Employment in India

Structural problems

Prasanth Regy

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Author: Prasanth Regy

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Acronyms

GDP	Gross Domestic Product	**UR**	Unemployment Rate
LFPR	Labour Force Participation Rate	**WPR**	Worker population Ratio
TFP	Total Factor Productivity		

Introduction

There are structural problems in the Indian economy, which have created a situation where the rate of economic growth continues to be fairly high, but few new jobs are being created. This has led to a situation of *jobless growth*. This is an immediate and vitally important challenge.

But lack of jobs is only one aspect of the problem. The quality of jobs is poor, and informality is increasing. Women are dropping out of the labour force. Our productivity continues to be very low compared to other economies.

This set of circumstances has led to a gap: a few Indians who have been endowed with skills, wealth, and health, have thrived. Others, the vast majority, increasingly find themselves without productive and dependable employment. Often, even the jobs which they do have are being automated and replaced. This leads not just to low income, but also to frustration, hopelessness, and distrust in the state. This may manifest through phenomena as diverse as farmer suicides, more demands for reservations, and communal/caste violence.
In this document, we study the structural issues relating to employment and growth in India, and propose policy steps to create large numbers of good jobs.[1]

1.1 Definitions

Unfortunately, discussions on this topic are often marred not just by lack of good data, but also by inconsistent definitions amongst various sources. To prevent confusion, I set out a few definitions here.

Gross Domestic Product GDP	=	Y
Total population of the country	=	N
People of working age (15 years +)	=	A
Employed people	=	E
Unemployed people	=	U

- Labour Force Participation Rate (LFPR) is the fraction of the population of working age who are in the labour force.

$$LFPR = \frac{E + U}{A}$$

- Worker population Ratio (WPR) is the fraction of the population of working age who are employed.

$$WPR = \frac{E}{A}$$

- Unemployment Rate (UR) is the fraction of the labour force who are unemployed.

$$UR = \frac{U}{E + U}$$

1.2 Framework

For any economy, the Gross Domestic Product (GDP) per capita is:

$$\text{GDP per capita} = \frac{Y}{N} = \frac{Y}{E} \cdot \frac{E}{A} \cdot \frac{A}{N}$$

1By a *good job*, we mean a job characterised by formalised terms of employment, reasonable stability, safe working conditions, the right to unionize, and a pay rate that enables at least a lower middle-class lifestyle.

where :
Y/E = output per worker
E/A = worker population ratio
A/N = working-age population ratio

Thus, the per capita value added can be decomposed into the employment rate, the working age population ratio, and the productivity (output per worker).[2] In India, there are issues with each of these. The rate of employment has been falling. The productivity is low and rising slowly. The fraction of the population that is of working age is increasing and will be high till about 2040, but this demographic dividend will be foregone if adequate productive employment is not available.

This article is structured as follows. First, in section 2, we examine if it is true that India's growth has been jobless, and the reasons why it has been so. In section 3, we consider why the employment rate has been decreasing. The next section, section 4, is on the demographic dividend: what it is, and why it is essential we make full use of it. In section 5, we consider labour productivity and how it can be increased. In section 6, we present an initial set of policy proposals aimed at improving the employment situation. The final section concludes.

2 Jobless Growth

Economic growth is usually associated with growth in employment. However, there is no guarantee that economic growth will be labour intensive, nor that productivity gains will be shared by all workers.[3]

In India, we have been seeing a situation where economic growth has been reasonably strong, but enough new jobs have not been created. The economy needs to create over 5 million jobs per year just to maintain the current employment rate.[4] India's GDP has been growing at a rate of 7.3% over the past four years,[5] one of the highest growth rates in the world. This growth has created jobs, but the increase in employment has not been commensurate with the increase in the labour force. During some intervals, there has even been a decline in jobs.[6] This situation of jobless growth has led to high unemployment and increasing inequality.

The divergence between growth and employment is clearly visible if we look at the *employment elasticity*. This is the percentage change in employment when the output rises by one percentage point. Figure 1 shows that the employment elasticity has been declining over the past several decades. Now one percentage point growth in GDP increases employment by less than 0.1 percentage points.

The primary reason for the decline in the aggregate employment elasticity has been the decline in the employment elasticity of agriculture.[7] There has been a decline in labour-intensity in the organized manufacturing sector. Further, sectors that are capital intensive have been growing faster relative to the labour intensive sectors.[8]

2 World Bank 2009.

3 Merotto, Weber, and Aterido 2018.

4 Assuming that the population of India 5 years of age and above grows at about 14 million per year over the next few years (UNDESA 2017a), and the LFPR continues to be 37% (Jha 2019a)

5 IMF 2018.

6 Abraham (2017) uses the Labour Bureau's Annual Employment-Unemployment Survey (Labour Bureau 2016) to reveal a decline in total employment from 446.39 million (2013-14) to 442.65 million (2015-16), a drop of 3.74 million jobs.

7 Basu and D. Das 2015.

8 Papola 2012.

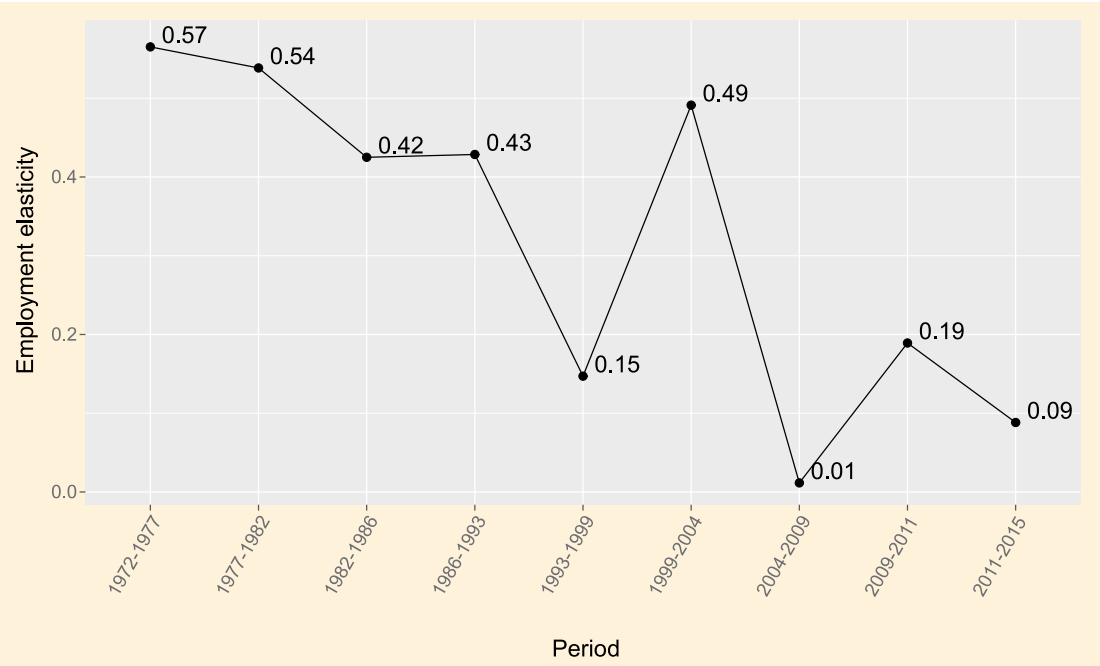


Figure 1: Elasticity of employment across time periods. Sources: Basole et al. (2018) and Misra and Suresh (2014)

Practices such as using contract workers, as well as leveraging capital-intensive technologies have put workers on the defensive.[9] This has occurred due to a fall in the price of capital relative to that of labour.

The cost of capital equipment has been driven low by trade reforms in capital goods,[10] while labour has become relatively costly because of a large number of laws that govern aspects such as industrial relations, wages, and occupational safety.

This phenomenon explains the *premature de-industrialisation*[11] taking place in India. Premature de-industrialisation refers to a situation where manufacturing begins to shrink at income levels that are a fraction of those at which the advanced economies started to de-industrialize. All advanced countries have been through a process of de-industrialisation, in which the share of manufacturing shrinks, and the share of services expands. However, India has turned into a service economy without having gone through the usual experience of industrialisation that most developed countries have. Services may not be able to absorb our large population of unskilled workers.[12]

This explains the fact that wages and productivity are diverging. Wage growth has been slower than the growth in productivity. For the period 1993–94 to 2011–12, while the per-capita GDP was growing at 4.7%,[13]

9 D'Costa 2017.

10 Sen and D. K. Das 2014.

11 Rodrik 2015.

12 Amirapu and Subramanian 2015.

13 WB 2019a.

the average annual growth rate in real wages for all workers was 3.7%.[14]

3 Decreasing employment

The employment of the country can be measured by the worker-population ratio, WPR. The worker-population ratio is a function of the LFPR and the unemployment rate, UR.[15] The lower the LFPR and the higher the unemployment rate, the lower the worker-population ratio. Our WPR has been declining steadily. Considering the entire population, it was 42.0% in 2004-05, 39.2% in 2009-10, and 38.6% in 2011-12.[16] Since then, the LFPR has further declined and the unemployment rate has gone up, so the WPR will be even lesser now.

3.1 Increasing unemployment

India, like many other low-income countries, suers from considerable structural under-employment. The large agricultural sector usually serves as a reservoir of under-employed labour, keeping open unemployment low. However, in the recent past, this trend has changed. The rate of unemployment in India was 2.2% in 2011-12, but it is reported to have shot up to 6.1% in 2017-18, the highest in four decades.[17]

3.2 Low labour force participation

Compounding this high unemployment is the low participation in the labour force. The LFPR fell sharply from 43% in 2004-05 to 36.9% in 2017-18.[18] Considering only the population that is 15 years and above, the LFPR was 49.8% in 2017-18, falling from 55.9% in 2011-12.[19]

There are two disturbing angles related to the sharp drop in LFPR: firstly, the number of Not in Education, Employment or Training (NEET) youth is sharply increasing. As open unemployment increases, more people in the prime ages of their working life get disheartened and drop out of the labour market altogether. The second is the decline in the LFPR of women, which has been an ongoing trend.

In countries that are very poor, the LFPR is high—few can afford to stay out of the labour force. As countries become more prosperous, more and more people of working age start withdrawing from the labour force. This withdrawal may be for further education. Often, among women, a part of this withdrawal may be for domestic duties. As incomes rise further, a larger proportion of women are seen to work again. This leads to a U-shaped relationship between female LFPR and economic development (as approximated by GDP per capita).[20]

Figure 2 displays this curve, highlighting the position of India.[21] The figure also contain the quadratic best-t curve. The female LFPR for India is far below the fitted curve.[22] This supports the argument that the low LFPR in India is largely attributable to the drop of LFPR amongst women.[23]

14 ILO 2018, Table 4.

15 They are related as:WPR = LFPR¹1 UR°

16 NSSO 2014, Statement 5.2.

17 This is across all age groups. See Jha 2019b.

18 All age groups. See Mehrotra 2019.

19 Jha 2019a.

20 This was perhaps rst noted in India by J. N. Sinha (1967), but has since been seen widely (Mammen and Paxson 2000; Goldin 1994).

21 The data is sourced from WB (2019b) and WB (2019c), and corresponds to 2017.

22 Some of the reasons for this are explored in Mehrotra and S. Sinha 2017.

23Beyer 2018.

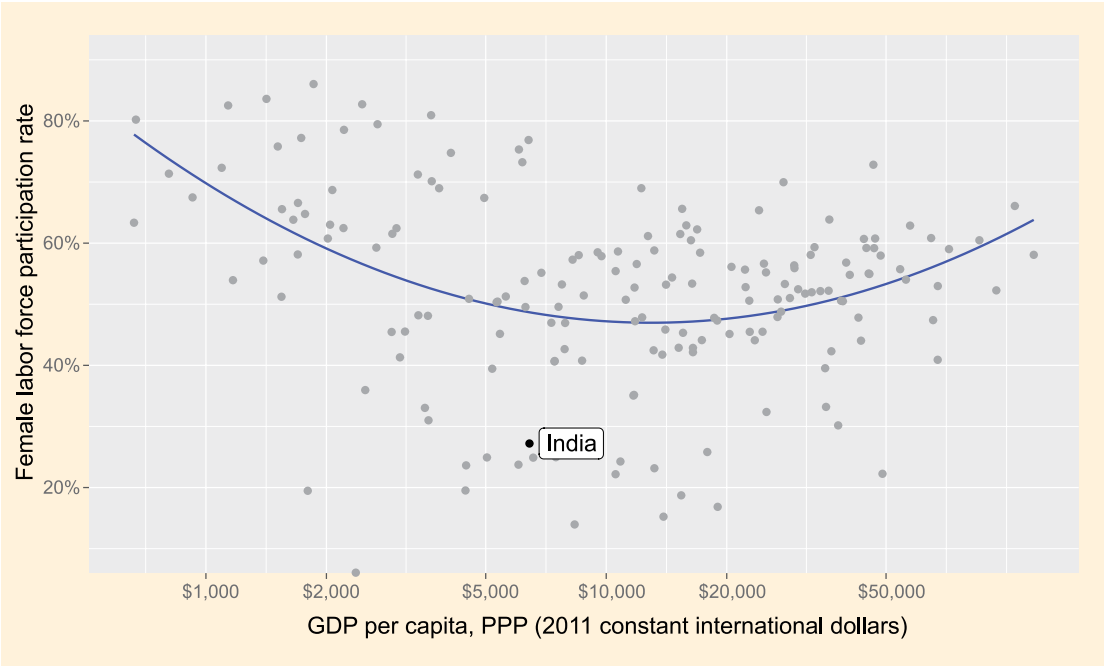


Figure 2: Female LFPR versus per capita GDP across countries.

3.3 Labour laws

Labour laws can impede the creation of jobs.[24] India's labour laws have traditionally privileged the rights of the employees against the opportunities of the unemployed. For instance, firms above a certain size cut-off need to get the approval of the government to lay-off even a single employee. There has been a shift in favour of skilled labour as against unskilled labour, and in favour of capital as against labour. This shift is driven by restrictive domestic labour regulations as well as by trade openness.[25] Some states are now trying to take small steps to change this situation so as to encourage growth and employment.[26]

3.4 Inadequate skills

A commonly cited reason for low job creation in India is the lack of adequately skilled workers. The educational system and vocational training system are not able to match the skill requirements of the labour markets. The vast majority of informal sector workers have no access to formal training, and such trainings as are provided are too short and of inadequate depth.[27]

3.5 Global trade

Trade can enhance prosperity by enabling countries to focus on areas where they have a comparative advantage or economies of scale.[28] However, trade is by no means an unmitigated good—it creates winners and losers. Trade can cause higher unemployment,

24 In this connection, Besley and Burgess (2004) had a strong impact. However, its conclusions have been challenged by Karak and Basu (2017) and Storm (2019).

25 Ramaswamy 2008.

26 MoLE 2015.

27 NCAER 2018.

28 Krugman 1987.

lower labour force participation, and reduced wages in local markets.[29]

Trade openness has played a key role in changing employment patterns in India.

- Goods previously produced here may now be imported, leading to loss of manufacturing and related jobs;
- Where production continues here, the labour may be replaced with imported capital goods, leading to loss of jobs;
- The remaining workers are subject to pressure and loss of negotiating power, due to the overhanging threat of being replaced by machines. This leads to poor quality jobs and informalisation.[30]

3.6 Enterprise size

There are several policies that incentivise fims to stay small, and discourage the entry of large new firms. Firms are often observed to use contract workers (secondary workers and labour outsourcing) to stay below the legal threshold size to escape labour regulations.[31] There is also evidence that tax regulations lead to small sizes.[32] In the past, we have also had reservations for small-scale enterprises in many sectors, supposedly for the protection of employment in these small enterprises.

However, there is significant evidence to prove that the situation might actually be the reverse. Employment is created in larger firms, and such firms are more likely to pay higher wages, create more investment, and be more productive.[33] When the small-scale reservations mentioned above were removed, the entry of new large enterprises, as well as the growth of establishments that were previously constrained by limits on their stock of fixed assets, led to an increase in output, employment, and investment.[34]

4 Demographic Dividend

At some point in the demographic development of any country, it reaches a stage where the growth in the working-age population is greater than the growth in the total population. At this point, the country experiences what is called the *demographic dividend*. According to United Nations Population Fund, "The demographic dividend is the economic growth potential that can result from shifts in a population's age structure, mainly when the share of the working-age population (15 to 64) is larger than the non-working-age share of the population (14 and younger, and 65 and older)." With fewer dependents, and the largest section of the population in the working age, it is possible to generate more incomes, more savings, more capital per worker, and more growth.

India is going through this stage right now. As a consequence of our demographic dividend, the dependency ratio—the ratio of the non-working age population to the working-age population—is decreasing in India. Figure 3 illustrates how it will decrease till about 2040, after which it will again increase. This is India's opportunity to achieve high growth and inclusive prosperity.

The benefits of this demographic dividend will be realised only if we are able to provide the additional labour force with gainful

29 Autor, Dorn, and Hanson 2013.

30 Amit and Nayanjyoti 2018.

31 Ramaswamy 2013.

32 Ramaswamy 2016.

33 La Porta and Shleifer 2008; Hsieh and Klenow 2009.

34 Martin, Nataraj, and Harrison 2017.

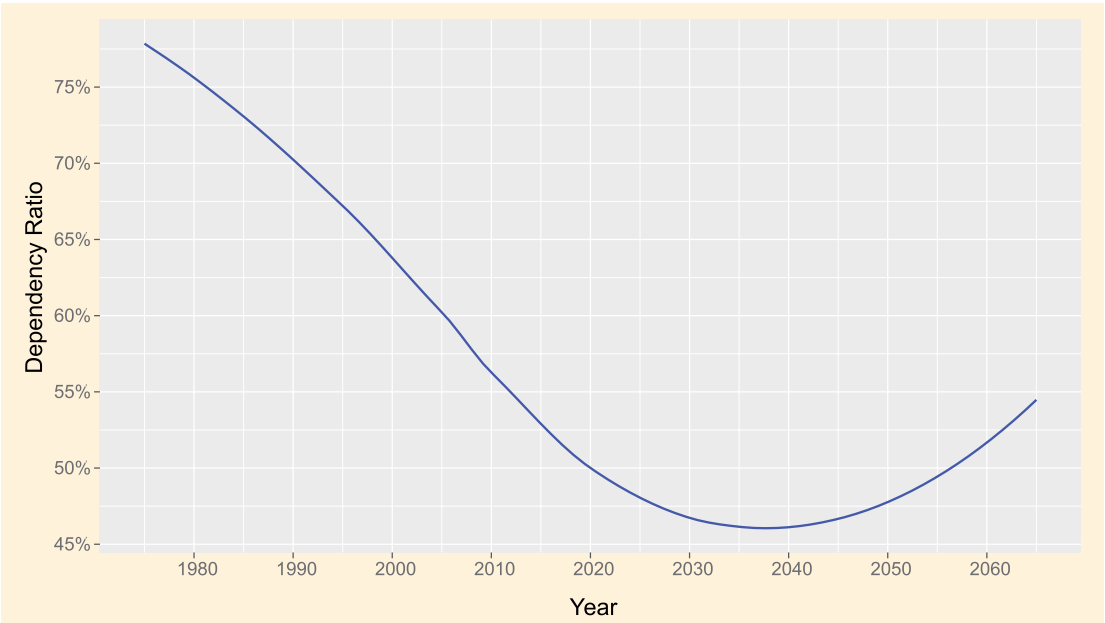


Figure 3: India's demographic dividend. Source: UNDESA (2017b)

jobs. If, instead, unemployment increases, the outcome may be worse than just the loss of an opportunity—large numbers of young people with no jobs and poor prospects could be associated with outbreaks of violence.[35]

5 Labour productivity

High labour productivity (defined as output per employed person) is critical to achieving prosperity. India's labour productivity has been growing very slowly.

The growth of 4.3% posted in 2017 was much lower than what is required to sustain high GDP growth.[36]

Labour productivity is a function of human capital formation (education, skills, etc), the capital available (machinery, equipment) for each worker, and increase the overall efficiency of production embodied in Total Factor Productivity (TFP). As mentioned earlier, over the past several years, there has been significant policy focus on increasing human capital through education, training and skilling. We have also seen above that capital deepening is accelerating. The TFP channel for increasing labour productivity depends on things like public capacity, institutional quality, and organisational methods.

In India, the informal sector is a large part of the economy and continues to persist. The productivity in the informal sector is declining.[37] Informalisation is increasing even in the formal sector. Firms are often observed to use contract workers (secondary workers and labour outsourcing) to stay below the legal threshold size to escape labour regulations.[38] There is also evidence that tax

35 For instance, see Benmelech, Berrebi, and Klor 2010.

36 Chakraborty et al. 2018.

37 Maiti and Sen 2010.

38 Ramaswamy 2013.

regulations lead to small firm sizes.[39] This informalisation of workers leads to poorer job quality.[40] Smaller firms do not grow or generate employment, while the larger firms are much more productive, and employ far more people.[41]

6 Policy proposals

India has tried to tackle unemployment in many ways. We have a infrastructure of employment exchanges, large but of questionable utility. We have tried to enhance human capital through skill development. Many jobs have been generated through large-scale public works. Other policy interventions have include increasing labour mobility through better roads and transport systems, as well as promoting urbanisation. While these continue to be important, they alone have not been able to solve the problem. In the sections below, some more concrete steps are suggested:

6.1 Natural resource regeneration

It is estimated that about 97 million hectares of land in India are degraded. This amounts to 29% of the total land area of the country. This is due to a variety of reasons, including wind erosion, water erosion, waterlogging, salinity, alkalinity, and vegetal degradation. This degradation costs us 2.5% of the GDP every year.[42]

In addition, water sources are also increasingly stressed.[43] Surface water resources are scarce, and the groundwater in many parts of the country are either over-exploited or critical. Overuse of water for irrigation leads to water-logging and increased salinity, rendering land unfit for cultivation.[44]

The problem of natural resource degradation is posing a serious threat to agricultural production. Ultimately, such degradation can lead to massive unemployment, migration of labour, regional and intergenerational disparities, and ecological imbalance.

In addition to this, India is severely affected by climate change, and the effects are predicted to worsen over the next several decades. The impacts on the country will include higher temperature, changing rainfall patterns, more extreme climate events, sea-level rise, and further desertication.[45]

These negative impacts can be countered by a large-scale public program to restore degraded natural resources and to adapt to climate change. Wind erosion can be controlled by sand dune stabilization and shelter belt plantation. Grasses and small shrubs can be grown in degraded pastures, increasing the carrying capacity of livestock. In hilly areas, mechanical soil and water conservation measures can help control soil erosion. These include bunding, contour bunds, and water harvesting ponds. Integrated watershed management involves soil and water conservation coupled with suitable crop management. Activities such as the construction of check dams along gullies, bench terracing, contour bunding, land leveling and planting of grasses, can increase percolation of water, decrease runo, and improve water availability. This will also help to counter the increased variability of

39 Ramaswamy 2016.

40 Kapoor and Krishnapriya 2017.

41 La Porta and Shleifer 2008; Hsieh and Klenow 2009.

42 Sethi 2018.

43 SAC 2016.

44 Hooda 2013.

45 Mani et al. 2018.

the rain due to climate change. Water-logging and soil salinity can be countered by lining the irrigation network in order to reduce the seepage of water from the canals.[46]

All this will require a large amount of labour. Thus, this would not just create large-scale low-skilled employment in the short-term, but also preserve and increase the productivity of land, thereby protecting the livelihoods of millions of people. Once the land is regenerated, the increase in the fertility of the land, in water availability, and in cropped area, can create many more long-term jobs.

6.2 Labour laws

As discussed earlier, the labour laws in India suppress employment. They protects the small number of formally employed workers, while possibly harming those who are unemployed or informally employed. In a competitive world with sudden and unpredictable market fluctuations, firms need to adapt quickly, changing their size, their production, technology, and other aspects of their business as required to survive and prosper. The fear of being stuck with workers even if the business is not doing well dissuades entrepreneurs from employing them in the first place.

The consequence is that we are unable to take advantage of our abundant labour, harming worker and factory-owner alike. This leads to an artificially high capital labour ratio. Our firms are unable to build up scale, which is essential for achieving competitiveness.

Comparisons with peer countries shows that India has some of the most stringent and restrictive labour laws in the world.[47] Reform of these laws is essential. While a few states have attempted to loosen the restrictions, much more needs to be done. One possibility worth exploring is to move this power from the Constitution's Concurrent List to the State List. This will enable each state to create laws that suit their particular requirements.

6.3 Urbanisation and Samarth Zilla

Over the past few years, there has been a policy push to promote a few large cities, without sufficient attention to the hinterland of those cities. This approach is showing its flaws. A more holistic regional development approach is required, which promotes the development of the rural and peri-urban areas of a district along with the urban areas.[48]

India is still largely rural, and it requires many more small towns, along with dynamic rural areas. The creation of roads, bridges, buildings, and houses in these towns and villages can generate a large number of jobs for unskilled, semiskilled, and skilled labourers.[49]

6.4 Industrial and trade policy

As discussed in Section 3.5, openness to trade has brought losses as well as gains to India. Trade has led to growth and prosperity, especially among the well educated and skilled members of the workforce. But trade has also led to poor outcomes among many vulnerable sections.

The potential of trade to create not just winners but also losers was always well

46 Bhattacharyya et al. 2015.

47 EXIM Bank 2013.

48 Ahluwalia 2015; Mahajan and Kalia 2019.

49 Pai 2019.

known. In theory, the aggregate gains would be greater than the losses, and the losers could be compensated from the gains, leaving everybody at least better off. However, in practice, none of this happened. We have paid the price of trade, but we have not exploited the employment-related benefits that could be derived from it. Neither have we have done enough to provide new opportunities to those who lost their jobs due to trade with countries such as China.

Since India has abundant low-skilled labour, we have a natural advantage in manufacturing. And given that the terms of trade are changing—incomes in China are increasing, and many bottlenecks in India are easing—attempts should be made to use industrial and trade policy as a tool to attract more jobs and production to India. This can offset lost employment and generate new jobs. This could be augmented by subsidised skill training for workers for whom there is a guaranteed demand.

6.5 Public services

There are many services that the private sector cannot provide. Only a government can provide law and order, public health, clean environment, and justice, which are all public goods. India does not have a good track record of delivering these services to the public.

A concentrated and improved effort to deliver these services can help increase employment significantly. Many states in India have recognised the need for these services, but have not filled these vacancies. There are about 25 lakh vacancies currently across the states of the country, including police, teachers, health workers, etc, as seen in Table 1.

Table 1: Government Vacancies.

Jobs	Number
Teachers	907,585
Health	892,360
Police	443,524
Railways	261,270
Total	**2,504,739**

Sources: Teachers: MoHRD (2018, Table 56), Police: BPRD (2017, Table 3.3), Railways: Ministry of Railways (2018)

Providing these services will not just increase employment, it will also affect the labour market positively in other ways. These posts provide services to the public and can improve the quality of governance. The improvement in health will lead to higher productivity. Better law and order, and improved delivery of justice, will lead to greater economic activity. The respective governments should initiate the process of filling these posts immediately and aim to ll them up within six months.

6.6 Job creation incentive

When an unemployed person gets a job, the effect on the employee is not just that of an increase in income. A job is also associated with feelings of security, pride, and self-sufficiency. Nor is the effect of the job restricted to just the employer and the employee. There is a wider social benefit to it, including greater aggregate social and human capital, technical and skill spillovers and lesser requirement for social support.

Further, if society values reducing poverty and inequality, sustainable jobs for poor people will have a social externality. Jobs for young men can contribute to social stability, and reduce criminality and violence.[50]

50 Blattman and Annan 2016; Benmelech, Berrebi, and Klor 2010.

Employment of young women can also produce externalities by facilitating human capital accumulation in their children. Thus, there can be significant positive externalities to creating jobs.[51]

So far, the attempt has been to increase employment by promoting economic growth and by complementary steps such as skill development, infrastructure development, and urbanisation. In a sense, these are trickle-down policies. They do not focus directly on jobs, but the expectation is that growth will lead to more jobs. The jobless growth of the past few years shows that this approach has not worked for creating employment. It is time to take more direct steps to promote job creation. We propose that employers be directly incentivised to create jobs. If a *new, good job* is created, the employer should be given a certain sum of money.

Variants of this policy are in use across the globe. For instance, New York State has a tax credit program which pays a tax credit of 6.85% of wages per new job.[52] In Australia, eligible employers receive a subside of upto AUD 10,000 per new employee.[53]

Closer home, such a policy is already implemented in parts of India. In Odisha, the government pays Rs 1,500 per month per worker for 36 months to apparel manufacturing units which employ at least 200 workers.[54] Gujarat is even more liberal. Under its Garment and Apparel Policy, it offers to provide 50% of wages (upto Rs 4,000 per female worker per month, and Rs 3,200 per male worker per month) for five years. The offer only holds for large enterprises that are new or are expanding, with minimum requirements on the number of machines and the employment generated.[55] Other states such as Punjab, Tamil Nadu, and Madhya Pradesh also have similar schemes.

Such incentives should be deployed more widely. The subsidy can be designed in such a way that it incentivises the employment of targeted demographics (for instance, women) in large firms (which are likely to achieve scale and employ more workers). It should be noted that the incentive is only for the creation of a *new* job. Once a job is created and filled, the employer will continue to employ the new employee only if they find that value is added mutually.[56]

7 Conclusion

So far, India has focused on securing growth. The hope was that jobs will follow as a side-effect of growth. Thus, the primary focus was on securing growth through reforms, promoting market efficiency, and promoting capital accumulation. This was sought to be helped along by supply-side interventions such as skilling, and matching interventions such as employment exchanges.
However, this has not been sufficient.
The market, operating freely, will create a sub-optimal number of jobs because of externalities to job creation. The government will need to intervene to some extent to create more jobs.

51 Robalino and Walker 2017.

52 Empire State Development 2017.

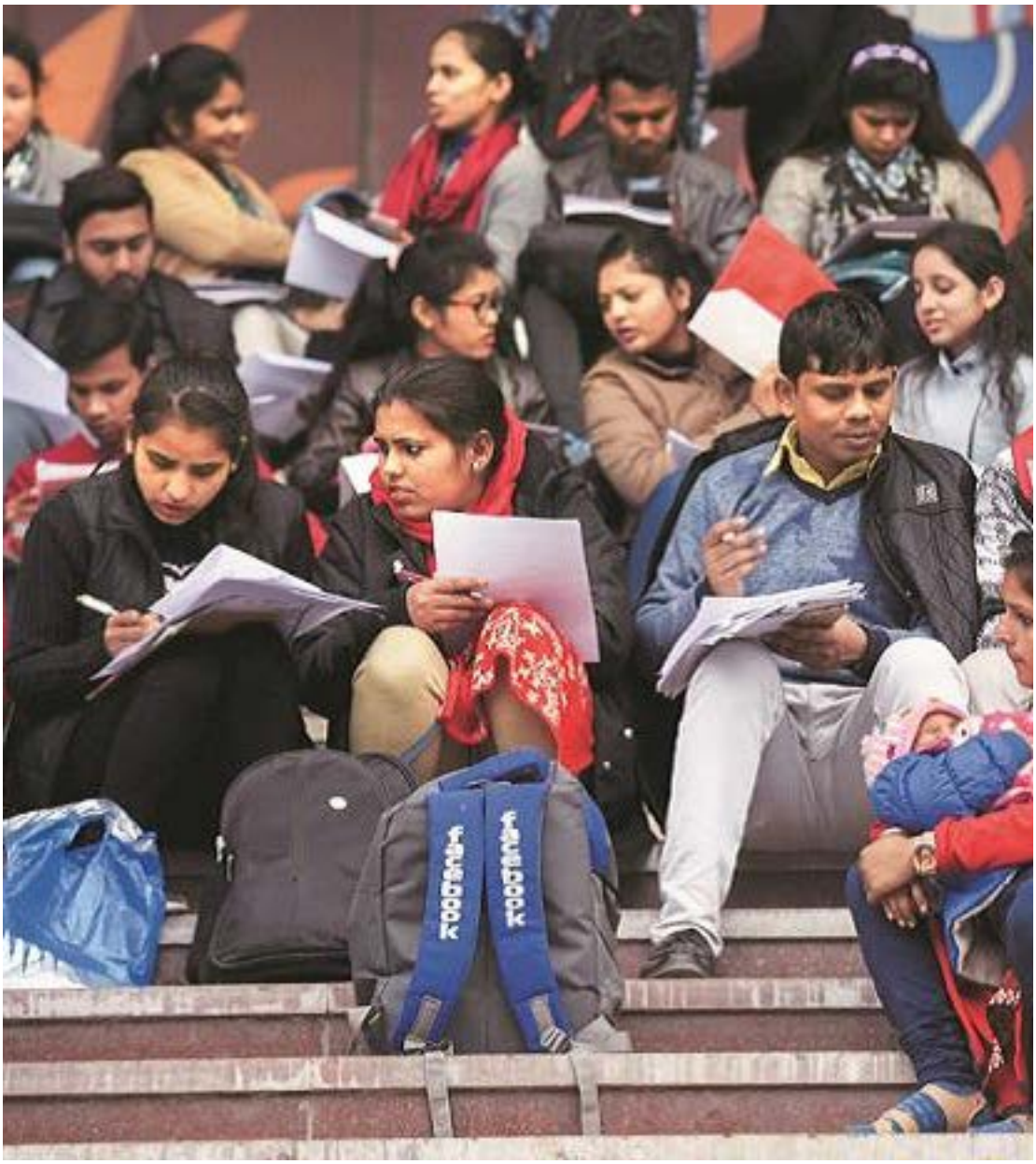
53 Australian Government 2018.

54 Government of Odisha 2017.

55 Government of Gujarat 2017.

56 Of course, further work is required to clearly dene what constitutes a new job, what jobs qualify as good jobs, how misuse can be prevented, and how this scheme can be implemented while not imposing unnecessarily onerous burdens on employers.

We have suggested that, in particular, the government should directly incentivise the creation of jobs by paying firms to create good new jobs. This will encourage labour-intensive growth rather than the currently seen capital-intensive growth. We have also given specific recommendations about how industrial and trade policies, as well as social protection and tax policies can be used together to create a job-rich growth environment.



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RAJIV GANDHI FOUNDATION
Jawahar Bhawan, Dr Rajendra Prasad Road, New Delhi 110 001
T 011 2375 5117, 2331 2456
E info@rgfindia.org **W** www.rgfindia.org **F** @rgfindia