

# Policy WATCH

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RAJIV GANDHI INSTITUTE FOR CONTEMPORARY STUDIES

## GROWTH WITH EMPLOYMENT

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An analysis of  
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# Editorial

Dear Reader,

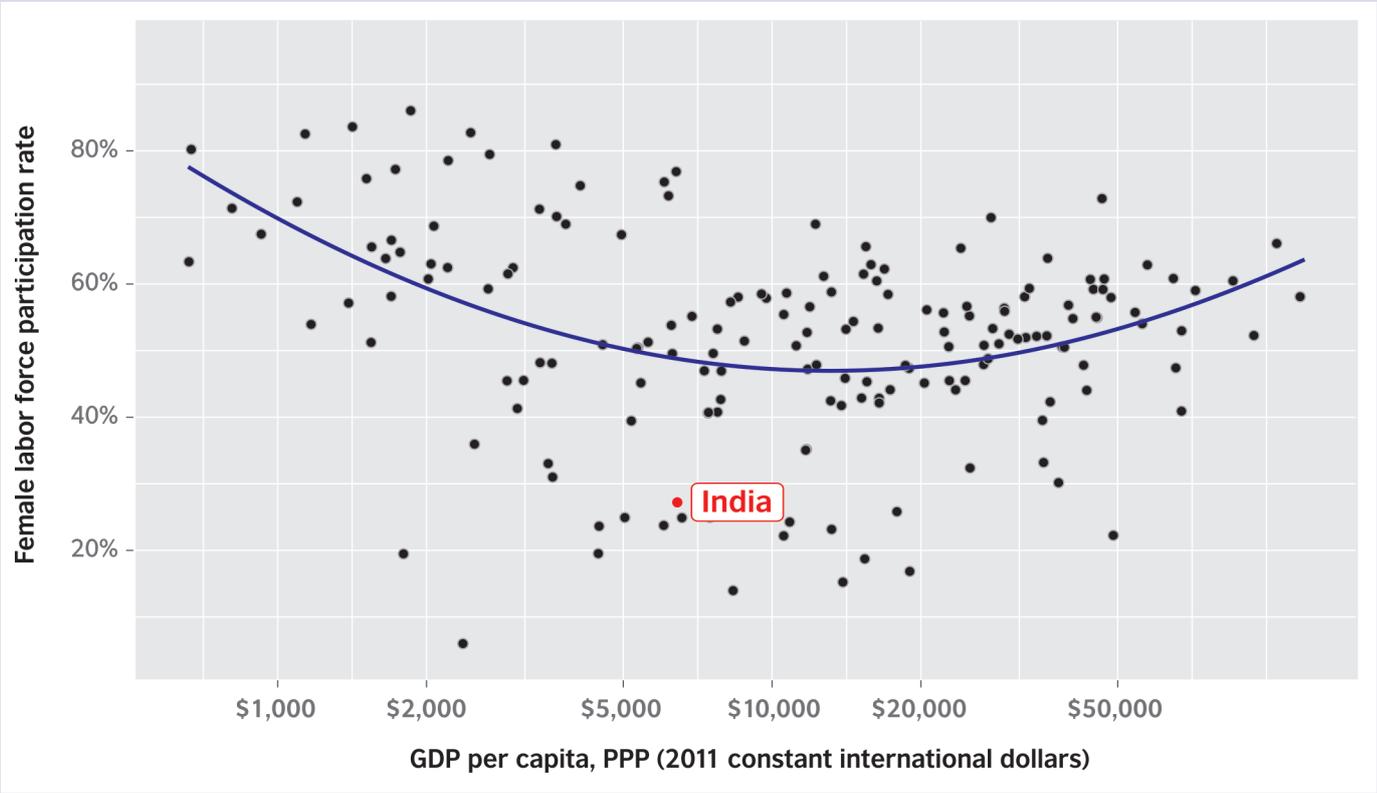
One of the themes on which we at RGICS work is “Growth with Employment”, and this edition of Policy Watch has four articles from this theme.

We start off with an infographic showing a very interesting phenomenon: when we look at economies across the world, we notice that female labour force participation is very high among the poorest countries, lower among middle-income countries, and again high among the rich countries. The female labour force participation is especially low in India, compared to its peers.

Our cover article is a look at the structural issues with employment in India. Over the past many years, we have seen growth happen without a commensurate increase in jobs; increasing informalisation, even within the formal sector; and drops in labour force participation that might render our ‘demographic dividend’ a ‘demographic crisis’ instead. This article surveys the employment scenario and suggests some high-level solutions. The second article examines how successful the ‘Mudra’ scheme has been. Our final article focuses on Rajasthan: how can it achieve not just higher growth, but also more jobs.

Hope you enjoy this issue!

# Infographic U-shaped female labour force participation curve



# Employment in India

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## Structural problems

Prasanth V Regy\*

### Introduction

There are structural problems in the Indian employment situation. Our economic growth continues to be fairly high, but few new jobs are being created, leading 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. The Labour Force Participation Rate (LFPR) is decreasing. Women, especially, are dropping out of the labour force. Finally, 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, find themselves without productive and dependable employment. They may even find that the jobs which they do have are being automated and replaced. The scarcity of good jobs also leads 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.<sup>1</sup> The framework for analysis I use can be easily understood as follows.<sup>2</sup> For an economy with income  $Y$  and population  $N$ , the Gross Domestic Product (GDP) per capita is:

$$\begin{aligned}\text{GDP per capita} &= \frac{Y}{N} \\ &= \frac{Y}{E} \frac{E}{A} \frac{A}{N} \\ &= w * e * a\end{aligned}$$

where :

$$\begin{aligned}E &= \text{employment} \\ A &= \text{working-age population} \\ w &= Y/E = \text{output per worker} \\ e &= E/A = \text{employment rate} \\ a &= A/N = \text{working age population ratio}\end{aligned}$$

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\*Senior Fellow, RGICS. Many thanks for Jagmeet Singh, Research Analyst, RGICS, for research assistance

Thus, the per capita value added can be decomposed into the employment rate, the working age population ratio, and the productivity (output per worker). In India, there are issues with each of these. The rate of employment has been falling, and the productivity is low and continues to stagnate. 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.

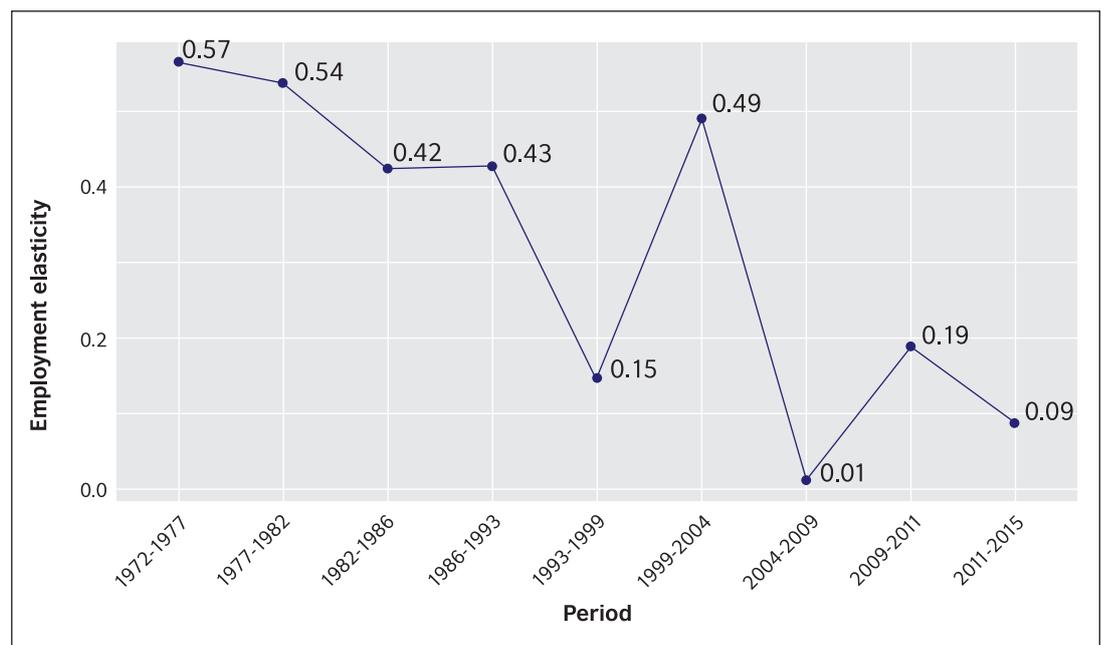
This article is structured as follows. First, in section 2, we examine if it is true that India's growth has been jobless, and the reasons why that has been so. We then consider why the employment rate has been decreasing. The next section, section 4 is on the demographic dividend: what it is, and why it is essential we make full use of it. In the next section, 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.

### Jobless Growth

Growth in aggregate production is usually associated with growth in total employment. However, there is no guarantee that economic growth will be labor intensive, nor that productivity gains will be shared by all workers.<sup>3</sup> In India, we have been seeing a situation where economic growth has been reasonably strong, but new enough new jobs have not been created. This situation, called 'jobless growth', has led to high unemployment and increasing inequality. We need to create over 5 million jobs per year, just to maintain its employment rate.<sup>4</sup> India's GDP has been growing at a rate of 7.3% over the past four years,<sup>5</sup> one of the highest growth rates in the world. This growth has also 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.<sup>6</sup>

The divergence 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: Elasticity of employment across time periods.**



Sources: Basole et al. (2018) and Misra and Suresh (2014)

Employment elasticity	$\mathcal{E}$	=	$\frac{\Delta E/E}{\Delta Y/Y}$
where :			
	$E$	=	<i>employment</i>
	$\Delta E$	=	<i>change in employment</i>
	$Y$	=	<i>output</i>
	$\Delta Y$	=	<i>change in output</i>

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.<sup>7</sup> This, coupled with the low growth of the agricultural sector, has meant that the sector has been shedding jobs.

Simultaneously, there has been substantial change in production technology. There has been a decline in labour-intensity in the organized manufacturing sector, especially in the labour-intensive industries. Within sectors, there has been a shift towards capital intensive production. Sectors that are capital intensive have been growing faster relative to the labour intensive sectors (Papola 2012). Sen and D. K. Das (2014) find that this has occurred due to a fall in the relative price of capital goods, driven by trade reforms in capital goods. Ramaswamy (2008) finds that there has been a shift in aggregate demand in favour of skilled labour as against unskilled labour, driven by restrictive domestic labour regulations as well as by trade openness.

Global trade not just decreases jobs requiring unskilled or semi-skilled labour, it also weakens the bargaining power of unskilled labour. Thus, the reasons for jobless growth include overly restrictive labour regulations, poor skills in the workforce, and trade openness.

### Employment rate

The employment-population ratio in India is estimated to be about 51.75% in 2018, down from 58.31% in 1991.<sup>8</sup> This number is low due to high unemployment and low participation in the labour force in the presence of a demographic dividend.

India, like many other low-income countries, suffers 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 is usually around 2%, but it is reported to have shot up to 6.1% in 2017-18, the highest in four decades.<sup>9</sup>

Labour laws can also impact the creation of jobs.<sup>10</sup> The labour laws in India have traditionally privileged the rights of the employee against the opportunities of the unemployed. The protections granted to the employees were so strong as to reduce the possibilities of the creation of new jobs. Some states are now trying to reverse their path so as to encourage growth and employment.<sup>11</sup>

Manufacturing has historically offered the fastest path out of poverty. However, there is some evidence that premature de-industrialisation<sup>12</sup> is taking place in India, closing off this avenue. Services may not be able to absorb our large population of unskilled workers.<sup>13</sup>

While skilling has received significant policy attention, progress in this area cannot be achieved overnight.

Wages and productivity are diverging. Wage growth has been slower than the growth in productivity. Practices such as using contract workers, as well as leveraging capital-intensive technologies have put workers on the defensive.<sup>14</sup> Further, manufacturers have been able to keep the bargaining power of labour low by leveraging trade.<sup>15</sup>

Compounding this high unemployment is the low participation in the labour force. The LFPR fell sharply from 43% in 2004-5 to 36.9% in 2017-18.<sup>16</sup> There are two disturbing developments here: 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 the famous U-shaped relationship between female LFPR and economic development (as approximated by GDP per capita).<sup>17</sup>

This curve has been plotted in the Infographic in this edition.<sup>18</sup> The figures also contain the quadratic best-fit curve. The female LFPR for India is far below the curve<sup>19</sup> This supports the argument that the low LFPR in India is largely attributable to the drop of LFPR amongst women.<sup>20</sup>

### Working age population

The fraction of Indian population who are of working age (usually considered 15 and above) is very high, compared to other countries. This is a double-edged sword: it could be a powerful positive factor in helping to raise incomes and develop faster, but if this phenomenon is not well utilised, it could also lead to a crisis.

At some point in the demographic development of any country, it reaches a point 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 nonworking-age share of the population (14 and younger, and 65 and older).

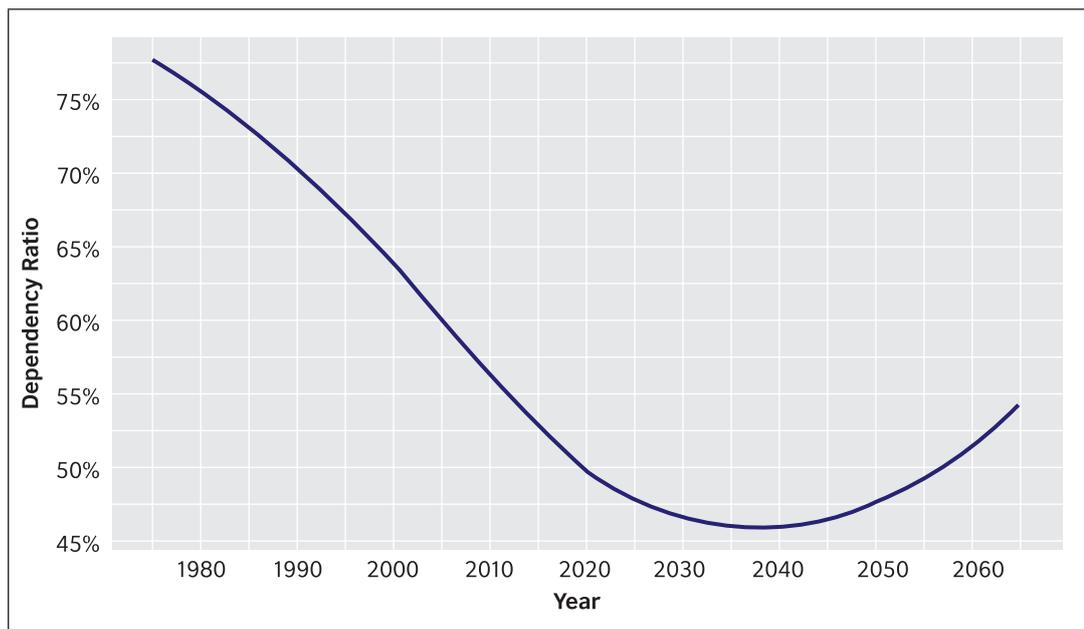
With fewer dependents, and the largest section of the population in the working age, it is possible to generate more incomes, more savings, more capital per worker, and more growth. As a consequence of our demographic dividend, the dependency ratio, defined as the ratio of the non-working age population to the working-age population, is decreasing in India. Figure 2 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 demographic dividend will be realised only if we are able to provide the additional labour force with gainful jobs. If, instead, youth unemployment is peaking, the outcome may be worse than just the loss of an opportunity—large numbers of young people with no jobs and poor prospects are associated with outbreaks of violence.<sup>21</sup>

## Labour productivity

India's labour productivity growth averaged a dismal 1.7% in the 30 years between 1950 and 1980. It improved to an average of 3.8% in the next 20 years and shot up to an average 8% between 2005 and 2011, which were also India's best growth years. Since 2011, labour productivity growth has started decelerating and the 4.3% growth posted in 2017 was much lower than what is required to sustain GDP growth in excess of 8%.<sup>22</sup>

**Figure 2: India's demographic dividend**



Source: UN (2017)

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, there is significant focus on human capital increase, through education, training and skilling. We have also seen above that capital is being increasingly deployed, in many cases replacing labour.

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.<sup>23</sup> Informalisation is increasing even in the formal sector. Firms are often observed to use contract workers (secondary workers and labor outsourcing) to stay below the legal threshold size to escape labor regulations.<sup>24</sup> There is also evidence that tax regulations lead to small sizes.<sup>25</sup>

This informalisation of workers leads to poorer job quality.<sup>26</sup> Smaller firms do not grow or generate employment, while the larger firms are much more productive, and employ far more people (La Porta and Shleifer 2008). Hsieh and Klenow (2009), using plant level



data show that total factor revenue productivity increases with size more both in India and China.

### Policy Proposals

So far, 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. However, meaningful skill development takes time, especially starting from a low skill base as in the case of India. It is also possible that by the time people are trained, production technology might advance and change, requiring new skilling.

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 all 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:

#### Job creation incentive

New jobs are associated with positive externalities:

**Social externalities** If society has preferences for reducing poverty and or inequality, sustainable jobs for poor people will have a social externality. Similarly, there can be social externalities linked to jobs for young men, which contribute to social stability. Jobs for young women can also produce externalities, by facilitating human capital accumulation in their children

**Labor externality** When many workers are unemployed or underemployed (which is the case in India), the economic opportunity cost of labor can be well below market wages. The difference between the market wage and the opportunity cost is a measure of the social benefit of not having labor resources idle.

Thus, there is a significant positive externality to creating jobs. So far, policy has tried 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. And just like trickle-down has not worked for growth or prosperity, it has not worked for employment either. It is time to take direct steps to promote employment.

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. This will directly reward employers who create new jobs.

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 add that value mutually.<sup>27</sup>

### Industrial and trade policy

As indicated in Section 2, openness to trade has brought losses as well as gains to India. Given that the terms of trade and changing—incomes in China are increasing, and many bottlenecks in India such as overly stifling regulations, lack of connectivity, poor electricity and infrastructure, are easing, attempts should be made to use industrial and trade policy as a tool to attract more jobs and production to India.

In addition, it is clear that trade openness has played a key role. This operates in many ways:

- 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.

Thus, while trade openness has led to growth and prosperity, especially among the well-educated and skilled members of the workforce, it is also necessary to consider the costs associated with it, and to ask whether trade has also led to a decrease in prosperity among many vulnerable sections.

### Social Protection

The recent amendment to the Maternity Benets Act mandates half a year of maternity leave. The act also requires a day-care facility in organisations with more than 50 employees, work-from-home options and a maternity bonus. Interventions such as these might actually end up reducing the employment of women. Imposing this burden entirely or even largely on the employer alone will dissuade employers from hiring women and reduce their pay.<sup>28</sup> Costs such as these should be borne by the government, or at least shared by it.

### Tax Policies

In India, income from Long-Term Capital Gains (LTCG) is generally taxed at a rate of 20%, after adjusting for inflation through indexation. LTCG on equity investments has been especially low. In fact, it was not taxed at all until recently.

Now, it is taxed at just 10% (without indexation). Dividends received from firms are taxed at about 17%. Thus, the effective rate of tax on capital gains income is quite low. In addition, wealth tax has been abolished and inheritance is also not taxed in India. In contrast, the return to labour (wages or salaries) are taxed at rate that can be as high as 30%.

This discrimination is sought to be justified by positing that since accumulation of capital leads to high incomes for labour, tax policy should encourage capital accumulation.<sup>29</sup>

While capital accumulation certainly should be encouraged, extreme tax bias towards capital and against labour can lead to a rentier society. Recent economic work has signaled the importance of higher taxes in income, wealth and inheritance, and also pointed out that many of the reasons for advocating zero tax on capital are awed.<sup>30</sup>

## 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. 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.

## Endnotes

- 1 By 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.
- 2 World Bank 2009.
- 3 Merotto, Weber, and Aterido 2018.
- 4 Mehrotra 2019.
- 5 IMF 2018.
- 6 Abraham (2017) shows uses the Labour Bureau’s annual household employment 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 WB 2018.
- 9 Jha 2019.
- 10 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).
- 11 MoLE 2015.
- 12 Rodrik 2015.
- 13 Amirapu and Subramanian 2015.
- 14 D’Costa 2017.
- 15 Amit and Nayanjyoti 2018.

- 16 Mehrotra 2019.
- 17 This was perhaps first noted in India by J. N. Sinha (1967), but has since been seen widely (Mammen and Paxson 2000; Goldin 1994).
- 18 The data is sourced from World Bank Open Data, and corresponds to 2017.
- 19 Some of the reasons for this are explored in Mehrotra and S. Sinha 2017.
- 20 Beyer 2018.
- 21 For instance, see Benmelech, Berrebi, and Klor 2010.
- 22 Chakraborty 2018.
- 23 Maiti and Sen 2010.
- 24 Ramaswamy 2013.
- 25 Ramaswamy 2016.
- 26 Kapoor and Krishnapriya 2017.
- 27 Of course, further work is required to clearly define what constitutes a new job, what jobs qualify as good jobs, how corruption and misuse can be prevented, and how this scheme can be implemented while not imposing unnecessarily onerous burdens on employers.
- 28 Chakraborty 2018.
- 29 The Chamley-Judd Redistribution Impossibility Theorem states that optimal tax rate on capital is zero. Also see Atkinson and Stiglitz (1976).
- 30 Piketty and Saez 2012.

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# MUDRA

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The art of taking credit for credit given by banks in normal course of their business

Vijay Mahajan

The Micro Units Development and Refinance Agency (MUDRA), was registered as a non-banking financial company on 25th September 2014. It was a wholly-owned subsidiary of the Small Industries Development Bank of India (SIDBI) with an initial capital of Rs. 20,000 crore and a credit guarantee fund of Rs. 3,000 crore. MUDRA's role was to enhance the flow of credit to micro and small enterprises and, as the name implied, to act as a regulator for microfinance institutions (MFIs). Within a few months, MUDRA's regulatory role was dropped as the Reserve Bank of India did not favour dilution of its regulatory powers over MFIs, which had been drawn up in 2013 after the Malegam Committee Report.

Thus, in the budget of February 2015, the Finance Minister announced the Pradhan Mantri Mudra Yojana (PMMY). By 8 April, 2015, when Prime Minister Narendra Modi launched MUDRA, the original MUDRA was made part of a wider Pradhan Mantri Mudra Yojana (PMMY). But this essentially renamed all loans to non-farm micro-enterprises up to Rs 10 lakh by public and private sector banks, and other financial institutions. Under the PMMY, three categories of loans were to be given, based on the stage of development and funding needs of the micro enterprises:

- 'Shishu' (meaning infant), loans up to Rs. 50,000/- provided with no collateral, @1% rate of interest/month repayable over a period of 5 years
- Kishor (meaning child): loans above Rs.50,000/- and up to Rs. 5 lakh
- Tarun (meaning adolescent): loans above Rs. 5 lakh and up to Rs. 10 lakh

The refinance agency, MUDRA was to offer bulk loans (in the form of refinance) to banks and non-bank finance company (NBFC) MFIs. MUDRA has a corpus of Rs 10,000 crore allocated by RBI from priority sector lending shortfall. Till March 31, 2017, MUDRA disbursed Rs 12,833 crore in the three year 2015-18 period: Rs 1805 cr in 2015-16, Rs 3526 cr in 2016-17 and Rs 7502 cr in 2017-18. Of the amount disbursed about a third went to NBFCs and MFIs, which are mainly catering to microenterprises, while the bulk went to commercial banks and regional rural banks which are already flush with cash and do not need any refinance. How minor the additionality of the MUDRA agency is, can be

seen by the fact that the refinance in three years amounted to a mere 2.25% of the total bank financing under PMMY scheme.

Yet, to take full credit for the work that banks were any way doing in normal course, MUDRA the refinancing agency was authorised to monitor all PMMY lending activity and aggregate data on its web-portal <https://www.mudra.org.in/>. The Annual Report of MUDRA agency talks mainly about all the work by done by banks, to which it has contributed less than 3% of the total lending by banks as part of their normal lending. All these loans under Rs 10 lakh were branded as PMMY. By using the word “Mudra” in both the agency announced by the NDA government and the renaming of existing lending as PMMY, all such lending is counted as Mudra loans. These loans existed before 2014 (indeed since 1971 after bank nationalization) and will continue after 2019. This lending has been an on-going activity by banks and has nothing to do with the MUDRA agency.

There are three problems with Mudra Yojana

1. There is no additionality – it is mere renaming of small non-agricultural loans financed by banks in normal course.
2. Mudra loans are flawed as a financial product – term loans instead of cash credit.
3. Mudra loans are too small to generate significant incremental income, leave alone additional employment

Let us deal with these one by one.

### Lack of additionality

There is no additionality in credit due to MUDRA – it is mere renaming of small non-agricultural loans financed by banks in normal course. Let us see the data:

#### Pradhan Mantri Mudra Yojana (PMMY) – Achievements from Apr 2015 to Jan 2019

Particulars	Units	2015-16	2016-17	2017-18	2018-19 (till Jan 2019)
Mudra Loans sanctioned	(nos in crore)	3.48	3.97	4.81	3.34
Mudra Loan amount sanctioned	(Rs cr)	137,449	180,528	253,677	180,710
Of this refinanced by MUDRA	(Rs cr)	3,291	3,525	7,798	NA
Percent refinanced by MUDRA	%	2.4%	1.9%	3.0%	NA
Total bank loans below Rs 10 lakh	(Rs cr)	15,99,146	17,61,667	20,07,821	
MUDRA loan amount as % of total bank loan amt < Rs 10 lakh		8.5%	10.2%	12.6%	

Source: <https://financialservices.gov.in/dfs-major-achievements>

Compiled for various years by RGICS; the data in the last row is from the Reserve Bank of India RBI-DBIE Basic Statistical Returns of SCBs in India

As can be seen, Mudra loans were between 8.5% to 12.6% of total bank credit, which is largely aimed at big borrowers. Within Mudra loans, refinance by MUDRA agency was only 2.4% to 3.0%. Thus Mudra and MUDRA are both quite insignificant with no additionality

To get a closer look at the operation of the PMMY, let us review the data for the current year, which gives break up by loan size category as well by type of borrowers.

**Pradhan Mantri Mudra Yojana (PMMY) – Achievements from Apr 2018 to 25 Jan 2019**

Loan Type	No. of Accounts	No. of Accounts (as % of total)	Sanctioned Amount (Rs. Cr)	Sanctioned Amount (as % of total)	Average loan size Rs.
Shishu	2,97,66,774	89.0%	83,379	46.1%	28,074
Kishore	31,18,348	9.3%	56,685	31.4%	181,799
Tarun	5,34,636	1.6%	40,647	22.5%	760,274
<b>Total</b>	<b>3,34,19,758</b>	<b>100.0%</b>	<b>1,80,710</b>	<b>100.0%</b>	<b>54,072</b>

Total No. of borrowers – 334.19 Lakh; Women borrowers – 233.51 Lakh (70%); SC/ST/OBC borrowers - 176.67 Lakh (53%); New Entrepreneurs – 77.49 Lakh (23%)

Source: <https://financialservices.gov.in/dfs-major-achievements>

Computation for % distribution of loan size and amount and average loan size by RGICS

Despite the impression created, loans counted as PMMY by the NDA government disbursed by commercial banks do not show any marked increase after the implementation of Mudra scheme. RBI data (for loans below 10 lakh, excluding personal and agricultural loans) shows that compounded average credit growth was 7.9% in the post-MUDRA 2016-18 three year period as against 6.6% pa in the pre-Mudra three year 2013-15 period

Year ending 31st Mar	For loans of Rs. 25,000 and Less,	For loans above Rs. 25,000 and up to Rs. 2 Lakh	For loans above Rs. 2 Lakh and up to Rs. 5 Lakh	For loans above Rs. 5 Lakh and up to Rs. 10 Lakh	Total loan amount in Rs. Crore
Amount outstanding in Rs. Crore					
2013	73,683	4,41,150	4,29,956	2,40,701	11,85,489
2014	37,166	4,89,525	4,75,832	2,82,642	12,85,166
2015	35,995	5,31,504	5,32,215	3,36,272	14,35,986
<b>2013-15</b>				<b>Pre-MUDRA</b>	<b>39,06,641</b>
2016	45,884	5,74,849	5,796,23	39,87,907	15,991,46
2017	41,294	6,17,332	6,31,800	47,12,406	17,616,67
2018	43,984	6,86,322	6,98,796	57,87,188	20,078,21
<b>2016-18</b>				<b>Post-MUDRA</b>	<b>53,686,34</b>

As IIM Ahmedabad Prof Abhishek Mishra wrote<sup>1</sup>: “Despite PMMY rules, there is no discernible change in lending patterns. Banks have basically converted regular lending schemes into Mudra loans and the profile of borrowers remains largely the same in pre and post Mudra period. The government has presented economic data in inventive ways, controversies around GDP estimation and employment data are testimony of this. PMMY/Mudra is an example where the name Mudra is used to denote all loans from across a range of government and private financial institutions even when not financed and provided for by the government. It’s a classic case of recategorisation, rebranding



and inventive renaming...PMMY in reality is merely the repackaging and rebranding of continuing lending activities of existing financial institutions. Loans given out in normal course of business are now collated, counted and reported as 'Mudra' loans."

### Flawed Financial Product

Mudra loans are flawed as a financial product - these are structured as term loans with a tenor of three years, with periodic repayments of principal and interest, whereas 90% or more of the amount is used for working capital, which is needed as long as the microenterprise runs. If the loan is repaid, the unit will not have working capital. These loans should have been offered as cash credit overdraft limits. That would also have reduced the interest burden on the borrowers.

To understand this better, let us take a typical Shishu loan, where the average loan size has been Rs 28,000. The microenterprise is likely to be in trading (such as a Kirana shop, or a street vendor), or in repairs (two-wheelers, mobile phones, consumer durables) or in services like tea-shops, ready-to-eat snack shops, tailors, barbers, cobblers, etc. Of the Rs 28,000 loan, the micro-entrepreneur will normally invest a large part, at least Rs 20,000 in working capital to buy supplies of raw material or goods to be sold, paying wages and paying for rent and electricity. Investment in fixed assets, if any, may go into wooden shelves and weighing scale for a Kirana shop; a gas cylinder, cook stove and utensils in case of a tea and snacks shop; and basic equipment and tools in case of a repair shop.

Now, with a Mudra loan, this microenterprise has to make a periodic (monthly or quarterly) payment of a principal instalment and interest. For a loan of Rs 28,000 repayable monthly over 36 months, that could be as much as Rs 1200 per month. As we know, a vast majority of loans go into trading activities, and if we assume that the sales turnover was four times of the loan amount, it would be Rs 1.12 lakh. Even if assume 20% margin, on the higher side, the gross income will be Rs 22,400 in the year. The net income from the microenterprise is unlikely to be more than Rs 2000 per month, which means the monthly instalment is 60% of the incremental income, leaving behind a mere Rs 800 per month.



This is bound to be drawn out by the micro-entrepreneur to meet household needs. On the other hand, if the micro-entrepreneur does not draw out the money, Rs 800 per month is barely enough to replenish the loan capital in 36 months. As happens in many cases, there is an adverse event like illness in the family, or a theft in the shop, or a client does not repay goods/services rendered on credit, there is no cushion to maintain the instalment repayment and this leads to the loan becoming an NPA. Catching up on older instalments becomes tougher. As we are only in the build-up phase of Mudra loans, the NPAs have so far remained low, reported in the range of 4-5%, but this will significantly increase as the larger number of loans given in the second and third year become due.

### Not enough additional income, and no additional employment

In a speech on May 25, 2017, BJP President Mr Amit Shah claimed “We have tried to create self-employment opportunities for about 8 crore people.”<sup>2</sup> In a similar vein, in a speech on October 24, 2018, the Prime Minister Mr Modi said “Around 14 crore loans were disbursed across the country under this (Mudra) scheme... In the last four years, loans worth Rs 7 lakh crore were disbursed under this scheme...Out of all those who took loans under Mudra, over 3.5 crore youth were first-time entrepreneurs, as they have chosen the path of self-employment for the first time. Today, there exist unprecedented employment as well as entrepreneurial opportunities in the country.”<sup>3</sup>

These claims are highly questionable. The average size of loans disbursed under Mudra Yojana even in 2018-19 is merely Rs 54,072 and the largest proportion of loans, 89% of total are the Shishu loans, which had an average loan size just Rs 28,074 in 2018-19. This amount could not be considered enough to start up a micro-enterprise that could even self-employ a person, leave alone provide jobs to others. As we know, a vast majority of loans go into trading activities, and if we assume that the sales turnover was four times of the loan amount, it would be Rs 1.12 lakh. Even if assume 20% margin, on the higher side, the gross income will be Rs 22,400 in the year which much lower than the average per capita income of Indians - Rs 1.11 lakh for 2017-18, as per Central Statistics Organisation (CSO). The only Mudra loans which could have generated significant additional income are Kishore loans and which could have generated both significant additional income as well as employment are Tarun loans. But the number of Kishore loans was a mere 9.3% and the number of Tarun loans was a mere 1.6 per cent in 2018-19. So on every count MUDRA the agency and Mudra – the PMMY scheme – have turned out to make little difference. To quote Shakespeare: “It is a tale told by an idiot, full of sound and fury, signifying nothing.”

### Endnotes

- 1 <https://thewire.in/banking/mudra-scheme-refinancing-credit-growth-narendra-modi>
- 2 <https://www.hindustantimes.com/india-news/not-possible-to-provide-jobs-to-all-so-we-promote-self-employment-amit-shah/story-z1XMRYTdwOkBseTzjyrMIL.html>
- 3 [https://www.business-standard.com/article/economy-policy/unprecedented-employment-opportunities-today-thanks-to-mudra-yojna-pm-modi-118102501433\\_1.html](https://www.business-standard.com/article/economy-policy/unprecedented-employment-opportunities-today-thanks-to-mudra-yojna-pm-modi-118102501433_1.html)

# Jobful growth for Rajasthan

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2019–2024

Prasanth V. Regy\*

## Executive Summary

- Rajasthan is undergoing jobless growth. Few jobs are being generated compared to the demand for employment. This situation is unsustainable and dangerous.
- In order to achieve full employment over the next five years, the challenge for public policy is to create conditions for the generation of 41 lakh jobs. This document is an effort to think how these jobs might be created.
- We find that jobs can be created in the areas of natural resource regeneration, urban infrastructure, and solar energy. Jobs can also be created through daycare subsidies for working mothers, and by filling up vacant positions in the state government.
- Land as well as water and forests in Rajasthan suffer from degradation and ecological stress. This degradation can be countered by a large-scale public program to restore those natural resources. This can create about 20 lakh new jobs over the next five years.
- Rajasthan requires many more small towns and dynamic rural areas. The creation of roads, bridges, buildings, and houses in these towns and villages can generate 15 lakh jobs for unskilled, semi-skilled, and skilled labourers.
- Rajasthan is very well positioned in the area of solar energy. A focus on growth and employment in this area can generate up to 7 lakh jobs, spread over all phases—manufacturing, installation, and maintenance.
- The female labour participation in Rajasthan is extremely low. We suggest a daycare voucher scheme for working mothers. This will enable many more women to continue working even after childbirth.
- There are about one lakh vacancies in the state government in Rajasthan, including positions such as school teachers and policemen. Filling these jobs not only provides high quality employment, but also facilitates better public service delivery.

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- In addition to these new initiatives, Rajasthan should continue to promote its economic growth through investments in skilling, infrastructure, and public services.
- In agriculture, policy should encourage shifting to crops that lend themselves to value addition, as well as investment in complementary industries such as agri-warehousing and food processing. Initiatives to discourage over-irrigation can help to prevent water-logging. This can raise employment in farming, and also reduce the power subsidy.
- Premature de-industrialisation is taking place in Rajasthan. Attracting investments and know-how from relatively new sources (such as China), more effective plug-and-play industrial facilities, and enabling safe skilling and housing for workers, can help Rajasthan create many new manufacturing jobs.
- Rajasthan needs to go beyond its traditional tourist audience and target new markets, such as sightseeing tourists from east Asia. Rajasthan should also go beyond just sightseeing, and offer unique experience-based tourism to high-spending Indian tourists.

## Context

Rajasthan is the largest state in the country, with an area of 342 thousand square kilometers, accounting for over 10% of India's total area. About 75 million people, around 5.5% of the national population, live in the state. Roughly 75% live in rural areas. The per capita income is just above Rs 1,00,000, which is lower than the national average.<sup>1</sup>

## Jobless growth

Rajasthan has grown at a low-to-moderate rate during the last two decades (1994–2015). The state Gross State Value Added (GSVA) growth over this period was 4.9%. This performance is slightly worse than the all-India growth rate of 5.2% over this same period.<sup>2</sup>

During this period, the increase in employment has not been commensurate. The unemployment rate is as high as 10.6%, and about 32 lakh people need employment.<sup>3</sup> This labour force will continue to grow, adding another 23 lakh persons seeking employment in the five years from 2019 to 2024. This is set against a background where the current growth model is creating practically very few new jobs. We estimate that the “business as usual” growth will not create more than 15 lakh jobs. The remaining 41 lakh people will be unemployed.

This employment situation is unsustainable and dangerous. Any policy attempts to improve this situation can succeed only if it pays attention to the unique characteristics of Rajasthan—its advantages and its limitations.

## Female labour participation

The female Labour Force Participation Rate (LFPR) in India is quite low, at 11.1%. This number is generally lower in Rajasthan.<sup>4</sup> Only 27.4% women are in the workforce, as compared to 75.5% men in 2015–16.

Part of the reason for such low LFPR could be social and cultural factors acting against women's employment. Another reason could be the possibility that persistently high unemployment disheartens job-seekers and causes them to retire from the labour force.

## 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).<sup>5</sup> 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.

The demographic dividend will manifest in different states at different times, depending on their population trends. In Rajasthan, while the dependency ratio is already decreasing, the demographic dividend window will be fully available during the 2040–2050 decade.<sup>6</sup> The state needs to act now to be able to utilise this window fully.

## Location

Rajasthan has an advantageous geographical location. It touches six major states of India: Delhi, Haryana, Punjab, Uttar Pradesh, Madhya Pradesh, and Gujarat.

It is connected by good roads to ports in Maharashtra and Gujarat. Nearly 39% of the Dedicated Freight Corridor (DFC) passes through Rajasthan. About 60% of the area of the state falls within the Delhi-Mumbai Industrial Corridor Project (DMIC) project influence area. The corridor will make Rajasthan easily accessible to western and northern markets.

## Land

Rajasthan is geographically the largest state of India, with over 10% of the total area of the country. Its population density is just about half that of the national average. Consequently, land is available in plenty. The government, through Rajasthan Industrial Development and Investment Corporation Ltd (RIICO), attempts to ensure adequate land and infrastructure support for enterprises.

## Investor perception

Rajasthan does well in terms of investors' perceptions. Based on the National Council of Applied Economic Research (NCAER) State Investment Potential Index, which looks at 51 sub-indicators and a perception survey to provide a single composite score, Rajasthan ranks 11th among Indian states in investment potential.<sup>7</sup>

## Policy challenge

If we are aiming at full employment, *the policy challenge is to create a total of 41 lakh jobs over the next 5 years.*

This document is an effort to think how these jobs might be created, in what sectors of the economy can these jobs be created. We try to answer questions like: What policies can encourage employment? What investments will be required? How can the resources be found?

Many well-known suggestions have been made to improve the employment situation in India and in Rajasthan. They include investments in skilling, infrastructure, urbanisation, promotion of tourism, food processing, labour reforms, etc. They continue to be valid and important suggestions, and various policy initiatives have already been launched along these lines. In this document, we make a preliminary effort to identify policy directions which can deliver large increases in employment while creating significant public value as well.

In the remainder of this paper, we first examine the conventional three sectors in more detail—agriculture, industry, and services. We also look at the cross-cutting sector of energy and natural resources. We then present proposals for increasing large-scale employment, and examine its fiscal implications.

## Agriculture

Agriculture employs 41% of Rajasthan's labour force. However, its share of GSVA has come down from 28.6% in 2011–12 to 24.6% in 2017–18, a sharp decline in a short period.<sup>8</sup> Clearly the average Rajasthani farmer is less productive than the average Rajasthani non-farmer. However, while Rajasthani farmers make up only 4.7% of all the farmers in the country, they contribute 8% of the total national agriculture output. So the Rajasthani farmer is more productive than the average Indian farmer.

During the period from 2011–12 to 2017–18, Rajasthan's GSVA grew at 6.0%. Compared to this overall growth, the agricultural sector in Rajasthan grew relatively anemically, at a rate of 3.4%. During this time, Indian agriculture grew at a rate of only 2.8%.<sup>9</sup> Thus agricultural growth in Rajasthan has been faster than in the rest of the country.

The growth in agriculture has been due to crop diversification, the use of drought resistant varieties, and due to growth in the livestock sector.<sup>10</sup>

## Diverse crops

Rajasthan is blessed with as many as ten different agro-climatic zones.<sup>11</sup> This enables it to cultivate a variety of crops. The state is a major producer of wheat, barley, pulses, sorghum, bajra, and rice. The state is also one of the largest producers of guar, coriander, cumin, fenugreek, fennel, mustard, oil seeds, soybean, gram and moth bean.<sup>12</sup>

## Livestock

Rajasthan has one of the highest livestock populations in the country. It produces 10% of India's milk and a third of sheep and goat. It also produces the largest amount of wool in the country.<sup>13</sup>

Animal husbandry is an important source of nutrition. In addition, livestock activities are especially important in generating employment for women, landless laborers, and small and marginal farmers. The large arid and semi-arid regions of the state are well-suited for rearing small ruminants, offering a major opportunity for employment and growth by tapping into the rapidly growing demand for meat in India.<sup>14</sup>

Livestock income is relatively stable. Thus it can act as an insurance against crop and drought risks, making farm incomes more resilient.

## Agricultural marketing

Rajasthan has 134 main markets (*Mandi*) and 308 sub-market yards. Many marketing reforms have already been adopted. The Rajasthan Agricultural Produce Market Act, 1961 has been amended to permit contract farming for fruits, vegetables, medicine plants or aromatic plants. Direct purchase from the farmers without going to the market yards has been allowed. This will reduce the number of market intermediaries, ensure remunerative prices to the producers, and encourage the setting up of agro-processing enterprises. Private consumer-farmer markets are now allowed, where a farmer may sell his produce directly to the consumer. The market fee on fruits and vegetables has been exempted.<sup>15</sup>



## Strategy for Agricultural jobs

Rajasthan has many advantages, including its crop diversity, its location, and its agri-marketing reforms. These should be leveraged to generate growth and employment.

Government policy should encourage shifting to crops that lend themselves to value addition. Policy should also encourage investment in complementary industries such as food-processing and agri-warehousing.

Rajasthan should aim to reduce its dependency on water intensive crops, and continue the transition to other crops such as guar, barley, pearl millet, and spices.<sup>16</sup>

Initiatives to encourage proper use of water can help to prevent water-logging, thereby raising employment in farming, as well as reducing the power subsidy. This incentive could take the form of a Direct Benefit Transfer (DBT) to the farmer instead of providing free electricity.

However, it should be noted that even with these reforms, growth in agriculture may not create a large number of new jobs in this sector, due to the extensive disguised unemployment that already exists. Growth in this sector may end up creating significant employment in the non-farm sector due to increased demand for goods and services.<sup>17</sup>

## Industries

Industries, consisting of mining and quarrying, manufacturing, utility services, and construction, has been a major growth driver in Rajasthan. Over the six years from 2011–12 to 2017–18, it has grown at a rate of 4.7%. This is vigorous compared to agriculture, but much weaker than the aggregate Rajasthan growth of 6.0%. At the same time, the share of industries in Rajasthan's overall economy has declined from 32.7% in 2011–12 to 30.3% in 2017–18. This points to premature de-industrialisation.<sup>18</sup>

## Mining and quarrying

Rajasthan is pre-eminent in quarrying and mining in India. The state produces many minerals like clay, copper, silver, zinc, garnets, and granite. It is the second largest mineral producing state and the sole producer of lead and zinc in India. The state has one of the highest limestone reserves, making it a hub for cement industries. It also has the highest reserve of marble and sandstone.

## Exports

Rajasthan has traditionally been strong in exports of handicrafts, gems and jewellery, dimensional stones, agro-products, and textile products. The top five export items from Rajasthan accounting for nearly two-thirds of exports from the State are textiles (including ready-made garments), gems and jewellery, engineering goods, chemical and allied products (including tyres), and handicrafts.

Agro and food products, dimensional stones comprising marble, granites and articles of stone mica, metals (ferrous and non-ferrous), and electronics and computer software are also important sectors having a share of more than 5% each in Rajasthan's exports.<sup>19</sup>

## Labour law reforms

Labour laws can have a major impact on the creation of jobs.<sup>20</sup>

In Rajasthan, as in most of the other states of India, overly protective labour laws have

reduced the incentives of entrepreneurs to set up factories and generate employment, while ostensibly protecting the interests of existing formal workers. Rajasthan has reformed many of these laws, reducing the role of the state in commercial decisions such as layoffs.<sup>21</sup> While industry has broadly welcomed these reforms, the awareness of this reform is still quite low within the industry.<sup>22</sup>

### Strategy for industry employment

Currently, Rajasthan accounts for only 1.8% of India's exports.<sup>23</sup> Today, Rajasthan has an opportunity to increase its exports by adapting to the changing global scenario. Under the 'Made in China 2025' policy, China is aiming to move out of low-cost manufacturing into high value-added technology and innovation.<sup>24</sup> Its rising wages potentially reduce its competitiveness. Meanwhile, the US is threatening to impose tariffs on China.<sup>25</sup>

This confluence of developments presents opportunities for Rajasthan. Higher exports will both increase average wages, and promote formalisation.<sup>26</sup> Rajasthan could aim to attract Chinese know-how and capital. This can enable the creation of large-scale industrial units targeting both the domestic and foreign markets.

The availability of skilled labour is a key constraint in the growth of industry. Considering the very low participation of women in manufacturing, providing safe transportation as well as safe housing for women workers in and around industrial zones will promote the availability of skilled and unskilled labour.<sup>27</sup>

Given the availability of a large variety of metallic and non-metallic industrial minerals, there is a huge potential of mineral-based industries in Rajasthan. However, this should be done with due care both for the environment and for the health of the workers.<sup>28</sup>

"Plug-and-Play" manufacturing facilities can help to create growth and generate employment. This involves the provision of industrial facilities with all required basic facilities such as electricity, water, and effluent treatment. There may also be space for accommodation for the workers. This eliminates the need for complicated and time-consuming process of land acquisition, or for entrepreneurs to spend their efforts and resources on setting up their own water supply, power backup, and effluent treatment facilities. Thus they can be especially useful for small and medium enterprises. Rajasthan already has provision for Plug-and-Play industrial facilities. However, these need to be made more effective.

### Services

The services sector accounts for over 45% of Rajasthan's GSVA as of 2017–18. This sector has been the primary driver of growth, with a growth rate as high as 8.8% between 2011–12 and 2017–18, much higher than the aggregate growth rate of Rajasthan, 6.0%.<sup>29</sup> Services in Rajasthan is driven primarily by tourism, which has been a large and powerful driver of growth. However, in recent years, the growth of services sector in Rajasthan has lagged that of India.

### Tourism

Rajasthan is one of the major tourist destinations of India. With its immense cultural heritage, natural assets, and existing hospitality infrastructure, Rajasthan holds great potential for the creation of many more jobs in tourism. To achieve this, Rajasthan needs to go beyond its traditional tourist audience and target new markets, such as sightseeing tourists from





China. Rajasthan should also go beyond just sightseeing, and offer unique experience-based tourism to high-spending Indian tourists. This requires a rethinking and broadening of the limited tourism product portfolio, currently focused mostly only on sightseeing.

**Table 1: Government Vacancies**

<b>Jobs</b>	<b>Number</b>
Anganwadi	7,811
ASHA	7,346
Health — nonparamedic	3,886
Health — paramedic	19,610
Police	14,242
Teachers	36,589
<b>Total</b>	<b>89,484</b>

### Government sector

The currently existing vacancies across the state government, including police, teachers, health workers, etc, are about 90,000, as seen in Table 1. These posts provide services to the public and can improve the quality of governance. The government should initiate the process of filling these posts immediately and aim to fill them up within six months.

### Strategy for service jobs

In order to create more jobs in the service sector, the state should leverage its favourable geographical location, its good business environment, and positive perceptions among potential investors. Tourism still presents many untapped opportunities. Further, Rajasthan can become a centre of skills-intensive services industry, such as hospitals, educational facilities and Information and Communication Technology (ICT).

## Energy and Natural resources

### Land and water

Rajasthan has the highest incidence of drought in the country: the chance of occurrence of meteorological drought in the state is almost 50%. Over 20 million ha, 67% of area is affected by desertification and/or land degradation. Between 2001 and 2009, Rajasthan lost 1.4 million ha of cropland. Wind erosion (44.2%) is the maximum contributor followed by water (11.2%), vegetal degradation (6.25%) and salinisation (1.07%).<sup>30</sup> It is estimated that the economic losses due to land degradation is as high as 17% of the total output of Rajasthan.<sup>31</sup>

The groundwater in about 80% of the blocks in the state are either over-exploited or critical. Surface water resources are scarce and confined to the south and southeast of the state. Inadequate planning and management of surface irrigation systems is the major cause of salinity of canal command area. The current water and energy policies induce inefficient use of water for irrigation, since there is no increased cost associated with more usage. Overuse of water for irrigation due to provision of free electricity leads to water-logging and increased salinity, rendering land unfit for cultivation.<sup>32</sup>

The problem of natural resource degradation is posing a serious threat to the sustained agricultural production. Degradation of the ecosystem the consequential loss of productivity would severely affect the livelihood of the majority of Rajasthan

who rely on crop cultivation and livestock rearing for their livelihoods. The resultant effects of the degradation are massive unemployment, migration of labour, regional and intergenerational disparities, and ecological imbalance.

### Rationalising subsidies

Input subsidies, such as subsidies for agricultural water and power, is a key determinant of land degradation. Rationalizing input subsidies will go a long way in improving the management of land resources.

Rajasthan offers large subsidies for the agricultural use of electricity. Agricultural electricity tariff is Rs 0.9/unit, which is only 12% of the actual cost. Many farmers are not metered and are billed on a at rate. The power subsidy in Rajasthan, according to the 2018–19 Budget Estimates, is as high as Rs 22,607 crore, which is more than 13% of the total revenue expenditure of the state.<sup>33</sup>

This subsidy can be reduced and rationalised in various ways. More of the subsidy can be given through DBT. The first step would be to determine Minimum Energy Support (MES) for farmers. Based on the MES, excess consumption by the farmer would be charged at the regular, unsubsidized tarffi, thus increasing incentives for economizing electricity. This would support the transition towards better water management, while ensuring that the power subsidy allocation to poor farmers remains secure.

### Energy

Rajasthan suffers from a energy deficit of 591 million units.<sup>34</sup> However, it is ideally situated for solar power generation.

The solar irradiation is as high as 6–7 kWh/m<sup>2</sup>/day, which is one of the highest in the world. The rainfall is low and there are more than 325 sunny days in a year. Further, there is an abundance of unused and at land. Leveraging these advantages, Rajasthan can generate jobs not just related to manufacturing solar panels, but also to their installation and servicing.

### Proposals

In this section, we discuss proposals that can generate 41 lakh jobs over the next five years. We are focusing on those ideas that create not just significant employment (both short-term and long-term), but also public value. We also consider options for the Rajasthan government to finance them.

### Natural resource regeneration

As mentioned above, about 20 million hectares of Rajasthan suers from land degradation or desertification. In addition, water sources and forests are also highly stressed.

The degradation of natural resources of Rajasthan can be countered by a large scale public program to restore those natural resources. For instance, wind erosion can be controlled by sand dune stabilization and shelter belt plantation. Grasses and small shrubs can be grown in degraded pastures. This can significantly increase the carrying capacity of livestock.

Water-logging and soil salinity can be countered by lining the irrigation network in order to reduce the seepage of water from the canals. Draining the sub-surface of excess water is also an important measure. A good drainage system consists of surface drains or sub-

surface drains or combination of both, as per need. Biodrainage, through planting trees such as Eucalyptus, can be a less costly, and more eco-friendly complement to creating drainage.

As mentioned earlier, Rajasthan is rich in minerals. Revegetation of the mine spoils is very challenging but necessary in India. Plants such as acacia and *vilayati kikar* can help the rehabilitation of mine areas.<sup>35</sup>

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.

We estimate that this project can provide employment to about 20 lakh people over a period of 5 years, accounting for a gradual scale-up. This will require about Rs 0.5 lakh crore in wages over the period.

### 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.<sup>36</sup>

Rajasthan is a largely rural state 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, semi-skilled, and skilled labourers.

By our calculations, about 12 lakh people can be employed in this area. This will require an expenditure of Rs 0.6 lakh crore over the period of 5 years.

### Support to working mothers

A range of interventions are required to address the constraints on women. In particular, some social security features, such as maternity leave and day-care facilities, can enhance the ability of women to participate in the labour-force.<sup>37</sup>

In India, the Maternity Benet Act 1961 is meant to protect the employment of women during the time of maternity and entitles her to full paid absence from work. The act is applicable to all establishments employing 10 or more employees. The duration of paid maternity leave was originally 14weeks, but it has been increased to 26 weeks by a recent amendment.<sup>38</sup> The Act also makes day-care facility mandatory for every establishment employing 50 or more employees.

As a consequence, employers may discriminate against women of childbearing age, both in hiring as well as in salaries.<sup>39</sup> Apparently, the government is working on an incentive scheme to reimburse some of the wages to employers.<sup>40</sup> Rajasthan could take the lead in this matter by bearing a significant part of the financial burden associated with the establishment and operation of such daycare centres. This will remove a significant part of the burden on the employer, leading to higher employment of women. The employer

would be still bound to protect the employment of the woman so that she can rejoin work after the period of the leave.

Our calculations indicate that this will require about Rs 3,000 crore over five years.

### Solar Power

As discussed above in section 5.3, Rajasthan is very well positioned to generate growth and employment in the area of solar energy. The government of India aims to achieve 100 GW of solar power by 2022.<sup>41</sup> Rajasthan alone targets the installation of 25 GW of solar power.<sup>42</sup> In fact, solar is close to achieving grid parity in Rajasthan.<sup>43</sup> This is partly due to subsidies, viability gap funding, and cheap imported solar modules.<sup>44</sup>

Jobs are generated during each phase of solar projects: business development, design and pre-construction, construction and commissioning as well as operations and maintenance. Employment is also created in the manufacturing of solar panels. It is estimated that an installed capacity of 25GW in Rajasthan would generate about 400,000 job-years of employment, depending on the mix of rooftop and ground-based projects. These would be a mix of skilled, semiskilled, and unskilled jobs. In addition, if Rajasthan is able to manufacture the modules needed to achieve half the national target, it would create 2.5 lakh more jobs.<sup>45</sup>

In total, given Rajasthan's natural advantages in manufacturing, location, and availability of sunlight and land, it should be able to generate as many as 6.5 lakh jobs in this sector.

### Filling vacancies

As mentioned in section 4.2 above, vacancies for almost 1 lakh state government jobs exist. These jobs vary from Anganwadi workers, to ASHA workers, to paramedics, to teachers and policemen.

Calculations indicate that filling these can cost about Rs 0.1 lakh crore.

### Fiscal impact

Projecting the current state government expenditure over the next five years, and assuming reasonable rates of growth, the total expenditure will come to about Rs 11.0 lakh crore. The additional expenditure for creating jobs proposed so far will come to 1.2 lakh crore spread over that period. The fiscal impact can be cushioned by spreading the schemes over a longer period, or reducing the intensity of the implementation (which will also reduce the employment creation).

Financing this will require a number of sources, apart from the government's own revenues:

- The Rajasthan government can rationalise subsidies such as power for irrigation. This alone accounts for Rs 22,600 crore every year.
- The government can seek assistance from the centre, including by tting these schemes into Centrally Sponsored Schemes to the extent possible.
- The government can borrow from the markets.
- Where excludable private gains are created by these schemes, for instance as in the case of land regeneration, the government can recover some of the expense from the private parties whose land is improved.

## Conclusion

Rajasthan has great potential for economic growth, but the employment situation in the state is dire. However, there are opportunities for policy changes which can help create much more employment. The greatest of these opportunities is in regeneration of degraded natural resources, construction of infrastructure for a large number of new towns, filling the many vacant government positions, promoting solar power, and enhancing social protection measures including daycare services.

The proposed projects can lead to the elimination of unemployment through the creation of 41 lakh jobs in the next few years. These projects are likely to cost about Rs 24550 crore per year. While this is a significant burden on the exchequer, it should also be remembered that this amount is being invested in the creation of public infrastructure, positive externalities, and for preserving natural resources. It will not just produce employment for the unemployed, it will also create more long-term permanent employment through the regeneration of barren land, greater urbanisation, higher growth, and better public service delivery.

## Endnotes

- 1 MoSPI 2018.
- 2 See WB 2018b, p. 6.
- 3 CMIE 2019b.
- 4 According to CMIE (2019a, p. 23), it is as low as 3.3%.
- 5 UNFPA 2018.
- 6 Singh 2019.
- 7 NCAER 2018.
- 8 See table 3.5 GoR 2018.
- 9 WB 2018a.
- 10 WB 2018b.
- 11 GoR 2019a.
- 12 GoR 2015.
- 13 GoR 2015.
- 14 WB 2018b.
- 15 GoR 2015; GoR 2019b.
- 16 WB 2018b.
- 17 Chakravarti 2017.
- 18 Rodrik 2015.
- 19 EXIM 2017.
- 20 In this connection, Besley and Burgess (2004) had a significant impact. However, its conclusions have been challenged by Karak and Basu (2017) and Storm (2019).
- 21 MoLE 2015.
- 22 PHDCCI 2015.
- 23 Chapter 2 MoF 2018.
- 24 ISDP 2018.
- 25 Bloomberg News 2018.
- 26 Artuc et al. 2019.
- 27 WB 2018b; PHDCCI 2015.
- 28 Yadav 2018.
- 29 GoR 2018.
- 30 Sharma, Burark, and Meena 2015.
- 31 Mythili and Goedecke 2016.

- 32 Hooda 2013.
- 33 RBI 2018.
- 34 CEA 2018.
- 35 LCLUC 2018.
- 36 Mahajan and Kalia 2019.
- 37 Srivastava 2013.
- 38 MoWCD 2017.
- 39 Mathur 2018.
- 40 MoLE 2018.
- 41 MNRE 2018.
- 42 GoR 2014.
- 43 MNRE 2018.
- 44 Aggarwal and Dutt 2018.
- 45 Kuldeep et al. 2017.

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