to get a print-out of the electronic job card once every three months or after completion of 30 days of work, whichever is earlier. Workshops with workers would be conducted periodically to incorporate workers' inputs in improving their access to information and steps would be taken to enhance their capacities based on actionable information. To avoid a situation where an information system subverts legal rights, the JIS itself would be subject to periodic audits by the Comptroller and Auditor General (CAG).

Proactive disclosure would minimally include:

1. Reading out key pieces of information such as details about the work sites, budgets, expenditure, worker wages at the facilitation centres on the 1st and 3rd Saturday of each month.
2. Displaying periodically updated information through boards and wall paintings at the information facilitation centres at the wards.
3. Disseminating information using audio-visual tools such as voice broadcasts on the phone and SMS, and through radios and newspapers.
4. Free and open access to all the records on the internet.

For Category 1 workers, the wage disbursement would happen in the presence of all the workers, at the Facilitation Centre, on the 1st and 3rd Saturday of each month. Wage disbursement would be accompanied with a mandatory printed 'wage slip' containing the essential details such as (1) the worker's job card details (2) the dates of work (3) the muster roll number (CEGC Report 2010) that have been accepted by the Ministry of Rural Development. (4) the total wages earned and (5) the date of wage disbursement. A copy of all this would be automatically updated in the job card as well.

For Category 2 workers, a monthly stipend would be deposited to their bank accounts directly on the last working day of the month.

Transparency is not an end in itself. Transparency mechanisms are put in to foster good accountability and governance that can at least be built in two ways. Proactive accountability is to ensure that implementation proceeds as envisioned. This can be achieved through mandatory and regular social audits. Reactive accountability addresses implementation lacunae via robust grievance redress structures.

3.2.8 / Mandatory social audits

Social audits are a process of verification of the implementation of the programme in consultation with the community. The Ward Officer will conduct concurrent social audits for all the work done each month. The details of all the work in the wards, the expenses incurred (both labour and material), the details of material sourcing, bills and vouchers will be proactively displayed in the public domain and will also be available at the facilitation centres for citizens to see and to take photocopies. Oral testimonies of people would be collected in addition to documentary verification and discussed with the citizens in public. The broad objectives of social audits are: (1) Ensure transparency and accountability (2) Inform and educate people about their rights and entitlements under the programme (3) Create regular, shared and collective platforms for the workers and the community to freely voice their grievances (4) Enhance participation and hence ownership in the programme implementation and (5) Build capacities of stakeholders/participants of the social audit process.

An independent Social Audit Unit (SAU) would be set up by the state governments to facilitate the conduct of social audits at each ward. 3 per cent of the total allocated funds should be reserved for social audits. SAU resource persons would be identified and trained for this unit. For example, one ULB Resource person would be selected and trained in the audit processes. Every town can have a trained pool of social auditors who would be randomly assigned to conduct social audits making sure that an auditor is not assigned one's own ward. The audits would be carried out once every quarter in each ward by a team of four social auditors and the ULB Resource person for that ward. Since all the required details would be proactively made available in the public domain, the social auditors need not necessarily depend on the local ULB for any other data.

The programme should adhere to the minimum principles of the auditing standards of social audits, formalised by the CAG.¹³ The minimum principles, can be classified under the following heads:

1. Access to Information
 - a. Understanding Entitlements -- Disclosure of job charts, time frames and responsibilities of each official in the programme
 - b. Equal and open access to information
 - c. Mandatory display and dissemination of information
2. Involvement and participation of citizens in the process of open decision making
3. Protection of citizens
4. Right to be heard through multiple modes
5. Collective platforms to be overseen periodically by independent ombudsperson(s)
6. Public Hearing and dissemination -- at the end of the social audit in each quarter, a public hearing will be organised outside the Ward Office. It would be mandatory for the Ward Officer and the technical team at the ULB to attend the Public Hearing. The findings of each social audit would be publicly disseminated and available at the ward office. Each SAU would itself be subject to periodic audits by the CAG.

3.2.9 / Grievance redressal

A Grievance Redress Commission would be set up at the national and the state level with a Grievance Redress Officer (GRO) at each Ward. Such a GRO would be at the level of the Ward Officer. The Grievance Redress Commission would be an independent body dedicated to conduct inquiries, verification, and inspection of each registered grievance.

The GRO would ensure the creation of multiple channels of registration of grievances -- a kiosk at the GRO's office, toll-free number, online option, and so on. Every grievance registered would get a dated receipt. In addition, the programme would contain a 'Right to Timely Grievance Redressal'. Enquiry, verification, and inspection of each grievance must be completed within seven working days of receiving the grievance. The enquiry and verification process would comprise an independent team of three members: one member of the social audit team and two members of the grievance redressal team. After completion of each

step in the grievance redress process, the complainant would be notified in person. The grievance would be considered closed only when there is a written notification by the complainant that the grievance has been resolved. There would be penalty clauses created in case of a delay in timely resolution of grievances or failure of redressal in genuine cases. There will be appellate authorities created for grievance redressal procedures. A worker, unsatisfied with the grievance redressal procedure could appeal to a higher appellate authority who will oversee resolution in a time bound manner.

Upon completion of verification and inspection, the grievance must be resolved within seven more working days. Thus, every grievance must be resolved within 15 days of receiving the grievance.

3.3 / Programme Budget

We now discuss the programme wage, number of people covered, and the resulting budget. As with programme structure elaborated above, this is an illustrative exercise that is presented for further discussion and debate.

3.3.1 / Calculation of wage rate

A point of reference for setting programme wages comes from the wage structure observed for broad occupational categories in the CMIE Consumer Pyramids survey. We choose three occupations, casual wage work, self-employed entrepreneurs in the informal sector (people in various kinds of trades) and white-collar clerical workers. The first two are likely to sign up for work under Category 1. The last occupational type is closest to Category 2 work. According to these data, median earnings reported by casual wage labourers in urban India in 2018 were ₹9625 per month or 370 per day assuming a 26-day working month. Self-employed informal entrepreneurs reported median monthly earnings of ₹12,500 or 480 per day. While white-collar clerical workers reported median earnings of ₹28,125 per month or 1082 per day.¹⁴

In addition, we note that the overall median daily wage (across all occupations) in urban India in 2018 was ₹500 per day.

The second point of reference for setting a programme wage is the recently proposed national floor minimum wage of ₹375 per day as well as the recent Ministry of Labour and Employment Government Order dated 28/09/2018 that gives minimum wage rates plus variable dearness allowance for a variety of occupations covering most activities that can be undertaken in this programme.¹⁵ For Type B areas (intermediate towns) the proposed 'unskilled', 'semi-skilled' and 'skilled/ clerical' rates are 466, 527, and 617 per day, while for Type C towns (smallest towns) they are 373, 437, and 527 respectively.

Taking these two points of reference and keeping the scheme simple in view of administrative constraints, we propose a wage rate of ₹500 per day for Category 1 workers, and the same rate converted into a monthly stipend of ₹13,000 for Category 2 work (work requiring continuous presence of a person with a diploma or degree). Since Category 2 work is envisioned as a skilling or training apprenticeship programme for youth with diplomas or degrees beyond Class 12, it need not pay in accordance with market rates. This is also why we refer to the payment as a stipend rather than a wage or salary. The wage structure will be the same for men and women, following the gender parity norm established under MGNREGA. Wages would be indexed to CPI-U. The base wage rate may be adjusted upwards based on cost of living considerations.

Setting the programme wage equal to the median urban wage, would raise earnings significantly at the bottom of the distribution. One criticism of this approach may be that as wages exceed the current market rates this will raise the cost of labour for local employers making some of their operations unviable, resulting in job losses. On the other hand, low wages are widely acknowledged to be the principal problem facing urban informal workers. A rise in wages for this section of the workforce would have significant demand effects, including increased demand for goods and services provided by local entrepreneurs. This question has been extensively explored in the context of minimum wage laws in developed countries. The

research over the effects of a rise in minimum wages in the US, the UK, and other developed economies points to a positive role for demand, while the negative effects in terms of loss of jobs are either small or non-existent (de Linde Leonard, Stanley, and Doucouliagos 2018; Manning 2016; Neumark and Wascher 2008). While these findings cannot be straightforwardly extended to the Indian context, to the extent that informal labour markets are imperfect with employers having some market power, the effects may be similar. Lastly, we also point out that instead of accepting low wages as the default mechanism for survival of small entrepreneurs, public policy should encourage increased productivity that can sustain higher wages while maintaining profit margins.

3.3.2 / Calculation of the budget

Here are our budget projections for guaranteed employment for 100 days (Category 1) and 150 days (Category 2) of the year. Appendix C has the detailed calculations.

The total budgetary requirement will have three components - labour, material, and administrative cost. We propose a 60:40 ratio, that is, 60 per cent of the total budgetary allocation would be labour cost and 40 per cent would be a combination of material and administrative cost. Labour costs should be split between the Centre and the states in a 80:20 ratio, while the non-labour costs would be shared between the Centre, the states, and the ULBs. Payment of penalties to workers in case of delays in wage payments (delay compensation) would thus be proportionately allocated to the Centre and states depending on who is causing the delay. In case of Type 1 cities, the smallest and most resource constrained, the non-labour costs will be shared between the Centre, State and ULB in the ratio of 50:40:10. For Type 2 cities it will be in the ratio of 50:30:20 and Type 3 cities, the largest, in the ratio of 50:25:25. The sharing scheme is intended to create a sense of ownership of the programme across all three levels of government.

The programme should also encourage convergence with other central and state government programmes for urban development. In such cases, while the labour cost may be completely covered by this programme, the material and administrative costs may be covered

as per the terms of the other programmes. For example, if a ULB is laying new pipes for water supply under the AMRUT programme, the material costs may be paid by the central government as per the terms of AMRUT but for the payment of wages, the ULB may avail of funds from the Urban Employment Guarantee Programme.

The total estimated labour costs depend on the number of people expected to make themselves available for work. We have estimated this number based on the 2018 CMIE Consumer Pyramids Survey. Data show that 50 per cent of workers earn up to ₹500 per day in urban areas. Data also show that around 25 per cent of the urban workforce has a diploma or degree beyond Class 12. Using these numbers, we present two possible schemes, one where one adult from every household is guaranteed work and one where every adult resident of a town is guaranteed work.

Scheme 1: Household

In order to calculate the potential workforce under the programme we start with the projected population for 2018 which is 1.3 billion.¹⁶ Applying an urbanisation rate of 35 per cent gives us a total urban population of 474 million.¹⁷ Given that roughly 50 per cent of the urban population resides in towns of less than 1 million, we get a small-town strength of 237 million. Assuming an average household size of four, gives us an estimated 59 million households. One worker from each household gives a total possible workforce of 59 million or 5.9 crore.

If we assume that all workers earning less than the programme wage will demand work for the entire period, we get a Category 1 workforce of around 30 million (half the total possible workforce). For Category 2 work, only the higher educated qualify and in addition we assume that only the openly unemployed are likely to sign up since a continuous presence of five months is required. Using an unemployment rate of 20 per cent (the PLFS rate for the higher educated), we get an estimated 3 million workers. The programme cost in this case works out to a total of 2.8 lakh crores or 1.7 per cent of GDP (see Appendix C).

To put this number in perspective, note that if every job card holder under MGNREGA (~70 million) was to get the full 100 days of employment at a wage rate of ₹200 per day, the programme cost would be 2.3 lakh crores (1.4 per cent of GDP). Further, the World Bank noted that MGNREGA should be funded to the extent of 1.7 per cent of GDP (Murgai and Ravallion 2005). This programme is in the same range.

Scheme 2: Individual

Instead of guaranteeing employment to only one adult from every household, it would be preferable for the scheme to cover every adult resident, which was the original vision behind the Right to Work campaign too. If this option is followed, the total possible worker pool would be 94.5 million or 9.4 crore. This number is obtained by starting from the estimated Indian working age population in 2018 (900 million), calculating the small-town fraction (14 per cent) and applying a labour force participation rate (LFPR) of 75 per cent. This LFPR is much higher than the observed average of around 50 per cent as per the PLFS. This is because India's low overall LFPR is driven largely by a very low participation rate for women, and a central aim of the proposed programme is to encourage participation of women in the workforce.

As before, assuming that all workers eligible for Category 1 will sign up and around 20 per cent of those eligible for Category 2 will do so, we obtain a total programme budget of 4.5 lakh crores, i.e., 2.7 per cent of GDP. (See Appendix C for details)

The programme costs may seem high but we emphasise the positive spill-over effects that will result from higher wage rates, skilling components and the strong element of public goods creation. Thus, it is more an employment, skilling, and an asset creation programme in one. Finally, we have assumed that the entire bottom half of the urban wage distribution will demand work. We have also assumed a large LFPR for Scheme 2. These are strong assumptions and the actual demand for work, and thus the actual costs will likely be lower.

3.3.3 / Budget planning

By December of each year, the state will submit its labour budget to the Centre by aggregating the labour budget of each ULB in that state. The labour budget will contain the planned person-days of work required for the next financial year. We propose a departure in the method of funds allocation from a centralised payment architecture of MGNREGA. Inadequate funds allocation has made MGNREGA a supply-driven programme. For instance, in 2018-19, MGNREGA funds were exhausted three months before the end of the financial year. Some state governments, such as the Government of Karnataka, have attempted to clear pending wage payments from their own exchequer based on a promise of reimbursement for the same from the Central government. However, news reports indicate that the Central government is yet to pay arrears to the tune of ₹950 crores from 2015-16 (CNBC TV18, 2019). Moreover, as we outlined in Section 3.1.2, a highly technical and centralised wage payment system has only added to worker woes instead of easing the wage payments process. In such situations, workers are confronted with an opaque system where the baton of accountability is being passed around from the field functionaries to a 'computer'.

3.3.4 / Funds allocation and sharing

To honour a truly demand-driven programme, at least two things are critical. First, an inventory of work should be planned well in advance. Second, funds should be made available whenever there is a demand for work. In addition, wage payments should be made on time to be compliant with the Payment of Wages Act (1936). The planning and submission of the labour budget at each ULB takes care of the first aspect of the demand-driven principle. The following example illustrates the second and third aspect of the demand-driven principle.

Consider a ULB in a Type 3 (largest) town. For such a ULB, the Centre's share of labour cost is 80 per cent and the state government's share is 20 per cent. For non-labour costs, the Centre's share is 50 per cent, the state government's share is 25 per cent and the ULB's share is 25 per cent. Suppose that the labour budget (in person-days) of this ULB translates to a total monetary requirement of ₹1000 for one financial year. Labour

costs would account for ₹600 (60 per cent) and non-labour costs would account for ₹400 (40 per cent).

In the first week of April in each financial year, the Centre would earmark and transfer ₹480 for labour wages (80 per cent of ₹600) and ₹200 (50 per cent of non-labour wages) to the state government's account. Similarly, each respective state government would earmark and park ₹120 (20 per cent of the labour wages) and ₹100 (25 per cent of the non-labour costs) to be transferred to the ULB's account. Therefore, at the beginning of each financial year, the state government's account will have the total of the Centre's share and the state government's share required for the entire year. The state government will transfer money to the ULB in 4 tranches, one tranche per quarter. All tranches, after the first would be transferred based on a utilisation certificate to be provided by each ULB to the state government. Such a utilisation certificate would explain how the allocated funds were used in a given quarter. Based on a quarterly utilisation, the state government will transfer the funds to the ULB's account. Finally, the ULB will have earmarked and stored ₹100 (25 per cent of the non-labour costs) in its account. Care should be taken that no wage payment to a worker is withheld due to any delays in production and verification of the utilisation certificates.

There could at least be two legitimate concerns in this model. First, that ULBs might overestimate their labour budget requirements and thereby seek more funds than required. To address this, we propose two critical checks. First, once every quarter, the ULB will have to submit a utilisation certificate demonstrating the cost incurred during the period. Any unused amount would be accounted for and adjusted proportionately between the Centre and the states prior to the allocation of funds in the next quarter. Second, the ULB would not just be subject to a periodic social audit but also a quarterly financial and utilisation audit. This would also be under the CAG norms. The second concern could be that introduction of the state government and the ULB as intermediaries in the payment process might cause leakages. While this cannot be overruled, we postulate that this mechanism of financial management and funds transfer would increase local accountability, decentralisation and the state government's and the ULB's stake in the programme implementation.

Our proposal could address four key failings of MGNREGA:

1. The urban employment guarantee programme would be genuinely demand-driven because funds for programme implementation are locally available throughout the year.
2. Giving monetary freedom to the state governments and the local ULBs would ensure better possibilities of timely wage payments.
3. This would ensure greater local accountability. In case of delays in payments, the workers would know that the ULB has the financial means to pay the workers.
4. In MGNREGA, the Gram Panchayat has been rendered quite powerless with the centralised payment systems. This discourages effective implementation. With greater local autonomy, through upfront decentralisation of funds, the state government and the ULB would have more stake in better programme implementation.

3.3.5 / Payment of wages

For each work in a worksite, there will be a muster roll containing the job card details of the applicant, the work details and the attendance at the worksite. Each muster is weekly and at the end of the week, the wages for each worker, based on attendance is uploaded at the facilitation centre. Suppose T denotes the date of completion of a muster. Then the measurement for that muster of work must be completed within four working days, that is, by T+4. Then the work details and the corresponding pay order for that work must be generated by T+8. The pay order would be electronically sent to the ULB by T+10. The ULB would then disburse the cash/cheque/receipt of electronic transfer to the workers by T+15. Wage disbursement must happen on the first Saturday and the third Saturday of each month at the Ward office. The job card of each worker must have the provision to be electronically updated at the facilitation centre during wage disbursement day. As an option, instead of provision of a wage slip, the updated job card with the record of work and wages could be printed and provided.

3.3.6 / Delay compensation

In case of a delay in payments, each worker will be eligible for a compensation. The compensation must be calculated for the full extent of delay - from the 16th day of closure of the muster roll to the date on which wage disbursement happens at the ULB. Since the ULB will have access to the full labour costs at the beginning of the financial year, the delay compensation would be borne entirely by the ULB. However, if the Centre or the state governments fail to transfer their amounts corresponding to the labour budget, the Centre and/or the state governments would be liable to pay the delay compensation.

3.4 / Conclusion and way forward

Criticisms of an urban employment guarantee scheme that have recently been made are that it does not aid India's structural transition from rural to urban and from low-productivity to high productivity work.¹⁸ It is true that a jobs guarantee programme cannot make the growth process distributionally more equal by itself. But the programme that is implicitly assumed in this criticism is simply a direct extension of MGNREGA to urban areas. As we have outlined here, an urban programme can, and perhaps should, take a very different form. If an ambitious urban employment guarantee programme along the lines proposed here is implemented, it has the potential to transform the structure of the economy as well as contribute significantly to an improved quality of life for millions of people. Specifically, the following effects may be envisaged on the economy at large:

1. A multiplier effect resulting from reduced unemployment and underemployment and increased incomes. This will boost demand in small towns and create conditions for successful entrepreneurship in a distributed fashion.
2. Increased productivity as well as improved quality of life due to better functioning public goods and services.

3. Increased employability and productivity in the private sector due to skilling in the programme.
4. Rising informal sector incomes due to an effective wage floor.
5. Reversal of ecological degradation.

The key steps involved in the rollout of such a programme are:

1. Passage of a National Urban Employment Guarantee Act - This Act will legally bind the state to provide a fixed number of days of work for all eligible people who apply under the programme, lay down the governance structure for administering the programme, and provide accountability mechanisms for its operation.
2. Creation of a Ministry of Employment - We propose that this programme be administered by a newly created Ministry of Employment under the Government of India. Such a Ministry will be responsible for all matters related to employment generation including the administration of MGNREGA.
3. Establishing functionaries for administering the programme - The Central and state governments have to hire, through an open process, a set of dedicated staff who are responsible for administering this programme as well as staff responsible for accountability measures under this programme.

We believe that the time is right for India to embark on this path.

Endnotes

1. See "Recent Trends in Employment and Unemployment in India", State of Working India 2019.
2. An antecedent to the SJSRY was the 'Nehru Rojgar Yojana' introduced in 1989.
3. The NULM was further restructured and renamed as the Deendayal Antyodaya Yojana-National Urban Livelihoods Mission (DAY-NULM) in 2016.
4. Local Self Government Department, Government of Kerala (http://lsgkerala.gov.in/index.php/en/schemes/ayyankali_urban_employment_guarantee_scheme)
5. The Green New Deal seeks to provide everyone with "(i) high-quality health care; (ii) affordable, safe, and adequate housing; (iii) economic security; and (iv) access to clean water, clean air, healthy and affordable food, and nature." House Resolution.0109, 116th Congress (<https://ocasio-cortez.house.gov/sites/ocasio-cortez.house.gov/files/Resolutionpercent20onpercent20apercent20Greenpercent20Newpercent20Deal.pdf>)
6. In *Olga Tellis v. Bombay Municipal Corporation* (1985 SCC (3) 545) the Supreme Court held that "An equally important facet of the right to life is the right to livelihood because no person can live without the means of livelihood."
7. In *Maneka Gandhi v. Union of India* (1978 SCC (1) 248) the Supreme Court held that "The right to live includes the right to live with human dignity and all that goes along with it...and also the right to carry on functions and activities as constitute the bare minimum expression of human self".
8. There is a trend among census towns and other urbanising villages to remain administratively rural. While some of the reasons for the resistance to be classified as urban is to avoid higher taxes and tighter building regulations, Eric Denis, Partha Mukhopadhyay, Marie-Helene Zerah (2012) have noted "rural schemes, such as the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), the world largest programme of this nature, are a strong incentive for settlements to remain rural"
9. As per the 2011 Census, 53 cities have a population of over 1 million which account for 160.7 million persons or 42.6 per cent of the urban population.

10. The 74th Constitutional Amendment, passed in 1992, added Part IX A “The Municipalities” into the Constitution of India. It mandated the creation of elected local governments in urban areas and sought to empower them through the devolution of functions, funds and functionaries.

11. Article 243-S of the Constitution, introduced by the 74th Amendment, states that every Municipality having a population of three lakhs shall have Wards Committees. While it does not restrict Municipalities below this population to have Ward Committee, this provision has been poorly implemented since most ULBs, above and below 3 lakh population, do not have functioning Ward Committees.

12. <http://nrega.nic.in/CEGC/TransparencyandAccountability.pdf>

13. http://nrega.nic.in/netnrega/writereaddata/Circulars/1948Social_Audit_.pdf

14. Income data are obtained from the second wave (May to Aug) of the 2018 CMIE Consumer Pyramids survey, the most recent wave for which full data are available. The numbers presented pertain to all of urban India and not only small towns.

15. Report of the Expert Committee on Determining the Methodology for Fixing the National Minimum Wage, https://labour.gov.in/sites/default/files/Committee_on_Determination_of_Methodology.pdf. And VDA Minimum Wages order dated 28/9/2018: <https://clc.gov.in/clc/node/586>

16. World Population Prospects: The 2017 Revision, United Nations Department of Economic and Social Affairs: <https://www.un.org/development/desa/publications/world-population-prospects-the-2017-revision.html>

17. Urbanisation rate as per census 2011 was 31 per cent. In view of the rapid urbanisation in the last decade, we have adjusted it upwards to 35 per cent.

18. <https://www.hindustantimes.com/editorials/urban-employment-guarantee-scheme-signifies-india-s-failure-to-address-inequality/story-WdvzySh9G-yaRuodCAMCyNP.html>

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Appendix A - Sample list of towns

Type 1 towns

(Up to 50,000 population)

Adoor (Municipality), Kerala
Afzalpur (Town Panchayat), Karnataka
Belonia (Municipal Council), Tripura
Chirkunda (Nagar Panchayat), Jharkhand
Degana (Municipal Council), Rajasthan
Golaghat (Municipal Board), Assam
Kovvur (Municipality), Andhra Pradesh
Kalimpong (Municipality), West Bengal
Lalganj (Nagar Panchayat) Uttar Pradesh
Mhowgaon (Nagar Panchayat), Madhya Pradesh
Mapusa (Municipal Council), Goa
Nakodar (Municipal Council), Punjab
Nelamangala (Town Municipal Council), Karnataka
Poonch (Municipal Council), Jammu and Kashmir
Rania (Municipal Committee), Haryana
Rameswaram (Municipality), Tamil Nadu
Soro (Municipality), Odisha
Sugauli (Nagar Panchayat), Bihar
Tuljapur (Municipal Council), Maharashtra
Vadnagar (Municipality), Gujarat

Type 2 towns

(50,000 - 300,000 population)

Anantapur (Municipal Corporation), Andhra Pradesh
Begusarai (Municipal Council), Bihar
Bhiwani (Municipal Council), Haryana
Cooch Behar (Municipality), West Bengal
Dewas (Municipal Corporation), Madhya Pradesh
Dhamtari (Municipal Corporation), Chhattisgarh
Gandhinagar (Municipal Corporation), Gujarat
Imphal (Municipal Corporation), Manipur
Kohima (Municipal Council), Nagaland
Kottayam (Municipality), Kerala
Margao (Municipal Council), Goa

Mirzapur (Municipal Corporation), Uttar Pradesh
Port Blair (Municipal Council), Andaman and Nicobar Islands
Ratnagiri (Municipal Council), Maharashtra
Raichur (City Municipal Council), Karnataka
Rishikesh (Municipal Corporation), Uttarakhand
Shimla (Municipal Corporation), Himachal Pradesh
Silchar (Municipal Board), Assam
Thanjavur (Municipal Corporation), Tamil Nadu
Tonk (Municipal Council), Rajasthan

Type 3 towns

(300,000 - 1,000,000 population)

Ajmer (Municipal Corporation), Rajasthan
Bhilai (Municipal Corporation), Chattisgarh
Bhubaneswar (Municipal Corporation), Odisha
Dehradun (Municipal Corporation), Uttarakhand
Erode (Municipal Corporation), Tamil Nadu
Gaya (Municipal Corporation), Bihar
Jammu (Municipal Corporation), Jammu and Kashmir
Kolhapur (Municipal Corporation), Maharashtra
Kozhikode (Municipal Corporation), Kerala
Kurnool (Municipal Corporation), Andhra Pradesh
Mangalore (Municipal Corporation), Karnataka
Mathura-Vrindavan (Municipal Corporation) Uttar Pradesh
Patiala (Municipal Corporation), Punjab
Rohtak (Municipal Corporation), Haryana
Rourkela (Municipal Corporation), Odisha
Salem (Municipal Corporation), Tamil Nadu
Siliguri (Municipal Corporation), West Bengal
Thiruvananthapuram (Municipal Corporation), Kerala
Tirupati (Municipal Corporation), Andhra Pradesh
Warangal (Municipal Corporation), Telangana

Appendix B - Sample list of works

The following list of potential works that can be undertaken in the programme is based on Mundoli, Manjunath, and Nagendra (2015, 2017, 2018), Mundoli, Unnikrishnan, and Nagendra (2017a, b), Nagendra (2016), Unnikrishnan et al (2016), Vij and Narain (2016), Narain and Vij (2016) and on other unpublished work.

Works are aimed at addressing urban environmental issues such as:

- Water conservation and harvesting
- Flood control
- Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, biodiversity support, residents well-being, supporting biodiversity): Planting in public spaces especially where space is not a constraint e.g. roadside should be mostly keystone species like Ficus, or local fruiting trees like mango, jackfruit, tamarind, which are hardy, require less maintenance, long lived and do not need much watering
- Preventing coastal and hillside erosion of cities/towns situated in such specific ecological landscapes
- Disaster management
- Enabling urban agriculture for subsistence
- Enabling livelihoods
- Recreation
- Biodiversity support

Possible List of works :

Space	Purpose	Actions	Description
Waterbodies (ponds, tanks, lakes)	Water conservation	Construction	Construction of smaller tanks in lakes (for idol immersion)
	Flood control	Repair	Maintenance of bunds, deweeding, desilting, garbage/waste removal, fencing or repairing boundary walls and fences
	Biodiversity support	Maintenance	Less reliance on STPs—reclaiming and rejuvenating wetlands
Waterbodies (ponds, tanks, lakes)	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting,	Planting vegetation suited to waterbodies, including trees where ecologically suitable, and otherwise, planting native plant species
		Maintenance	
		Removal	Rejuvenating grasslands,
			Maintenance, for example lopping and removal of dead trees; but with care to not affect hydrology

Space	Purpose	Actions	Description
Waterbodies (ponds, tanks, lakes)	Supporting livelihood	Construction	Floating wetlands that can be used to harvest reeds which can be used by local women's self-help groups to make reed baskets, mats
		Repair	
		Maintenance	
Open wells	Water conservation	Construction	Sinking new wells, reviving disused wells, dredging
		Repair	
		Maintenance	
Wetlands	Water conservation	Maintenance	Cleaning weeds and garbage
	Flood control		Less reliance on STPs—reclaiming and rejuvenating wetlands
	Biodiversity support		
Wetlands	Supporting livelihood	Construction	Floating wetlands that can be used to harvest reeds which can be used by local women's self-help groups to make reed baskets, mats
		Repair	
		Maintenance	
Water channels including stormwater drains	Flood control	Construction	Desilting, cleaning weeds and garbage
		Repair	Constructing to aid flood control
		Maintenance	
Canals	Water conservation	Construction	Cleaning weeds and garbage
	Flood control	Repair	Maintenance of bunds, dewatering, desilting, garbage/waste removal, fencing or repairing boundary walls and fences
	Biodiversity support	Maintenance	

Space	Purpose	Actions	Description
Canals	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity) Preventing erosion	Planting Maintenance Removal	Planting vegetation suited to canalside strengthening, including trees where ecologically suitable, and otherwise, planting native plant species. Maintenance, for example lopping and removal of dead trees; but with care to not affect hydrology
Canals	Supporting livelihood	Construction Repair Maintenance	Floating wetlands that can be used to harvest reeds which can be used by local women's self-help groups to make reed baskets, mats
Coast/ beachfronts	Preventing coastal erosion	Construction Repair Maintenance	Construction, maintenance of mangroves wherever possible, supplemented with built structures such as groynes and other structures
Coast/ beachfronts	Disaster management	Construction Repair Maintenance	Construction and maintenance of cyclone shelters
Coast/ beachfronts	Enabling coastal livelihoods	Construction Repair Maintenance	Fish drying and processing sites
Riverside	Water conservation Flood control Biodiversity support	Construction Repair Maintenance	Construction, maintenance and repair of riverside bunds, desilting, deweeding and removing garbage

Space	Purpose	Actions	Description
Riverside	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity) Preventing erosion	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees; but with care to not affect hydrology.
River/riverside	Supporting livelihood	Construction Repair Maintenance	Floating wetlands that can be used to harvest reeds which can be used by local women's self-help groups to make reed baskets, mats
Hill slopes and valleys	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity) Preventing erosion	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees
Hill slopes and valleys	Water conservation Flood control	Construction Repair Maintenance	Constructing and maintaining structures to control and hold flow of water; including water harvesting

Space	Purpose	Actions	Description
Parks (large and small neighbourhood parks)	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees Focus on less landscaping and more planting of trees
Protected areas, forest land and wooded groves within cities	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees
Government managed areas of worship – temples, churches, mosques, etc	Water conservation	Construction Repair Maintenance	Construction rainwater harvesting tanks Maintenance of ponds and tanks—deweeding, desilting
Government managed areas of worship – temples, churches, mosques, etc	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees

Space	Purpose	Actions	Description
Roadsides	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees
Wooded graveyards and crematoriums	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees
Playgrounds and open spaces	Recreation	Construction Repair Maintenance	Construction of facilities for different games in playgrounds and maintenance
Alongside railway lines	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees

Space	Purpose	Actions	Description
Below high tension wires and along buffer areas of land left aside for electric works	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees
Below flyovers	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees
In the buffer areas around airports, ports and other similar facilities	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees
Other unoccupied public lands	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees.

Space	Purpose	Actions	Description
Slums	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting trees that provide shade as well as nutrition (e.g. drumstick, fruiting trees) and medicinal plants, maintenance, for example lopping and removal of dead trees.
Slums	Enabling urban agriculture for subsistence	Planting Maintenance Removal	Individual and community farming, creating kitchen gardens with medicinal plants and greens to supplement nutrition
Slums	Water conservation	Construction Repair Maintenance	Construction of rainwater harvesting and storage for individual homes and for slum as a whole
Government schools and anganwadis	Water conservation	Construction Repair Maintenance	Construction of rainwater harvesting and storage facilities
Government schools and anganwadis	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees

Space	Purpose	Actions	Description
Government schools and anganwadis	Enabling urban agriculture for subsistence	Planting Maintenance	Individual and community farming, creating kitchen gardens with medicinal plants and greens to supplement nutrition
Government educational institutions (PU colleges/Universities/ITI/hostels)	Water conservation	Construction Repair Maintenance	Construction of rainwater harvesting and storage facilities
Government educational institutions (PU colleges/Universities/ITI/hostels)	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees
Government educational institutions (PU colleges/Universities/ITI/hostels)	Enabling urban agriculture for subsistence	Planting Maintenance	Individual and community farming, creating kitchen gardens with medicinal plants and greens to supplement nutrition
Government housing projects (JNNUM/AMRUT, Aashraya, employee housing etc)	Water conservation	Construction Repair Maintenance	Construction of rainwater harvesting and storage facilities
Government housing projects (JNNUM/AMRUT, Aashraya, employee housing etc)	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees

Space	Purpose	Actions	Description
Government housing projects (JNNUM/ AMRUT, Aashraya, employee housing etc)	Enabling urban agriculture for subsistence	Planting Maintenance	Individual and community farming, creating kitchen gardens with medicinal plants and greens to supplement nutrition
Other government facilities	Water conservation	Construction Repair Maintenance	Construction of rainwater harvesting and storage facilities
Other government facilities	Enhancing urban greenery (reducing air and water pollution, maintaining urban micro-climate, residents well-being, supporting biodiversity)	Planting Maintenance Removal	Planting appropriate vegetation, including ecologically suitable local species of trees where relevant, maintenance, for example lopping and removal of dead trees
Others	Vermi-composting	Construction Repair Maintenance	Urban organic waste from markets for creating vermicompost that can be sold via nurseries. Construction, maintenance and repair of facilities
Other government facilities	Enabling urban agriculture for subsistence	Planting Maintenance	Edible wild plant nurseries, coop nurseries for native fruiting species

Environmental monitoring and evaluation at ward level :

1. These are positions that can be for continuous months not exceeding 150 days in a year, and with a different set of people hired each year.
2. The employment can be in certain months of the year (for example, post monsoon as one stretch)
3. This will require easy to use equipment for data collection and programs for data entry
4. The position is to provide both employment and experience for unemployed who hold a graduate or post-graduate degree (BA, BSc, BBA, BCA, MA, MSc, MBA, BCA and so on)
5. The jobs in this will not be to meet shortfall in already existing government positions but are in addition to these
6. The information from these monitoring and data collection could feed into prioritising the kind of works that need to be done (table above)

Type of work and kind of space	Purpose	Actions	Description
Land use mapping of all common and public lands in the ward (lakes, wooded groves, tanks, ponds, water channels, rivers, school and so on)	Protection of common/ public land	Data collection Monitoring	Regular survey of all common and public lands Tracing boundaries using GPS points and marking land use features (for example lake inlets and outlets)
Mapping of stormwater drains	Water conservation	Collecting data Monitoring	Mapping all the stormwater drains using GPS and ensuring that they are maintained and not encroached upon.
Tree census of all trees in the ward (including trees on private property)	Biodiversity mapping for protection of greenery	Collecting data Monitoring	Collecting details of each trees in ward: GPS location, species, height, DBH
Water quality monitoring	Protection of water bodies	Collecting data Monitoring	Collecting water samples from lakes, river, ponds, tanks, wells
Climate monitoring: Heat islands and air pollution sensors	Climate change	Collecting data Monitoring	Collecting information on temperature and air pollution to monitor status of environment

Type of work and kind of space	Purpose	Actions	Description
Mapping waste dumps and stagnant water pools	Protecting against spread of urban disease	Data collection Monitoring	Collecting information on waste sites and water pools to ensure that they are addressed to control disease
Social interviews with local residents and users of commons/ public lands	Information to understand continued and changed use environmental resources	Data collection Monitoring	Interviews with those who use commons and public lands for livelihood and subsistence use. To monitor changes to use and understand causes. To provide information that can be used at time of rejuvenation works , for example, that of lakes to ensure all views and uses are included
Data entry	Knowledge centre		Updating data collected in ward from surveys and mapping

Appendix C - Calculation of the programme budget

Scheme 1 : Household

	Millions		
Population (2018)	1354		
Urban (35% of total)	474		
Small town (50% of urban)	237		
Households (avg size = 4)	59.2		
	Category 1	Category 2	Total
Workers (millions)	30	3	33
Wage per day	500	500	-
Number of days per year	100	150	-
Annual wage	50,000	75,000	-
Wage bill (millions)	1480938	222141	1703078
Total bill (millions) (labor:non-labour 60:40)	-	-	2838463
Total bill in lakh crores	-	-	2.84
% GDP	-	-	1.7

Scheme 2 : Individual

	Millions
Working age population (2018)	900
Small town working age pop (14%)	126
Labour force (LFPR 75%)	94.5

	Category 1	Category 2	Total
Workers (millions)	47	5	52
Wage per day	500	500	-
Number of days per year	100	150	-
Annual wage	50,000	75,000	-
Wage bill (millions)	2362500	354375	2716875
Total bill (millions) (labor:non-labour 60:40)	-	-	4528125
Total bill in lakh crores	-	-	4.53
% GDP	-	-	2.7

Sources and Notes: Population figures are taken from World Population Prospects 2017, UN DESA (<https://www.un.org/development/desa/publications/world-population-prospects-the-2017-revision.html>). Category 1 worker pool is assumed to be the bottom half of the labourforce based on income data obtained from Consumer Pyramids Survey (CMIE). Category 2 worker pool is obtained by multiplying the share of higher educated in the urban labourforce (25%) with the rate of open unemployment among the higher educated (20%). See Section 3.3.2 for explanation.

Chapter 4

Creating Good Jobs Through a Universal Basic Services Programme

A Universal Basic Services (UBS) programme can deliver human capital improvements resulting in increased productivity, improve the quality of life, reduce indebtedness and create a shared sense of the public. It will also create a large number of good quality jobs.

4. Creating Good Jobs Through A Universal Basic Services Programme

Rosa Abraham, Anjana Thampi, Tejas Pande, and Amit Basole

Centre for Sustainable Employment, Azim Premji University, Bangalore

We would like to thank Anand Shrivastava, Deepti Goel and Krithika Raghavan for their comments and inputs. All errors and omissions remain our own.

Executive Summary

1. We propose the creation of a Universal Basic Services (UBS) programme that will expand the current public system of delivering key services creating millions of good jobs in the process.
2. India has experienced several years of high GDP growth with improvements in availability of private goods and services. However, it has failed to convert this growth into a strong system of public goods. As malls, mobiles, and motorcycles have flourished, streets, schools and sanitation have suffered.
3. Historical experience of industrialised economies shows that the transition to a mature democracy involves the creation of a strong and shared sense of the public. There is an urgent need to expand public spending on services that will create an inclusive and stable democracy.
4. In this paper, taking the example of two crucial public services, health and education, we first show that, despite improvements, India currently underperforms relative to comparable developing countries in terms of public spending as well as outcomes. Out-of-pocket spending by households on health and education is high, and a leading cause of indebtedness.
5. State-level analyses show considerable heterogeneity in spending as well as performance. We identify states that have performed relatively well in delivering public services given their level of per capita income. We find that states with relatively higher public spending on health per capita also tend to have lower out-of-pocket expenses in private health facilities. We also identify states which are providing public education that delivers outcomes on par with the private system and at a fraction of the cost to the household.
6. On the employment front, we find that a modest expansion of the current system, that consists of filling vacancies and eliminating shortfall in infrastructure in the health and education systems, can create more than 2 million jobs, which is around 15 per cent of the current workforce in these two sectors.
7. Regularising the employment of anganwadi workers, ASHAs, helpers, and other contractual employees in the public health and education system can create good jobs for another 3 million workers.
8. There have been calls recently to increase the health budget from around 1 per cent to 3 per cent of GDP, and the education budget from 4 to 6 per cent of GDP. Our analysis strongly supports the need to make this commitment. It will make enough resources available to eliminate existing shortfalls, expand capacity, and create decent jobs for millions of workers across the education and health spectrum.
9. We analyse the current policy approach to urban housing and argue for greater attention to the inadequate nature of available housing, rather than only its presence or absence. We also argue that there has been too much emphasis on ownership, and not enough on seeing housing in the holistic context of the lives and priorities of the working poor in urban areas.
10. We argue that provisioning of public housing is connected to employment in two keys ways: as a direct creator of jobs, and as a facilitator of good jobs via ease of access to transportation and other essential public services.

4.1 / Why universal basic services?

The Indian economy has been on a sustained high growth path since the early 2000s and is consistently placed among the fastest growing countries in the world. It is time to harness this growth towards a fundamental transformation of Indian society by delivering quality public services to all citizens. Universal provisioning of basic services has far-reaching private and public benefits (Centre for Equity Studies 2014). Both historical and contemporary evidence from industrialised as well as developing countries underline the importance of quality, universal, public goods and services in building a modern society. The idea of universal basic services (UBS) has been gaining visibility in India and elsewhere.¹ In this context we welcome the recent proposals to increase public expenditure on education to 6 per cent and on healthcare to 3 per cent of GDP.

Using the examples of health, education, and housing, we show that there is a strong case to be made to expand public spending on all three. We also focus on one often under-emphasised benefit of UBS, its job-creating potential.

A UBS programme will improve the general quality of life in India as it would:

- Create a large number of good jobs for people with a variety of educational backgrounds as well as skills.
- Build a more cohesive society where there is greater equality of opportunity for advancement and everyone has a stake in effective delivery of services.
- Free up private resources for investment in small businesses by reducing the burden of out-of-pocket expenditures on households.
- Support the private sector by improving worker productivity.

Even though comprehensive data are not available, anecdotal evidence suggests that the last two decades of rapid economic growth have seen a dramatic divergence between the quality of private and public goods. This is a result of underinvestment over the decades. India consistently underspends public resources on health and education relative to sub-

Saharan African countries, Brazil, Russia, China and South Africa (BRICS countries), as well as some of its South Asian neighbours. Public expenditure as a percentage of GDP has stagnated in the case of health and even declined a little in the case of education after the year 2000. The out-of-pocket expenditure on these essentials is therefore higher in India than in many other countries of the world, many of which are poorer or have grown slower. There is also a problem of inadequate infrastructure in existing public services.

The results are clear in terms of poor indicators of health, nutrition and education, and poorly-staffed public health facilities and schools. This is also revealed by migration to the private system by those who can afford to exit the public system. This compounds the problem of quality in the public sector as the ones with the least resources are largely the users of public services. The UBS approach sees the solution in a universalising of public services, thereby creating a stake for everyone in the same public system.

Restoring as well as creating much-needed public goods for India's future must be made our priority. One overlooked aspect of such an expansion of public service provisioning is that it can generate a large number of good quality jobs requiring a range of skills and education levels. Many of them are hard to mechanise, which resonates well with our comparative advantage of being a labour abundant country. They are also hard to substitute with imports and tend to employ domestic workers. But they do need a big commitment of fiscal resources. We cannot pay anganwadi workers a regular government wage or hire the teachers and doctors we need, without spending public money. However, if we do spend, then we will be repaid many times over, not only due to increased demand and multiplier effects, but also because such investments will increase productivity, and more importantly, the quality of life in India's villages and cities.

While a UBS programme can, and should cover many services, in this document we examine three – healthcare, education, and housing. Further work will deal with other crucial services.

4.2 / Health

Healthcare has entered the discourse in the run-up to the 2019 Lok Sabha elections, with health manifestos released by members of Reclaiming the Republic, Jan Swasthya Abhiyan, Alliance of Doctors for Ethical Healthcare and Vikalp Sangam. Political parties also appear to be taking it seriously.² The momentum on increasing public healthcare could be in response to the demands of the electorate – a recent cross-country survey revealed that after jobs, better healthcare facilities was the most important priority of voters (Association for Democratic Reforms 2018).

The healthcare sector is rife with market failures and often necessitates serious state intervention, not only for reasons of equity but also for reasons of efficiency. Over 50 years ago, Nobel laureate Kenneth Arrow pointed to many features of the sector such as lack of adequate information about the service being purchased and asymmetry of interests between healthcare providers and patients which led to catastrophic private market failures. In India, the proliferation of privately delivered healthcare has resulted in many cases of malpractice, over-prescription of drugs, and unnecessary procedures (Gadre and Shukla 2016, Dongre and Surana 2018).

Public health also features a strong public goods component. As every economics student learns in microeconomic theory – public goods (goods that are non-rival and non-excludable) – are usually underprovided by the private sector. The public good features of healthcare are many: infectious diseases can affect more people than the immediate patient, and therefore, controlling them has benefits both in the vicinity and perhaps even globally (for example, the eradication of polio or smallpox); sanitary and phytosanitary measures that protect individuals have benefits beyond the individual; information about best practices in maintaining health spill over to others at no cost; and so on. As a result, there is a strong case to be made for public funding and provisioning of healthcare.

A UBS programme would expand and improve the public provisioning of essential services, among which health is a clear priority. With inadequate health infrastructure and a poorly regulated private sector, India has much to gain from universal healthcare. We also emphasise that direct provisioning of quality

public healthcare is preferred to insurance-based models such as Ayushman Bharat. The biggest improvements in health outcomes across the world have come from improving preventive healthcare systems (Deaton 2013). However, the current approach being followed in India is that of an insurance-based model for healthcare. The emphasis on such an approach was clear from the launch of Ayushman Bharat or National Health Protection Scheme in the Union Budget 2018-19, and the increase in its allocation to ₹6,400 crore in the Union Budget 2019-20. The scheme entails providing insurance coverage of up to ₹5,00,000 per family per year to 10 crore identified poor families for 1300 secondary and tertiary healthcare packages, to be funded in a centre–state ratio of 60:40 in most states. Under the scheme, eligible beneficiaries are expected to be able to avail benefits at public and empanelled private hospitals.

The scheme excludes primary healthcare, and has operated mainly for those who have availed tertiary healthcare – 77 per cent of the cases are tertiary care as per official government figures. Covering only 40 per cent of households also excludes many vulnerable households: the difference between the monthly per capita consumer expenditure of a household at the 40th percentile and one at the 80th percentile is only around ₹1000, while the average out-of-pocket expenditure from private health facilities is ₹24,000 (Smith, Chhabra, and Bhattacharya 2019). The scheme does not cover drugs or out-patient care, which are the main components of total out-of-pocket expenditure that is itself at least 20 times higher than the allotted budget under the scheme (Smith, Chhabra, and Bhattacharya 2019).

There is also evidence against the model from its predecessor Rashtriya Swasthya Bima Yojana and state health insurance schemes. Nearly one in five of the poorest households spent more on health than their annual per capita consumption expenditure, and 80 per cent of them were not under any insurance cover (Bhattacharya and Rathore 2018). In the lowest quartile of the population, nearly 40 per cent of those who died did not receive any medical attention before death, likely due to lack of access to public health facilities and insufficient coverage of health insurance (Bhattacharya and Rathore 2018). There could be extra charges levied

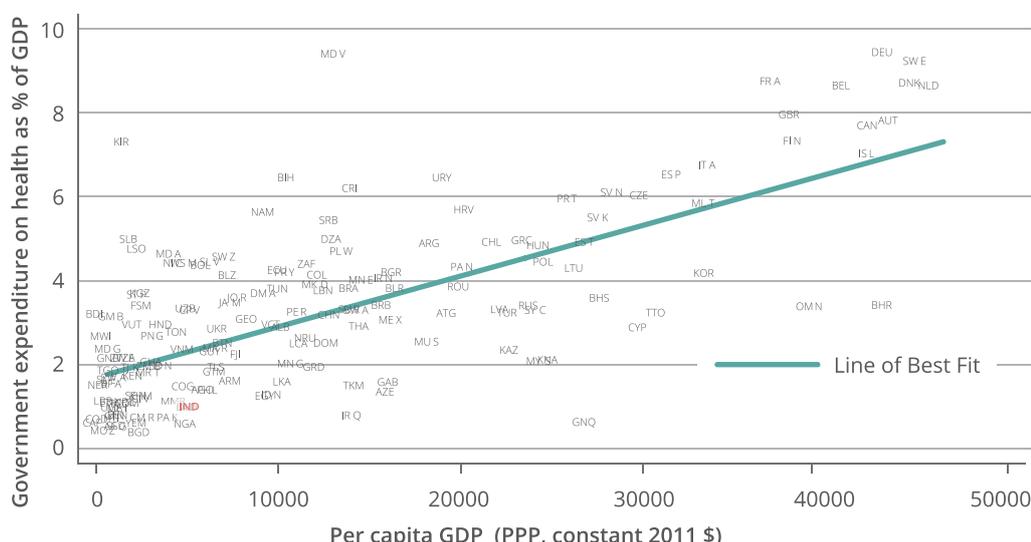
on them if the health facility has a monopoly in the district. There are also cases where the insured have been denied access or charged more than warranted (Das, Aiyar and Hammer 2018).

4.2.1 / Indian health spending and performance in global perspective

India currently spends only around 1 per cent of its GDP on public health expenditure, and has done so since 2000. India underspends on health even after accounting for its level of per capita GDP (Figure 4.1). We examine India's public health expenditure in comparison to a cohort of developing countries that are similar in various respects such as per capita

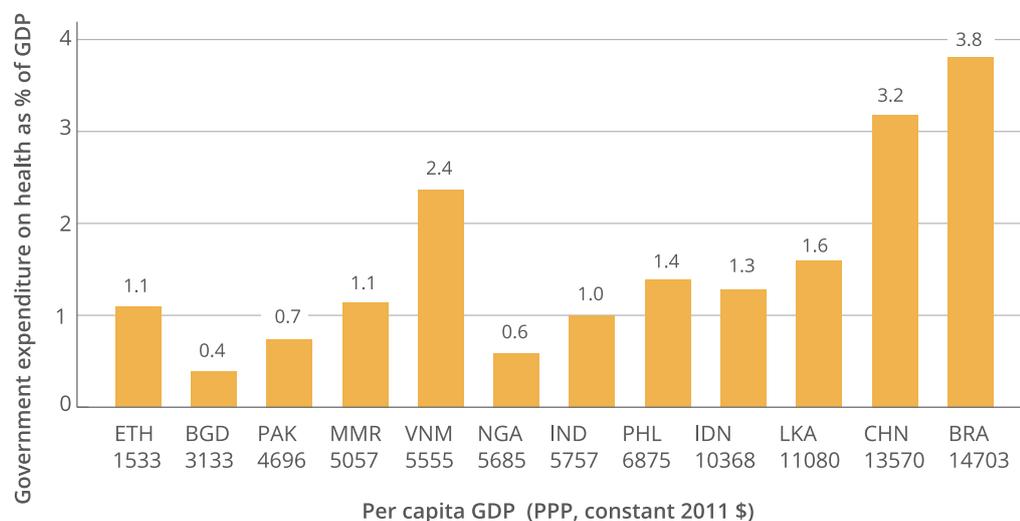
GDP, population density and population size. We also examine India's performance relative to some countries from the BRICS group. The country cohort comprises Bangladesh, Brazil, China, Ethiopia, Indonesia, Myanmar, Nigeria, Pakistan, Philippines, Sri Lanka, and Vietnam. Figure 4.2 shows government health expenditure as a percentage of GDP for all cohort countries sorted by increasing order of per capita GDP (given below the country code). India fares poorly not just in comparison to richer countries such as China and Brazil, but also when compared to some poorer countries. The per capita GDP of Ethiopia is only around one-fourth that of India, but the former still manages to spend a roughly equivalent 1.1 per cent of its GDP on healthcare. Vietnam, at the same per capita GDP level as India, spends 2.4 per cent of its GDP on healthcare. Vietnam, at the same per capita GDP level as India, spends 2.4 per cent of its GDP on healthcare.

Figure 4.1 :
Public expenditure on health as percentage of GDP, 2015



Sources and notes: World Development Indicators, World Bank. See https://wits.worldbank.org/wits/wits/wits/help/content/codes/country_codes.htm for country codes. Only countries with GDP per capita < \$50,000. See https://wits.worldbank.org/wits/wits/wits/help/content/codes/country_codes.htm for country codes

Figure 4.2 :
Public health expenditure as percentage of GDP for selected countries, 2015



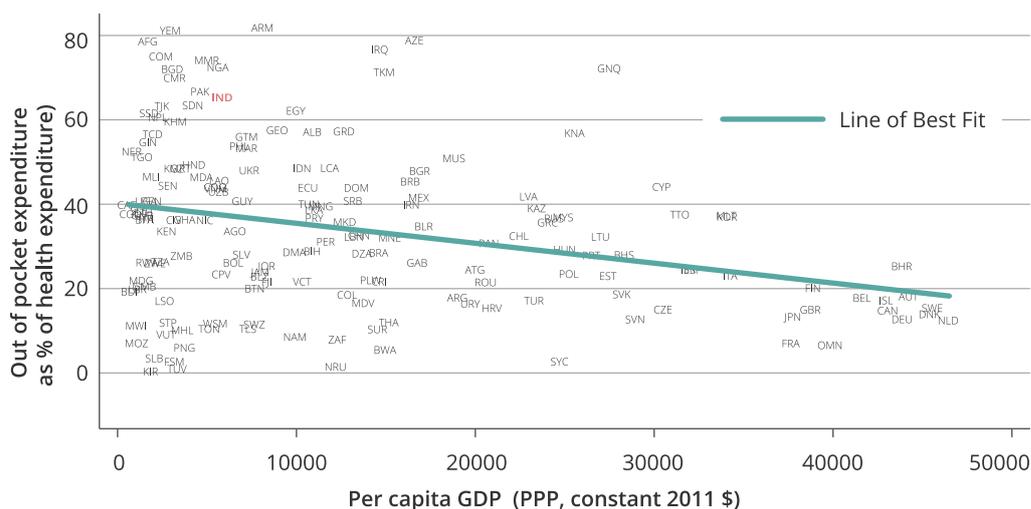
Sources and notes: World Development Indicators, World Bank.
ETH – Ethiopia, BGD – Bangladesh, PAK – Pakistan, MMR – Myanmar, VNM – Vietnam, NGA – Nigeria, IND – India, PHL – Philippines, IDN – Indonesia, LKA – Sri Lanka, CHN – China, BRA – Brazil

As a result of this low level of public health spending, out-of-pocket expenditures on this essential service are higher in India than in many other countries of the world. As one might expect, with richer countries having better public healthcare, out-of-pocket expenditures by households as a percentage of total spending on health tend to fall with per capita GDP. However, the variation among poorer countries is much larger (see Figure 4.3), suggesting that some poor countries do a much better job of meeting healthcare needs publicly than others. At 65 per cent, India is a clear outlier on the high side. Out-of-pocket health expenditure in India is close to that in Pakistan, 20 percentage points higher than in Vietnam and almost 30 percentage points higher than in Ethiopia (Figure 4.4). India is among the top 10 countries in the world in this respect. This is also a matter of concern because high out-of-pocket health

expenditures are an important reason for indebtedness in the country (Smith, Chhabra and Bhattacharya 2019).

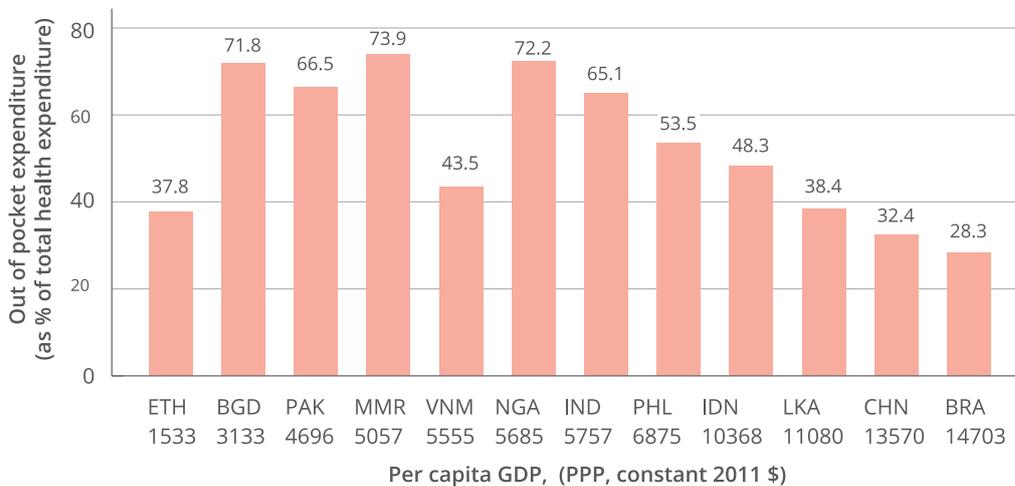
India underperforms relative to some comparable developing countries not only in terms of public spending on health, but also when it comes to health outcomes. We look at three different outcomes: life expectancy (Figure 4.5), infant mortality (Figure 4.6) and under-five mortality rates (Figure 4.7). Once again, Vietnam – which spends more than double the share of GDP on public healthcare that India does, and has a comparable per capita GDP – performs better on all three outcome indicators. Vietnam’s outcomes are comparable to richer countries such as Indonesia and the Philippines. Thus it appears that, following the example of other east Asian economies like China and South Korea, Vietnam has reaped the benefits of strong public investment in health.³

Figure 4.3:
Out-of-pocket expenditure by households as percentage of total health expenditure, 2015



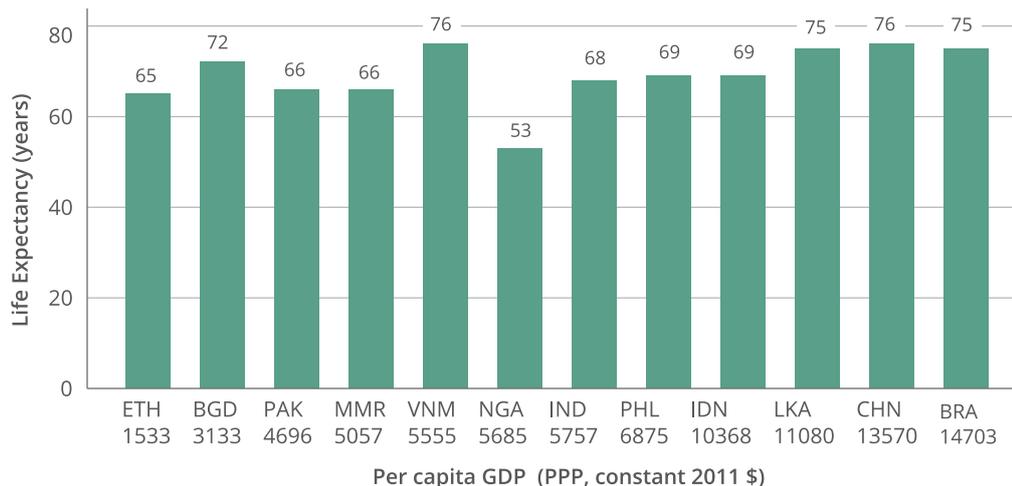
Sources and notes: World Development Indicators, World Bank. See https://wits.worldbank.org/wits/wits/witshelp/content/codes/country_codes.htm for country codes

Figure 4.4:
Out-of-pocket expenditure by households as percentage of total health expenditure for selected countries, 2015



Sources and notes: World Development Indicators, World Bank.
ETH – Ethiopia, BGD – Bangladesh, PAK – Pakistan, MMR – Myanmar, VNM – Vietnam, NGA – Nigeria, IND – India, PHL – Philippines, IDN – Indonesia, LKA – Sri Lanka, CHN – China, BRA – Brazil

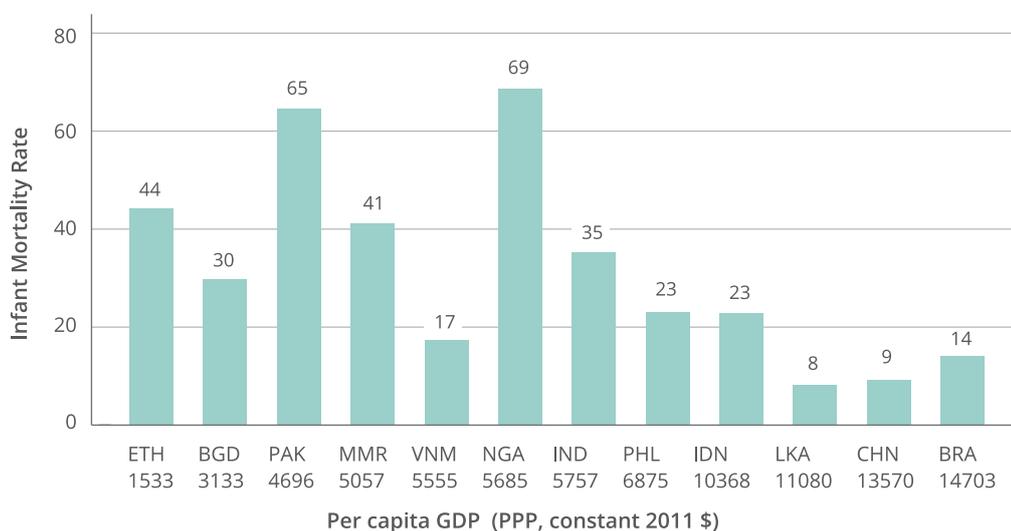
Figure 4.5:
Life expectancy in selected countries, 2015



Sources and notes: World Development Indicators, World Bank.

ETH - Ethiopia, BGD - Bangladesh, PAK - Pakistan, MMR - Myanmar, VNM - Vietnam, NGA - Nigeria, IND - India, PHL - Philippines, IDN - Indonesia, LKA - Sri Lanka, CHN - China, BRA - Brazil

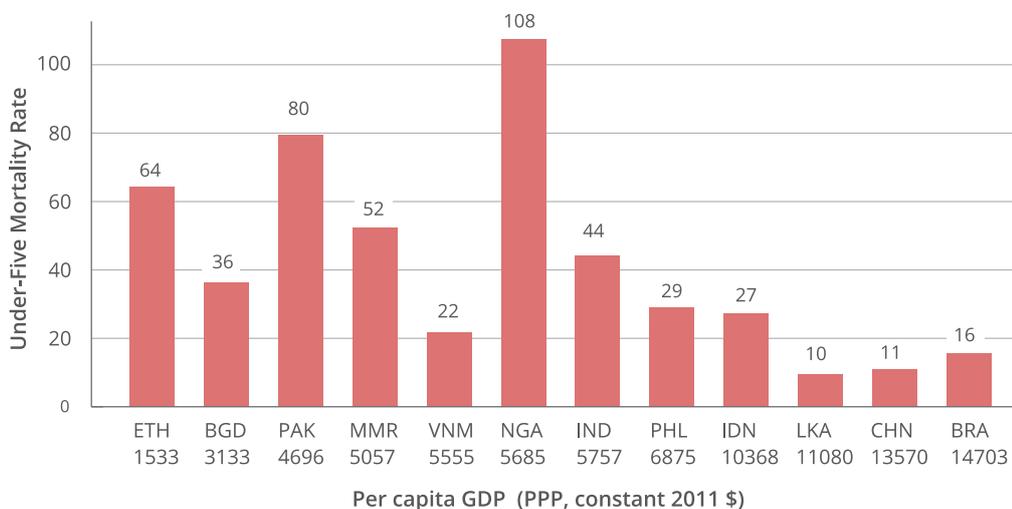
Figure 4.6:
Infant mortality rate in selected countries, 2015



Sources and notes: World Development Indicators, World Bank.

ETH - Ethiopia, BGD - Bangladesh, PAK - Pakistan, MMR - Myanmar, VNM - Vietnam, NGA - Nigeria, IND - India, PHL - Philippines, IDN - Indonesia, LKA - Sri Lanka, CHN - China, BRA - Brazil

Figure 4.7:
Under-five mortality rate in selected countries, 2015



Sources and notes: World Development Indicators, World Bank.

ETH - Ethiopia, BGD - Bangladesh, PAK - Pakistan, MMR - Myanmar, VNM - Vietnam, NGA - Nigeria, IND - India, PHL - Philippines, IDN - Indonesia, LKA - Sri Lanka, CHN - China, BRA - Brazil

4.2.2 / A state-level analysis of health spending and outcomes

The foregoing analysis shows that current proposals to increase public health spending in India to around 3 per cent of GDP are eminently reasonable given international standards. However, a commonly heard criticism of expanding public healthcare is that the existing system is inefficient. To the extent that these inefficiencies are due to lack of funding, the criticism only begs the question: why not a better funded system? But it is also possible that quite independent of resource constraints, the public sector is worse at delivering quality healthcare than the private sector. State level evidence, however, belies this claim.

We can use the diversity across states in levels of per capita Net State Domestic Product (NSDP), institutional capacity, health expenditure and outcomes to explore the effectiveness of the public health system.⁴ Further, because health is a state subject, states have a key role in determining health outcomes. Investigating inter-state variations allows us to identify states that may be better performing, given their level of per capita income, as potential models.

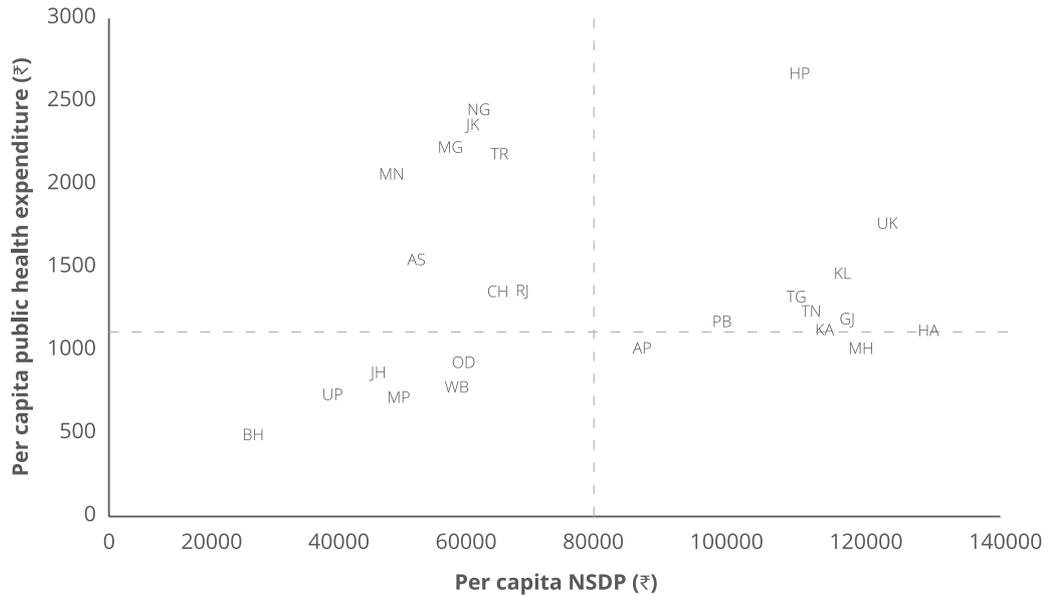
Per capita public spending on health varies by more than 10 times across states, from around ₹500 per person in Bihar to ₹5800 per person in Mizoram (Table 4.1). One determinant of public health spending is, of course, the size of the state's economy. Interestingly, however, even states with similar levels of per capita NSDP have very different levels of public health spending per person (Figure 4.8). With lower populations, the north-eastern states generally have the highest per capita public spending on health.

Table 4.1: Per capita public spending on health by state, 2015-16 (₹)

State	Expenditure (₹)
Bihar	491
Madhya Pradesh	716
Uttar Pradesh	733
West Bengal	778
Jharkhand	866
Odisha	927
Maharashtra	1011
Andhra Pradesh	1013
Haryana	1119
Karnataka	1124
Punjab	1173
Gujarat	1189
Tamil Nadu	1235
Telangana	1322
Chhattisgarh	1354
Rajasthan	1360
Kerala	1463
Assam	1546
Uttarakhand	1765
Delhi	1992
Manipur	2061
Tripura	2183
Meghalaya	2223
Jammu & Kashmir	2359
Nagaland	2450
Himachal Pradesh	2667
Goa	3643
Sikkim	5126
Arunachal Pradesh	5177
Mizoram	5862

Sources and notes: CBHI (2018)

Figure 4.8:
Per capita Net State Domestic Product and per capita public health expenditure, 2015-16

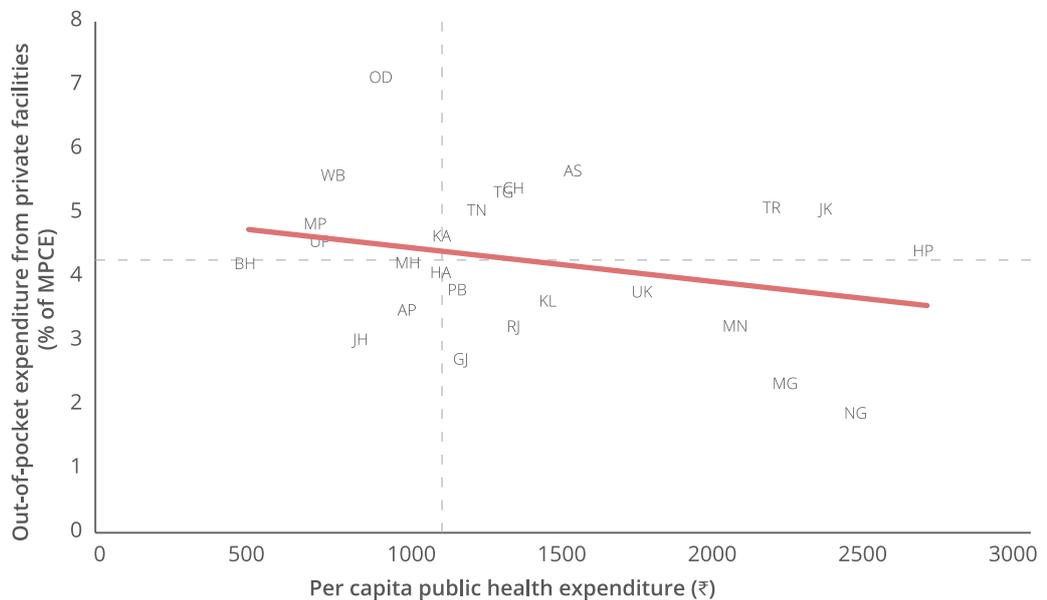


Sources and notes: CBHI (2018), Economic and Political Weekly Research Foundation. Outlier states – Arunachal Pradesh, Goa, Mizoram and Sikkim – have been excluded. Refer List of State codes Refer Appendix B for list of State codes.

However, even some larger, populous but poorer states have relatively high public health spending per person. For example, Chhattisgarh has a per capita NSDP half that of Haryana and Gujarat, but spends ₹1354 per person compared to ₹1119 for Haryana and ₹1189 for

Gujarat. This is important since states with relatively higher public spending per capita also tend to have lower out-of-pocket expenses in private health facilities (Figure 4.9 and Table A4.1).

Figure 4.9:
Per capita public health expenditure (2015-16) and out-of-pocket health expenditure (2014) from private facilities



Sources and notes: NSS 2014b, CBHI 2018. Per capita public health expenditure is for 2015-16. Out of pocket expenditure is for 2014. Outlier states – Arunachal Pradesh, Goa, Mizoram and Sikkim – have been excluded. Refer list of state codes. Refer Appendix B for list of State codes.

The level of per capita public spending can indicate a state government's priorities, but spending needs to be placed in the context of outcomes for a fuller picture. We find that in a sample of 25 states, increasing public spending by ₹100 per capita is associated with a reduced under-five mortality rate by nearly 1 per 1000. This association of increased public spending per person with decreased under-five mortality persists and is statistically significant at the 10 per cent level, even after controlling for per capita NSDP, though it reduces to 0.8 per thousand.

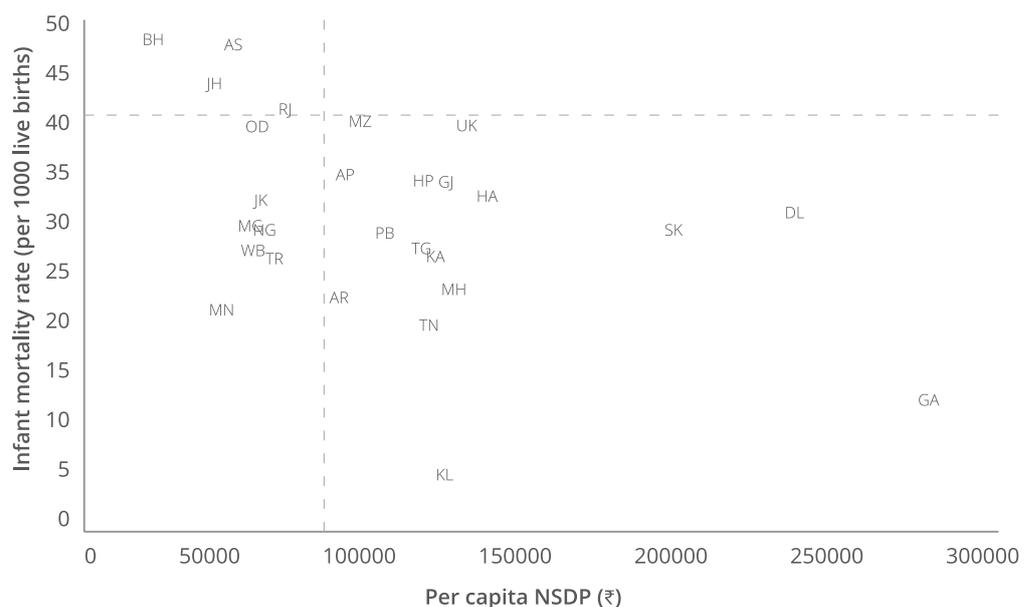
In general, the relationship between per capita NSDP and health outcomes can help identify states that perform better than the national average even with a per capita NSDP that is lower than the national average. We look at infant mortality rate (Figure 4.10), under-five mortality rate (Figure 4.11), and immunisation rates (Figure 4.12). As one might expect, richer states tend to have lower mortality rates and higher immunisation rates. Of greater interest are those states which are poorer than the national average but still perform better than average on outcomes. In Figures 4.10 and 4.11, states that fall below the national average in infant or under-five mortality as well as below the per-capita average income will appear in the lower left quadrant. We see that large poor states such as Odisha and West Bengal perform relatively well in outcomes in spite of having lower than average per capita incomes. In Odisha, the outcomes could be a result of the revival

in recent years of the Integrated Child Development Services (ICDS) in the state, which provides health, nutrition and growth monitoring services to young children, pregnant women and lactating mothers (Khera 2015). By 2015-16, this state had the highest coverage of ICDS services (International Institute for Population Sciences and ICF, 2017). Odisha also has among the highest number of government health personnel per 1,00,000 population (NITI Aayog 2018).

More than two-thirds of the worst performing districts in terms of health outcomes are in the states of Uttar Pradesh, Bihar and Jharkhand. Districts with higher health deficits tend to have higher proportions of their population not using government health facilities and lower proportions of women with at least four antenatal visits before delivery (Bhattacharya and Jha 2018). This could be due to either absence of facilities or staff or poor quality. Meanwhile, Kerala has the lowest under-five and maternal mortality rates and the highest number of government health personnel per 1,00,000 population (NITI Aayog 2018). The superior health indicators in Kerala are linked to its history of public provisioning of well-functioning health services (Bardhan 1974, Ramachandran 1997).

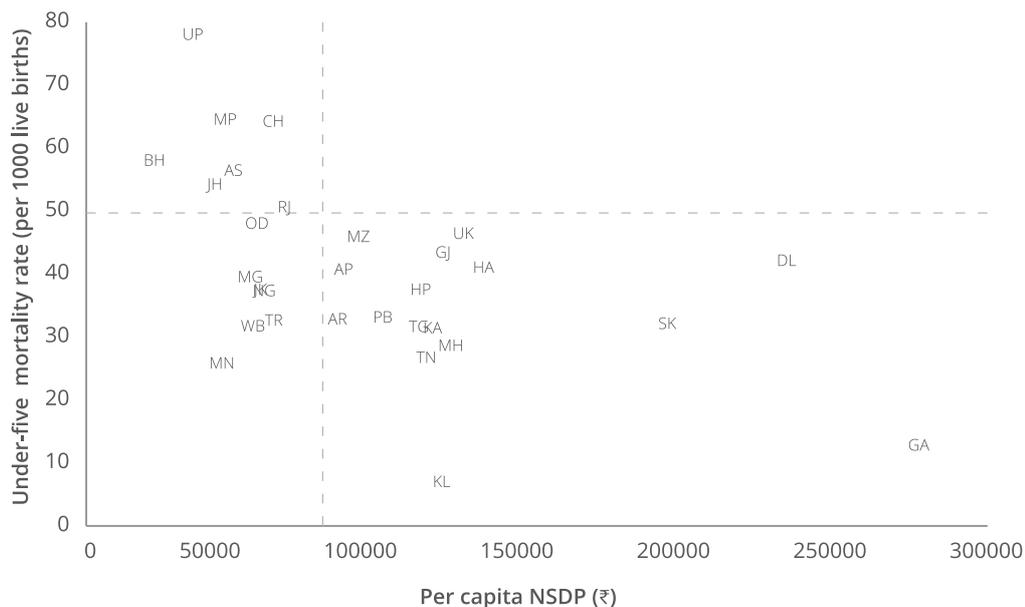
While no one state may appear as a model to be emulated along all dimensions, what is clear from the foregoing evidence is that there are benefits from expanding public healthcare facilities, and improving

Figure 4.10:
Infant mortality rate and per capita NSDP, 2015-16



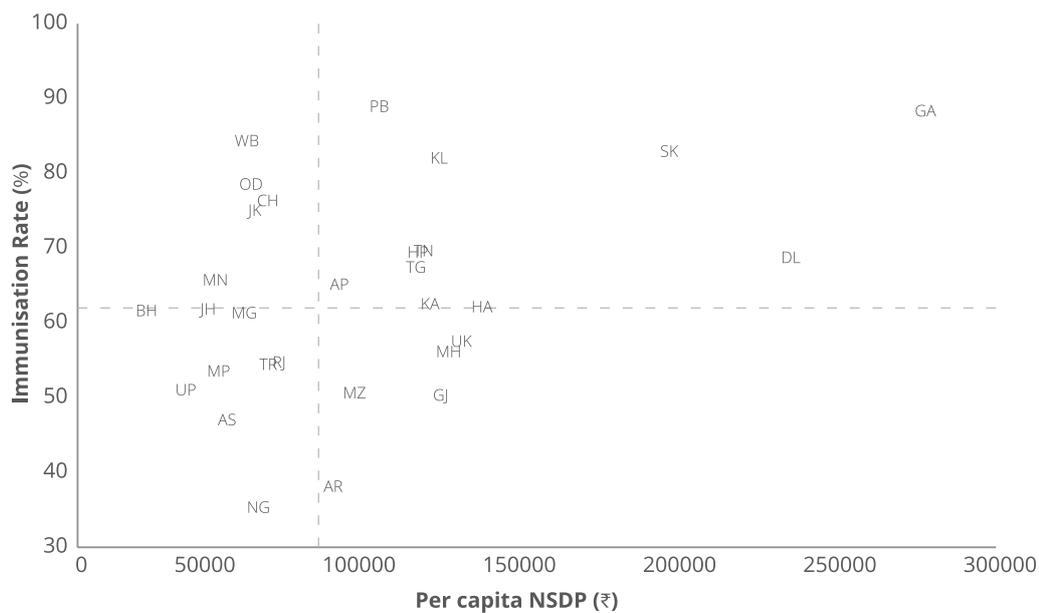
Sources and notes: NFHS-4 2015-16, EPWRF. Refer Appendix B for list of State codes.

Figure 4.11:
Under-five mortality rates and per capita NSDP, 2015-16



Sources and notes: NFHS-4 2015-16, EPWRF. Refer Appendix B for list of State codes.

Figure 4.12:
Immunisation rates and per capita NSDP, 2015-16



Sources and notes: NFHS-4 2015-16, EPWRF. Refer Appendix B for list of State codes.

their accessibility and quality to cater to the health needs of all citizens. And that public healthcare can be delivered effectively even in relatively poor states, if there is political will.

4.2.3 / Scope for employment generation

Apart from the intrinsic value of universally providing for basic needs and creating systems in which every citizen has a stake, UBS has the advantage of contributing to the creation of more decent employment opportunities in the country. As mentioned earlier, jobs thus created often have a care component and are thus relatively immune to mechanisation. Further, they tend to employ domestic workers.

Expanding and improving the provision of health facilities would increase employment by filling the existing vacant seats and/or shortfall in personnel in sub-centres, primary health centres (PHC) and community health centres (CHC). Universal provisioning of health services would also include covering up the shortfall in health infrastructure, and this would involve employing additional personnel in the new facilities.

A few important caveats are in order here. First, while there are several estimates of shortfall to be found in the press, we take a conservative approach and only present numbers that are provided by existing official reports. Second, the absence of statistics for urban India prevents us from estimating employment generation at the national level, so we present figures for the rural sector only. For both these reasons, our estimates of jobs created should be considered as a lower bound.

4.2.3.1 / Shortfall and vacancies in rural health personnel

Rural Health Statistics 2016-17 provide state-level information on the number of required and sanctioned positions in the public healthcare system, as well as the existing number of personnel. Table 4.2 shows the shortfall in health personnel in rural areas, calculated as the difference between required positions and actual positions in the rural health system. It also shows

the number of vacant positions, calculated as the difference between sanctioned and actual positions in sub-centres, PHCs and CHCs. These positions include health workers (male and female) at sub-centres and PHCs; auxiliary nurse mid-wives at sub-centres and PHCs; health assistants (male and female), doctors and block extension educators at PHCs; pharmacists, laboratory technicians, nursing staff at PHCs and CHCs; specialists, general duty medical officers and radiographers at CHCs.

Uttar Pradesh and Rajasthan have the highest number of vacant positions (at more than 15000 each) as well as the highest shortfall against the required personnel. In percentage terms, Bihar and Himachal Pradesh have the highest figures of vacant against sanctioned positions and shortfall against required personnel. All in all, if existing vacant positions were to be filled, 0.12 million people would get jobs, and if the entire shortfall in personnel was to be taken care of, another 0.20 million people would get jobs. It needs to be noted that these figures are only for the rural healthcare system, and therefore underestimate the number of jobs that would be created in the expansion of the public health system countrywide.

4.2.3.2 / Shortfall in rural health facilities

Tables 4.3, 4.4 and 4.5 give the shortfalls in sub-centres, PHCs and CHCs, and the potential expansion in employment opportunities if these were to be bridged. There are two types of sub-centres and PHCs, Type A and Type B. Type B is required to be in place if the average number of patients is higher than prescribed, and it therefore requires more personnel. The Indian Public Health Standards (Ministry of Health and Family Welfare 2012a, 2012b, 2012c) give the essential and desirable requirements in personnel for the three types of facilities. The expansion in employment by setting up new facilities is estimated using these requirements. By taking care of the shortfall in sub-centres, between 0.10 million to 0.17 million people would get jobs. Similarly, 83000 to 0.13 million people would get jobs in new PHCs and around 0.1 million people would get jobs in new CHCs. In total, between 0.29 million and 0.42 million jobs could be generated if the shortfall in health facilities were to be bridged (Table 4.6).

Table 4.2: Total shortfall in personnel and vacant positions in rural health system

State/UT	Required	Shortfall (Required - Actual)	Shortfall as % of Required	Sanctioned	Vacant (Sanctioned - Actual1)	Vacant as % of Sanctioned
Andhra Pradesh	25647	7094	27.66	31345	6590	21.02
Arunachal Pradesh	2507	1030	41.08	0	0	0.00
Assam	18552	4043	21.79	14581	443	3.04
Bihar	35291	17983	50.96	9529	3882	40.74
Chhattisgarh	18233	3279	17.98	19282	3927	20.37
Goa	652	222	34.05	667	83	12.44
Gujarat	32990	5711	17.31	34414	6097	17.72
Haryana	9308	2352	25.27	12195	2897	23.76
Himachal Pradesh	9178	4884	53.21	7289	2793	38.32
Jammu & Kashmir	11569	3589	31.02	12398	2083	16.80
Jharkhand	12407	4506	36.32	10956	2963	27.04
Karnataka	38159	14112	36.98	34396	9486	27.58
Kerala	19951	4633	23.22	20446	0	0.00
Madhya Pradesh	30907	7952	25.73	34163	8832	25.85
Maharashtra	38898	10434	26.82	42316	12116	28.63
Manipur	1675	194	11.58	2766	430	15.55
Meghalaya	2013	408	20.27	2273	77	3.39
Mizoram	1265	124	9.80	1909	683	35.78
Nagaland	1968	395	20.07	1085	34	3.13
Odisha	27516	10032	36.46	18171	2535	13.95
Punjab	11038	2114	19.15	14385	2693	18.72
Rajasthan	51471	21429	41.63	49601	15031	30.30
Sikkim	490	130	26.53	390	96	24.62
Tamil Nadu	32348	11853	36.64	34747	6898	19.85
Telangana	16013	4267	26.65	20060	4080	20.34
Tripura	2919	859	29.43	1050	0	0.00
Uttarakhand	6333	3023	47.73	4193	877	20.92
Uttar Pradesh	77897	36017	46.24	63400	16888	26.64
West Bengal	32022	11746	36.68	46774	12525	26.78
A & N Islands	456	118	25.88	782	46	5.88
Chandigarh	83	18	21.69	117	0	0.00
D & N Haveli	233	37	15.88	91	7	7.69
Daman & Diu	108	25	23.15	107	9	8.41
Delhi	55	16	29.09	97	14	14.43
Lakshadweep	98	19	19.39	172	0	0.00
Puducherry	498	140	28.11	481	6	1.25
All-India	570748	194788	34.13	546628	122934	22.49

Sources and notes: Rural Health Statistics, 2016-17

1. These positions include health workers, ANMs, health assistants, doctors, block extension educators, pharmacists, laboratory technicians, nursing staff, specialists, general duty medical officers and radiographers.

2. Sanctioned and vacant positions include two additional positions, general duty medical officers and block extension educators, for which information on the number of required personnel and shortfall are not available. This explains the difference in the actual positions between these two sets, named Actual and Actual1.

Table 4.3: Shortfall in sub-centres and estimated employment through new sub-centres

State/UT	Shortfall	% Shortfall	Type A		Type B	
			Essential	Desirable	Essential	Desirable
Andhra Pradesh	0	0	0	0	0	0
Arunachal Pradesh	6	1.89	18	24	24	30
Assam	1229	21.01	3687	4916	4916	6145
Bihar	8688	46.62	26064	34752	34752	43440
Chhattisgarh	0	0	0	0	0	0
Goa	0	0	0	0	0	0
Gujarat	0	0	0	0	0	0
Haryana	712	21.57	2136	2848	2848	3560
Himachal Pradesh	0	0	0	0	0	0
Jammu & Kashmir	0	0	0	0	0	0
Jharkhand	2212	36.50	6636	8848	8848	11060
Karnataka	0	0	0	0	0	0
Kerala	0	0	0	0	0	0
Madhya Pradesh	3223	25.96	9669	12892	12892	16115
Maharashtra	2932	21.70	8796	11728	11728	14660
Manipur	88	17.29	264	352	352	440
Meghalaya	323	42.56	969	1292	1292	1615
Mizoram	0	0	0	0	0	0
Nagaland	59	12.97	177	236	236	295
Odisha	1505	18.37	4515	6020	6020	7525
Punjab	518	14.94	1554	2072	2072	2590
Rajasthan	0	0	0	0	0	0
Sikkim	0	0	0	0	0	0
Tamil Nadu	0	0	0	0	0	0
Telangana	0	0	0	0	0	0
Tripura	0	0	0	0	0	0
Uttarakhand	0	0	0	0	0	0
Uttar Pradesh	10679	34.23	32037	42716	42716	53395
West Bengal	2714	20.74	8142	10856	10856	13570
A & N Islands	0	0	0	0	0	0
Chandigarh	0	0	0	0	0	0
D & N Haveli	0	0	0	0	0	0
Daman & Diu	0	0	0	0	0	0
Delhi	73	87.95	219	292	292	365
Lakshadweep	0	0	0	0	0	0
Puducherry	0	0	0	0	0	0
All-India	34946	19.50	104838	139784	139784	174730

Sources and notes : Rural Health Statistics, 2016-17

Personnel calculated on the basis of essential and desirable requirements specified for each sub-centre in Indian Public Health Standards (2012c)

Table 4.4: Shortfall in primary health centres (PHCs) and estimated employment through new PHCs

State/UT	Shortfall	% Shortfall	Type A		Type B	
			Essential	Desirable	Essential	Desirable
Andhra Pradesh	50	4.18	650	900	700	1050
Arunachal Pradesh	0	0	0	0	0	0
Assam	0	0	0	0	0	0
Bihar	1200	38.72	15600	21600	16800	25200
Chhattisgarh	0	0	0	0	0	0
Goa	0	0	0	0	0	0
Gujarat	0	0	0	0	0	0
Haryana	814	33.45	2392	3312	2576	3864
Himachal Pradesh	0	0	0	0	0	0
Jammu & Kashmir	0	0	0	0	0	0
Jharkhand	669	69.25	8697	12042	9366	14049
Karnataka	0	0	0	0	0	0
Kerala	0	0	0	0	0	0
Madhya Pradesh	818	41.13	10634	14724	11452	17178
Maharashtra	387	17.58	5031	6966	5418	8127
Manipur	0	0	0	0	0	0
Meghalaya	0	4.39	65	90	70	105
Mizoram	0	0	0	0	0	0
Nagaland	0	0	0	0	0	0
Odisha	35	2.66	455	630	490	735
Punjab	146	25.26	1898	2628	2044	3066
Rajasthan	0	0	0	0	0	0
Sikkim	0	0	0	0	0	0
Tamil Nadu	0	0	0	0	0	0
Telangana	79	10.29	1027	1422	1106	1659
Tripura	16	14.68	208	288	224	336
Uttarakhand	0	0	0	0	0	0
Uttar Pradesh	1573	30.28	20449	28314	22022	33033
West Bengal	1239	57.55	16107	22302	17346	26019
A & N Islands	0	0	0	0	0	0
Chandigarh	0	0	0	0	0	0
D & N Haveli	0	0	0	0	0	0
Daman & Diu	0	0	0	0	0	0
Delhi	8	61.54	104	144	112	168
Lakshadweep	0	0	0	0	0	0
Puducherry	0	0	0	0	0	0
All-India	6409	21.85	83317	115362	89726	134589

Sources and notes: Rural Health Statistics, 2016-17

Personnel calculated on the basis of essential and desirable requirements specified for each PHC in Indian Public Health Standards (2012b)

Table 4.5: Shortfall in community health centres (CHCs) and estimated employment through new CHCs

State/UT	Shortfall	% Shortfall	Essential	Desirable
Andhra Pradesh	106	35.45	4876	5512
Arunachal Pradesh	0	0	0	0
Assam	80	33.61	3680	4160
Bihar	624	80.62	28704	32448
Chhattisgarh	24	12.44	1104	1248
Goa	0	0	0	0
Gujarat	0	0	0	0
Haryana	25	18.25	1150	1300
Himachal Pradesh	0	0	0	0
Jammu & Kashmir	0	0	0	0
Jharkhand	53	21.99	2438	2756
Karnataka	120	36.81	5520	6240
Kerala	0	0	0	0
Madhya Pradesh	188	37.83	8648	9776
Maharashtra	190	34.55	8740	9880
Manipur	3	15.00	138	156
Meghalaya	1	3.57	46	52
Mizoram	0	0	0	0
Nagaland	0	0	0	0
Odisha	0	0	0	0
Punjab	0	0	0	0
Rajasthan	0	0	0	0
Sikkim	2	50	92	104
Tamil Nadu	0	0	0	0
Telangana	78	40.63	3588	4056
Tripura	6	22.22	276	312
Uttarakhand	0	0	0	0
Uttar Pradesh	476	36.67	21896	24752
West Bengal	189	35.13	8694	9828
A & N Islands	0	0	0	0
Chandigarh	0	0	0	0
D & N Haveli	0	0	0	0
Daman & Diu	0	0	0	0
Delhi	3	100.00	138	156
Lakshadweep	0	0	0	0
Puducherry	0	0	0	0
All-India	2168	29.61	99728	112736

Sources and notes : Rural Health Statistics, 2016-17

Personnel calculated on the basis of essential and desirable requirements specified for each CHC in Indian Public Health Standards (2012a)

Table 4.6: Total requirements for health personnel in potential sub-centres, PHCs and CHCs

	Essential	Desirable
Type A	287883	367882
Type B	329238	422055

Sources and notes: Calculated from personnel requirements in Indian Public Health Standards.

4.2.3.3. / Shortfall in physicians

In the earlier section, employment generation was estimated using the Indian Public Health Standards. For comparison across countries, the World Health Organisation (WHO) uses a standard of one physician per 1000 population. As per the National Health Profile 2018, the total number of registered allopathic doctors in India is 10,41,395. According to media reports, 80 per cent of these doctors are actually available, giving a doctor-population ratio of 0.62:1000.⁵ Eliminating the shortfall vis-à-vis WHO standards via public recruitment would employ an additional 0.5 million physicians. It needs to be noted that this includes rural and urban areas, so that some of the additional employment would already have been covered in the earlier calculations in section 4.2.3.1. To put this number in perspective, note that this required addition to the number of physicians across the country constitutes around 10 per cent of the existing workforce in the health sector.

4.2.4 / Regularising existing employees

No discussion of jobs in healthcare (and education) can be complete without discussing a long-standing demand of activists and workers to regularise the employment of Accredited Social Health Activists (ASHA) and anganwadi workers. There are around 1.03 million ASHA workers (Ministry of Health and Family Welfare 2018), 1.2 million anganwadi workers and 1 million helpers in rural and urban areas. In September 2018, the honorarium for these workers was increased by at least 50. Anganwadi workers are now to get ₹ 4500 or ₹ 3500 per month (depending on

their earlier pay), anganwadi helpers are to get ₹2500 per month, and the incentive amount for ASHA workers was increased to ₹2000 per month (Financial Express 2018). However, these amounts are still far below what they would earn as regular government employees.

These workers form the frontline of public health service delivery across the country. Strengthening this system would pay itself many times over in the form of increased motivation and quality of service provisioning, dignity and respect for these (mostly women) workers, and increase in mass demand due to higher wages.

4.2.5 Summing up

To sum up, India needs to more than double its overall public spending on healthcare to catch up to comparable developing countries. This will be money well-spent because international as well as state-level evidence indicates a strong relationship between more public spending and better health outcomes as well as lower out-of-pocket expenses.

Further, a large number of decent work opportunities will be created in the process. If the vacant positions as well as shortfall in personnel and in health infrastructure are filled, between 0.41 million and 0.62 million jobs could be generated (Table 4.7). To put these numbers in perspective, this constitutes around 8 to 12 per cent of the existing workforce in the health sector, and around 4.5 to 7 per cent of the unemployed who are at least graduates.

Table 4.7: Requirements for health personnel if shortfall in personnel and shortfall in facilities are covered

Facility	Requirement	Vacant	Shortfall
Type A	Essential	410817	482671
	Desirable	490816	562670
Type B	Essential	452172	524026
	Desirable	544989	616843

Sources and notes: Calculated from Tables 4.2 and 4.6

Universalising public provisioning of healthcare could therefore take care of two of the most important priorities of the electorate – jobs and healthcare (Association for Democratic Reforms 2018). The National Health Policy (NHP) 2015 draft proposed enacting a National Health Rights Act which would recognise health to be a fundamental right, and therefore denial of this right would be justiciable. However, the final NHP 2017 diluted this proposal to an aspirational goal for the future. With the substantial progress to be made in improving health outcomes and citizens marking it as one of their major priorities, it is time to recognise health as a legally enforceable right creating millions of decent jobs in the process.

4.3 / Education

Education has an instrumental value, improving health, expanding opportunities and labour productivity and hence earnings. It has multiple neighbourhood benefits, enabling greater democratic participation and transforming of societies. Besides this, the attainment of learning has an intrinsic value in itself, being transformative and emancipatory. Given its far-reaching benefits and the need to ensure affordable and accessible education, it is imperative that the State be actively involved in its provisioning. An affordable common schooling system, besides making schooling accessible to all, can also contribute to building a cohesive and equal society.

With the passing of the Right to Education (RTE) Act in 2009, education was confirmed as a fundamental right of every child, committing the State to ensuring free and compulsory education for children between the ages of 6 to 14 years. The State's commitment to providing accessible education is not restricted to the primary, and needs to extend to the secondary and tertiary levels. The public sector has also played a crucial role in higher education. Historically, some of India's best colleges and universities have been public and this continues to be the case. Going beyond the elite public universities, higher education at a mass-level has been attainable because of the vast state university system.

Extending public educational opportunities to all implies hiring an adequate number of teachers and other professionals, as well as building adequate

infrastructure. This can generate valuable work opportunities as well.

In this section, as in the previous one, we argue that India currently underspends public resources on this vital service, compared to other countries with similar levels of income. Within India, we show that there are examples of states that have been able to provide public schooling at a reasonable cost without compromising on quality of the teaching imparted.

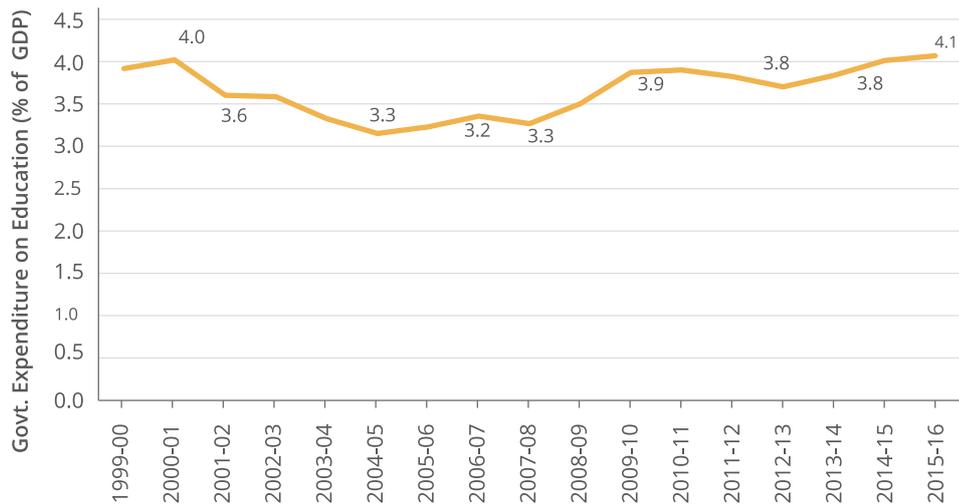
4.3.1 / Indian educational spending and performance in global perspective

In India, the government (Centre and State, and across all levels of education) spends around 4 per cent of GDP on education. As early as 1966, the Report of the Education Commission (also known as the Kothari Commission) recommended an increase in educational expenditure to 6 per cent of national income. This demand continues to be reiterated even today both within the current government⁷ and outside.⁸ However, even with the implementation of the RTE in 2010, there has been no substantial change in the allocation towards education (Figure 4.13).

Globally, unlike health, where India is below average, for education, India's spending is very close to the global average given its level of per capita GDP (Figure 4.14). But there is still room for improvement given that there are many countries with a per capita GDP very close to that of India, who spend 6 per cent or even more of their GDP on education. As in the earlier section, we compare India's spending on education with a cohort of countries that are similar in terms of per capita GDP, population size and population density. The cohort comprises Bangladesh, Brazil, China, Indonesia, Pakistan, Sri Lanka, and Vietnam to which we add Kenya, Ghana, Malawi, Nepal, and Uganda for comparison with educational statistics from the World Development Report 2018.⁹

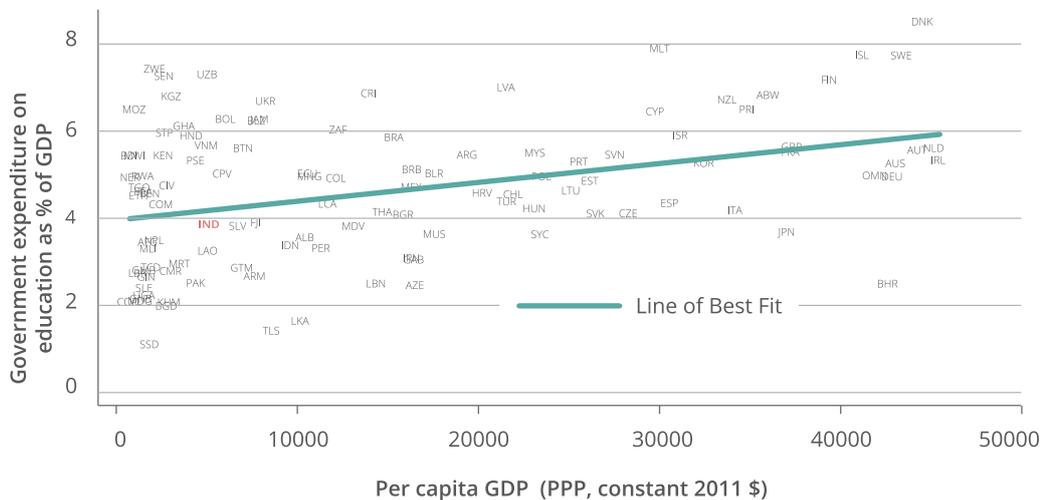
In 2013, India spent just a bit less than 4 per cent of GDP on education. Vietnam, with a similar GDP per capita, spent 5.6 per cent and countries like Ghana and Kenya, which have comparatively lower levels of GDP per capita, spent a far greater share (Figure 4.15).

Figure 4.13:
Trends in
Government
Expenditure
on Education,
India



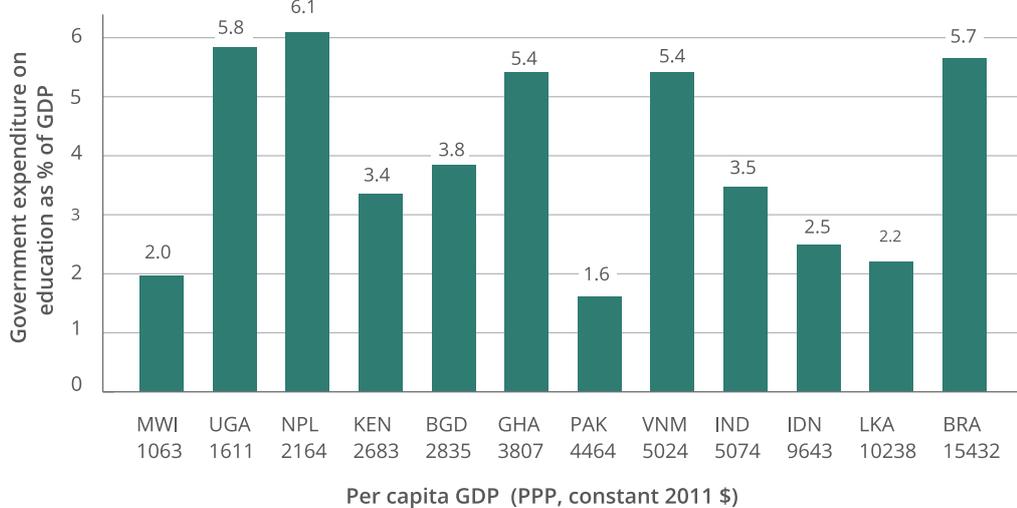
Source and notes : Education expenditure data from Analysis of Budget Expenditure (ABE) 2012-2015, GDP data from 1999 to 2013 from National Statistical Commission; 2014 and 2015 estimates from NSSO. Base year - 2011-12.

Figure 4.14:
Public
Expenditure
on Education
(as % of GDP)
against GDP
per capita,
2013



Sources and notes: World Development Indicators, World Bank. Countries with GDP per capita < \$50,000. See https://wits.worldbank.org/wits/wits/help/content/codes/country_codes.htm for country codes

Figure 4.15:
Expenditure
on Education
(as % of GDP)
across similar
countries, 2013



Sources and notes: World Development Indicators, World Bank
1. Labels on X-axis represent country code and GDP per capita. 2. Bars ordered by increasing GDP per capita.
3. MWI - Malawi, UGA- Uganda, NPL -Nepal, KEN - Kenya, BGD - Bangladesh, GHA - Ghana, PAK - Pakistan, VNM - Vietnam, IND - India, IDN - Indonesia, LKA - Sri Lanka, BRA - Brazil.

In the last two decades, the highest government expenditure on education as a share of GDP was 4.4 per cent in 2000 even as other developing countries have either gradually increased education expenditure over time (Nepal, Indonesia) and/or spent a considerably higher share than India (Brazil, Malawi).

As with health, spending is only half the story, outcomes matter as much. Educational achievements or outcomes may be measured on the basis of enrolment rates, literacy rates, and drop-out rates as well as in terms of quality using indicators capturing basic learning such as students' performance and comprehension skills.

Despite low and stagnant levels of expenditure on education, India's literacy rates have steadily risen over the years, increasing from 18.3 per cent in 1951 to 72.1 per cent in 2011, according to Census reports. Enrolment rates have also risen and gross primary enrolment rate was 84 per cent in 2016-17 (NIEPA 2018). In 2014, nearly 93 per cent of rural households had a primary school within one kilometre of their house (NSS 2014). Therefore, in terms of coverage and reach, educational outcomes, particularly at the primary level, have improved gradually over the years.

When placed in the context of other developing countries, however, India's performance leaves something to be desired. In 2011, less than 70 per cent of the adult population were literate, while in Sri Lanka and Vietnam, more than 90 per cent of adults were literate. In 1960, adult literacy rate in India was 28 per cent compared to 9 per cent in Nepal. By 2010, adult literacy rate in India and Nepal were almost equal at around 60 per cent. Similarly, in 1980, youth female literacy in India was around 40 per cent. In 30 years, this increased to 74 per cent. During the same period, Bangladesh was able to increase its youth female literacy from a much lower initial level of 27 per cent to 74 per cent (Rathore and Das 2018). Finally, in India, the net enrolment rate in lower secondary (Classes 9 and 10)¹⁰ in 2013 was only 66 per cent compared to 93 per cent and 90 per cent in Sri Lanka and Vietnam. Despite the near-universal enrolment at the primary level, the quality of education leaves much to be desired. As per the 2018 World Development Report, in 2017, almost 90 per cent of Grade 2 students in rural

India could not read a single word of a short text, and more than 80 per cent failed to perform basic two-digit subtraction.¹¹ Nepal, despite a lower per capita GDP, had a similar government expenditure on education to GDP ratio as India, and achieved far better learning outcomes. Several other sub-Saharan African countries such as Ghana, Zambia, Tanzania and Kenya, despite being poorer than India, have shown better learning outcomes (World Bank 2018).

In summary, international comparisons, with the earlier-mentioned caveat on accounting for institutional differences, show that India can afford to spend much more on education and also do much more to improve the quality of public education.

4.3.2 / A state-level analysis of educational spending and outcomes

In 1976, education was moved to the Concurrent list of subjects, and the allocation of resources and expenditure became a shared responsibility of the Centre and states. The Centre devolves a certain share of its revenues to the states and the latter may also have their own sources of revenues for financing education.

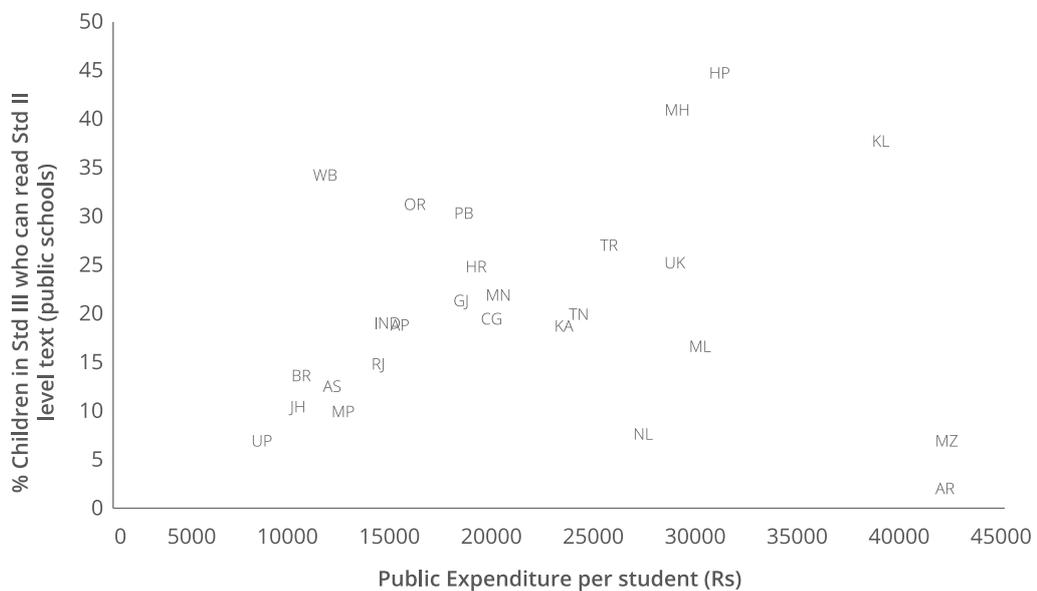
In 2015-16, the total budget provision (revenue account) of Education Departments at the Centre and states amounted to ₹4,33,342 crores. Of this, about 80 per cent was for states and Union Territories. Across states, there is considerable heterogeneity in the allocation to education. For instance, Bihar allocates 6.8 per cent of SDP to education, well above the national average of 4.1 per cent, and that of other higher income states such as Kerala (2.7 per cent), Tamil Nadu (2.1 per cent) and Gujarat (1.8 per cent) (MHRD 2016).

However, expenditure on education as a share of GSDP, as a measure, is skewed in favour of lower-income states. Poorer states like Bihar and Assam will show relatively high shares due to their GSDP being much lower in comparison to richer states like Tamil Nadu or Maharashtra. The absolute spending per child in these latter states will be much higher.

We look at another indicator of state's commitment to education, i.e. resources allocated by the state government on a student enrolled in government or government-aided schools. In 2014-15, Uttar Pradesh and Bihar had amongst the lowest expense per enrolled student (₹7613 and ₹9583). Goa spent the highest, ₹67,041 per enrolled student. All southern states spent well above the national average of ₹13,974 (Figure A1 in Appendix) (CBGA 2016). Not surprisingly, states with higher per student spending are associated with better learning outcomes (Dongre, Kapur, and Teary 2014). We confirm this in

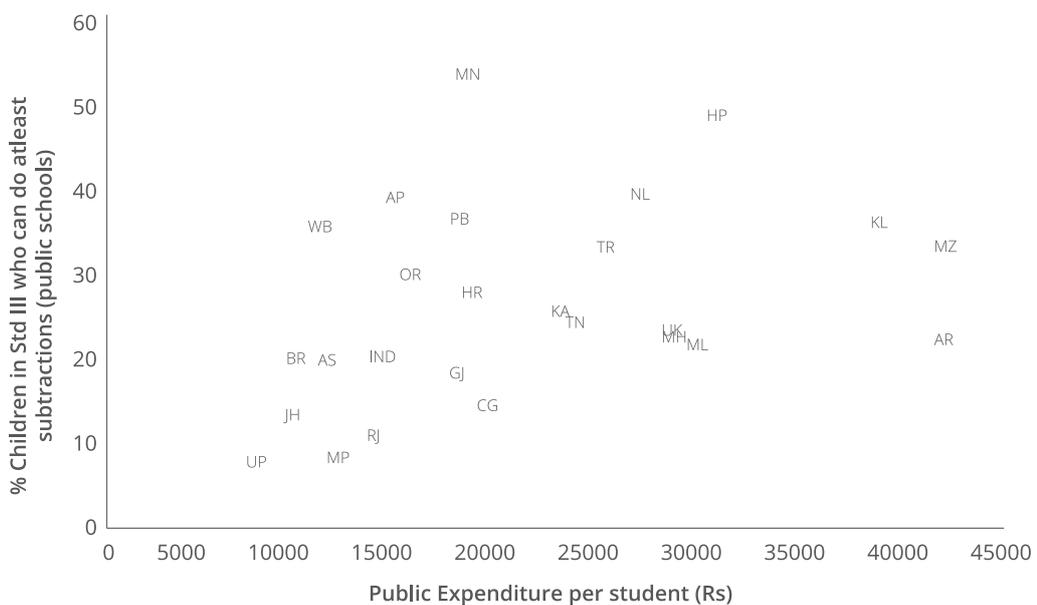
Figures 4.16 and 4.17. Kerala and Himachal Pradesh spent among the highest per student, and also performed well above average in learning outcomes in English and Math. On the other hand, states like Bihar, Madhya Pradesh, Uttar Pradesh and Assam spent the least per student in public schools, and the learning outcomes were among the lowest in the country. West Bengal and Orissa are states which have been able to achieve relatively high learning outcomes with only moderate spending per student. Recall that these two states also featured as having better than average health outcomes given lower than average NSDP.

Figure 4.16:
Learning outcomes (reading) by government expenditure per student



Sources and notes: ASER 2016, CBGA 2016. Public expenditure per student is for 2014-15. ASER learning outcomes are for 2016. Public expenditure per student is for 2014-15. ASER learning outcomes are for 2016. Refer Appendix B for list of State codes.

Figure 4.17:
Learning outcomes (mathematics) by government expenditure per student



Sources and notes: ASER 2016, CBGA 2016. Public expenditure per student is for 2014-15. ASER learning outcomes are for 2016. Refer Appendix B for list of State codes.

Learning outcomes differ significantly between private and public schools. On an average, twice the number of students in private schools were able to achieve basic reading/math comprehension compared to students in public schools. But this too varies across states. For instance, in states like Madhya Pradesh, Bihar and Uttar Pradesh, private schools had four to five times more success in achieving basic learning outcomes. In Andhra Pradesh, Karnataka and Punjab, outcomes were broadly similar between private and public schools. Notably, in Maharashtra and Tamil Nadu, public schools fared better in reading achievements compared to private schools (ASER, 2016). The National Achievement Survey (2017) also confirms that these two states achieve learning outcomes above the national average. This survey includes both rural and urban government and government-aided schools, unlike ASER (2016) which covers only rural schools.

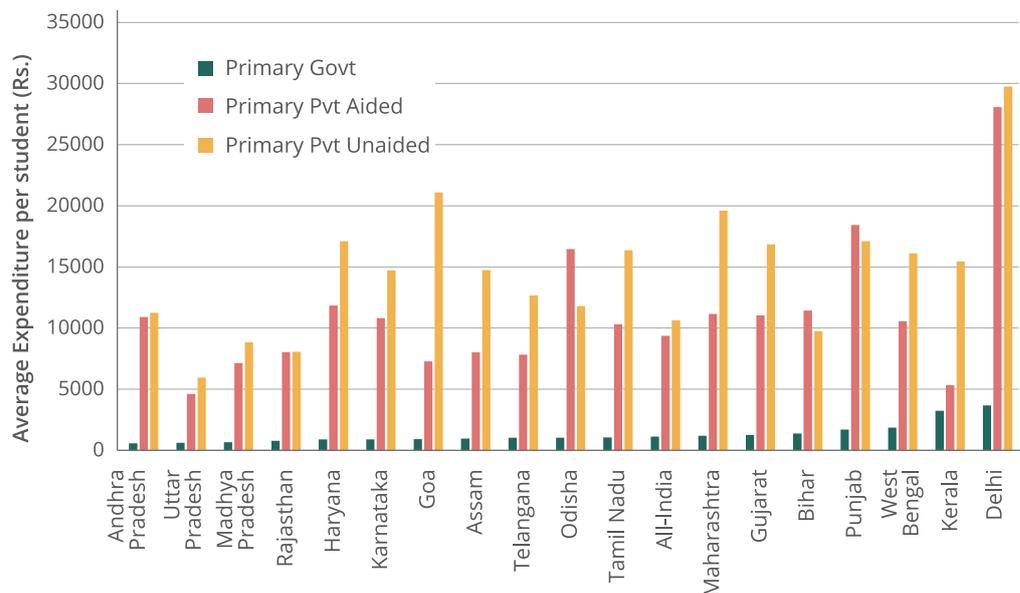
But these two states are exceptions and in most instances, public schools have failed to provide quality education to their students. Dongre et al (2014) show public schools in India face a 'double inefficiency' where the expenditure incurred by the government per student in public schools are higher than expenditure incurred by private institutions per student, while learning outcomes are lower.¹²

While private schools show better learning outcomes, most poor households cannot afford a private education. Out-of-pocket expenditure by households in

an academic session on a student at primary level was ₹1111 in government institutions compared to ₹10,623 in private unaided institutions (NSS 2014). On an average, primary education in public schools cost only one-tenth of the cost of primary education in private schools (Figure 4.18). These differences narrowed marginally as the level of education increased, but even at higher-secondary education level, private education cost three times as much as public education (NSS, 2014).¹³

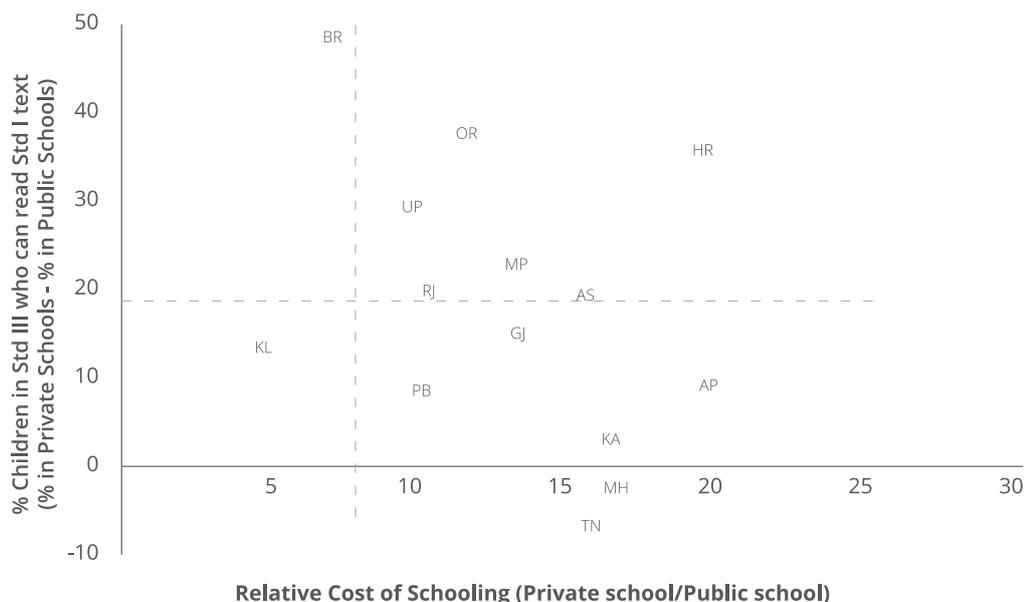
Taking into account the relative cost of private vs public education, how do educational outcomes fare across private and public schools? Figure 4.19 compares the performance of private schools vis-à-vis public, against the relative costs to the household of each. The top left quadrant represents states which have relatively small differences in what households pay out-of-pocket for private versus public schooling, but large difference in learning outcomes in favour of private schooling. The top right quadrant comprises states with high public-private cost differential and learning differentials. In all states, except Maharashtra and Tamil Nadu (seen below the X axis), private schools outperformed public schools. In all states, private schools were more expensive than public, although the extent of disparity varied greatly across states. In Kerala, for example, private schools cost five times more than public, while in Andhra Pradesh they were twenty times more expensive.

Figure 4.18:
Out of pocket expenditure on primary schooling by management type, 2014.



Sources and Notes: NSS 2014a

Figure 4.19:
Differentials
in Costs and
Learnings
Outcomes
– Public vs
private schools



Sources and notes: ASER 2016, NSS 2014a. ASER Learning outcomes are for 2016. Cost of schooling is for 2014. Refer Appendix B for list of State codes.

In summary, it is possible to identify states which are providing public education that delivers outcomes on par with the private system at a fraction of the cost to the household. Additionally, controlling for factors such as family background, mother's education and school infrastructure, learning differential between private and public schools has narrowed in recent years, suggesting that public schools and private schools are converging in their performance (ASER 2016). Moreover, only 40 per cent villages had a private school (ASER 2016). Therefore, education via the public schooling system enables reaching out to a vast population, and as recent evidence shows, this can be done without compromising on learning outcomes.

An interesting recent case study in public education is Delhi. Revamping the public schooling system was one of the major priorities of the Aam Aadmi Party (AAP) leadership when it was elected into power. Massive investments in infrastructure were undertaken – including revamping existing classrooms, providing training for teachers and recruitment of more teachers. In 2017-18, nearly a quarter of the budget was allocated for education. In 2016, students in Delhi's public schools outperformed their private school counterparts, and recorded the second-best performance among government schools across the country, finishing behind Thiruvananthapuram.¹⁴ While educationists and the teachers themselves have praised the new initiatives, the outcomes of these investments on students' learning will take longer to

materialise, as the existing learning deficits are huge and there is a steep learning curve ahead for students. Despite this, the revamped public schools and the experiences of teachers and students in these schools are testimony to the possibilities for effective public investment in education.

4.3.3 / Scope for employment generation

As the cases of states like Tamil Nadu, Karnataka and Maharashtra demonstrate, there is scope for providing affordable and good quality basic education at low costs via public schools. This requires supplementing the existing infrastructure of schools with both human and physical infrastructure. Both of these create opportunities to expand employment directly and indirectly.

4/3.3.1 / Teacher shortfall and vacancies

According to the RTE Act, teacher vacancy rate should not exceed 10 per cent. In 2016, there was a total shortfall of 0.9 million elementary teachers in government schools alone (MHRD, 2018), a vacancy rate of approximately 18 per cent against all sanctioned posts (Table 4.8). Bihar, Jharkhand and Uttar Pradesh had among the highest vacancy rates, together accounting for half the vacant posts in the country. Ensuring all these posts are filled means creating almost a million additional jobs in the country. This is only for ensuring adequate teaching capacity at the primary level.

Table 4.8: Vacancies against sanctioned posts of Elementary school teachers, as on 31.03.2016.

State/UT	Vacant Posts	Vacant Posts as % of total Sanctioned Posts
A & N Islands	402	10.7
Andhra Pradesh	19468	13.2
Arunachal Pradesh	783	5.8
Assam	39522	19.6
Bihar	203650	34.4
Chandigarh	1232	23.1
Chhattisgarh	43100	17.8
D & N Haveli	174	9.6
Daman & Diu	59	9.8
Delhi	14132	25.0
Goa	0	0.0
Gujarat	24841	11.0
Haryana	11931	17.0
Himachal Pradesh	2726	5.5
Jammu & Kashmir	11833	11.7
Jharkhand	73793	38.4
Karnataka	19486	8.4
Kerala	1383	1.1
Lakshadweep	58	7.8
Madhya Pradesh	63851	17.6
Maharashtra	13857	4.6
Manipur	364	1.9
Meghalaya	873	3.9
Mizoram	1135	9.1
Nagaland	317	1.9
Odisha	0	0.0
Puducherry	524	13.5
Punjab	22340	23.4
Rajasthan	37522	13.2
Sikkim	0	0.0
Tamil Nadu	15705	9.6
Telangana	13049	13.4
Tripura	1298	3.8
Uttar Pradesh	174666	23.0
Uttarakhand	7676	16.7
West Bengal	85835	18.9
All-India	907585	17.5

Sources and notes : MHRD, Educational Statistics at a Glance, 2018.

At the secondary level too, there are unmet teacher needs, although the extent of teacher shortfall in the secondary level is not easily available. Available official statistics suggest that at the secondary level, there are 1,06,906 vacancies for secondary school teachers.¹⁵ Meeting officially sanctioned teacher requirements, at the primary and secondary levels alone, implies creating another million jobs, at least. Based on available estimates, this is about 11.45 per cent of the currently educated unemployed and almost 5.4 per cent of the current workforce in education. This number will be even larger if we include pre-schools, in the form of the large network of anganwadis serving infants, young children and mothers across the country. Anganwadis are typically understaffed and consequently, anganwadi workers (AWW), overworked. As of 2015, there were 1,17,035 vacant positions for AWW and 19,755 vacant positions for supervisors¹⁶.

4.3.3.2 / Expanding capacity

In recent years, there has been a change in focus to improving qualitative outcomes, moving from an input-based orientation in education policies to outcome-orientation. However, as Kundu (2018) argues, ensuring basic social and physical infrastructure inputs – not just more teachers, but more schools, adequate infrastructure including classrooms, toilets and other facilities, can themselves be instrumental in improving learning outcomes. Therefore, a focus on meeting quantitative targets can go a long way in achieving qualitative improvements.

As per DISE, as many as 1,08,680 schools were single teacher schools. Here, there is scope for greater job generation simply by ensuring that potential capacities are met.

In 2013, lower secondary enrolment was only 66 per cent compared to 92 per cent at the primary level. Drop-out rates peak at Class 5 and Class 8. In 2016, about 2.16 crore children dropped out of secondary school. If these children are brought back into the schooling system, this implies the need for additional teaching capacity, and more teaching jobs.

Besides employing more teachers, building the infrastructure of existing school systems is also imperative. Most primary schools lack basic physical

infrastructure. In 2015-16, about 13 per cent of primary schools were in need of major repair works, about 6 per cent were single-classroom schools (students from Classes 1 – 3 would share one room)

3.4 / Regularising existing employees

Alongside creating new jobs to fill existing vacancies, there is also an urgent need to regularise teachers' employment. In 2016-17, of nearly 11 lakh teachers, about 14 per cent of school teachers were contract workers by official estimates, of which almost 60 per cent were women (DISE 2017). Public schools accounted for the majority of contract teachers (60 per cent). Contract teachers earn only a fraction of regular teacher salaries, with the differential varying across states. For example, in Rajasthan, the starting salary of a regular teacher in a primary school was ₹26,013 per month while a contract teacher earned about ₹4,800. In Punjab, on the other hand, a regular teacher earned about ₹36,000 per month, while a contract teacher earned ₹31,000 (NUEPA 2016).

It is imperative that teaching jobs be made remunerative. Therefore, contract and para teachers who are professionally qualified must be regularised and paid salaries on par with current permanent teachers.

4.4 / Housing

Access to good housing ensures an individual's ability to live a secure, productive, and healthy life. It is instrumental in providing an improved quality of life for those incapable of becoming productive members of the society, especially the young, old, abandoned/ widowed, of ill health, unemployed or differently abled (King et al 2017). Adequate housing options imply the inclusion of sufficient access to basic services required to live a healthy and secure life, especially for the urban poor – affordable and sufficient nutrition, reliable public transportation, electricity, solid waste management, safety, clean potable water and sanitation, and other public health measures (King et al 2017). At the same time, it is widely acknowledged that housing no longer refers to a physical unit of dwelling alone. It is the site

of an individual's assertion of self-identity, community ties (CSE 2017), and portal for availing services (Bhan et al. 2014). It is important to address issues regarding access to adequate and affordable housing options in cities so as to not adversely impact one's economic productivity as well as urban sustainability and equity. Failure to provide these services affects the lives of all citizens, and impacts the smooth functioning of the city, at large. In the absence of housing options available in well-serviced locations, the urban poor are often forced to look for housing on the city's periphery plagued with irregular access to basic services, lack of employment, fragmented social networks, and longer and unreliable commutes. Importantly, providing adequate, quality housing will also lead to the generation of a large number of jobs.

We develop an understanding of inadequate housing that is not limited to an absolute lack of housing units, and emphasise the need to think beyond home ownership alone. We also address the question, what constitutes a holistic policy response to housing provision. We outline the broad challenges faced by stakeholders involved in providing and availing adequate and affordable housing options. We put forth three responses that are needed, in light of the challenges outlined: augmenting housing stock keeping household needs in focus, outlining pathways to enact a right to housing, and thinking of housing provision as a way to create jobs.

4.4.1 / Challenges

4.4.1.1 / Housing inadequacy

First, it is important to understand the nature of the housing deficit in the country to measure the effectiveness of the State's response to housing provisioning. According to the Ministry of Housing and Urban Affairs (MoHUPA), the total housing deficit in urban India at the end of 2012 was pegged at 18.78 million units (Kundu 2012). According to the 2011 census, 32 per cent (approximately 78.9 million) of total households in India were found in urban areas. This indicates that nearly a quarter of urban households experienced housing deficiency and homelessness. The report's estimates provide us with a more nuanced portrait of the nationwide housing deficit.

Table 4.9 demonstrates that the number of households living without access to shelter are far fewer in comparison to those living under significantly deficient conditions. While the total number of housing units considered non-serviceable (katcha) was just under a million, the report included prevalent instances of housing poverty (households in unacceptable physical and social conditions) to define housing shortage. Housing poverty included housing units experiencing material dilapidation and several families living within a single housing unit out of necessity for a multitude of reasons. Thus, even for those households who had access to shelter, this was inadequate to provide a good quality of life. This allows us to approach the total deficit with two approaches: absolute shortage and inadequacy (Bhan et al. 2014).

Deficit in access to adequate and affordable housing is experienced by economically weaker sections (EWS) and low income groups (LIG) the most, thus forcing them to choose one or the other (Kundu 2012). This exacerbates the crisis in providing affordable and adequate housing (see Table 4.10).

Responses towards addressing housing shortage and poverty rely on varying notions of affordability for specific population groups. Reserve Bank of India's Bulletin (January 2018) outlined a number of measures undertaken by them to promote the construction of affordable housing units by the private sector as well as demonstrate the efficacy of state-run subsidy schemes to increase housing affordability across Indian cities (Palayi and Priyaranjan 2018).

4.4.1.2 / Overemphasis on home ownership

Aggarwal et al. (2014) analysed the total number of urban households according to their monthly income against their ability to afford household units at market prices. They found that 62 per cent of all households were not able to afford houses over 4 lakhs, and hence were priced out of the market since rates usually exceeded this threshold. Thus in absence of subsidies, the housing market excludes those households who need new housing options the most (Agarwal et al. 2014, Palayi and Priyaranjan 2018).

Table 4.9: Distribution of estimated urban housing shortage in India (in millions)

Factors	As at end-2012
Households living in non-serviceable katcha houses	0.99
Households living in obsolescent houses	2.27
Households living in congested houses	14.99
Households in homeless condition	0.53
Total Urban Housing shortage	18.78

Sources and notes : Report of Technical Group (TG-12) on Estimation of Urban Housing Shortage 2012, Ministry of Housing & Urban Poverty Alleviation.

Table 4.10: Distribution of estimated urban housing shortage in India (in millions)

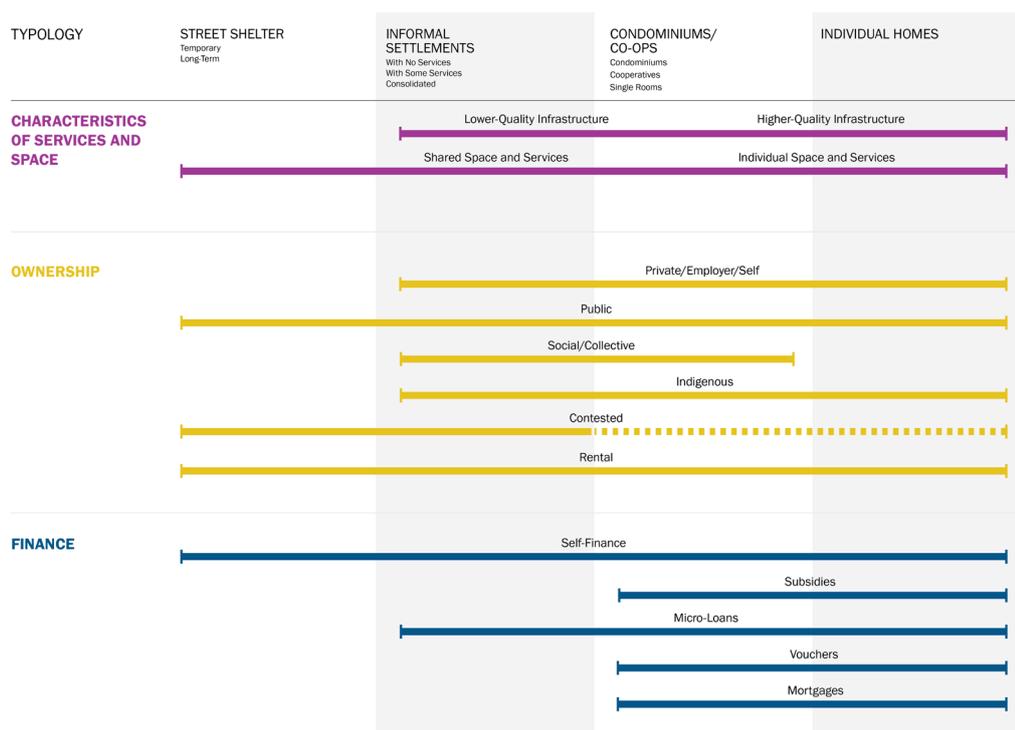
Economic Groups	As at end-2012
Economically Weaker Sections (EWS)	10.55 (56%)
Low Income Group (LIG)	7.41 (40%)
Medium and High Income Group (MIG+HIG)	0.82 (4%)
Total	18.78 (100%)

Sources and notes : Report of Technical Group (TG-12) on Estimation of Urban Housing Shortage 2012, Ministry of Housing & Urban Poverty Alleviation.

Owning a home can lead to creating a financial asset in addition to providing shelter and access to basic services. In fact, in many countries like India, housing is observed to be a household's most valuable asset (Singh et al. 2014). However, this option is not available to many urban households and nor is purchase of housing a priority for poor households given expenditures on health, education, food and other necessary goods and services. As King et al (2017) observe housing units are not shelters differentiated according to the purchasing power of a household (Figure 4.20). Instead, they are characterized according to access to services, heterogeneous ownership, and financing options. It is important to note that many households do not experience a linear progression towards owning a house. They may well remain lifelong renters with a probable increase in quality of life and better access to services.

Scholars and activists, alike, have pointed out the difficulties posed by emphasis on home ownership and land titles on improving access to basic services for the urban poor (Yap 2016). Documentary proof for places of residence are used by the state machinery to provide services, often without clear and/or consistent definitions of what constitutes such proof. However, such requirements end up enshrining the need for ownership and clear titles in policy guidelines (Bhan et al. 2014). In a first, a comprehensive Central housing program such as Rajiv Awas Yojna (RAY) declared that land titles and housing tenure was to be decoupled from access to services. While this was hailed as the first step towards enshrining housing as a right for all, the efficacy of implementation of services depended on coordination as well as consistent interpretation of policy guidelines across levels and bodies of government, which was often lacking (Bhan et al. 2014). Thus, it is important to decouple access to housing and allied services from home ownership.

Figure 4.20:
Is home ownership the ultimate shelter possibilities for urban India



Sources and notes : King, R., et al. 2017. Reprinted with permission.
All types of housing conditions can range from short to long term. While not represented in the diagram, homelessness is an important issue in some cities in the global South. The dotted line indicates the variability of this characteristic across cities.

4.4.1.3 / Insufficient policy response

Around the 1980s, policy analysts and international financial institutions (IFIs) like the World Bank argued that governments the world over had failed to provide effective services, especially for their marginalized communities (Harriss 2007). The State's role was seen as one establishing the necessary institutions for effective service delivery. They promoted institutional reforms through privatisation, decentralisation, civil society participation, and community involvement (ibid). This affected the housing sector, too.

Housing policies enacted by the Central government slowly changed the latter's role from a direct provider of housing units to that of an enabler creating a policy framework as well as financial institutions to increase access to housing. The National Housing Policy (NHP) 1988 saw the establishment of the National Housing Bank along with other enabling policy measures to create a better-functioning housing market and help those in the lower income groups get assistance in accessing private sector housing with greater ease. While access to housing finance and private sector housing increased, public-private partnerships geared towards creating affordable housing stock remained elusive (Joshi and Selva 2018).

The NHP was designed to provide housing for urban as well as rural citizens. But subsequent policies were introduced to address the housing challenges posed by a steady increase in cities across India. One of the most significant policy interventions to improve the urban standard of living was the Jawaharlal Nehru National Urban Renewal Mission (JnNURM). Launched in 2005, it sought improvements in basic services and/or construction of new housing stock for the urban poor in 65 cities through public-private partnerships. One of the sub-missions under the program – Basic Services for the Urban Poor (BSUP) – addressed concerns endemic to urban poor communities living in slums. In addition, the Integrated Housing and Slum Development Program (IHSDP) was taken up in cities not included under JnNURM. Housing units constructed under a PPP model were provided to families, who were expected to shoulder 12 per cent of the total unit cost (MoHUPA 2005).

While the government ran ambitious targeted programs like the JnNURM to create additional stock for EWS households, its credit subsidy schemes to help LIG

households to access finance to procure housing units were less effective (Joshi and Selva 2018). Little success was achieved for reasons including lack of adequate subsidy, high transaction costs, unwillingness of banks, and availability of clear land titles (Standing Committee Report 2014).

Building on the moderate success of building housing units through BSUP, the Centre launched Rajiv Awas Yojna (RAY) in 2013 to create 'slum-free cities' (MoHUPA 2013). The scheme promoted greater involvement of the private sector for in situ slum redevelopment as well as increasing affordable housing stock under Affordable Housing in Partnership (AHP). While RAY was credited with many progressive policy measures that addressed the socio-economic needs of the EWS and LIG residents, it remained biased towards home ownership, mired in implementation issues, and was short-lived. After the NDA government was voted into power, RAY was discontinued and replaced with Pradhan Mantri Awas Yojna-Urban (PMAY-U) in 2015 with the expressed goal of providing 'Housing for All by 2022' (MoHUPA 2016).

RAY and PMAY-U shared their common objective to usher in formal housing and creating 'slum-free cities'. In contrast to RAY, though, the PMAY-U program was designed to be more decentralised in financing, construction, and development of housing by providing assistance to Urban Local Bodies (ULBs) through states and union territories. The program implemented in situ development of slums, offered a credit-linked subsidy scheme (CLSS) for affordable housing units belonging to EWS/LIG households, created additional affordable housing stock in a public-private partnership, and offered subsidy for a beneficiary seeking housing enhancements. (MoHUPA 2016). Schemes like CLSS have been proven to increase the affordability of housing across 30 Indian cities (Palayi and Priyaranjan 2018). However, they do not take cognizance of spending patterns of urban poor households. Higher out-of-pocket expenditure on education, health, and mobility might impede a household's ability to invest in a housing unit and continue living in insecure and inadequate housing (King et al. 2016). So far, PMAY-U has failed to meet targets by large margins, with issues ranging from low rate of completed homes to unwillingness from private developers and lending institutions.¹⁷ The government, on its part, has been

taking aggressive measures to stimulate the housing sector and meet its policy objectives by classifying housing under priority sector lending, extending CLSS to include MIG households, and refinanced loans through National Housing Bank (NHB) (Kundu and Kumar 2017). However, soaring per unit costs, unavailable land, supply side constraints, and emphasis on home ownership have skewed the policy response against providing housing to those who need it the most.

4.4.2 / Responses

4.4.2.1 / Adequate housing

The discussion around inadequate housing underscored a few key issues: overcrowding, unaffordability, and lack of options. It was not just an absolute lack of housing but the lack of adequate living conditions in existing housing that drove the demand for new and affordable housing units in the lower income groups. Going forward, it would be prudent to understand the paths adopted by urban households towards achieving self-sufficiency with respect to housing needs.

While owning a new house might be desirable, it might not be necessarily feasible. It is important to acknowledge and provide for a multitude of housing options instead of locking in households to live in a narrowly-understood definition of an owned house. For example, while a large number of households own homes in urban areas, there are a significant number of renters, too (Table 4.11).

Rental housing may be seen as a solution and an approach with which to respond to the housing crisis. It provides the necessary flexibility to access economic opportunities and grow out a house incrementally according to the specific needs of the household. Illustratively, access to rental housing has a direct impact on workforce participation (Harish, 2016). Currently, rental housing exists as a private market consisting of small landlords with little to no oversight. Despite recent policy encouragement to build public rental housing, this has yet to be taken up by most urban centres (Bhan et al. 2014).

Housing experts also contend that well-serviced mass housing be made available through plotted development that takes into consideration a household's heterogeneous needs with an ability to grow out incrementally, engage in diverse economic activities, and maintain community ties.¹⁸ This includes a combination of market-based interventions and public provisioning. The path to creating affordable housing stock from the supply side has met with policy and financial hurdles ranging from lack of serviced land to cost of construction and technological innovation to unwillingness of housing finance institutions to fund projects (CBRE & FICCI 2018). Proposed solutions from private developers and housing experts have included earmarking land for affordable housing in city master plans, transfer of development rights (TDR) to incentivise private developers, amendments to rental laws, and increasing public sector's direct role in building more housing units (Bhan et al 2014, King et al 2016, KPMG 2012).

Table 4.11: Distribution of estimated urban housing shortage in India (owners/renters)

Tenure	Number of families living in old houses	Families living in katcha houses	Number of families in congestion	Families without homes	Total Urban housing shortage
Self-owned	1,395,735	770,817	9,188,746	326,430	11,681,728
Rented	870,417	219,183	5,700,019	203,570	6,993,189
Total					18,674,917

Sources and notes : Report of Technical Group (TG-12) on Estimation of Urban Housing Shortage 2012, Ministry of Housing & Urban Poverty Alleviation.

4.4.2.2 / Right to housing

Housing rights activists have stressed upon the centrality of access to adequate housing in order to achieve good quality of life as recognized by international declarations to push domestic policies to follow suit. For instance, the United Nations General Assembly signed into effect the Universal Declaration of Human Rights (UDHR) that envisaged the right to adequate housing as a basic human right as early as 1948 (Assembly, U.G., 1948). In India, access to housing is not enshrined as a right, but a need that is to be provided for by a bouquet of welfare schemes operationalised by the Centre and state governments and public/private employers. While welfare schemes mandate access to adequate and affordable housing, there are no clearly-defined consequences should entities fail to meet their targets. Similarly, in the absence of a rights-based mechanism for redressal, private builders are not mandated to fulfil the unmet need for affordable housing (Bhan et al. 2014, Joshi and Selva 2018).

The right to housing may be secured through a multi-pronged approach so that not only is a household able to secure a house, but is also able to attain housing security. Policy measures are crucial to regulate irregularities and distortions so that cost escalations for houses built through subsidy schemes are not borne by beneficiaries, especially those from low income groups (Joshi and Selva 2018). For instance, it was found that delays in approvals and cash transfer resulted in higher out-of-pocket expenditures (Joshi and Selva 2018), often driving beneficiaries to borrow from informal lenders at higher interest rates (Singh et al. 2014) to pay contractors for timely completion of projects. For long-term urban poor residents, especially those residing in informal housing (as defined by various state agencies), it is important to set up procedures to procure land tenure so as to alleviate fears of unplanned evictions, regularisation of basic services, and orderly incorporation into the urban fabric. For renters, it is imperative that the State enforce frameworks that benefit the rights of landlords and tenants, both. It is also important that there be legal recourse to resolve

biases against renting on the basis of their caste, gender, religion, and sexual orientation. Lastly, the well-established linkages between employment, mobility, and adequate housing need to be exploited to meet the housing gap in urban areas (NCEUS 2007).

4.4.2.3 / Housing and employment generation

Housing programs such as RAY and the BSUP submission under JnNURM envisaged provision of livelihood opportunities around the sites of affordable housing so as to maintain housing-livelihood linkages and incentivise adoption of affordable housing units located in peri-urban areas of the city. Proper implementation of such initiatives would also mandate that such economic opportunities would not be provided at the expense of physical mobility. Housing market dynamics affect economic activity with respect to changes in employment patterns and demand for housing (Singh et al. 2014). In fact, housing construction itself (both, public and private) contributes directly and indirectly to the economy and employment opportunities significantly (Tipple 1994). The construction sector's growth might be directly affecting the economy through its impact on employment (Mallick and Mahalik 2010). The Economic Survey 2018 estimated that realty and construction sectors are likely to generate 15 million new jobs by 2022 (MoF 2018). It is prudent to create a secure and skilled workforce to meet the demands of such an influx of new projects. At the same time, there is a need to reverse the trend of high levels of employment precarity – especially amongst the informal and migrant labour – caused by hostile labour practices and importance of social ties in securing work in the sector (Pattenden 2016). While the government has worked towards creating an enabling framework for the augmentation of the total urban housing stock, it has lagged in providing a model for regularised employment in the construction sector through state-run construction organisations such as National Building and Construction Company (India) Ltd.

4.5 / Employment generation through universal basic services

There exist several reasons to invest in a strong public system of universal basic services. In this paper we highlight an often less emphasised one: the creation of a large number of high quality jobs. We have indicated some numbers in this regard.

In this section, we bring these numbers together and also comment on the wider multiplier effects of increased government spending in the health and education sectors.

Filling Vacancies	Expanding Capacity	Regularising Employees
0.20 million health workers (rural)	0.29 – 0.42 million health workers (rural)	1.03 million ASHA workers (rural and urban)
+ 1 million teachers (rural and urban)		+ 1.2 million anganwadi workers (rural and urban)
+ 1,17,035 anganwadi workers		+ 1 million helpers (rural and urban)
+ 19,755 supervisors		

The numbers presented in the above table are very conservative estimates, which exclude urban health system requirements as well as number of additional teaching professionals needed for expansion of schooling capacity beyond the primary level, due to lack of data. Even then we find that nearly 2 million jobs can be created by filling vacancies and expanding capacity. This constitutes 15 per cent of the existing workforce in the health and education sectors. By another estimate,

using the WHO standards for physicians required per 1000 people, we find that the required addition to the number of physicians across the country constitutes around 10 per cent of the existing workforce in the health sector. Lastly, by regularising ASHAs, and anganwadi workers and helpers, over 3.2 million persons in these positions would have decent jobs.

The employment effects of an expansion in the health and education sectors that would result from increased public expenditure in these areas would not be limited only to these sectors. As these sectors expand, the demand for inputs from other sectors that supply to these two sectors would also increase, thus increasing their output and hence employment. Two factors are important here: the share of the output for a given sector that goes as input into the health and education sectors, and the absolute size of the input sector. For example, health and education together account for 0.1 per cent of the output of the trade sector, but trade employs 48 million people. So, a 20 per cent increase in health and education output may proportionally generate 97000 jobs. These effects would flow through the economy and the final effect on employment will be significantly larger than only on health and education.

4.6 / Conclusion

India stands at a crucial juncture in its economic history. It has an opportunity to leverage nearly two decades of rapid economic growth into the creation of modern democracy with essential services provided publicly to all. A Universal Basic Services (UBS) programme can put the country firmly on such a path. It can deliver human capital improvements resulting in increased productivity. It will improve the quality of life, reduce indebtedness and create a shared sense of the public. And lastly, it will create a large number of good quality jobs. For all these reasons we call for a comprehensive UBS programme in India.

Endnotes

- 1 For India, see <http://reclaimingtherepublic.in/> and <https://www.ideasforindia.in/topics/poverty-inequality/a-proposal-for-universal-basic-services.html>. A proposal for UBS in the UK (Portes, Reed, & Percy 2017) with seven free public services (healthcare, education, democracy and legal services, shelter, food, transport and information) argues that besides directly meeting basic needs, UBS would increase efficiency, reduce costs, facilitate the labour market, and strengthen social institutions and social cohesion.
2. The Congress Party has proposed increasing public health spending to 3 per cent of GDP by 2023-24. The manifesto of the Communist Party of India (Marxist) also includes implementing a right to free healthcare, and raising public expenditure on health to 5 per cent of GDP.
3. However, some caution is necessary in interpreting these figures. The institutional context within which the public system operates is crucial to how effective it is in delivering healthcare. For example, Bangladesh, which has a much lower per capita GDP than India and spends a much lower share of GDP on healthcare, shows better outcomes than India. On the face of it, this may undermine the argument for public spending on health. However, as a recent WHO report argues, Bangladesh has “set an extraordinary example of gaining good health at a very low cost and has been proposed as a role model for other developing countries in the region” (Ahmed, et al., 2015, p. xxiv). To ensure quality of care and better outcomes it is necessary to strengthen key institutions so that they become more accountable. In this respect, there may be much to learn from countries such as Vietnam and Bangladesh.
4. In a way, therefore, international comparisons that take India as one unit of analysis are somewhat misleading due to intra-country variations.
5. <https://indianexpress.com/article/india/less-than-one-doctor-for-1000-population-in-india-government-tells-lok-sabha-4760892/>
6. Accredited Social Health Activists (ASHAs) are trained female community health workers who are chosen from the village to work as an intermediary between the community and the public health system by creating awareness of good health practices and facilitating the use of health services. Anganwadi workers and helpers work at centres that provide the services covered under the Integrated Child Development Services scheme, including supplementary nutrition, pre-school education and health services.
7. http://niti.gov.in/writereaddata/files/Strategy_for_New_India.pdf
8. <http://reclaimingtherepublic.in/education/>
9. Ethiopia, Myanmar, Nigeria and the Philippines have been excluded for reasons of data availability.
10. In general, primary schooling covers the first 5 years of formal education, i.e. from Classes 1 to 5. Classes 6th, 7th, and 8th are referred to as middle/upper primary school. Formal schooling up to Class 8 is known as elementary schooling. Secondary schooling or lower secondary includes Classes 9th and 10th, while Classes 11 and 12 are referred to as higher secondary schooling.
11. These numbers for India correspond only to children in rural schools. At the national level when comparing across other countries, India ranked 72nd out of 74 countries in 2009 in the Programme for International Student Assessment (PISA) ranks.
12. Student achievements between private and public schools are not perfectly comparable unless students’ background, school infrastructure and family characteristics are controlled for. For instance, one study finds that 75 per cent of learning differentials can be explained by the influence of characteristics such as parents’ education, siblings, and other factors (ASER, 2016). Yet, the differentials persist, although perhaps at a lower magnitude.

13. While students in public schools spent far less on their education than students in private schools, the NSS 71st Report also found that students in government institutions were spending more on private coaching than their counterparts in private institutions. For instance, in primary level, government-school students spent 28 per cent of expenditure on private coaching, compared to about 5 per cent in the case of students in private unaided schools. Therefore, the lower costs of public schooling may be more than offset by higher tuition expenditure, pointing towards the need to make qualitative improvements in public schools.

14. It has been argued that the higher pass percentage in Class XII was achieved by holding back poor performing students in Class IX. But these criticisms may not be valid. <https://www.newsland.com/2018/06/09/delhi-government-schools-print-filtering-students-aam-aadmi-party>

15. <https://www.ndtv.com/education/indias-teachers-crisis-country-falls-short-of-1-million-school-teachers-1778220>

16. <http://pib.nic.in/newsite/mbErel.aspx?relid=133102>

17. As of March 2018, barely 8 per cent of the target for construction of houses had been met: <https://timesofindia.indiatimes.com/india/pm-awas-yojana-only-8-target-met-under-urban-housing-scheme/article-show/63405544.cms>

18. Refer Joshi and Selva (2018) for detailed analysis of design and implementation issues affecting housing provisioning in urban Karnataka and how targeted interventions can help beneficiaries while meeting policy objectives.

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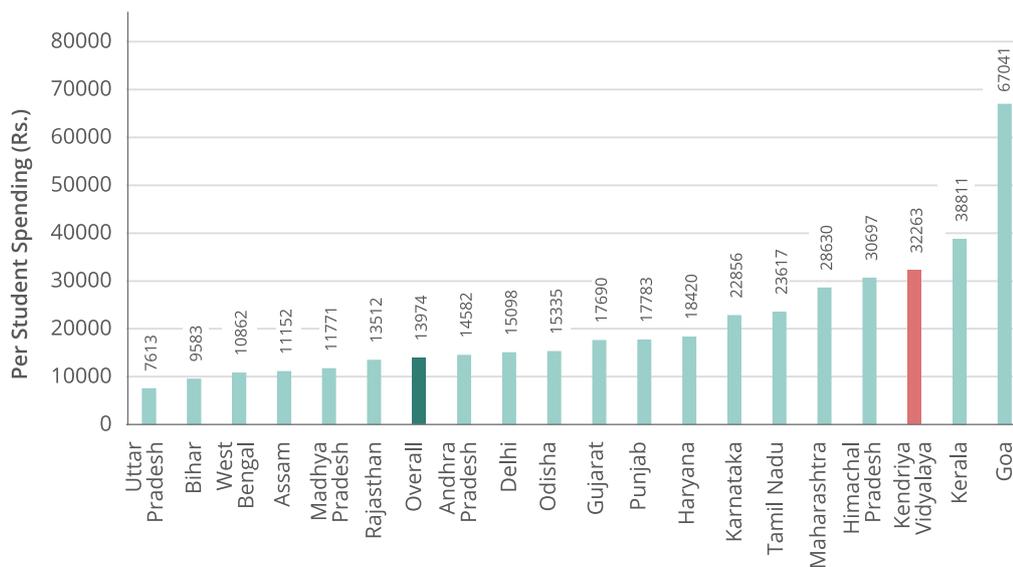
Appendix A

Table A1:
Out-of-pocket expenditure of households from public and private health facilities as percentages of monthly per capita consumer expenditure, 2014

State	Rural		State	Urban	
	Public	Private		Public	Private
Delhi	0.39	4.85	Tamil Nadu	0.45	5.52
Meghalaya	0.42	2.26	Nagaland	0.62	2.36
Tamil Nadu	0.54	4.43	Sikkim	0.62	4.24
Nagaland	0.58	1.43	Mizoram	0.64	1.84
Jharkhand	0.62	3.38	Maharashtra	0.7	3.79
Uttarakhand	0.63	3.11	Telangana	0.74	3.69
Goa	0.67	5.92	Chhattisgarh	0.77	4.6
Kerala	0.72	3.54	Rajasthan	0.8	3.32
Rajasthan	0.82	3.18	Kerala	0.81	3.74
Gujarat	0.82	2.68	Gujarat	0.82	2.75
Maharashtra	0.96	4.5	Uttarakhand	0.83	4.92
Andhra Pradesh	0.97	3.32	Karnataka	0.84	4.22
Telangana	0.97	6.42	Delhi	0.88	3.27
Madhya Pradesh	1.03	5.32	Andhra Pradesh	0.89	3.83
Uttar Pradesh	1.1	4.21	Tripura	0.93	7.77
Mizoram	1.11	2.51	Meghalaya	1.02	2.36
Assam	1.18	3.84	Jammu & Kashmir	1.05	4.04
Haryana	1.19	4.39	Madhya Pradesh	1.12	4.08
Chhattisgarh	1.21	5.75	Jharkhand	1.15	2.44
Tripura	1.22	3.84	Arunachal Pradesh	1.15	2.03
Karnataka	1.26	4.91	Goa	1.18	4.28
Bihar	1.26	4.2	Bihar	1.3	4.25
Sikkim	1.3	4.33	Manipur	1.37	3.34
Jammu & Kashmir	1.41	5.8	Haryana	1.44	3.63
Manipur	1.58	3.12	Uttar Pradesh	1.49	5.35
Punjab	1.76	4.15	Assam	1.58	7.98
West Bengal	2.18	5.08	West Bengal	1.64	6.17
Odisha	2.31	7.99	Punjab	1.95	3.2
Arunachal Pradesh	2.36	2.69	Odisha	2.03	5.29
Himachal Pradesh	3.18	4.54	Himachal Pradesh	3.33	2.78

Source: Calculated from NSS Social Consumption – Health survey, 2014

**Figure A1:
Spending
per student
by State
Government,
(Revised
Expenditure
estimates)**



Source: CBGA 2016

Appendix B - State acronyms

AP	Andhra Pradesh	ML	Meghalaya
AR	Arunachal Pradesh	MN	Manipur
AS	Assam	MP	Madhya Pradesh
BR	Bihar	MZ	Mizoram
CG	Chhattisgarh	NL	Nagaland
CH	Chandigarh	OR	Odisha
DL	Delhi	PB	Punjab
GA	Goa	PY	Puducherry
GJ	Gujarat	RJ	Rajasthan
HP	Himachal Pradesh	SK	Sikkim
HR	Haryana	TL	Telangana
JH	Jharkhand	TN	Tamil Nadu
JK	Jammu and Kashmir	TR	Tripura
KA	Karnataka	UK	Uttarakhand
KL	Kerala	UP	Uttar Pradesh
MH	Maharashtra	WB	West Bengal

Chapter 5

How to Revive Indian Manufacturing? On the Need for Industrial Policy

After a long period out in the wilderness, state intervention in industrialisation has been making a comeback in scholarly and policy circles. There is now greater recognition of the fact that economic growth is delayed not just by government failures, but often more severely due to market failures.

5. How to Revive Indian Manufacturing? On the Need for Industrial Policy

Jayan Jose Thomas

Associate Professor at Indian Institute of Technology New Delhi and
Member, Kerala State Planning Board

Contact: jayanjthomas@gmail.com

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Executive Summary

1. This paper argues that the absence of a well-articulated industrial policy has been a major stumbling block in expanding manufacturing employment in the country.

2. State intervention has played a crucial role in the successes of the East Asian economies such as South Korea and Taiwan where the 'leading hand of the State' was instrumental in identifying potential areas of growth, as well as in guiding, promoting, and disciplining the private players.

3. The withdrawal of the State from industrial development in India after the 1990s has implied not only a marked deceleration in public investment but also the State's abdication from the sphere of industrial policy. This has been a crucial difference between the Indian and the East Asian industrialisation experiences.

4. After a long period out in the wilderness, State intervention in industrialisation has been making a comeback in scholarly and policy circles. There is now greater recognition of the fact that economic growth is delayed not just by government failures, but often more severely due to market failures. Recent

discussions highlight the role of State as a leading player, especially in the creation of new technologies and in the setting up of sophisticated industries.

5. After 2004-05, while there has been a marked acceleration in the growth of factory employment in India, the growth of overall manufacturing employment decelerated, mainly due to the stagnation in employment growth in the small and informal sector firms. The 'spread effects' of the growth of the factory sector on small firms in the informal sector have clearly reduced after the 2000s.

6. At the same time, there has been growing informalisation within the factory sector during recent years. The shares in incremental employment of contract workers and other employees who are outside the purview of the labour laws have been rising sharply since the 2000s onwards. Also, as shares of gross value added in the factory sector, profits have been rising and wages declining during this period.

7. Given such a context, labour laws no longer appear to be a constraint on the growth of the manufacturing. Experiences from various industries show that

employers find different ways to circumvent the existing labour regulations, while the authorities adopt a lax attitude towards implementing them.

8. After 2011-12, the sharp decline of investment in the Indian economy has contributed to a slowing down in the growth of the factory sector. But the growth-retarding effects are likely to be much higher in the informal sector, especially in the aftermath of demonetisation of high value currency notes in November 2016 and the introduction of goods and services tax (GST) in July 2017.

9. The paper identifies the following key issues in Indian manufacturing, which a new comprehensive industrial policy should address.

a. Public investment: Investment rates in India had reached the levels achieved by China by 2007. However, the Chinese and the Indian rates began to diverge after that. In the aftermath of the global financial crisis, while the State in China responded with massive investments in infrastructure and new technologies, the Indian economy suffered due to stagnation in both public and private corporate investments.

b. Infrastructure: In India, electricity shortages have had a significant negative effect on the growth of output and revenues of manufacturing firms. The growth-retarding impacts of power shortages have been more severe on small industrial units, which cannot afford to install generators. Our field research in Coimbatore in Tamil Nadu confirms that power shortages have been the most serious constraint to growth in this industrial town between 2007 and 2014.

c. Finance: From the 2000s onwards, development banks in India as well as in many other countries began offering 'universal banking services', diluting their core strengths in long-term lending. With the crisis due to NPA and other problems affecting the banking sector, credit disbursed by the commercial banks to the industrial sector has declined sharply from 2014-15 onwards. Several owners of small and medium firms we spoke to highlighted the problem of relatively high interest rates.

d. Trade liberalisation: The weighted average of import tariffs in India on capital goods declined from 94.8 per cent in 1991-92 to 5.6 per cent in 2009-10. The tariff reductions have adversely affected the prospects of India's manufacturing firms, which are, as noted above, already disadvantaged by many supply-side constraints.

e. Capital account liberalisation: The gradual liberalisation of India's capital account from the 2000s onwards and the resultant increase in the inflows of foreign portfolio investments (FPI) into the country have created problems for the country's manufacturing sector. The volatility in FPI flows has led to wide fluctuations in exchange rates and also in the prices of several commodities (such as steel and cotton).

f. FDI: Recent studies show that the impact of FDI in promoting manufacturing growth in India, especially by bringing in new technologies and managerial capabilities, has not been very high.

g. Regional diversity: In India, industrial policies should reflect the priorities and requirements for industrial development across various regions. There are variations across states with respect to demographic structures, which also have important implications for their labour markets. This paper uses the example of Kerala to illustrate the importance of state-specific industrial policy.

h. Research and development: India requires technological advances that generate new economic opportunities and absorb — not displace — labour. It needs to be noted that innovations and technological interventions are needed in the case of traditional and labour-intensive industries as well.

i. Domestic Market: India should envisage an industrial growth that is driven more by the domestic market, which will benefit from an improvement in the wages and incomes of its rural and urban informal workers. In any case, the prospects for a growth strategy led by exports are rather bleak, given the continuing crisis and the uncertainties in the global economy.

5.1 / Introduction

A striking feature of the Indian economy has been the relatively small contribution made by the manufacturing sector to the country's gross domestic product (GDP) and, more importantly, to employment. In 2017, manufacturing accounted for only 15.1 per cent of India's GDP, compared to 29.3 per cent in China.¹ In 2011-12, India's manufacturing sector provided employment to 61.3 million, which was only 13 per cent of the country's total workforce of 472.5 million.²

What explains India's relatively slow progress in industrialisation and industrial growth? This note argues that the absence of a well-articulated industrial policy has been a major stumbling block to expanding manufacturing employment in the country.

In India, manufacturing consists of the organised and unorganised (or registered and unregistered) sectors. The organised manufacturing sector is almost identical to the factory sector. The factory sector comprises factories that employ more than 10 workers and operate with the aid of electric power (as well as factories that employ more than 20 workers without the aid of electric power). Annual Survey of Industries (ASI) is the main source of data on the factory sector, and according to ASI, the factory sector employed 13.3 million workers in India in 2011-12 (and 14.9 million workers in 2016-17).

The National Sample Survey Office's (NSSO) household surveys on Employment and Unemployment (EUS) is the other major source of information on Indian manufacturing. According to the EUS conducted in 2011-12 (which is the latest publicly available survey), the size of India's manufacturing workforce (organised and unorganised combined) was estimated to be 61.3 million. This implies that factory workers (13.3 million) comprised 21.7 per cent of all manufacturing workers in India in 2011-12. At the same time, close to 80 per cent of all manufacturing workers in India are outside the factory sector, engaged in small, informal (or unregistered) enterprises.³ It is notable that despite its low share in employment, the organised sector contributed 67.6 per cent of India's total manufacturing GDP in 2010-11 (GOI 2016).

5.2 / The role of state in Industrial development

There has been a long-standing debate on the extent to which interventions by States or governments, especially in the building of technological and institutional capabilities, contribute to the process of industrialisation. It is well known that State intervention in industrialisation has been extensive in the case of the former Soviet Union, China during its Maoist phase, and India during the planning years. In each of these industrialisations, the public sector played a dominant role, even in the operations of private firms which had been subjected to significant controls by the State. These experiments produced mixed results with respect to achieving industrialisation and economic growth.

According to many commentators, State intervention played a crucial role in the miraculous successes of the East Asian economies too, such as of South Korea and Taiwan (Amsden 1989; Chang 2007). Remarkably, in these countries, the role of State intervention was not in the setting up of public sector units. On the other hand, the 'leading hand of the State' had been instrumental in identifying potential areas of growth, as well as in guiding, promoting, and disciplining the private players (such as the chaebols in South Korea) (Amsden 1989).

Nevertheless, neoclassical economists and 'Washington institutions' such as the International Monetary Fund (IMF) and the World Bank have been arguing for a limited role for the government in industrial and economic development. They contend that the 'invisible hand of the market', in itself, will bring in economic development and that the government only needs to ensure that conditions exist for the free operations of the markets. Pointing to many instances of government failures (such as the inefficiency in public sector units in some countries), the IMF and the World Bank oversaw 'structural reforms' in several developing countries from the 1980s onwards. These reforms resulted in a retreat of the State from industrial and economic development.

However, a number of economists have challenged the neoclassical narrative on how industrialisation could be driven by market forces alone. Alice Amsden (1989) pointed out that the East Asian countries achieved their successes not by sticking to only those industries in which they had comparative advantages (such as labour intensive industries). On the contrary, they (South Korea, for instance) made bold forays into diverse and challenging areas such as shipbuilding and steel making. They managed to achieve this because the governments in these countries offered assistance, especially in the form of subsidies, to the deserving firms. In other words, Amsden (1989) argued that late-industrialising countries such as South Korea achieved success by 'getting relative prices wrong' (for instance, with subsidised credit, capital was being made cheap in a capital-scarce country) -- not by 'getting relative prices right' as the neoclassical economists contend (Amsden 1989).

In the case of the advanced economies of today, including Britain and the United States, Ha Joon Chang (2002) pointed out that the State intervened to nurture industries in these countries too, during their phases of industrialisation. Therefore, when institutions such as the IMF deny developing countries the opportunities for industrialisation with State support, they are, in fact, 'kicking away the ladder' for climbing the steps for development (Chang 2002; Chang 2007).

The voices favouring State intervention in industrialisation have been growing louder during recent years. First, there is now greater recognition of the fact that economic growth is delayed not just by government failures, but often more severely due to market failures, especially with the eruption of financial crises in many parts of the world. Secondly, the spectre of deindustrialisation is emerging as a threat to employment growth not just in the developed world but also in developing countries. According to Rodrik (2015), deindustrialisation refers to a situation in which countries '[run] out of industrialisation opportunities sooner and at much lower levels of income compared to the experience of early industrialisers.' Rodrik (2015) attributes this to globalisation and labour saving technological progress in manufacturing.

Given such a context, there is now a much greater appreciation for the role of industrial policy in aiding industrialisation. Mazzucato (2011) has highlighted the critical contributions made by the 'entrepreneurial State' towards achieving economic growth. She argues that State has been a leading agent – and not just a facilitator – in achieving innovative breakthroughs, including in the case of the internet, the computer industry and the pharma-biotech industry. The IMF, in a recent paper, seems to have finally admitted the role of what it describes as 'Technology and Innovation Policy' in fuelling economic growth. This paper points out how the East Asian miracle economies followed the 'moonshot' approach to development: the leading hand of the State directing domestic firms in these countries into technologically sophisticated industries (Cherif and Hasanov 2019).

The role of the State in financing industrial development is important too, as development banks played a vital role in the industrialisation of Germany (Gerschenkron 1962). Development financial institutions (DFIs) have been crucial for providing long-term finance for manufacturing growth in several countries including Germany, Japan, South Korea, Brazil, and India. Commercial banks suffer from a problem of maturity mismatch when it comes to lending for long-term investments, as they are dependent on short-term borrowings from depositors. While the decline of DFIs in India since the 2000s has hampered the country's industrial growth, the setting up of China Development Bank in 1994 has really boosted that country's industrialisation drive during the recent years (Nayyar 2018).

5.3 / State and industrialisation in india

As is well known, India had launched an ambitious programme of industrialisation led by the State and the public sector during the 1950s, which had indeed been a model for other developing countries too. Industrialisation in India during the 1950s through the 1970s had been characterised by large investments by the public sector in key, strategic areas, as well as by extensive control of the State over the activities of the private sector through the licensing regime.

Industrial development that occurred in India during the planning phase had been unsuccessful in generating adequately large manufacturing employment, particularly considering the vastness of the country's labour reserves. India's Second Five-Year Plan model emphasised the building of a capital goods sector, comprising machines that produce other machines. According to this model, greater allocation of investment to the capital goods sector would result in faster growth of savings, investment and output in the long run.

Investment into capital- and technology-intensive sectors during the planning years (including into areas such as space science and atomic energy) laid the foundations for India's diversified economic base. At the same time, however, the employment generating potential of the capital goods sector had been limited. Given such a context, it was believed (perhaps a little too naively) that handicrafts and the production of consumer goods in the small-scale sector would alleviate the problem of unemployment in the country.

Nevertheless, Indian planning did very little to remove the hurdles to the growth of agriculture and small-scale industries (SSIs). India's record during the post-Independence period in implementing land reforms and ensuring primary education for all has been rather unimpressive. As a result, the benefits from State-led development have so far reached only a minority of Indians. The slow growth of rural incomes and the persistence of high income inequalities have dampened the growth of industrial demand in the country, especially for mass-consumption goods (such as apparels or processed food).

India's economic development shifted from being State-led to increasingly market-driven from the 1980s onwards. The licensing requirements for private sector investments began to be liberalised from the 1980s itself. India inaugurated far-reaching market-oriented economic reforms in 1991. With the 1991 reforms, the Indian economy has become increasingly open for foreign trade and investment. Quantitative restrictions

(QRs) on imports had been virtually removed by the early 2000s, and tariffs on most goods have been reduced drastically in the following years. The norms on foreign direct investment (FDI) had been liberalised. The reservation of certain sectors for the small-scale sector had been abolished in 1991. At the same time, with the reforms in the banking sector, credit received by micro and small industries as well as small agricultural cultivators has been on a decline.

Public investment in India has been declining sharply from the 1990s onwards. In fact, the capability of the State to undertake public expenditures has been undermined by its commitment to maintain fiscal discipline. With the opening of the capital account, increasingly from the 2000s, the Indian economy has been coming under the influence of highly volatile, short-term capital inflows. Given India's heavy dependence on the imports of oil (and in recent years electronic goods), the country's current account has been in a deficit thereby increasing the vulnerabilities on the external front.

It may be noted that the withdrawal of the State from industrial development in India after the 1990s has implied not only a marked deceleration in public investment but also the State's abdication from the sphere of industrial policy. This has been a crucial difference between the Indian and the East Asian industrialisation experiences. In fact, during the post-1991 period, state governments (in particular) in India have had very little autonomy with respect to investments and policies related to industrial growth. Given the imbalances in the nature of Centre-state fiscal relations in India, state governments do not have large enough financial resources at their command to make impactful interventions in the industrial sector. They are often compelled to compete with each other in attracting domestic private and foreign investments by extending tax and other concessions to the private industrialists.

5.4 / Trends in indian manufacturing

5.4.1 / Growth of indian manufacturing over the decades

According to estimates based on EUS, India's manufacturing employment was 32.2 million in 1983, 39.8 million in 1993-94, 55.2 million in 2004-05, and 61.3 million in 2011-12 (see Table 5.1 and Figure 5.1). The size of the manufacturing workforce relative to the country's total workforce remained steady at 10.6 per cent between 1983-84 and 1993-94, but rose to 12.1 per cent by 2004-05 and to 13 per cent by 2011-12 (see Table 5.1).

Despite the growth in the size of the overall manufacturing workforce, there had been hardly any significant change in the size of India's factory sector during the 1980s and 1990s. According to the ASI, factory sector employment in India was 8.2 million in 1983, 8.8 million in 1993-94, and 8.5 million in 2004-05. Factory sector employment as a share of total manufacturing employment in India declined from 25.5 per cent in 1983 to 15.4 per cent in 2004-05 (see Table 5.1 and Figure 5.1). The factory-based production of cotton and jute textiles suffered steep declines during the 1980s, with thousands of mill workers losing jobs in Mumbai, Kolkata, Ahmedabad, and other industrial centres.

The introduction of economic reforms in 1991-92 was followed by a surge in industrial investments in India. Almost all factory-sector industries experienced acceleration in the growth of output and employment from 1991-92 to 1995-96, and the star performers had been minerals and metals, machinery, automobiles, and chemicals and petrochemicals. However, the growth of output in India's organised manufacturing sector decelerated between 1996-97 and 2001-02, with several industries recording negative or very low rates of growth. Factory-sector manufacturing employment increased sharply, by 1.5 million, during the first half of the 1990s, and declined subsequently by 1.1 million, during the second half of the 1990s (see Figure 5.2 and Table 5.2).

Given the above-referred context, India's industrial growth during the 1980s through the first half of the 2000s has been described as 'jobless.' That is, despite the relatively fast growth of factory-sector output, the growth of factory-sector employment in the country has been stagnant during this period (see Figure 5.2). Some scholars have argued that labour regulations have restricted flexibility in India's labour market which slowed down the growth of factory employment in the country.

It is notable that despite the stagnancy in the growth of factory employment, total manufacturing employment in India (NSS-EUS) increased by 23 million (from 32.2 million to 55.2 million) between 1983 and 2004-05 (see Table 5.1). This suggests that the expansion of manufacturing employment in India during the early 1980s to the middle of the 2000s occurred largely in micro and small units in the unorganised sector.

5.4.2 / Manufacturing employment during a phase of fast growth : 2004-05 to 2011-12

The growth of employment and output of the organised manufacturing sector (as well as of overall GDP) in the country registered an impressive revival during the early 2000s. Factory sector employment in India increased from 8.5 million in 2004-05 to 13.4 million in 2011-12 (see Figure 5.2) – an increase of 4.9 million new jobs over this seven-year period. That was remarkable compared to the near 'jobless' growth that characterised this sector for the two-and-a-half decades since the 1980s.

The record of employment growth in the unorganised manufacturing sector, however, presents an altogether different picture. Between 2004-05 and 2011-12, NSSO EUS data shows that overall manufacturing employment in India increased from 55.2 million to 61.3 million – thus an increase of only 5.1 million new jobs. At the same time, as we have already seen, organised manufacturing employment had registered a sharp increase during this very period (4.7 million new jobs from 2004-05 to 2011-12). Thus, between 2004-05 and 2011-12, the growth of employment in the manufacturing sector (organised and unorganised sectors combined) decelerated, despite a revival in

employment growth in the organised sector. Clearly, this points to a sharp downward fall in the growth of employment in India's unorganised manufacturing from the mid-2000s onwards.

Between 1983 and 2004-05, employment in the relatively 'modern' industries – chemicals, petroleum, rubber and plastic products, minerals, metals, metal products, machinery, equipment, instruments, motor vehicles, and transport equipment – increased by approximately 6.3 million (NSS-EUS). During this period, the net increase in factory employment in the same set of industries was only 0.9 million (see Table 5.2). This suggests that for every new job in the factory sector, approximately six jobs had been generated in the unregistered sector in the above-referred set of industries during the years from 1983 to 2004-05.

The period between 2004-05 and 2011-12, however, presents a completely different picture. The net increase in factory employment during this period (according to ASI data) in the modern industries

referred above was 3.2 million (thus a much better record compared to the corresponding increase of only 0.9 million between 1983 and 2004-05). At the same time, the NSS-EUS suggest that the net increase in overall employment in these industries during the 2004-12 period was also 3.2 million. This implies that there had been hardly any net increase in employment in the unregistered sector in a wide range of industries, including chemicals, plastic products, minerals, metals, metal products, machinery and equipment, and motor vehicles.

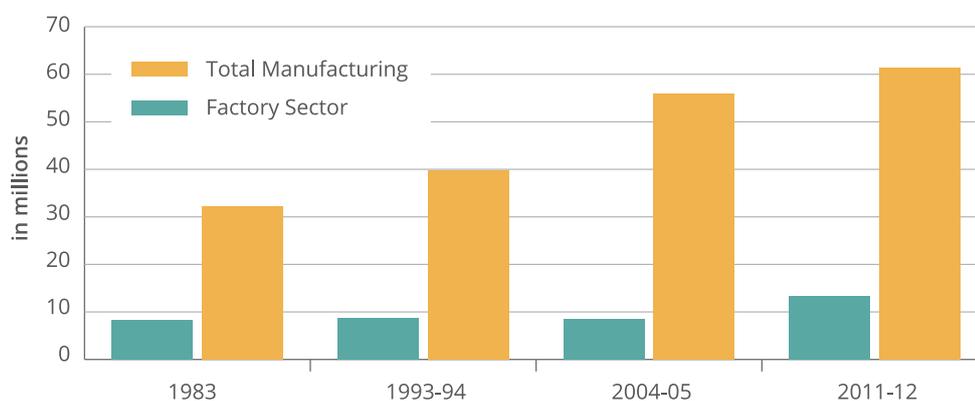
It is important to note that even within the factory sector, a substantial share of the incremental employment created after the 2000s has been in relatively large factories. Rakshit (2019) shows that factories that employ 200 or more workers accounted for 61 per cent of the total factory employment in India in 2014-15, up from 54 per cent only in 2000-01. In fact, 43 per cent of the incremental employment during the 2000-2015 period occurred in factories employing 500 or more workers (Rakshit 2019).

Table 5.1:
Employment in the Factory Sector and Manufacturing in India, in million numbers and as % of total employment in the country

Years	Employment in million numbers			Manufacturing employment as % of total employment	
	Factory sector	Manufacturing, total	Total Employment (all sectors)	All workers	Urban male workers*
1983	8.2	32.2	303.4	10.6	
1993-94	8.8	39.8	374.4	10.6	
2004-05	8.5	55.2	457.8	12.2	
2011-12	13.4	61.3	472.5	13.0	16.7
2017-18	14.9**				15.6

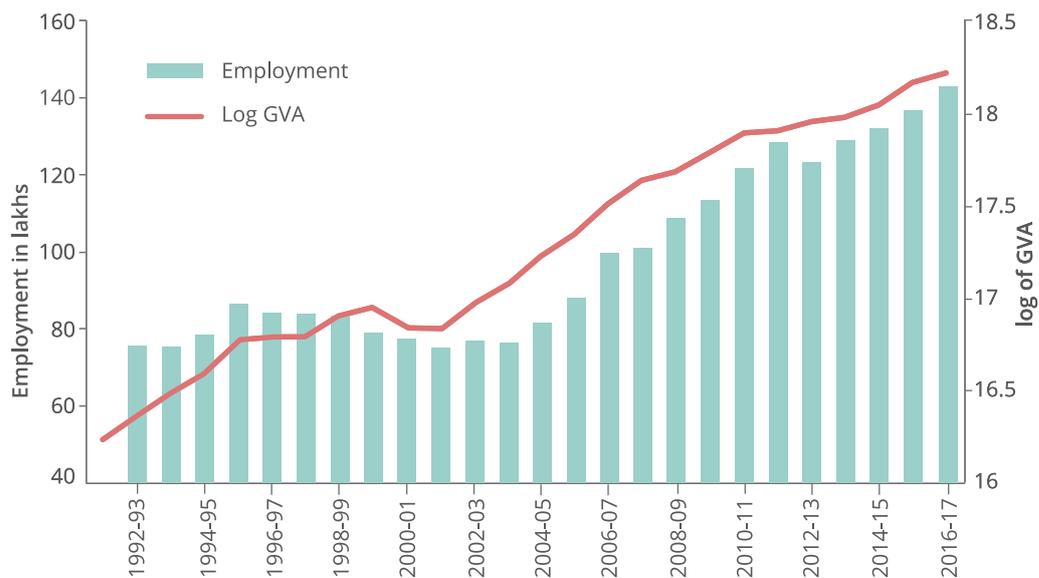
Sources and notes: Author's estimations based on various rounds of EUS conducted by the NSSO (for manufacturing and total employment) and ASI (for factory sector employment). See Thomas and Johny (2018) for more details; *Jha (2019) based on the yet-to-be released Periodic Labour Force Survey (PLFS) conducted by the NSSO. Relates to working-age population only; ** relates to the year 2016-17.

Figure 5.1:
Employment in the Factory Sector and Manufacturing in India, in million numbers



Sources and notes : Author's estimations based on various rounds of EUS conducted by the NSSO (for manufacturing and total employment) and ASI (for factory sector employment).

Figure 5.2: Log of Gross Value Added and Employment in lakhs, India's Factory Sector: 1991-92 to 2016-17



Sources and notes : Annual Survey of Industries, various years

Table 5.2: Employment in the Factory Sector in India, industry-wise, numbers in 1000s

Industries	Increment to employment						Employment in 2016-17
	1973-74 to 80-81 (7 yrs)	1980-81 to 91-92 (11 yrs)	1991-92 to 95-96 (4 yrs)	1995-96 to 04-05 (9 yrs)	2004-05 to 11-12 (7 yrs)	2011-12 to 16-17 (5 yrs)	
Food products, beverages, tobacco products (10, 11, 12)	740	-35	207	1	406	100	2322
Textiles, garments, leather goods, footwear (13, 14, 15)	231	-160	377	6	821	404	3090
Wood products, furniture, jewellery, toys, precision devices (16, 31, 32)	10	4	67	50	105	121	515
Chemicals, petroleum, rubber and plastic products (19, 20, 21,22)	227	188	264	48	729	427	2325
Minerals, metals, metal products (23, 24, 25)	229	164	217	-108	1275	79	2775
Machinery, equipment, instruments (26, 27, 28)	153	139	181	-230	649	91	1543
Motor vehicles, transport equipment (29, 30)	96	61	143	-170	558	223	1304
All manufacturing (10:32)	1713	378	1524	-471	4675	1435	14289
Average annual increment to employment, all manufacturing	245	34	381	-52	668	287	-

Sources and notes : Annual Survey of Industries, various years

5.4.3 / Growth of manufacturing employment after 2011-12

The growth of overall GDP and of manufacturing incomes in India had been at extremely fast rates (annual growth rates of above 8 per cent for both) during the years 2003-04 to 2007-08. However, the worldwide economic crisis, which became pronounced by 2008, affected Indian industries too, especially the export-oriented sectors including garments and engineering. The expansionary monetary and fiscal policies initiated in India to tide over the economic slowdown, which included greater lending by banks, helped to overcome the crisis to some extent.

Nevertheless, the Indian economy has been facing greater difficulties after 2011-12. First, there has been a slowdown in investment rates in the Indian economy. Gross capital formation as a proportion of the country's GDP was 39.5 per cent in 2012-13 but declined to 33.5 per cent by 2016-17. India's exports have slowed down in growth too, with a decline in the global demand conditions. India's current account deficit had dipped to very high levels by 2012-13 (touching 5 per cent of GDP in that year). The change in the base year for GDP estimations from 2011-12 onwards makes it difficult to compare the rates of growth before and after that year. However, certain points are worth noting. There has been a clear deceleration in the growth of agricultural incomes and rural demand in India after 2011-12 (compared to the years between 2003-04 and 2011-12). The construction sector which had been the most important source of employment in the country during the period from 2004 to 2012, experienced a noticeable slowdown in the growth of incomes after 2012-13. According to ASI data, the growth of value added and employment in India's factory sector decelerated markedly from 2011-12 onwards, relative to the growth during the 2004-11 period. The growth of value added had revived somewhat during the 2014-16 period but slowed down again in 2016-17. The slowdown in employment growth after 2011-12 in industries such as machinery, minerals, and metal products is of particular concern (see Figure 5.2).

As is well known, demonetisation of high-value currency notes in November 2016 and the introduction of goods and services tax (GST) in July 2017 have been

landmark events with very serious implications for the economy and the labour market. Small units in the informal sector have been adversely affected by these policies. When informal sector units have been compelled to become part of the formal sector in the wake of demonetisation and GST, many of them may have possibly perished, causing severe loss of employment.

The employment situation in India has now reached a tipping point. An expansion of the country's working-age population, on the one hand, and the structural shift of the workforce away from agriculture, on the other, implies that new jobs will have to be generated in the non-agricultural sectors at a relatively fast rate. We have estimated that the potential workforce in India in industry and services grew at the rate of 14.7 million a year during the 2004-12 period. At the same time, the actual rate at which employment was created in industry and services in the country during the above-referred period was only 6.5 million per year -- or at less than half of the potential rate (Thomas 2015).

It is difficult to understand what may have happened to overall manufacturing employment growth in India during the recent years, given that the NSSO has not released any survey on employment and unemployment after 2011-12. The State of Working India 2018 report prepared by Azim Premji University, which examined evidence from Labour Bureau and other sources, and surveys conducted by the Centre for Monitoring of the Indian Economy (CMIE) has concluded that the growth of employment in India has clearly slowed down after 2011-12. It is learnt that the NSSO survey for the year 2017-18 has been completed, and some media outlets have published reports based on the yet-to-be-released data. According to these reports, the unemployment rate in the country had reached a record high level of 6.1 per cent in 2017-18 (Thomas 2019). These reports further suggest unimpressive growth in overall manufacturing employment. The share of manufacturing workers among all workers in the case of urban males (aged 15 years and above) declined from 16.7 per cent in 2011-12 to 15.6 per cent in 2017-18 (see Table 5.1).

5.5 / Industrial policy: parameters and considerations

5.5.1 / Labour rigidity argument: losing relevance?

The ‘jobless’ growth – stagnant growth of employment despite a relatively fast growth of value added – in India’s factory sector between the 1980s and early 2000s has been the subject of scholarly debate. Some economists have argued that the slow growth of factory employment in India during the 1980s and in later decades has been mainly on account of the rigidity in the country’s labour market. This rigidity has been attributed to the introduction of certain labour regulations in the country during the late 1970s, which, it is argued, made it difficult for the employers to retrench workers (Fallon and Lucas 1993; Besley and Burgess 2004). At the same time, some other scholars have questioned the argument that India’s labour market is rigid, and even pointed to some of the problems in the methods used in studies that attributed jobless growth to labour regulations (Bhattacharjea 2009; see also the review in Thomas 2018a).

However, there are enough grounds to contest the above assessment, particularly in the context of the rising share of informal employment even within the formal segment of Indian manufacturing. Between 1999-2000 and 2014-15, directly employed workers accounted for only 33.5 per cent of the incremental employment in India’s factory sector, while the rest were contract workers or other employees who are outside the purview of the labour laws (see Table 5.3). Annavajhula and Pratap (2012) find that contract workers are employed in almost every aspect of the production operation and they form 70-80 per cent of all workers in Maruti Suzuki’s plants in Gurgaon and Manesar.

In recent years, trade union activism has declined in India, and the bargaining strength of labour relative to capital have substantially reduced. In India’s

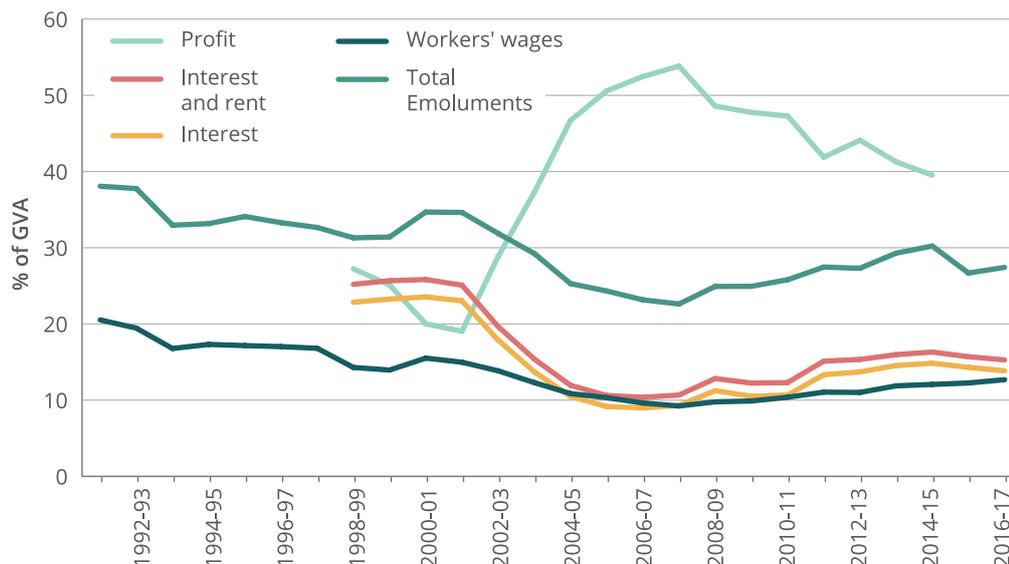
factory sector, as a share of gross value added, profits increased sharply from 19.0 per cent in 2000-01 to 53.8 per cent in 2007-08, whereas workers’ wages declined from 15.5 per cent to 9.2 per cent during the same period. Although profits as a share of gross value added declined afterwards (to 39.5 per cent in 2014-15), this decline was more due to the rise in interest charges and salaries for supervisors and managers (see Figure 5.3). Experiences from various industries show that employers find different ways to circumvent the existing labour regulations, while the authorities adopt a lax attitude towards implementing them (Dutta 2016). In a field study of women garment workers in Bangalore, Johny (2018) writes about the strategies adopted by the employers to avoid payment of gratuity benefits to workers (including persuading workers to terminate their current contract and re-join the same factory within a week or so on a new contract) (Thomas and Johny 2018).

Table 5.3: Distribution of employment in India’s factory sector, by categories, 1999-2000 to 2014-15, as % of all persons employed

Category	1999-2000	2014-2015	Incremental employment, 1999-2000 to 2014-15
All Persons Employed	100	100	100
Workers	76.8	77.5	78.4
Directly employed	61.7	50.1	33.5
Men	50.9	40.1	24.7
Women	10.8	10	8.8
Employed through contractors	15.2	27.4	44.9
Employees other than workers	23.2	22	20.3
Supervisory and Managerial Staff	10	9.8	9.5

Source: Annual Survey of Industries, various years

Figure 5.3:
Expenditures on Labour and Capital as % of Gross Value Added, India's Factory Sector, 1991-92 to 2016-17



Sources and notes : Estimates based on Annual Survey of Industries.

5.5.2 / Investment and industrial growth

In India, the growth of the industrial sector has been closely linked to trends in investment. Gross capital formation (GCF) as a proportion of GDP in India was 19.2 per cent in 1980-81, rose to 23.0 per cent in 1992-93, but following stagnation in investment after the mid-1990s, was still at 24.3 per cent in 2000-01 (all estimations using 2004-05 as the base). In fact, there has been a sharp fall in public investment in the Indian economy since the 1990s. Gross fixed capital formation (GFCF) in the public sector as a proportion of India's GDP peaked at 12.2 per cent in 1986-87, but subsequently declined to 6.6 per cent by 2002-03. Private corporate sector GFCF too was on a decline in the country from the middle of the 1990s.⁴

There has been a significant revival in investment and industrial growth in India since the early 2000s onwards. GCF as a proportion of GDP rose impressively to 38 per cent in 2007-08. This revival had been led by private corporate sector investments, which were financed largely by a notable rise in corporate profits and savings. However, after 2007-08, the private corporate sector GFCF has registered a decline in India. According to national income estimates with 2011-12 as the base year, GCF as a proportion of GDP in India was 39 per cent in 2012-13 but fell to 33.3 per cent by 2016-17.⁵

It is important to note that, as per the data compiled by the World Bank, investment rates in India had reached the levels achieved by China by 2007. However, the Chinese and the Indian rates began to diverge after that. By 2011, while GCF as a proportion of GDP was 39.6 per cent for India, this rate had risen to 47.7 per cent for China (see Figure 5.4). In the aftermath of the global financial crisis, while the State in China responded with massive investments in infrastructure and new technologies, the Indian economy suffered due to stagnation in both public and private corporate investments.

5.5.3 / Infrastructure challenges

In India, the growth of the infrastructure sectors such as electricity, roads, and ports have failed to catch up with the overall pace of economic growth. This has resulted in severe supply-side bottlenecks, adversely affecting the growth of the country's manufacturing sector. The constraints in the infrastructure sector raise the costs of Indian firms, especially the micro, small and medium units, and reduce the competitiveness of their products both in the domestic and export markets.

Estimates by the Ministry of Power show that the energy availability in India during 2011-12 was 857.9 billion units (or kilowatt hours), which was 8.5 per cent less than the energy required for that year. Power

Figure 5.4:
Gross Capital Formation as % Gross Domestic Product, India and China: 1992 to 2017



Source: World Development Indicators

demand-supply shortages have been reported from every region of India and from a majority of Indian states in 2011-12 (CEA 2012, Annex II). By 2017-18, energy availability in India increased to 1203.6 billion units, and the deficit in energy availability was reduced to 0.7 per cent. The decline in deficit does not, however, confirm that the power situation has improved in the country. The reduction in the deficit could partly be a consequence of the slowdown in energy demand (which grew at an annual rate of only 3.2 per cent between 2013-14 and 2017-18), arising from a slow growth of demand from the industrial sector.⁶

It needs to be noted here that the power generation capacity in China was 2.4 times the power generation capacity in India in 2000 and 4.1 times the Indian figure in 2008. By 2017, electricity generation in China (in gigawatt hours) increased to 4.7 times the corresponding Indian level.⁷ Public sector power utilities under the control of the Central or the state governments accounted for more than 80 per cent of the total energy generation capacity in India even in 2011-12 (and 53.9 per cent in 2019).⁸ It is clear that investments by the public sector in power generation are crucial, especially given the long gestation nature of power projects.

Allcott et al. (2015) show that in India electricity shortages have had a significant negative effect on the growth of output and revenues of manufacturing

firms. They further show that the growth-retarding impacts of power shortages have been more severe on small industrial units, which cannot afford to install generators. Our field research in Coimbatore in Tamil Nadu confirms that power shortages have been the most serious constraint to growth in this industrial town between 2007 and 2014. For instance, in January 2012, industrial units in Coimbatore suffered from six hours of power cuts on a daily basis, and as a result, several units were operating at 50 per cent or even less of their actual production capacities. The owner of a leading pump manufacturer in Coimbatore recounted the schedule of power cuts affecting his factory in January 2012: 10 am to 12 noon, 4 pm to 6 pm, 7.30 pm to 8.15 pm, and 9.45 pm to 10.30 pm.⁹

There are other forms of infrastructure bottlenecks that affect the growth of small industrial units. Consider, for instance, the case of agro- and food-processing industries. The prospects for the growth of such industries, especially in relatively small-scale units, are indeed very high in India. These industries will be beneficial for farmers and will also help provide cheap food for the general public. However, a major hurdle for the growth of such industries is the absence of the necessary infrastructure. Even facilities for storage and transport of fruits, vegetables and other agro-based products from the farm to the market (cold storages, for instance) are extremely poor in most parts of the country.

5.5.4 / Banking and credit

India used to have a relatively strong institutional mechanism for the long-term financing of industrial development, but this began to weaken from the 2000s onwards (Nayyar 2018). The development finance institutions (DFIs) in India included term-lending institutions such as Industrial Credit and Investment Corporation of India (ICICI) and Industrial Development Bank of India (IDBI); State financial corporations and State industrial development corporations; and institutions such as Life Insurance Corporation (LIC) and Unit Trust of India (UTI), which mobilised savings from households. Lending by DFIs as a proportion of GFCF by the private sector in the country climbed to 75 per cent by 2000-01 (Nayyar 2018).

However, from the 2000s onwards, development banks in India as well as in many other countries began offering 'universal banking services', diluting their core strengths in long-term lending. On the other hand, from the mid-2000s onwards, commercial banks in India increased their lending to large-scale industries, including units notably in the power and telecom sectors (Nagaraj 2013). Long-term lending by commercial banks to large-scale industries eventually led to the ballooning of their non-performing assets (NPAs).

During the pre-1990 years, targeting of bank credit to agriculture and SSIs was an important aspect of India's banking policies. The availability of subsidised credit made sizeable contributions to the growth of SSIs, for instance, the garment industry in Tiruppur (Chari 2000). However, the shares of agriculture and industry in the total allocation of credit by scheduled commercial banks in India declined from the 1990s onwards. As a proportion of non-food gross bank credit, advances to SSIs fell from 15.1 per cent in 1990-91 to 6.5 per cent in 2005-06, 5.7 per cent in 2010-11, and only 4.9 per cent in 2017-18 (see Figure 5.5). The number of loan accounts of the SSI sector in commercial banks had declined from 219 million in 1992 to 93 million in 2005. On the other hand, the share of personal loans and

professional services in total outstanding bank credit in India increased from 9.4 per cent in 1990-91 to 27 per cent in 2005-06 and was 22.8 per cent in 2017-18 (Reserve Bank of India 2006; also see Figure 5.5).

It is important to note that with the crisis due to NPA and other problems affecting the banking sector, credit disbursed by the commercial banks to the industrial sector has declined sharply from 2014-15 onwards. The year-on-year growth of bank credit received by micro, small and medium industries had been negative during 2015-16 and 2016-17, and only marginal (only 0.5 per cent) in 2017-18. In comparison, the year-on-year growth of personal loans disbursed by scheduled commercial banks was above 15 per cent in each of these years (Reserve Bank of India).

Several owners of small and medium firms we spoke to highlighted the problem of relatively high interest rates. They say while they have to pay interest rates of 10-11 per cent in India, Chinese firms receive loans at much lower interest rates (say 4 per cent).¹⁰ The high interest rates on working capital loans, in particular, are a heavy burden for the entrepreneurs. Typically, working capital requirements are relatively high during periods of recession, when firms are more likely to be burdened with the non-payment of dues from their customers (other firms, which may also be feeling the pains due to the recession). On the contrary, however, banks are reluctant to provide loans to firms during periods of recession due to the fear that they may default on the loans. Also, if a firm delays its repayment of a loan (which is more likely during a recession) by more than a certain period, banks begin to charge penal interest rates.¹¹

At the same time, micro enterprises (mostly in the unregistered sector) receive very little credit from banks and other institutional sources. Typically owners of microenterprises depend on their own personal or family savings for investment in machinery.

5.5.5 / Trade liberalisation and rising import intensity of manufacturing

India has reduced the tariffs on the import of several manufactured goods into the country during the 2000s. The weighted average of import tariffs in India on capital goods declined from 94.8 per cent in 1991-92 to 28.7 per cent in 1995-96, 23.1 per cent in 2001-02, 9.5 per cent in 2005-06, and to 5.6 per cent in 2009-10. The tariff reductions have adversely affected the prospects of India's manufacturing firms, which are, as noted above, already disadvantaged by many supply-side constraints. Some of the industries that recorded fast rates of growth of imports into India from the 2000s onwards include machine tools, electrical and non-electrical machinery, electronic and computer goods, and transport equipment (see Figure 5.6).

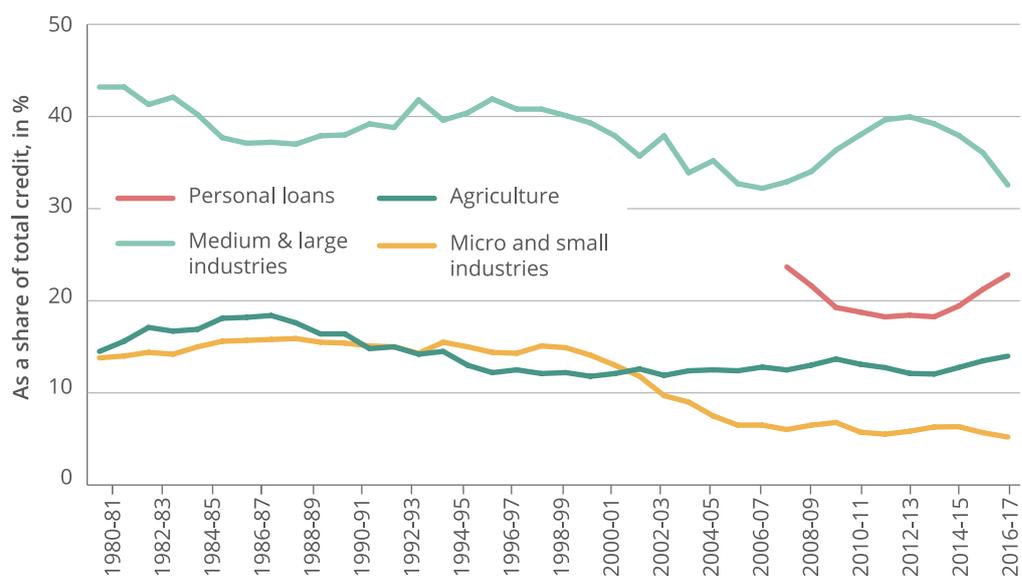
In the case of the electronics industry, India has been liberalising duties from the middle of the 1990s onwards, initially as part of its World Trade Organisation (WTO) requirements and later as a result of the Free Trade Agreements (FTAs) that India and some of the East Asian countries entered into. Given such an environment, domestic manufacturers of electronic components could not develop the technological capabilities needed to survive in this fast-changing industry. Despite being a major market for mobile phones, India is today a large importer of telecommunication products (Francis 2018).

Industrial growth that is increasingly based on imported components reduces the growth opportunities for the domestic industry and depresses the possible linkages between the large and the small-scale sectors. Typically, a substantial part of the production of ancillaries and components for machinery, and transport-equipment industries in India has been in the small-scale or the unorganised sector. With the rise in the import of components, such opportunities for production in the small-scale sector have been reduced.

5.5.6 / Exchange rate fluctuations

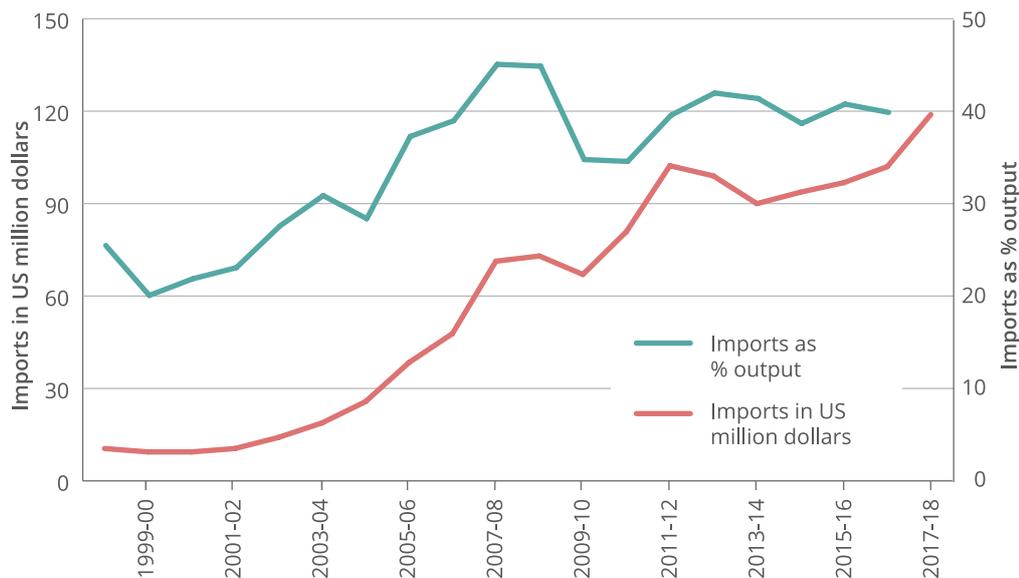
The gradual liberalisation of India's capital account from the 2000s onwards and the resultant increase in the inflows of foreign portfolio investments (FPI) into the country have created problems for the country's manufacturing sector. The volatility in FPI flows has led to wide fluctuations in exchange rates and also in the prices of several commodities (such as steel and cotton) (see Figure 5.7). It may be noted that unlike India, China has had strict controls on foreign capital movements across its borders to filter out volatile, short-term capital flows, which are often harmful to the economy. In the context of Brazil, Nassif et al. (2019) show how long-term industrial and technological policies have been weakened due to their incompatibility with short-term macroeconomic policies.

Figure 5.5:
Shares of Industry and Agriculture in outstanding non-food gross bank credit in India, 1991-92 to 2016-17 in %



Source: Reserve Bank of India

Figure 5.6:
Imports of Machinery, Electronic Goods, and Transport Equipment into India, 1998-99 to 2017-18: in million dollars and as a share of Domestic Production of these Products in India

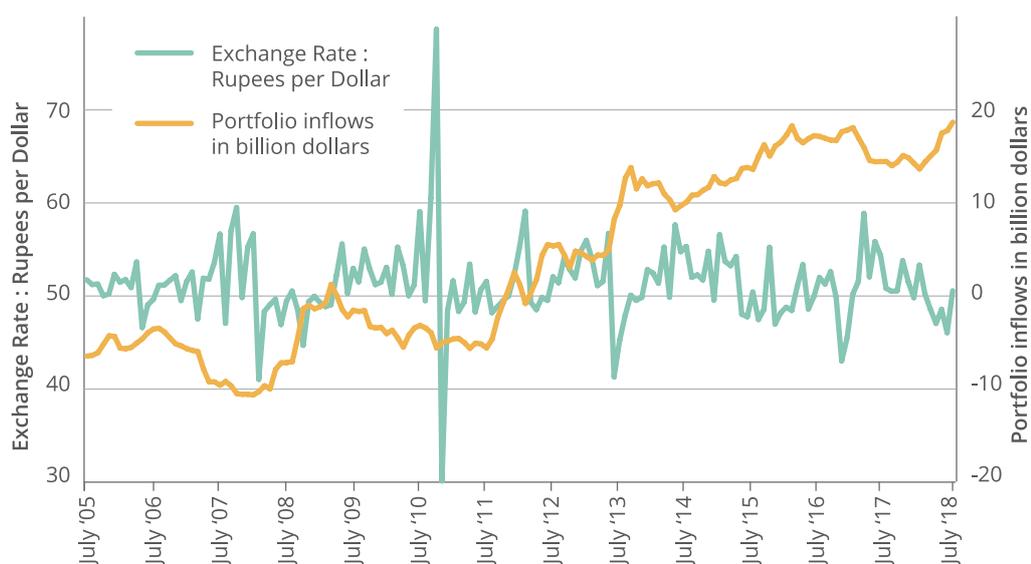


Sources and notes: Import data as reported in the Handbook of Statistics on Indian Economy, Reserve Bank of India; Output data from Annual Survey of Industries. Based on data on imports and output of the following goods: machine tools; machinery except electrical and electronic; electrical machinery except electronic; electronic goods; computer goods; transport equipment; and project goods.

The Rupee-Dollar exchange rate appreciated sharply between May 2007 and April 2008, resulting in a steep decline in the revenues and employment of export-oriented industries such as textiles, garments, leather, and engineering in India. At the same time, there has also been equally sharp depreciation of the Indian Rupee, such as during the second half of 2008 and

again during the period from May 2011 to August 2013 (see Figure 5.7). During these periods of currency depreciation, imports of machinery and raw material become costlier. Also, many Indian firms, which have availed of foreign-currency loans, incur heavy losses when they are required to repay their loans in the depreciated rupee.

Figure 7:
Rupee-Dollar Exchange Rate and Inflows of Foreign Portfolio Investment into India, July 2005 to August 2018



Source : Portfolio investment from RBI Website; Exchange Rate until April 2011 also from RBI; Exchange rate for other months from <http://www.x-rates.com/d/INR/USD/hist2011.html>

5.5.7 / Industrial policies for regional development

In India, industrial policies should reflect the priorities and requirements for industrial development across various regions. There are variations across States with respect to demographic structures, which also have important implications for their labour markets. In 2011, the population in the age group of 0 to 14 years as a share of the total population was 23.4 per cent only in Kerala and 40.1 per cent in Bihar (according to data from the Census of India). Within India, the largest additions of the working-age population over the coming years are going to come from some of the poorest regions, including states such as Uttar Pradesh and Bihar. At the same time, states such as Kerala and Tamil Nadu will see their population ageing.

Kerala has already started facing a severe shortage of unskilled workers, whereas, at the same time, educated workers from this state have been seeking employment opportunities elsewhere. According to an estimate by the state government, 1.4 million Keralites were working in various professions outside the country in 2011 (Pravasi Malayali Census 2011). At the same time, a rising stream of migrant workers from other states, including Bihar, West Bengal, and Odisha, meets the large demand for unskilled labour in Kerala. According to an estimate in 2011, migrant labourers in Kerala from the other Indian states numbered approximately 2.5 million, which was close to 20 per cent of the state's total workforce (12.7 million) at that time.

Given such a context, the Approach Paper for the Thirteenth Five Year Plan for Kerala (from 2017 to 2022) had suggested that the future industrial development of Kerala should focus on industries that build on the advantages of a skilled workforce. Kerala aims to make a mark in sectors such as biotechnology, life sciences, pharmaceuticals (thus furthering Kerala's expertise and advantages in the area of healthcare), electronics hardware, and knowledge industries in general.

Kerala is indeed making steady progress in some of these areas (a Life Sciences Park is being set up in Thiruvananthapuram). However, a relative shortage of financial resources is a big hurdle for the state in setting up research centres and other institutions that are crucial for the nurturing of knowledge industries.

Central government public sector enterprises (PSEs) and research and educational institutions funded by the Central Government have a relatively small presence in the state (In 2013-14, Kerala's share in total investment by Central government PSEs was only 1.9 per cent, much less than Kerala's share in India's population, which was 2.8 per cent in 2011).

5.5.8 / Services v/s manufacturing

India's recent economic growth has been led by the services sector. The relatively fast growth of the services sector, especially of sectors such as information technology (IT) and financial services has, in fact, created some disadvantages for the manufacturing sector in India. Most importantly, services sector growth has pushed up the cost of land and also for skilled labour in the country. Entrepreneurs we talked to in different parts of the country (Gujarat, Kerala, Tamil Nadu, and Karnataka) have cited availability and cost of land as a key concern for them.¹² For instance, in Peenya industrial estate in Bangalore, the cost of one acre of land would be higher than Rs. 10 crores, according to some estimates in 2017. Therefore, for an entrepreneur, the cost of land would become a heavy drain on her financial resources even before she begins production.

Many engineers and other skilled professionals find the services sector more attractive (in terms of salaries and working conditions) compared to manufacturing. Manufacturing firms find it difficult to offer salaries comparable to those offered in sectors such as IT or financial services. Owners of manufacturing firms complain that even less skilled workers prefer to work in shopping malls or retail services rather than in factories.

5.5.9 / Small firms v/s big firms

In India, public sector units have facilitated the growth of small firms around them, typically as suppliers of inputs or as players in some stage of the value chain. For example, a number of industrial units in Peenya have been engaged in the aircraft industry, to a large extent due to the linkages built in this industrial area by Hindustan Aeronautics Limited (HAL), Bangalore. Similarly Bharat Heavy Electricals Limited (BHEL) in Tiruchirappalli and Indian Petrochemicals Limited (IPCL)

in Vadodara in 1969 had helped the emergence of clusters of small industrial units in these cities.¹³

However, in recent years, leaders of small-industry associations point out that they receive very little assistance from the bigger private firms, especially foreign-owned firms. For instance, small firms engaged in the power equipment industry note that multinational corporations (MNCs) in this sector (such as Hitachi or ABB) prefer to work with other foreign firms (as suppliers), and not with the small-scale Indian firms. They also point to how a major Indian private company in the power sector imported most of the machinery it needed while setting up its new plant thereby denying smaller Indian firms the opportunity to benefit from such a large demand.¹⁴

A major complaint of micro and small industries is that the charges they receive from the bigger firms for turning, milling or other machining operations (what are commonly referred to as 'job works') have hardly improved over the years. In fact, with the emergence of computerised numerical control (CNC) machines, the bigger firms have to depend less on the small firms for machining and other operations. Delay in payments from their buyers (which are typically bigger firms) is another major problem faced by the smaller firms. This increases the working capital needs of the small firms especially because they will have to make ready payments for purchasing their inputs.¹⁵

5.5.10 / Foreign investment and the 'Make in India' initiative

To promote the growth of manufacturing in India, the Union government, led by the National Democratic Alliance (NDA), has launched a 'Make in India' initiative. Previously, the United Progressive Alliance (UPA) government had rolled out the National Manufacturing Policy with the same objective. The thrust of both these initiatives has been to attract private investments, especially foreign investment, with the government acting as a facilitator for private investors. In recent years, rules relating to FDI have been liberalised to a great extent, with more and more sectors being put under the 'automatic route' for approval.

International experience suggests that FDI will contribute to development only if it brings in technologies and managerial capabilities, and not just capital, to the host nation. If the objective of the foreign investors is only to gain better access to the markets in the host nation, they could end up weakening, rather than strengthening, the domestic firms.

Given this context, there are concerns on the nature of FDI flows into India during recent years. Rao and Dhar (2018) show that about half of the total reported FDI inflows into India between 2004 and 2014 were not 'realistic' – these were investments made either by financial investors or by national investors investing in the domestic economy through the FDI route. They further show that the share of manufacturing in total FDI flows into India declined from 47.8 per cent during the period October 2012 - September 2014 to only 30.3 per cent during the period October 2014 - March 2017 (Rao and Dhar 2018). Further, an increasingly larger share of FDI flows into India is not in the form of 'greenfield' investments, but is achieved through the acquisition of shares of domestic firms (Nagaraj 2017).

Since 2011-12, investments in the country by domestic private firms have been on a low key. The possible reasons include the slowdown in demand at home and abroad, unutilised capacities of these firms, and their high levels of indebtedness. Given such circumstances, the expansion in public expenditures will be a critical component of any effort to promote economic growth and development in India.

5.5.11 / Guiding technological development

Technological changes in the manufacturing sector have been increasingly labour saving, and this brings in a new dimension to the challenge of employment creation.¹⁶ New technologies such as of electric vehicles or of renewable energy sources will absorb much less labour than their earlier generation of technologies (compared to diesel or petrol engine vehicles, electric vehicles require much fewer components). Further,

India is highly dependent on imports in the case of many new technologies (for instance, in the case of electric vehicles, India is dependent on the import of lithium batteries).

Given such a context, it is important to invest in the creation of new technologies. India requires technological advances that generate new economic opportunities and absorb — not displace — labour. Consider, for instance, advances in biotechnology that may find new commercial applications for our agricultural products, or electric vehicles and renewable energy solutions that depend less on imported material (Thomas 2018b). Nevertheless, India's spending on research and development (R&D) has been rather inadequate. Nagaraj (2017) reports that in 2011, R&D spending as a proportion of GDP was only 0.8 per cent for India, compared to 1.8 per cent for China. In fact, China is gradually shifting its economic base from low-wage industries and is now emerging as a global leader in several new technologies, including artificial intelligence and renewable energy.

It needs to be noted that innovations and technological interventions are needed in the case of traditional and labour-intensive industries as well. Consider the case of the textile industry, which employs 9.3 million workers in India, out of which 84 per cent are outside the factory sector (in 2011-12) (Thomas and Johny 2018). Many of these workers are attached to handlooms or other traditional forms of production, with extremely low levels of productivity. For instance, in a major centre for handloom weaving in Kannur district of Kerala, a worker is able to weave only 5 to 6 metres of cloth in a day (and earn only around Rs.350-400 a day). On the other hand, in a newly set up high-tech weaving factory in the same district, a worker can oversee the production of up to 450 metres of cloth in a day.¹⁷ It is clear that in handlooms and other traditional sectors, both technological and organisational innovations are needed to increase productivity, improve wages, and at the same time, avoid job losses.

5.6 / Concluding remarks

Given the growing size of the working-age population of India, the employment-challenge for India is possibly bigger than that faced by any other country (except China) in the world. At the same time, a large population also offers a sizeable market, which can be turned into a significant advantage for domestic manufacturers. In the Indian context, however, low levels of rural incomes and a high degree of inequality are constraints to realising the potential of the domestic market. In rural India, in 2011-12, the richest decile of households accounted for 55.7 per cent of the total consumption expenditure on durable goods (NSSO's surveys on household consumption expenditures). SSIs in the unregistered sector, which cater to the demand from the poorer sections of the population, have been trapped in a cycle of poor quality of production, outdated technologies, and low levels of profitability.

India should envisage industrial growth that is driven more by the domestic market, which will benefit from an improvement in the wages and incomes of its rural and urban informal workers. In any case, the prospects for a growth strategy led by exports are rather bleak, given the continuing crisis in the global economy, the growing tide of protectionism in the developed world, and competition from other labour surplus countries such as Bangladesh. Once the domestic market is seen as the anchor for its future growth, the Indian industry will realise that it is not in its interests to squeeze more labour. On the contrary, rising wages and labour incomes could provide the basis for a revival of mass demand, and fuel the growth of a range of industries including food, clothing, and consumer durables.

India's policymakers should realise that planning and industrial policies are not incompatible with markets and globalisation. In fact, the need for industrial policies is ever greater now given the uncertainties associated with technological changes and turbulence in the global economy. At the same time, there are huge investment needs in the country today in the areas of irrigation, electricity, rural and urban infrastructure, as well as in many areas of basic research. With greater investment and well-directed industrial policies, India should try to revive its manufacturing sector, fully tapping into the potential of its vast home market and also of its young workers and entrepreneurs.

Endnotes

1. Data obtained from the World Bank's World Development Indicators available at <http://data.worldbank.org/indicator>
2. According to data from the National Sample Survey Office (NSSO) on Employment and Unemployment Survey.
3. It needs to be highlighted, however, that NSSO's employment survey is a survey of households while ASI is a survey of enterprises. This difference in the nature of the two surveys is a limitation while making an estimate of employment in the unorganised manufacturing sector using a combination of data from the NSSO and ASI.
4. Data obtained from National Accounts Statistics, Ministry of Statistics and Programme Implementation, Government of India, available at <http://www.mospi.gov.in/13-national-accounts-statistics>
5. Data obtained from National Accounts Statistics, Ministry of Statistics and Programme Implementation, Government of India, available at <http://www.mospi.gov.in/13-national-accounts-statistics>
6. <https://powermin.nic.in/en/content/power-sector-glance-all-india>
7. Data obtained from World Development Indicators, World Bank.
8. Information from the Ministry of Power, Government of India reported in <http://www.indiastat.com>
9. Based on the author's field research on Coimbatore's industrial sector from 2008 onwards. See also Thomas (2009).
10. Based on the author's field research in Coimbatore, Peenya (Bangalore), and Kollam (Kerala) (all during 2017-2018).
11. Based on the author's field research at various industrial towns, including Coimbatore, Rajkot (2015-2016), and Kollam (2018).
12. Based on the author's field research in Coimbatore, Rajkot and Vadodara (2015-2016), Peenya, Bangalore (2017), and various industrial locations in Kerala.
13. Based on the author's field research in Vadodara (2015-2016), Peenya, Bangalore (2017), and Tiruchirappalli, Tamil Nadu (2018).
14. Based on the author's field research in Vadodara (2015-2016) and Peenya, Bangalore (2017).
15. Based on the author's field research in Coimbatore, Rajkot (2015-2016) and Tiruchirappalli (2018).
16. For instance, as of now, the Rourkela plant of a major public sector Steel company employs around 12,000 workers and produces 4.5 million tonnes of steel annually. Company sources suggest that, during the early 1990s, this plant had employed around 30,000 workers, although its production capacity then, had approximately been only one-third of the current level. Based on the author's field research in Rourkela (2018).
17. Based on the author's field research in Kannur, Kerala (2019).

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Chapter 6

Using Fiscal Policy to Alleviate the Job Crisis

Fiscal deficits are generally viewed negatively and seen as a threat to financial and economic stability. While some of the concerns are legitimate, history and empirical analysis shows that many of the fears are either unfounded or overblown.

6. Using Fiscal Policy to Alleviate the Job Crisis

Srinivas Thiruvadhanthai

Director of Research, Jerome Levy Forecasting Center,
Mount Kisco, New York, USA
Contact: srinivas@levyforecast.com

Executive Summary

India consistently ranks high among major economies in economic growth, but its record in employment generation has been underwhelming. As the State of Working India report (2018) shows, each percentage of gross domestic product (GDP) growth has resulted in fewer jobs being created over the past 25 years, barring the 1999-2004 period. While India has made great progress in alleviating extreme poverty, employment generation is critical if we want to move the masses toward middle income. Most of macroeconomic policy and strategy is focused on generating growth, but little attention is paid to employment generation beyond lamentations, especially when there is good evidence of a substantial difference in outcomes when fiscal policy is directed towards employment.¹

India needs a comprehensive national employment policy, supported by fiscal expansion, driven by policy designs that promote labour-intensity while addressing the vast needs of basic services, ecological sustainability, and preservation of heritage and traditional crafts. However, such a policy will flounder if the bogeyman of fiscal sustainability forever hobbles the fiscal support needed. In particular, the obsession with rating agency decisions is pernicious. As I discuss in Section 6.2 below, there are major misconceptions about India's fiscal policy, government debt, and fiscal sustainability that are belied by India's own experience since the 1980s. Unquestionably, developing economies face greater constraints than developed economies on the balance of payments (BOP) front. I discuss these challenges in Section 6.3. However, currently, with the central government primary deficit almost vanishing, there is ample fiscal space to support employment programmes.

6.1 / Job growth and job quality, both inadequate

India's employment statistics have generated a great deal of controversy in recent times. The survey with the longest history—Employment Unemployment Survey (EUS) by the National Sample Survey Office (NSSO) was last conducted in 2011-12 and has since been discontinued. The Periodic Labour Force Survey, also conducted by NSSO, was launched in 2017 to provide timely information on the labour market. Unfortunately, the release of the first report has been delayed. While leaked versions showed unemployment rising to a 45-year high in 2017-18, the survey is not strictly comparable to the old EUS. To be clear, the NSSO data are not without problems, but they are the only comprehensive, long time series data on the state of the labour market in India. Surveys carried out by the Centre for Monitoring the Indian Economy (CMIE) also paint a grim picture. On the other hand, employment based on the number of enrollees in Employee Provident Fund Organisation (EPFO) database shows solid job growth in the past two years. However, the EPFO data covers only a small sliver of the workforce and there are questions about the interpretation of the data. The weight of evidence suggests that job growth has been weak, even if we cannot have much confidence in the precise estimates.

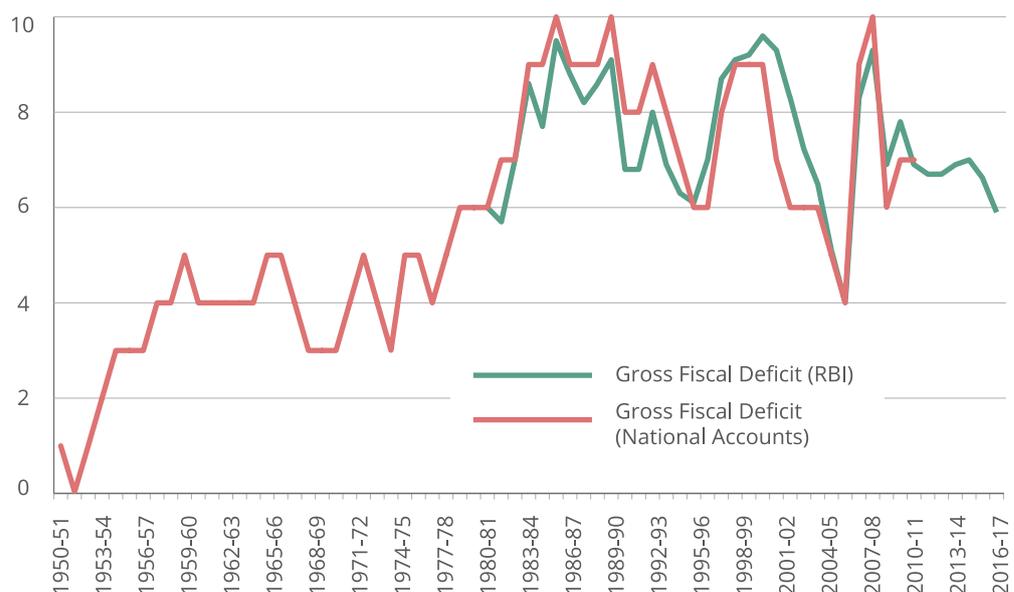
More importantly, there has been a worrisome long-term trend toward progressively weaker job growth

for a given percentage point of GDP growth. In other words, economic growth is translating into fewer jobs. Last but not least, the vast majority of workers earn below what would be termed living wage (State of Working India 2018). In short, employment growth and job quality have both been inadequate.

6.2 / The need for fiscal expansion to support employment

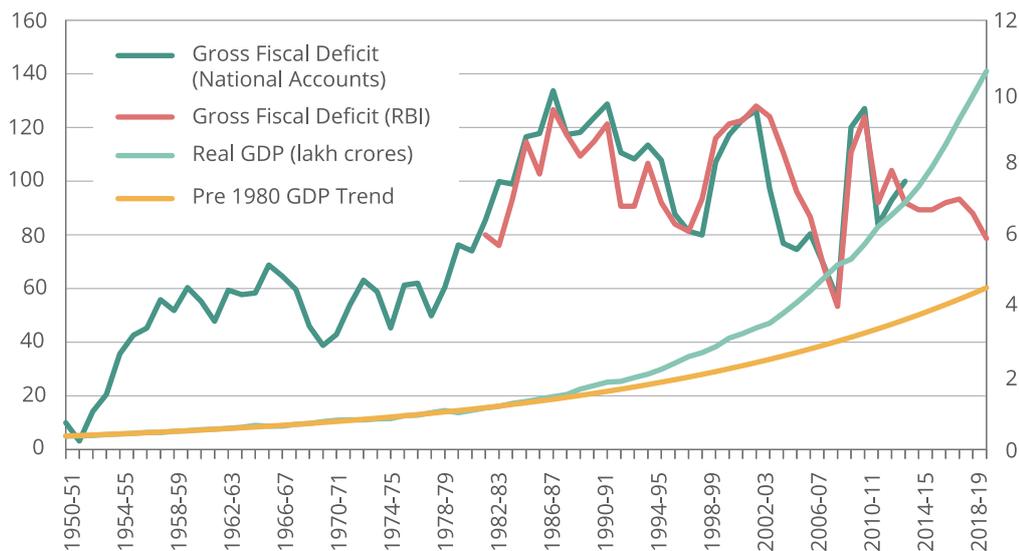
No matter how many employment generation programmes are created and how well they are designed, if inadequately funded, these programmes will fail to create a meaningful increase in employment. However, a large budgetary allocation would face immense pushback from economists and policymakers concerned about fiscal sustainability, inflationary pressures, and BOP risks. The relationship between fiscal deficits and economic growth has become a hotly debated topic in the aftermath of the 2008-09 global financial crisis, with recent studies recognising that fiscal 'austerity'—fiscal contraction—may have hurt growth. Nonetheless, in the Indian context, fiscal deficits are generally viewed negatively and are seen as a threat to financial and economic stability. While some of the concerns are legitimate, history and empirical analysis show that many of the fears are either unfounded or overblown.

Figure 6.1 :
Gross Fiscal Deficit as a Percentage of GDP



Sources and Notes: RBI: Handbook of Statistics on Indian Economy: <https://rbi.org.in/Scripts/AnnualPublications.aspx?head=Handbook%20of%20Statistics%20on%20Indian%20Economy>
CSO: <http://www.mospi.gov.in/publication/national-accounts-statistics-back-series-2011>

Figure 6.2 :
High Deficit
Periods Have
Also Been
Periods of
High Growth



Sources and Notes: RBI: Handbook of Statistics on Indian Economy: <https://rbi.org.in/Scripts/AnnualPublications.aspx?head=Handbook%20of%20Statistics%20on%20Indian%20Economy>
CSO: <http://www.mospi.gov.in/publication/national-accounts-statistics-back-series-2011>

6.2.1 / History of fiscal deficits and growth

One of the most striking features of India's post-independence economy is that the socialist governments of pre-1980 were ironically more fiscally prudent than the market-friendly governments since 1980. Up until 1980, the consolidated public sector gross deficit rarely exceeded 5 per cent (Figure 6.1).² Also, until 1980, the revenue account was generally positive, with the capital expenditures accounting for the overall deficit. Thus, borrowing was presumably to fund investment, which is conventionally considered sound. In contrast, since 1980, India has often run large

deficits on the revenue account; that is, borrowing to finance current spending, which is a major red flag in conventional wisdom. Moreover, the overall deficit has been generally much larger than the pre-1980 peak. Only in one year, 2007-2008, did it fall below the peak of the pre-1980 range; in every other year since 1980, it has been higher than the peak of the pre-1980 range. Yet, this period has also coincided with the takeoff in India's GDP from the previous Hindu rate of growth (Figure 6.2).

Figure 6.3 :
Government
Debt-to-GDP
Ratio



Sources and Notes: Combined Finance and Revenue Accounts of the Union and the State Governments in India and Budget documents of the State Governments. See Table 237 : Select Debt Indicators of the Central and State Governments (as percentage of GDP), Reserve Bank of India

Of course, a mere juxtaposition does not prove causality. However, with the notable exception of Rodrik and Subramanian (2004), there is widespread agreement that the growth acceleration in the 1980s was caused by fiscal expansion. At the same time, most mainstream economists hold the view that the 1980s fiscal expansion led to a surge in debt and was ultimately unsustainable (Srinivasan and Tendulkar 2003), culminating in the 1991 BOP crisis (I tackle the BOP issue in Section 6.3 below). Yet, the empirical evidence does not support the assertion. Fiscal deficits have been structurally higher since 1980, as has been government debt scaled to GDP (Figure 6.3). The natural question is if deficits and debt were unsustainable in the long-term, how have they remained at high levels for nearly 40 years, which by most definitions would be long-term?

Contrary to the dominant view, there is empirical support that the increase in deficits was a proximate factor in triggering India's take-off. Kevin Nell (2012) has argued that India was demand constrained in the 1952-1979 period and that fiscal expansion brought the economy closer to potential. Using different methods, I show that there is a positive, long-term causal relationship between fiscal deficits and economic growth (Thiruvadhanthai 2018). This contradicts the general assumption among mainstream economists that deficits drove growth in the short-term, but were ultimately harmful.

In fact, from a financial Keynesian perspective, there are solid reasons why deficits can have a positive influence. In a market economy, demand is constrained by cash income. However, since one person's demand represents income for someone else in the economy, cash income, in turn, is constrained by demand. This trap can be broken by financial deepening that allows people to borrow and thereby generate demand over and above their cash income. However, in developing countries, financial deepening can be limited by a lack of collateral and the absence of a secondary market for debt instruments. Government deficits can help bridge the gap by providing cash income—when the government runs a deficit, the private sector, by definition, runs a surplus. Moreover, a large stock of government debt means a corresponding large stock

of financial savings for the private sector, which can be the foundation for a sustained consumer-demand led economy. A growing body of research shows that financial instability is primarily caused by buildup in private sector debt rather than fiscal profligacy (Jorda et al. 2013). Indeed, there are good arguments on why sovereign debt accelerated the Industrial Revolution in the United Kingdom (Ventura and Voth 2015).

6.2.2 / Need for fiscal expansion

India's present fiscal policy is too tight. The consolidated deficit for 2018-19 is estimated to be 5.9 per cent of GDP, which would be the lowest in the last forty years except for the two boom years of 2006-07 and 2007-08 when economic growth was close to 10 per cent. In fact, as I elaborate below, fiscal policy has been too tight for a few years, given the deleveraging imperatives of the corporate sector, the balance sheet problems of the banking sector, and the backdrop of weak global growth. Thus, fiscal expansion aimed at job creation would also serve to accelerate growth, help the corporate sector repair its balance sheet, and alleviate the non-performing loans in the banking sector.

By 2013, it was clear that the Indian corporate sector was struggling with debt-servicing and that banks were faced with surging non-performing assets (NPA). Capital spending slowed sharply as businesses began to retrench and deleverage. To understand the financial dynamics, it is useful to look at the aggregate flow of funds and sector financial balances. Sector financial balances is a useful framework for understanding the effect of financial flows on balance sheets and the feedback from balance sheets to the real economy. The British economist, Wynne Godley, developed the concept of sector financial balances from the national income and product accounts (Godley and Lavoie 2012). Essentially, the sector financial balance is an accounting identity that relates saving/investment decisions to the net accretion/reduction of financial asset position across the four major sectors of an economy—the private corporate sector, the household sector, the government sector, and the foreign sector. A sector runs a positive financial balance when its savings exceed its investment and vice versa. We can write the sector financial balance in commonly understood terms as follows:

Government Sector Balance + Private Corporate Sector Balance + Household Sector Balance = Current Account Balance

A sector running negative financial balances is either running down its cash balances or running up debt. Usually, cash balances are unimportant over longer periods of time, and negative sector balances are closely related to a build-up in debt in the sector running negative balances. When the corporate sector is trying to reduce its borrowing, by definition, the other domestic sectors have to reduce their net lending or increase their borrowing. In India's case, the adjustment occurred via a reduction in the current account deficit from 2013 to 2016 (that is, reduced borrowing from foreigners), which allowed the corporate sector to sharply reduce its net borrowing from 2012-13 to 2015-16. Since then, the current account deficit has widened again. The government has compounded the problem by cutting the deficit by nearly a percentage point of GDP. The sector financial balance equation shows that a widening current account deficit and a shrinking government deficit together imply a worsening financial balance of the combined corporate and household sector. While household financial savings changed little, corporate sector borrowing picked up. Little wonder that the NPA problem has proved so intractable.

Looking ahead, with the global economy decelerating and global trade volumes contracting, there is not much scope for improvement in exports. Meanwhile, as long as India grows robustly, its imports will tend to rise. Of course, decline in oil prices can mitigate the impact on imports, but further improvements in the current account deficit are unlikely. Under these circumstances, fiscal expansion is necessary to support economic growth while alleviating the financial stresses in the private economy. Fiscal deficits serve two purposes. The first is increasing the demand for goods and services directly purchased by the government or indirectly induced through transfers. Second, it enables the corporate sector to run financial surpluses and rapidly deleverage, thereby strengthening its balance sheet, and eventually positioning it to power the economy.

In fact, another episode from the past may be instructive. From 1998-2002, the corporate sector was dealing with high levels of debt and difficulties

in debt-service. As the sector underwent balance sheet repair, the government ran large fiscal deficits through that period, supporting growth. Government debt as a percentage of GDP rose steadily, peaking in 2004 at 83 per cent for the centre and state governments combined and at about 66 per cent for the central government. Currently, the central government debt is about 48 per cent of GDP, the lowest level since 1984-85. The consolidated public sector debt stands at 68 per cent of GDP, which is near the low end of the range of the last 20 years. Thus, there is scope for significant fiscal expansion.

6.2.3 / Will bigger deficits fuel inflation?

A common fear is that expanding fiscal deficits will kindle inflationary pressures. The big fiscal expansion in the immediate aftermath of the global financial crisis of 2008-09 undoubtedly contributed to the high inflation. Unquestionably, any policy that boosts demand will tend to push up inflation. However, the inflation level is much lower today than it was in 2008-09 and a moderate rise would still keep it well within the Reserve Bank of India's (RBI) target range. Presently, India's Consumer Price Index (CPI) inflation is 2.05 per cent, and Wholesale Price Index (WPI) inflation is running at 2.76 per cent. Core CPI inflation is higher at 5.36 per cent but is still well within the RBI's band. The RBI estimates that a percentage point increase in deficit leads to a 25 basis points increase in WPI inflation (Khundrakpam and Pattanaik 2010). Given the present level of inflation, one should hardly be concerned about the potential increase in inflation caused by larger deficits.

Moreover, the broader economic context suggests that fiscal deficits are unlikely to result in much higher inflation. There are three reasons why inflation is likely to remain subdued. First, oil prices, which have a significant influence on inflation, are subdued. In contrast, in the previous two episodes of rising inflation, oil prices were either rising or historically elevated. In the 1980s, oil prices bottomed in 1986 and increased over the next few years, spiking during the first Gulf War. In the most recent episode of high inflation, oil prices consistently ran above \$100/barrel from early 2011 until mid-2014. Second, food prices,

which also have a large influence on overall inflation in India, have been benign. In contrast, both in the late 1980s and earlier in this decade, weak domestic agricultural output, coupled with surging global food prices, caused soaring food inflation. Third, the strength of the feedback from deficits to inflation depends on the context. Running large deficits in the midst of robust private sector activity is likely to result in overheating as supply constraints and bottlenecks become binding. In the 1980s, and from 2010-12, the private sector was expanding rapidly, and increased government spending caused the economy to bump up against supply constraints, stoking inflation. Currently, there is a capacity glut. For example, capacity utilisation in the manufacturing sector is running well below the early 2011 peak. In short, the conditions that promote rising inflation are currently absent.

6.3 / Managing the balance Of payments

The biggest challenge to any significant fiscal expansion is the stress on the BOP. India runs a current account deficit, which makes it necessary to attract foreign capital to fund the deficit. While the effect of fiscal deficits on BOP is often exaggerated, it is true that fiscal expansion will spur growth as well as imports and will tend to increase the current account deficit. Indirectly, fiscal expansion is likely to incur the disapproval of rating agencies and—since ratings can significantly influence capital flows—exert pressure on the BOP. What can India do to manage the BOP constraint in a world of sluggish international trade and rising trade tensions is something that policymakers need to think deeply about.

6.3.1 / The twin deficits myth

Twin deficits—the idea that fiscal deficits cause current account deficits—is a popular myth that underlies much of the misgivings about fiscal activism. In the Indian context, because unsustainable fiscal expansion has been cited as a major cause the 1991 BOP crisis, exploration of the twin deficit hypothesis is all the more important.

One of the persistent myths about India's 1991 BOP crisis is that the event was caused by profligate government deficits and the consequent buildup in government debt. Most recently, this idea was mooted in Economic Strategy for India report (2018) released by a group of eminent economists. The fact is that most of the evidence for linking the 1991 BOP crisis to fiscal deficits takes the form of hand-waving, *post hoc ergo propter hoc* kind of arguments. The econometric evidence is inconclusive. There are many studies that explore the twin deficits link, for example, Anoruo and Ramchander (1998), Parikh and Rao (2006), and Ramu (2017). Anoruo and Ramchander limit their study to short-term dynamics and come to the surprising conclusion that current account deficits cause fiscal deficits rather than the other way around. In contrast, both Ramu as well as Parikh and Rao, find that fiscal deficits cause current account deficits. The contrasting findings reflect flawed assumptions underlying the papers. In particular, all three papers fail to account for structural breaks in time series on current account deficit scaled to GDP. It is well-known that failure to account for structural breaks can lead to erroneous inference about stationarity (Perron 2005), which all three papers indeed do. Correcting for those flaws, I find that there is no statistically significant link between fiscal and current account deficits in the case of India (Thiruvadhanthai 2018).

Let us focus on the narrative analysis of the economic developments and whether they support the causal mechanisms of the twin deficit hypothesis. At its heart, the twin deficit hypothesis stems from an accounting identity:

$$\text{Current Account Deficit (CAD)} = \text{Fiscal Deficit (FD)} + \text{Domestic Private Sector Deficit (PD)}^3$$

Since this is an identity—true by definition—if fiscal deficits increase, then CAD must increase if PD remains constant. The second if is a big if. Nonetheless, it is not hard to imagine that expansionary fiscal policy stokes domestic demand, which in turn spur imports and causes the CAD to worsen. That argument is unexceptionable. However, the data do not show that this channel was crucial in causing the 1991 crisis. Imports scaled to GDP did not increase much in the late 1980s. Only when the Iraq War started and oil prices jumped, did imports surge in 1990.

The crisis was triggered by the instability of capital flows. Political uncertainty fueled by unstable governments from 1989 to 1991 caused capital to flow out. Remittances (which are technically part of the current account) slowed, non-resident Indians began to withdraw money, and external commercial borrowings became harder to obtain. One could argue that the worsening government deficits, at least partly caused the crisis in investor confidence. While that may be true, it shows that the government deficit has an influence only because investors are primed to believe that it is important rather than through any direct economic channel.

6.3.2 / Rating agencies

While the 2008-09 crisis damaged the worldwide credibility of the rating agencies, it did not diminish their influence commensurately. In particular, their ratings continue to hold sway over policymakers in developing countries. The influence of rating agencies is crucial because their framework emphasises fiscal sustainability and government debt-to-GDP ratio. This, in turn, is partly due to the fact that their primary concern is inflation and the resulting impact on returns to financial investors. The rating agencies' framework implicitly informs India's Fiscal Responsibility and Budget Management Act (FRBM) and the N.K. Singh committee's recommendations for targeting a 60 per cent debt-to-GDP ratio. Thus, the specter of downgrade or negative watch by rating agencies is a major impediment to any meaningful fiscal expansion.

In reality, the rating agency framework is flawed and following their prescriptions is likely to be self-defeating. Jayadev (2017) offers a strong critique of the N.K. Singh committee report's debt targets. Following the Reinhart-Rogoff (Cassidy 2013) fiasco, the empirical utility of debt targets has been widely questioned. As I have argued in the previous section, India has managed high debt levels for nearly three decades without apparently any impact on economic growth.

It is also worth noting that in 2004, on the eve of India's greatest decade of economic growth, public sector debt scaled to GDP was at a record level. More importantly, when the private sector is struggling with debt and the global economic conditions are not conducive

for growing exports, trying to tighten fiscal policy is counterproductive. It will weaken economic growth, aggravate the debt problems in the private sector, and increase banking sector problems. These, in turn, will cause revenues to weaken and add to the burden on the exchequer through the need to recapitalise banks. These dynamics played out in Europe in the last decade. Even in India, despite keeping a tight leash on deficits, the overall debt-to-GDP ratio has declined only modestly in the last few years mainly because growth has been moderate. *Robust economic growth is the best way to overcome debt problems.*

Furthermore, empirical research on the drivers of capital inflows into emerging markets also calls into question the validity of fiscal sustainability metrics. The major country-specific factors influencing capital inflows appear to be current account deficit, capital controls or lack thereof, and exchange rates (Cerutti et al. 2015)—debt-to-GDP ratio is conspicuously absent as an important factor. Interestingly, the study finds that when global financial conditions become less conducive, more 'virtuous' countries, as in those with low public debt, are not any less affected. In other words, assuaging rating agencies by curbing the government debt-to-GDP ratio will not help a country when global financial conditions turn adverse. On the other hand, as long as the current account deficit is relatively stable, fiscal expansion, by spurring growth, will tend to attract capital inflows. India has been a sought after destination for international capital largely because it is one of the few countries that offer prospects of robust growth in a world of low growth.

While rating agency decisions are likely to have some impact on capital inflows into India, the way forward is to shift the terms of the debate. Instead of setting fiscal policy based on rating agency guidelines, India's policymakers should take the lead in challenging the framework, robustly arguing India's long-term record of managing debt, external and internal, while fostering strong growth and moderate inflation. At any rate, rating agency decisions may have a short-term impact, but they are unlikely to alter capital flows in the long term. India is one of the few major economies in the world that is still growing robustly and has a long track record of providing solid returns on portfolio and direct investment.

6.3.3 / The long-term BOP constraint

The biggest challenge India faces in growing robustly, with or without fiscal expansion, is the challenging global economic environment and consequent sluggish growth in exports. Anemic exports combined with strong domestic growth tending to result in higher imports, will cause the trade deficit to widen and exert pressure on the BOP. Rising trade deficits will need to be balanced by higher capital inflows, which will increase the vulnerability to unfavorable developments in global financial conditions. Alternatively, imports have to be lowered. That is, monetary and fiscal policies will have to tighten, bringing down domestic growth. Escalating trade tensions and a rollback of globalisation would only make matters worse. While India needs to find ways to grow its exports more rapidly, it is important to be realistic about the prospects, given the global backdrop. Thus, India's policymakers need to craft a proactive, comprehensive policy to overcome the BOP constraint on growth.

After averaging well over double-digit growth in dollar terms from 1990 through 2012, India's merchandise exports have barely grown in the last five years. In real terms, India's exports of goods and services are growing at a 5 per cent rate. It is not as if India is a laggard. India's export growth, both in the dollar and real terms has largely tracked that of the broader emerging market group. Thus, India's export performance does not reflect India-specific problems but global economic weakness and the plateauing of the benefits of globalisation.

Despite tepid export growth, India has managed to grow its economy robustly in the past five years. The steep decline in oil prices has been a major factor in keeping a lid on import growth. Gold imports too have been weaker. However, India's other imports have grown strongly, largely the result of increasingly skewed income and wealth (Kumar 2018). Upper-income consumption tends to be much more import-intensive—foreign education and vacations, high-end smartphones, cars, and so forth—and increases the import elasticity of growth. Although fiscal expansion directed at the bottom of the pyramid will dampen the import elasticity of growth, the overall boost to growth will still tend to exert pressure on the BOP.

At this juncture, India needs more comprehensive import substitution policies that seek to manage the BOP situation. Thomas (2019) discusses the continued relevance of industrial policy today for job creation. Industrial policy and import substitution in the Indian context brings back bad memories of planning and shortages. We can learn from the past and not make the same mistakes, but we do not have the option of doing nothing.

6.4 / Policies for employment generation

There is great scope for public policy to vastly enhance job creation and address India's myriad needs. Broadly, government policies can help:

- 1) facilitate private sector job creation while addressing the chronic skills shortage,
- 2) provide financing to startups that are directed at the bottom of the pyramid,
- 3) expand MGNREGA to address the country's ecological challenges while finding gainful employment for unskilled workers, and
- 4) train and deploy workers to conserve heritage structures and thereby promote tourism.

6.4.1 / Facilitating on-the-job training

India has a huge youth population, which is supposed to deliver the so-called demographic dividend. Yet, India also suffers from a chronic and pervasive skills shortage. A 2014 report from the OECD found that 'employer surveys indicate skills shortages in ICT, financial services, tourism, retail, and skill-intensive manufacturing: in 2013, 61 per cent of India's employers reported recruitment difficulties. These shortages, aggravated by a shortage of qualified trainers and the low willingness of employers to pay skills premia, have forced graduates into jobs unrelated to their training.' (OECD Report 2014).

India has a national skills development programme under the aegis of the National Skills Development Corporation (NSDC), a public-private partnership. However, both the design of the programmes and the funding leave a lot to be desired. Many of the NSDC programmes replicate classroom-type training with

certification issued upon completion. Unsurprisingly, NSDC's performance has been underwhelming, falling short of the targets for skilling as well in the job finding rates post skilling (Report of the Committee for the Rationalization and Optimization of the Sector Skill Councils 2016). Moreover, some of the so-called training institutes have turned out to be engaging in fraudulent practices. While NSDC is an important endeavor, much greater effort is needed to bridge the employability gap.

The key to employment generation is to recognise that on-the-job training provides one of the best and most cost-effective ways of imparting occupational skills and enhancing employability. A growing body of evidence indicates that work-based learning—such as apprenticeships—offers one of the best ways to build skills that are valued in the marketplace (Lerman 2018). Switzerland and Germany both have extensive apprenticeship programmes. In the former, about 70 per cent of the youth take up an apprenticeship and approximately 95 per cent of 25-year olds have acquired their degrees while undergoing an apprenticeship. Of course, it may not be possible to replicate the Swiss and German models in India, given the small size of the formal sector in India in relation to the size of the workforce. However, there are programmes, such as internships that are less extensive but can nevertheless be effective (U.S. Department of Labor 2014). On-the-job-training is a critical mechanism for improving both the supply and demand sides of the labour market. Combining classroom learning with real-world application reinforces each. Moreover, employers are more likely to invest and hire when they can rely on the supply of skilled labour.

However, the challenge for apprenticeships and internships is that employers worldwide have become increasingly reluctant to expend resources on training (Taylor 2015), reflecting competitive pressures in the era of globalisation. Indian businesses too are not immune to such pressures. Hence, substantial government support in terms of subsidising on-the-job training programmes would make it more likely that businesses offer such opportunities. With an industry partnership, the government can promote apprenticeship/internship programmes that help students in colleges and vocational courses to obtain valuable experience and skills.

6.4.2 / Incubating start-ups aimed at the bottom of the pyramid

The government of India already has a programme called 'Startup India' to incubate new and innovative businesses. However, the startup landscape in India is dominated by applications that are copycats of western models—neither innovative nor necessarily addressed towards the local needs. The problem is that businesses aimed at innovative solutions to local problems are likely to be perceived as risky by venture capitalists as well as budding entrepreneurs. Yet, such innovations are vital both for solving India's unique problems but also fostering labour-intensive development.

In 2015, two young entrepreneurs, struck by the filth of the Ganga River and by the copious amounts of temple flowers being dumped into the river, wondered if the flowers could be recycled. Out of this, the venture Helpusgreen was born. The firm collects used flowers from temples and converts them into artisanal products such as incense sticks and handmade paper products. The entire process is labour intensive, from collecting the flowers to processing them. The startup thus addresses India's environmental challenge with a labour-intensive solution while leveraging technology to reach a broad market.

Given that private capital for such ventures is unlikely to be forthcoming, the government has to play a bigger role. As venture capitalist William Janeway has argued, innovation is either fostered by bubbles, monopolies, or the state (Janeway 2012). In the United States, the government incubated the computer industry for nearly two decades before commercial application gained a foothold. Mariana Mazzucato expounds on a similar theme in her book (Mazzucato 2013), 'The Entrepreneurial State'. If a million Helpusgreens bloomed, India would go a long way in addressing its multifarious problems while creating gainful employment.

Apart from the social impact and other such externalities, solutions aimed at the bottom of the pyramid are more likely to find applications in other developing economies, thereby offering the scalability that would make such ventures eventually attractive to private sector financiers.

6.4.3 / Expanding MGNREGA

Since its inception in 2006, the MGNREGA programme has been heavily criticised. Yet, studies have shown that the programme has increased employment, directly and indirectly, generated more income for rural households, promoted gender parity, and sustainable development, and created assets (Freud 2015). A study conducted by the Indian Institute of Science found that, 'Implementation of MGNREGA works such as water conservation and harvesting works, drought proofing, irrigation provisioning, and improvement works, and renovation of traditional water bodies have contributed to improved groundwater levels, increased water availability for irrigation, increased area irrigated by ground and surface water sources and finally improved drinking water availability for humans and livestock.' (Indian Institute of Science 2013).

Despite MGNREGA's multifarious benefits, the programme has been hampered by inadequate funding since inception. Moreover, adjusting for inflation, the allocations for MGNREGA have declined over the years. As such, while the act guarantees 100 working days for those seeking work, the average days of work provided has been consistently below 50. This is hardly surprising given that the current allocation to MGNREGA is less than 0.3 per cent of GDP as opposed to the 1.7 per cent that the World Bank estimated the programme would require to be fully funded. MGNREGA can be expanded substantially to create more jobs and address ecological challenges on a war-footing. State of Working India 2019 also proposes an urban employment guarantee programme that tries to address employment and ecology problems in small towns (Basole et al. 2019). Moreover, the spillover effects of a substantially enhanced MGNREGA as well as a job guarantee programme for urban India, are likely to create more jobs indirectly. Although the jobs directly created by MGNREGA are not themselves skilled work, by boosting the rural economy, the programme fosters demand for products and services that can, in turn, create skilled jobs in finance, telecommunication, and information technology services.

6.4.4 / Preservation of heritage structures and promoting tourism

India has countless heritage sites and the vast majority of them are in a state of disrepair. The proper conservation and maintenance of these sites require far greater manpower than currently devoted to the task. As a result, many historical landmarks and structures are encroached upon, defaced, and languish in anonymity. The restoration and maintenance of these sites can directly provide employment. In addition, these sites can become major tourism destinations, providing indirect employment. For example, the number of visitors to Humayun's Tomb after restoration work has gone up by 1000 per cent.

New York City, with a history of about 300 years, has nearly double the protected heritage buildings of India, a vast country with millennia of history. Documenting and restoring India's heritage sites will require skilled as well as unskilled workers. Currently, the Archaeological Survey of India is woefully undermanned. An internship/apprenticeship programme can draw upon India's large college-going population for the skilled labour, thereby also providing them work experience. Not only are many sites neglected, even the ones that are relatively well-maintained lack an adequate appreciation of the historical significance. Thus, there is scope for not only restoring the sites but also creating awareness about the cultural heritage. Training tour guides can help cultivate awareness about the heritage, bring in tourists, and boost the local communities economically.

6.5 / Conclusion

While economic growth has allowed India to bring down poverty rates dramatically, especially extreme poverty, growth has not translated into jobs. Given India's burgeoning youth population, there is an urgent need to craft a government policy, adequately supported by the budgetary resources, to promote robust employment generation. Ultimately, the best remedy for alleviating poverty is enough jobs and enough high-quality jobs.

The central government has enough fiscal space to adopt a robust employment generation policy. Even a doubling in the outlay on MGNREGA would hardly be profligate. Moreover, the high potential multiplier of such outlays is likely to result in robust growth and tax revenues, thereby limiting the deficit. While expansionary fiscal consolidation has been debunked by global and Indian experience over the past 10 years, fiscal consolidation via fiscal expansion has a sound basis, especially in the current context.

Endnotes

1. The stark difference between the US and Germany in job losses during the 2008-09 crisis—when large wage subsidies in Germany muted the employment decline—shows that fiscal and public policy has an important role in employment generation (Jacobs 2012).
2. The combined deficits of the central and state governments, departmental enterprises, and public sector corporations; for the National Accounts data, I define deficits as gross investment less gross saving.
3. This identity is a restatement of the sector financial balance identity in section 6.2.2.

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Azim Premji University

Pixel Park, PES Campus, Electronic City, Hosur Road
Bangalore 560100

080-6614 5136

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