Policy Brief

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19 Jan 2024

Old or New: What's Driving The Employment Growth in Formal Manufacturing Sector in India?

Questions pertaining to the distribution of employment in India's manufacturing sector and its evolution over time have attracted considerable interest among researchers and policy makers. Identifying and understanding the drivers of change in the employment distribution is important from a policy perspective. Specifically, the subject of whether it is the Micro, Small and Medium Enterprises (MSMEs) or the large firms that have been significant contributors to employment deserves attention. In addition, determining whether younger or older firms drive employment growth is critical. This is especially relevant as the Government undertakes a series of initiatives to accelerate the growth of the manufacturing sector through programmes such as Make in India, Production Linked Incentive scheme, and Start-Up India.

The distribution of employment in India's manufacturing sector, when combining data from both the organised and unorganised enterprise surveys is bimodal. In this distribution, a large share of employment is concentrated in micro-enterprises. Following this, there is a notable concentration of employment in large enterprises, while the share of small and medium enterprises is considerably small (Krueger, 2013; Hasan and Jandoc, 2010; Mazumdar and Sarkar, 2013). In a forthcoming study, we focus exclusively on the registered/organised sector for which annual data is available from the Annual Survey of Industries (ASI) and examine how the employment distribution has evolved over time. Examining data from the ASI for sixteen years, we find that small firms (defined as those employing 10-49 workers) account for the smallest share of employment; while large firms (defined as those having more than 250 workers) account for the highest employment share. Significantly, over time, the share of large firms in total employment increased from

51.1 percent in 2000-01 to 58.5 percent in 2015-16. While the share of small and medium enterprises (SMEs) in total employment was comparable to that of large enterprises in 2000-01, it declined by about 7 percentage points in 2015-16. Consequently, large firms accounted for the highest share of employment by 2015-16. This is indeed a positive development as larger plants offer higher wages compared to smaller plants. The link between size and wages has been the subject of economic research, both from a theoretical and empirical lens. The literature typically finds that workers at large firms receive higher wages on average.

It is crucial to identify and understand the drivers of the rising employment share in large plants and declining employment share in small plants. This is particularly important when determining whether this shift is attributed to the expansion of previously smaller plants and their transition to larger size bins or to the entry of new larger plants driving the uptick in employment in the large size bins. If it is the former, there is a strong case for supporting small and medium plants through special support programmes that provide small industry finance, extension and advisory services, infrastructure and training programmes for managers and workers. However, if it is the latter, there is a compelling case for focussing on encouraging the entry of new plants.

Addressing the above questions require us to be able to track the growth of factories over time. Although the ASI dataset provides a panel dataset with a unique identifier for factories, the sample design of the ASI does not permit us to track the growth and life cycle dynamics of all factories over time. The sampling strategy is such that only the larger factories (i.e. those factories which are in the "Census Scheme' of the sample and typically have 100 or more workers) are surveyed each year. The remaining smaller units which are in the Sample Scheme cannot be tracked every year. Therefore, we are unable to consistently track factories in all size bins in the ASI.

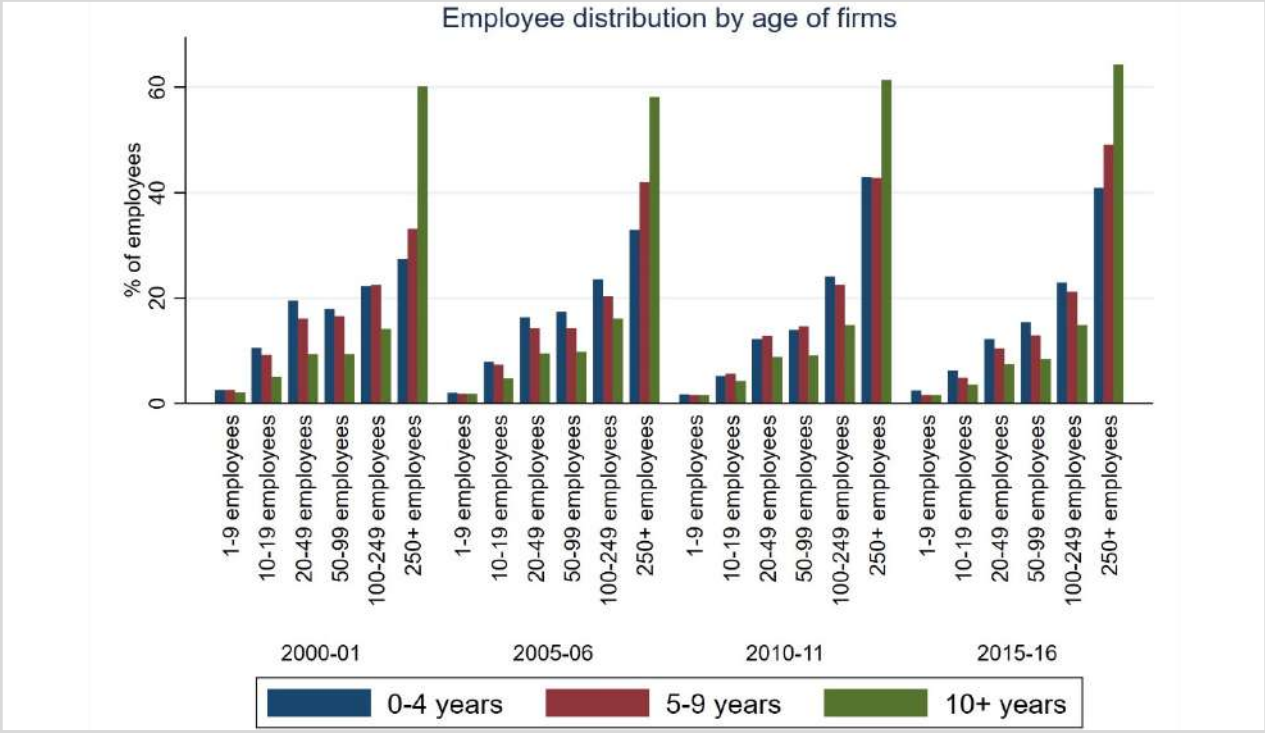
Our study seeks to understand the catalysts for changing the employment distribution over time using a two-fold approach. First, we study approximately 3000 plants that are captured during all 16 years in the ASI surveys. We then examine if there is any evidence of transition amongst these plants from lower size bins to higher size bins^1. We find that all these plants have 100 or more employees and a quarter of those plants that were reported to be in the large size bin (i.e. had 250 or more employees) in 2015-16 had been surveyed as a smaller plant in at least one earlier year^2. Furthermore, since not all plants that were captured in these yearly surveys for the first time were new plants, they could have started as smaller units before they were included in the survey. Likewise, some of the large plants that were surveyed in all 16 years could have started as smaller plants in the years prior to the time period of our analysis (i.e. before 2000-01). Therefore, the estimate that a quarter of large plants in 2015-16 transitioned from being smaller plants in the earlier years is a conservative one. This finding presents the evidence of plants transitioning across the size distribution and becoming large over time. Therefore, there is a case for supporting small and medium plants that have the potential to grow, expand and transition to larger size bins through schemes and programmes that improve access to credit, markets, skilled

^1 Plants that report to have 100 or more employees account for 19 to 31 percentage of the total number of plants surveyed across years. Specifically, since 2010-11, this share has consistently remained above 29 percent.

^2 This fraction decreases as we look at previous years, since the number of years preceding that year also decreases.

workers and infrastructure, amongst other factors.

However, looking at the factories in the Census Scheme of the ASI sample which appear in all 16 years of the panel alone is not enough, as these factories typically have 100 or more employees. To understand what is driving the change in the distribution, we need to examine the remaining firms as well. In the absence of panel data for MSMEs that allow the study of firm life cycle dynamics, we use an alternative approach. We construct a panel dataset at the 'size-bin level' by aggregating the plant-level data provided in the ASI surveys for each year across the following size bins: 1 to 9 employees; 10 to 19 employees; 20 to 49 employees; 50 to 99 employees, 100 to 249 employees, 250 to 300 employees and 300+ employees within each of the available 3-digit NIC (2004) in each state. This new panel helps us to consistently track the set of plants in specific size bins across 16 years.



Source: ASI plant-level data

Our analysis shows that size-bins which witness higher employment growth are typically those that have a higher share of plants in rural areas, have a higher share of contract workers in the workforce, and a higher share of female workers in their directly hired workforce. Not surprisingly, we also observe that states that are more industrialised and have better infrastructure facilities witness higher employment growth.

The findings vis-à-vis the share of the young firms in a given size-bin are of particular interest. We observe that the higher is the share of newly established plants, the lower is the growth of employment in a size bin. This indicates that it is not the younger, but mature plants that are driving employment growth. The only size bin, where we find the contrary results is the 100-249 employee size bin. These results appear to suggest that in the 100-249 size bin, employment growth is likely to be driven by young plants, while in the size bin of 250+ employment, it is the older mature plants that drive employment growth. It further indicates that in addition to creating an

enabling environment for the growth and expansion of small and medium sized incumbent firms, it is important to encourage and facilitate the entry of new medium sized firms. Over and above this, our analysis also highlights the importance of older large firms as they account for a sizeable share of employment in the organised manufacturing landscape and drive employment growth in the large size-bins.

To formulate policy to reduce underemployment and foster economic growth, factors that are conducive to generating such high-growth plants contributing to the employment creation need to be identified. While we are still far from understanding the most effective policy levers that stimulate high-growth plants, our analysis suggests that a two-fold approach is required. One, encouraging the entry of new plants. And two, amongst the incumbents, facilitating the growth of dynamic small and medium-sized firms to expand. The latter can be achieved through policy instruments that do not incentivise firms to remain small by restricting support to enterprises that are below a certain threshold of investment, employment, or turnover, as defined in the current architecture of MSME programmes.

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