Robots Don't Take Toilet Breaks

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One of the points I often make is about one million Indians entering the workforce every month. That makes it 12 million or 1.2 crore youth entering the workforce every year.

That is our 'so called' demographic dividend.

And that is half the population of Australia.

And that is more than 2.5 times the population of New Zealand.

The question is where are the jobs for these youth?

Source: Thossaphol/www.istockphoto.com

The former RBI governor Raghuram Rajan made a similar point recently, when he said: *"Remember that we have what we call the population dividend. A million new people entering the labour force every month... If we don't provide these jobs that are required, you have a million dissatisfied entrants. And that could create a lot of social mischief."*

The government's response to this issue seems to be, that we have done what we could, now it is the industry's turn to do its bit. As Arvind Panagariya recently said: *"The major impediment in job creation is that our entrepreneurs simply do not invest in labour intensive activities." Pangariya said this on August 25, 2017. He was the vice-chairman of the Niti Aayog at that point of time. His term came to an end on August 31, 2017.*

Recently, the Labour Secretary M Sathiyavathy also made a similar point, which was that eight states had amended the Industrial Disputes Act. This gave firms more flexibility to hire and fire workers. But despite this the corporates were not investing in labour intensive industries in these states.

The question is why are firms not investing in labour intensive industries. First and foremost, the Industrial Disputes Act is not the only labour law going around which needs to be amended, if corporates are to invest in more labour-intensive industries.

As Jagdish Bhagwati and Arvind Panagariya (the same Arvind Panagariya quoted earlier, and this makes me wonder why did he say what he did) write in *India's Tryst with Destiny: "The costs due to labour legislations rise progressively in discrete steps at seven, ten, twenty, fifty and 100 workers. As the firm size rises from six regular workers towards 100, at no point between the two thresholds is the saving in manufacturing costs sufficiently large to pay for the extra costs of satisfying these laws."* Hence, India needs better labour laws. The work that has already been done on this front is clearly not enough.

We will get back to labour laws later in the Letter. Recently, I came across a very interesting research report by Nikhil Gupta and Madhurima Chowdhury of Motillal Oswal, who have a very interesting data driven take on why Indian corporates prefer to use capital rather than labour.

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The analysts use data up to 2014-2015 from the Annual Survey of Industries and based on it conclude that over a period of 35 years up to 2014-2015, the rate of employment in the Indian industry has increased at 1.9 per cent per year on an average. At the same time, the gross value added has increased at the rate of 8 per cent per year on an average.

One method of measuring the gross domestic product (GDP) is by calculating the value added by the different industries during the period the GDP is being measured. This value added is referred to as gross value added (GVA). The GDP is defined as GVA plus indirect taxes minus subsidies.

What the Motilal Oswal analysts are essentially saying is that while the gross value added has grown at a rate of 8 per cent per year, labour employment in the industrial sector has grown at just 1.9 per cent. Factories covered by the Annual Survey of Industry covered around 1.4 crore individuals in 2014-2015. This basically reflects labour employment in the formal sector and forms around 20 per cent of the total employment in the Indian manufacturing sector.

So, what is happening here? Why has GVA grown at 8 per cent per year and the employment at just 1.9 per cent per year? The companies have expanded using capital (i.e. money to buy machinery and equipment). Gupta and Chowdhury point out that employment has grown at an average of 1.9 per cent per year, over a period of 35 years. In comparison, the capital employed by industry has grown at the rate of 14 per cent per year.

Clearly, capital has won the race hands down. Or if I were to put it in simple words, when it comes to Indian industry, machine has won over man for a while now.

The total number of employees per factory has come down from 80 in the early 1980s to around 60 in 2014-2015. Hence, the average Indian factory now employs one fourth fewer people than it did earlier. At the same time, the total capital employed in a factory has jumped from less than Rs 50 lakh to more than Rs 10 crore, during the same period.

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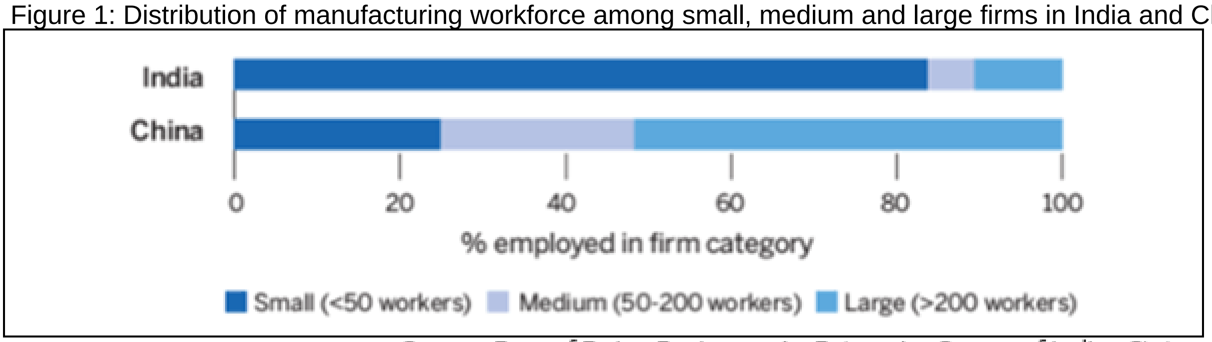
There are multiple things that we can conclude from these numbers:

- The Indian corporates prefer machine to men and they have done that for a while now.
- The Indian corporates like the idea of expanding their production and in the process their business, by installing new machines and equipment, rather than employing more people. (Okay, I know I am saying the same thing in different ways. But it is important to make this point multiple times).
- It also tells us that Indian corporates like corporates in any other part of the world, do what is beneficial for them. They are in the business of doing business and not in the business of creating jobs.
- The question is why do Indian corporates prefer machines over men? The reason is straightforward. Machines are cheaper and more productive than men. Over the years, the labour costs have been growing at a much faster rate than the capital cost. The ratio of cost per unit of labour divided by cost per unit of capital was greater than 2.5 in 2014-2015. This basically means that hiring additional employees to expand is much more expensive than simply installing extra machines and other equipment.

The cost of per unit of labour has gone up over the years, whereas the cost per unit of capital has remained more or less stable. What this tells us very clearly is that when companies expand, it is cheaper for them to employ more machinery and get the machines to do the job, than human beings. If I were to put it simplistically, robots (i.e. machines) have won the employment race in India.

Other than this, labour laws remain a major issue which discourage companies from employing people. Take a look at Figure 1.

Figure 1: Distribution of manufacturing workforce among small, medium and large firms in India and China.



Source: Ease of Doing Business - An Enterprise Survey of Indian States

What does Figure 1 tell us? It tells us very clearly that close to 85 per cent of Indian manufacturing firms are small. They employ less than 50 workers. In case of China, only around 25 per cent of the manufacturing firms are small. Also, in case of China, more than 50 per cent of manufacturing firms are large i.e. they employ more than 200 workers. In the Indian case, around 10 per cent of the manufacturing firms are large. And India has very few middle-sized firms which employ anywhere between 50 to 200 workers.

Since, a bulk of manufacturing firms are small, they create fewer jobs. This is a phenomenon which plays out across labour intensive sectors which can employ a huge mass of India's unskilled and semi- skilled labour, as well. Some of the most labour intensive sectors in India are textiles, apparels and food and beverages.

The Motilal Oswal analysts point out that while the gross value added by these sectors has grown at rapid rates, the employment in them hasn't. Take the case of textiles, the GVA has grown at the rate of 12 per cent per year, whereas employment has grown at just 3.1 per cent per year. In case, of apparels, the GVA has grown at 11.4 per year and employment at 1.8 per cent per year. For food products, the rates are at 12.3 per cent and 2.4 per cent, respectively.

These data points are again telling us that the businesses in these different sectors are growing at fast rates but they aren't creating jobs at the same pace. At the aggregate level, what it tells us is that while companies are expanding and so is the economy, jobs aren't being created at the same pace. In fact, jobs are being created at a very slow pace. A major reason for this, as explained above, lies in the fact that it simply makes more sense for corporates to use machines rather than human beings when they are looking to expand.

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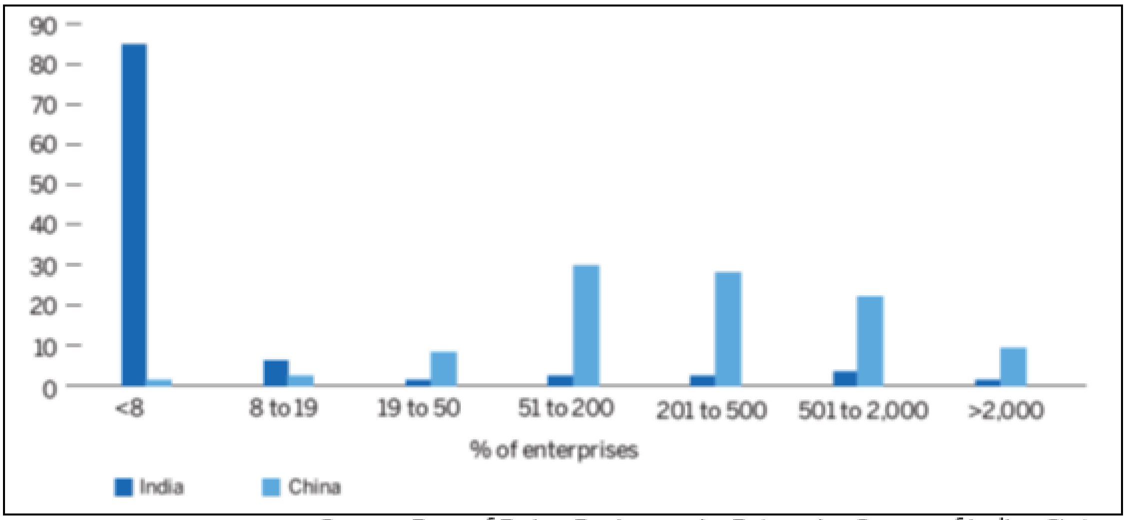
Take a look at Figure 2. It worth remembering here that the apparel sector has the potential to create huge jobs. As the chief economic adviser Arvind Subramanian along with Rashmi Verma in a June 2016 column in The Indian Express, wrote: *"Every unit of investment in clothing generates 12 times as many jobs as that in autos and nearly 30 times that in steel."*

Figure 2: Distribution of Enterprise Size in Apparel Sector.



Source: Ease of Doing Business - An Enterprise Survey of Indian States

What does Figure 2 tell us? It tells us that a bulk of Indian apparel firms employ less than eight employees. This basically tells us that they start small and continue to remain small. The question is why? Labour laws the way they are, are a major reason, as I explained at the beginning of the Letter. It's time to get into a little more detail on the issue.

As the Niti Aayog - *IDFC Enterprise Ease of Doing Business - An Enterprise Survey of Indian States report points out: "Stringent labour laws have continued to hold back the emergence of large enterprises... It is however noted that a majority of enterprises tend to have less than 49 employees regardless of whether they are located in a high- or low-growth state. This may be of interest with regards to the impact of In¬dia's labour laws on the enterprise sizes in India. Only few laws are applicable to enterprises of all sizes such as the Minimum Wages Act of 1948. As far as legal registration of manufacturing firms is concerned, the employment threshold of ten is a major mark¬ing point in the sense that all those employing ten or more workers and using electric power (20 or more if power is not used) are required to register under the Factories Act of 1948."*

A bulk of Indian apparel firms employ less than eight employees. This basically tells us that they start small and continue to remain small.

If jobs are to be created the size of these firms need to go up. They need to employ more people. But these firms need to draw a comparison between labour cost and capital cost, and for a while the capital cost has been winning hands down. In this scenario, it seems highly unlikely they will create jobs.

To conclude, robots (i.e. machines bought with capital(money)) are more productive than human beings.

They are cheaper than human beings.

And also, they don't take toilet breaks. Yes, Robots don't take toilet breaks.