Nourishing Dwarfs to become Giants: Reorienting policies for MSME Growth[1]

<div style="text-align:right">

03

CHAPTER

</div>

ॐ पूर्णमदः पूर्णमिदम्-पूर्णात् पूर्णमुदच्-यते।
**From the complete, the complete is born.
From a seed, a mature tree is born.**

MSMEs that grow not only create greater profits for their promoters but also contribute to job creation and productivity in the economy. Our policies must, therefore, focus on enabling MSMEs to grow by unshackling them. Job creation in India, however, suffers from policies that foster dwarfs, i.e. small firms that never grow, instead of infant firms that have the potential to grow and become giants rapidly. While dwarfs, i.e., firms with less than 100 workers despite being more than ten years old, account for more than half of all organized firms in manufacturing by number, their contribution to employment is only 14 per cent and to productivity is a mere 8 per cent. In contrast, large firms (more than 100 employees) account for three-quarters of such employment and close to 90 per cent of productivity despite accounting for about 15 per cent by number. The perception of small firms being significant job creators pervades because job destruction by small firms is ignored in this calculus: small firms find it difficult to sustain the jobs they create. In contrast, large firms create permanent jobs in larger numbers. Also, young firms create more jobs at an increasing rate than older firms. Size-based incentives that are provided irrespective of firm age and inflexible labour regulation, which contain size-based limitations, contribute to this predicament. To unshackle MSMEs and thereby enable them to grow, all size-based incentives must have a sunset clause of less than ten years with necessary grand-fathering. Deregulating labour law restrictions can create significantly more jobs, as seen by the recent changes in Rajasthan when compared to the rest of the states.

INTRODUCTION

3.1 Job creation in large numbers remains an urgent imperative to provide financial and social inclusion for our young population. After all, a well-paying job provides the best form of financial and social inclusion to not only the individual but also his/her entire family. Chapter 7 in this volume of the Survey predicts that the working-age population will grow by roughly 97 lakh per year during the coming decade and 42 lakh per year in the

---

[1]   Disclaimer: In this chapter, the term "dwarfs" for firms that remain small despite being old is contrasted to "infants" for firms that are small because they are young. This usage is purely for firms and has no correlation with such usage for individuals and is therefore not intended to harm any sensibilities, whatsoever.

2030s. If we assume that the labour force participation rate (LFPR) would remain at about 60 per cent in the next two decades, about 55-60 lakh jobs will have to be created annually over the next decade. In this context, this chapter examines how policies followed over the last seven decades stifle the growth of Micro, Small & Medium Enterprises (MSMEs) in the economy. MSMEs that grow not only create greater profits for their promoters but also contribute to job creation and productivity in the economy. Our policies must, therefore, focus on enabling MSMEs to grow by unshackling them. The chapter then lays out the policy map for re-orienting the policy stance to foster the growth of MSMEs and thereby greater job creation and productivity in the economy.

THE BANE OF DWARFISM AND ITS IMPACT ON JOBS AND PRODUCTIVITY

### Domination of 'Dwarfs' in number

3.2   A startling fact is how the bane of dwarfs, which are defined as small firms that never grow beyond their small size, dominates the Indian economy and holds back job creation and productivity. For the purposes of the analysis in this section, firms employing less than 100 workers are categorized as small and firms employing 100 or more workers as relatively large. Though a firm employing 100 workers is definitely not large in the global context, as we show below, firms employing 100 workers are relatively large in the Indian context. Firms that are both small and older than ten years are categorized as dwarfs as these firms have continued to be stunted in their growth despite surviving for more than 10 years.[2]

3.3   Figures 1(a) to (c) show the share of dwarfs in the number of firms, the share in employment and their share in Net Value Added (NVA). This analysis has been conducted using *firm-level* data from the Annual Survey of Industries (ASI) for the year 2016-17, which is the latest available. While dwarfs account for half of all the firms in organized manufacturing by number, their share in employment is only 14.1 per cent. In fact, their share in NVA is a miniscule 7.6 per cent despite them dominating half the economic landscape. In contrast, young, large firms (firms that have more than 100 employees and are not more than 10 years old) account for only 5.5 per cent of firms by number but contribute 21.2 per cent of the employment and 37.2 per cent of the NVA. Large, but old, firms (firms that have more than 100 employees and are more than 10 years old) account for only 10.2 per cent of firms by number but contribute half of the employment as well as the NVA. Thus, firms that are able to grow over time to become large are the biggest contributors to employment and productivity in the economy. In contrast, dwarfs that remain small despite becoming older remain the lowest contributors to employment and productivity in the economy.

---

[2]   Disclaimer: In this chapter, the term "dwarfs" for firms that remain small despite being old is contrasted to "infants" for firms that are small because they are young. This usage is purely for firms and has no correlation with such usage for individuals and is therefore not intended to harm any sensibilities, whatsoever.

Figure 1(a). Share of dwarfs versus others in number of firms (as of 2016-17)
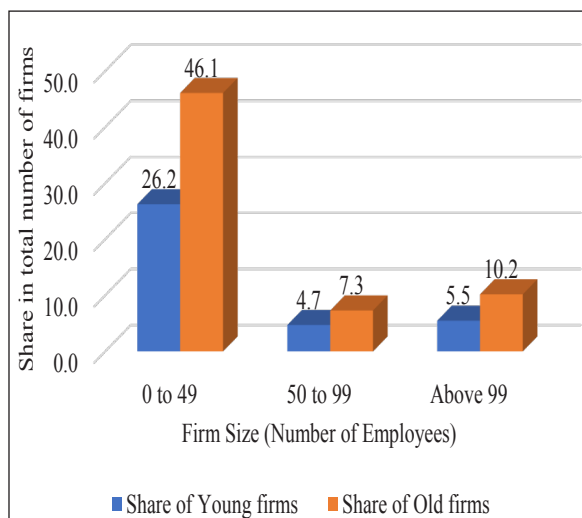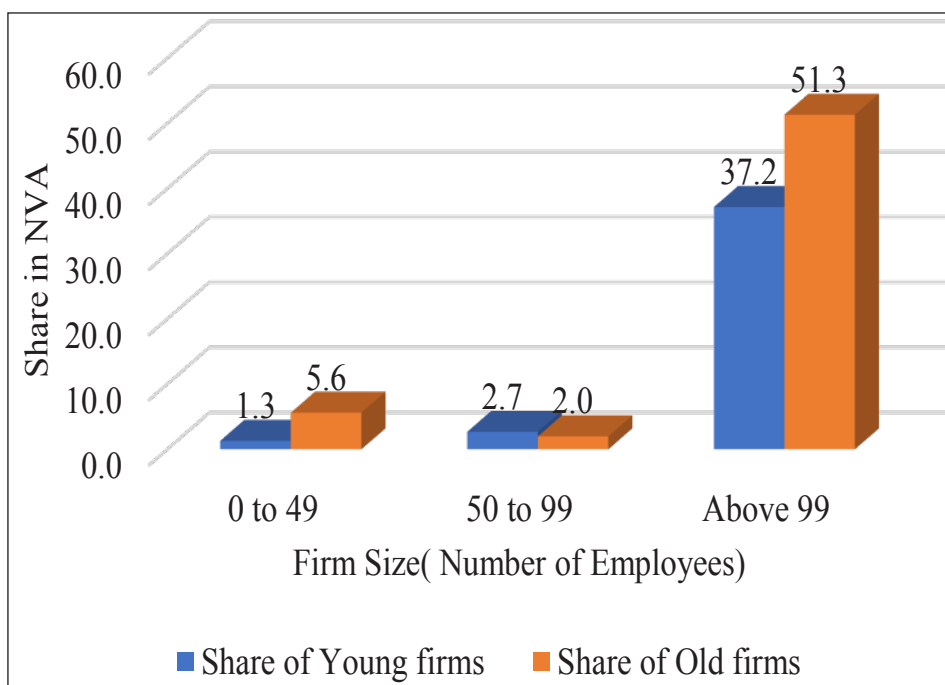

Source: ASI Firm level data

Figure 1 (b). Share of dwarfs versus others in employment (as of 2016-17)
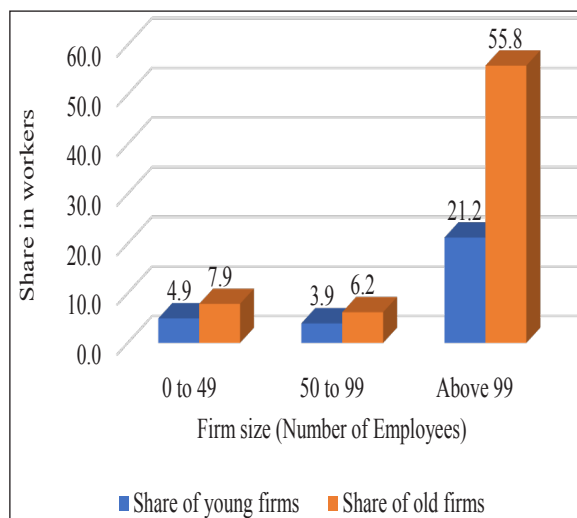
Source: ASI Firm level data

Figure 1(c). Share of dwarfs versus others in Net Value Added (as of 2016-17)

Source: ASI Firm level data

3.4 When examined purely according to size, we note that the proportion of small firms in organized manufacturing is around 85 per cent. In contrast, large firms account for only around 15 per cent of all the firms in organized manufacturing. These proportions have not changed much over time as seen in 2010-11 (Figure 2 (a)). Thus, small firms definitely dominate the economic landscape in India. Crucially, however, small firms accounted for only 23 per cent of the total employment in organized manufacturing in 2016-17 while the large firms accounted for over 77 per cent of the total employment. These proportions remain similar to those in 2010-11 (Figure 2(b)). Even more tellingly,

the share of small firms in Net Value Added (NVA) from organized manufacturing was only 11.5 per cent whereas the share of large firms in NVA was 88.5 per cent in 2016-17; these proportions are not different in 2010-11 either (Figure 2(c)). Even among the small firms, firms with less than 50 employees dominate the most numerically but create the least jobs and remain the most unproductive. Thus, the contribution of small firms to output and employment in the manufacturing sector is insignificant though they account for close to 85 per cent of all firms.

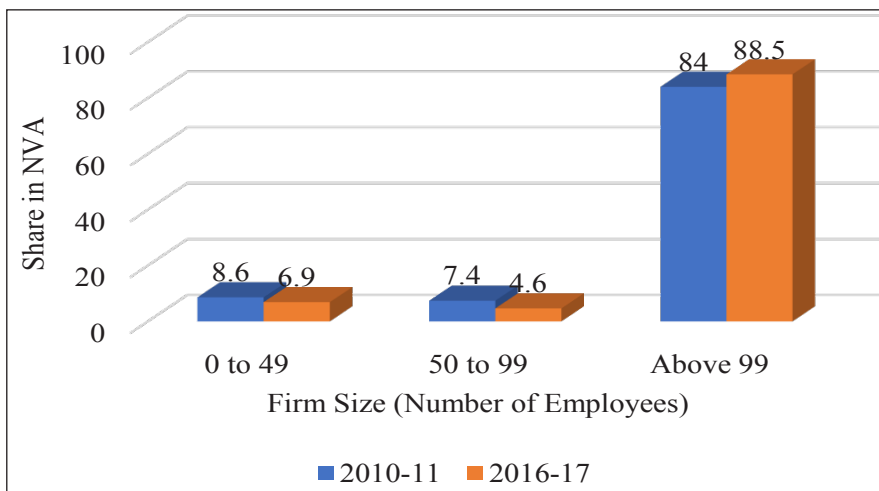**Figure 2(a). Distribution of number of factories by firm size**

Source: ASI Firm level data

Figure 2(b). Distribution of employment across firms by firm size
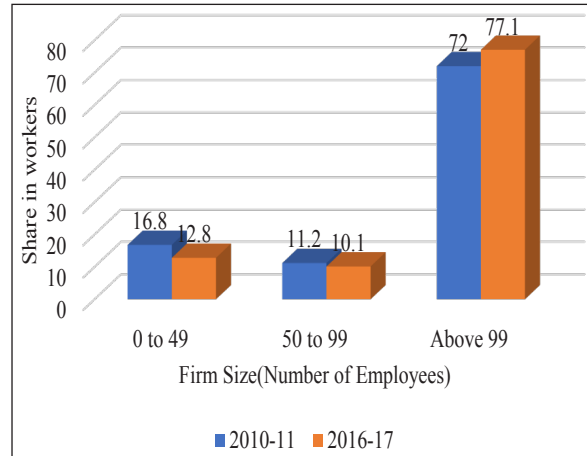
Source: ASI Firm level data

Figure 2(c). Distribution of NVA Share by firm size

Source: ASI Firm level data

3.5   The above findings dispel the common notion that small firms generate the most employment. Small firms may generate a higher number of new jobs. However, they destroy as many jobs as well. Thus, higher levels of job creation in small firms co-exist with job destruction, thereby leading to lower levels of net job creation (Li and Rama, 2015). This common perception also stems from the fact that the effect of size confounds the effect of age. Specifically, most young firms are small (though most small firms are not young, at least in the Indian context). Absent careful distinction between the effect of age

versus that of size, the notion that small firms create jobs has prevailed because it is the young firms, who also happen to be small, create the most jobs. To establish this fact, the proportion of firms, share of employment and share of NVA by age has been examined.

Effect of Size compared to Effect of age

3.6 As compared to the small firms, it is the young firms that contribute significantly to employment and value added. Firms less than 10 years of age account for about 30 per cent of employment and about half the NVA. In fact, we crucially note that the share in employment as well the share in NVA trend downwards with an increase in firm age. This is despite the fact that young firms are on average smaller than older firms. Thus, young firms account for a disproportionate share of employment and productivity (Figure 3).

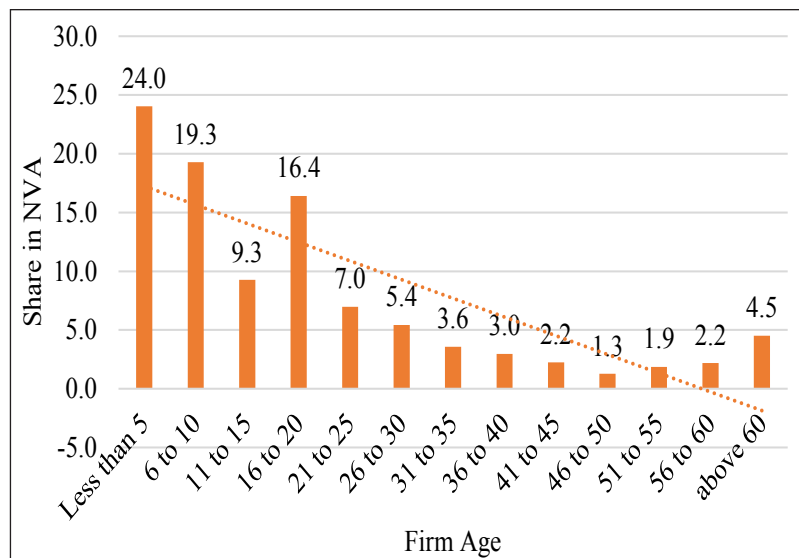**Figure 3(a). Proportion of firms by firm age**
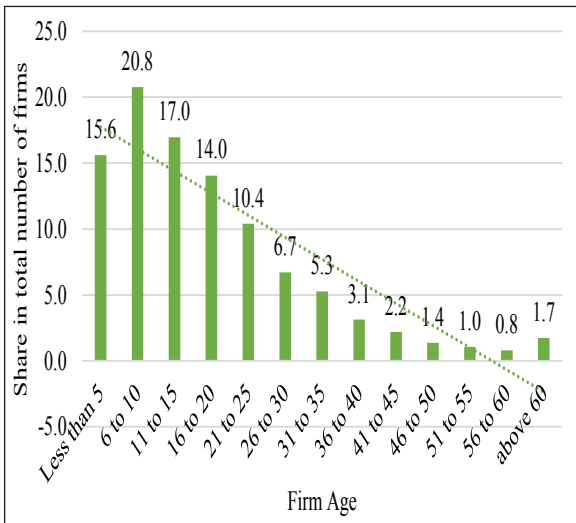
Source: ASI Firm level data

Figure 3(b). Employment share by firm age
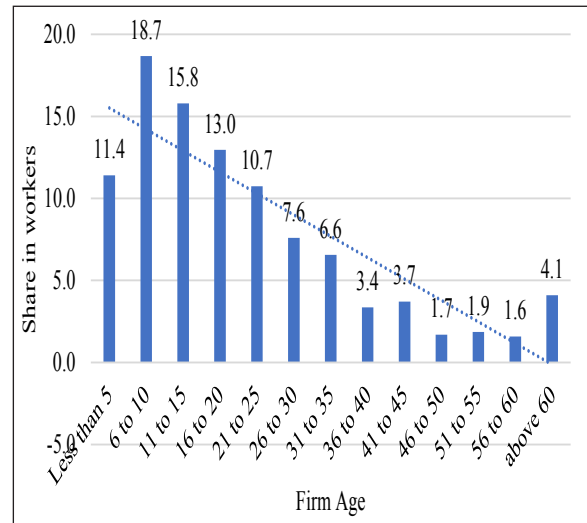
Source: ASI Firm level data

**Figure 3(c). NVA share by firm age**

Source: ASI Firm level data

Cross-Sectional Comparison

3.7   What is the impact of the above size distribution of firms on jobs and productivity? Figure 4 compares growth of employment and productivity with firm age in three countries: U.S., Mexico and India (Hseih and Klenow, 2014). The comparison is done using both organized and unorganized manufacturing firms. For India, the data include both from the ASI and the surveys of unorganized manufacturing organized by the National Sample Survey Organization (NSSO). The left and the right panels use the size and productivity as of age five or younger as the base for comparison. The average employment level for 40-year old enterprises in the U.S. was more than seven times that of

the employment when the enterprise is newly set up. In contrast, the average employment level for 40-year old firms in India was only 40 per cent greater than the employment when the enterprise is newly set up. Thus, once they survive for forty years, the average 40-year old firm in the U.S. generates five times (=7/1.4) as much more employment than the average 40-year old Indian firm. Even Mexico does far better on this dimension than India. The average employment level for 40-year old firms in Mexico is double that of the employment when the enterprise is newly set up. Thus, once they survive for forty years, the average 40-year old firm in Mexico generates 40 per cent more (=2/1.4) employment than the average 40-year old Indian firm.
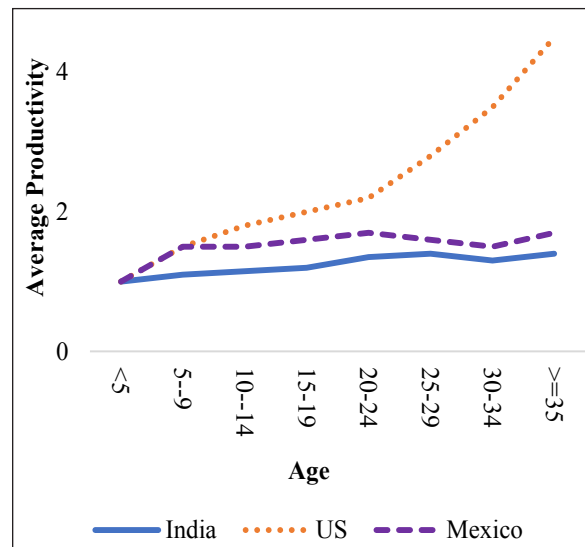
Figure 4(a). Change in employment with firm age

Figure 4(b). Change in productivity with firm age
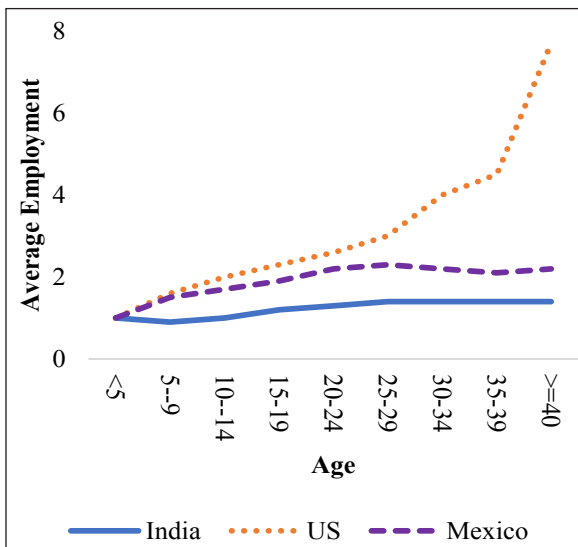
Source: Hseih and Klenow (2014)

3.8   A similar tale unfolds with productivity as well when we compare these three countries for the effect of aging of firms on productivity. The average productivity level for 40-year old enterprises in the U.S. was more than four times that of the productivity of an enterprise that is newly set up. In contrast, the average productivity level for 40-year old firms in India was only 60 per cent greater than the productivity of an enterprise that is newly set

up. Thus, once they survive for forty years, the average 40-year old firm in the U.S. is 2.5 times (=4/1.6) more productive than the average 40-year old Indian firm. Mexico does far better than India on this dimension as well. The average productivity level for 40-year old firms in Mexico is 1.7 times that of the productivity of an enterprise that is newly set up.

3.9   Thus, the comparison with other countries highlights that both employment creation and productivity do not grow adequately as firms age in India.

THE ROLE OF POLICY IN FOSTERING DWARFISM

3.10 In this section, we highlight that our policies – across the board – protect and foster *dwarfs* rather than *infants*. The key distinction here is that while infant firms are small and young, dwarfs are small but old. Thus, while infant firms can grow to become large firms that are not only more productive and generate significant employment, dwarfs remain small and contribute neither to productivity nor to jobs.

3.11   As we show below, these policies create a "perverse" incentive for firms to remain small. If the firms grow beyond the thresholds that these policies employ, then they will be unable to obtain the said benefits. Therefore, rather than grow the firm beyond the said threshold, entrepreneurs find it optimal to start a new firm to continue availing these benefits. As economies of scale stem primarily from firm size, these firms are unable to enjoy such benefits and therefore remain unproductive.

The lack of productivity and growth inhibits the ability of the dwarfs to create jobs.

Impact of Labour Regulation

3.12   India has a plethora of labour laws, regulations and rules, both at the centre and the state levels that govern the employer-employee relationship. Each of these legislations exempts smaller firms from complying with these legislations. Table 1 shows the size thresholds applicable to each piece of labour regulation. For instance, the Industrial Disputes Act (IDA), 1947 (Chapter VB) mandates companies to get permission from the Government before retrenchment of employees. This restriction is, however, applicable only to firms with more than 100 employees. Thus, firms with less than 100 employees are exempt from the need to get permission from the Government before retrenching their employees. Given the transaction costs inherent in complying with such regulations, naturally a large majority of firms would prefer to be below the threshold of 100 employees. Thus, such labour legislation creates perverse incentives for firms to remain small. In this sense, labour legislation complements other benefits provided to small firms in providing such perverse incentives.

Table 1. Size based Limitations posed by Key Labour Legislations

S.No.	Labour Acts	Applicability to Establishments
1	Industrial Disputes Act,1947, Chapter V relating to strikes, lockouts, retrenchment, layoff	Employing 100 or more workers
2	Trade Union Act, 2001-Registration of trade unions	Membership of 10 per cent or 100 workmen whichever is less
3	Industrial Employment (Standing Orders) Act, 1946	100 or more workmen
4	Factories Act,1948	10 or more workers with power and 20 or more workers without power
5	Contract Labour (Regulation & Abolition) Act, 1970	20 or more workers engaged as contract labour
6	The Minimum Wages Act, 1948	Employment in the schedule having more than 1000 workers in the State
7	Employees' State Insurance Act,1948 - ESI Scheme	10 or more workers and employees monthly wage does not exceed ₹21000
8	Employees' Provident Fund & Miscellaneous Provisions Act, 1952	20 or more workers

Source: Compiled from Ministry of Labour and Employment

Comparing productivity indicators in "inflexible" versus "flexible" states

3.13   To examine the impact of labour regulations, states are classified as flexible and inflexible based on the restrictiveness of their labour regulations. For this purpose, we build on the state-level survey that was conducted by OECD in 2007.[3] This survey covered eight major labour related legislations and indicators: IDA, 1947, Factories Act, 1948, State Shops and Commercial Establishments Acts (State Act), Contract Labour (Regulation & Abolition) Act, 1970, the role of inspectors, the maintenance of registers, the filing of returns and union representation.   21 States were surveyed and the responses were compiled by the OECD into an index that reflects the extent to which procedural changes have reduced transaction costs by limiting the scope of regulations, providing greater clarity in the application of regulations, or simplifying compliance procedures.

Answers were then scored as "1" if they reduced transaction costs, "0" if they did not, and (for two questions) "2" for a further reduction, with a maximum score of 50. This index has been updated by covering the labour reforms initiated by the States till 2013-14.

3.14   No major labour reforms were initiated by the states from 2007 to 2014. In 2014, Rajasthan was the first State that introduced labour reforms in the major Acts. Thereafter many States followed on the path of Rajasthan. The year 2014 is, therefore, fixed as the cut off year to classify and rank States as *Flexible* and *Inflexible*. *Flexible* states include those states that score 20 or more out of a maximum score of 50, i.e., states that have reduced transaction costs by at least 40 per cent. Other states are denoted as *Inflexible*. Figure 5 shows that Assam, Jharkhand, Kerala, Bihar, Goa, Chhattisgarh and West Bengal are classified as inflexible states while the other 14 states are classified as flexible.

Figure 5. Classification of States as Flexible & Inflexible based on labour restrictions
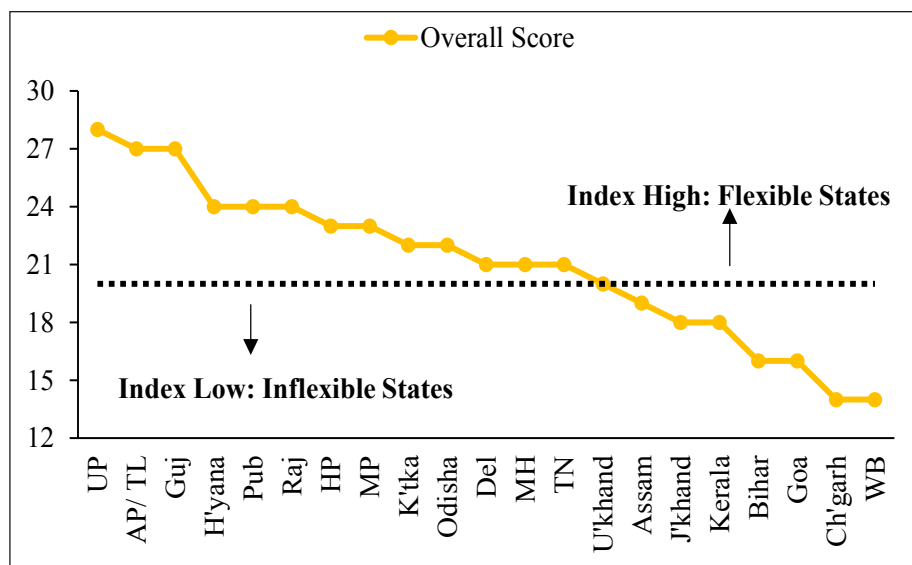
Source: OECD Economic Survey, 2007 updated with Survey calculations.

3.15   A comparison between the indicators for labour, capital and productivity of manufacturing firms in the Inflexible and

Flexible States makes it amply clear that flexibility in labour laws creates a more conducive environment for growth of industry

---

[3]   OECD Economic Surveys: India. Volume 2007, Issue no. 14.

and employment generation. The comparison of various indicators between Inflexible and Flexible States using ASI data is displayed in Figure 6.

3.16 The *Flexible States* contribute disproportionately more, on average, to labour, capital and productivity when compared to the Inflexible States. The aggregate number of workers, capital and NVA are significantly higher on average in the *Flexible States* than in the *Inflexible States*. The average number of workers per factory, capital per factory and wages per factory are also higher in the

Flexible states than in the Inflexible states. Moreover, the linear trend lines in each case indicate that the number of workers, capital and NVA are increasing at a faster pace in *Flexible* States than in the *Inflexible* states.

3.17 Moreover, due to rigidity in the labour laws, employers in *Inflexible* States prefer substituting labour with capital. This can be seen from (a) negative rate of growth in total number of workers in the state and average number of workers per factory, and (b) positive rate of growth in total fixed capital in the state and average fixed capital per factory.

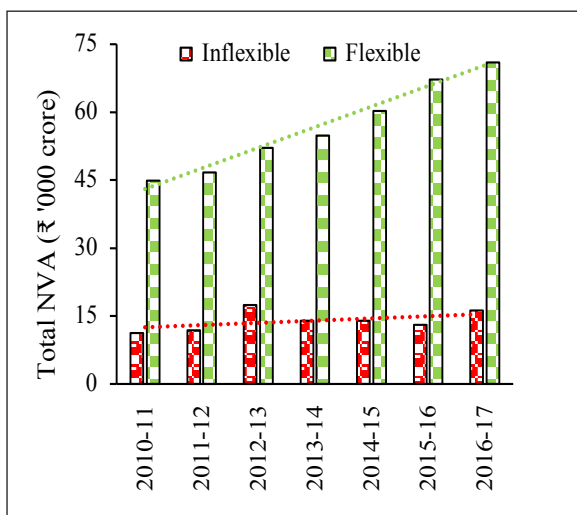### Figure 6. Comparison between Inflexible vs. Flexible States

(a) Total Number of Workers in the State*
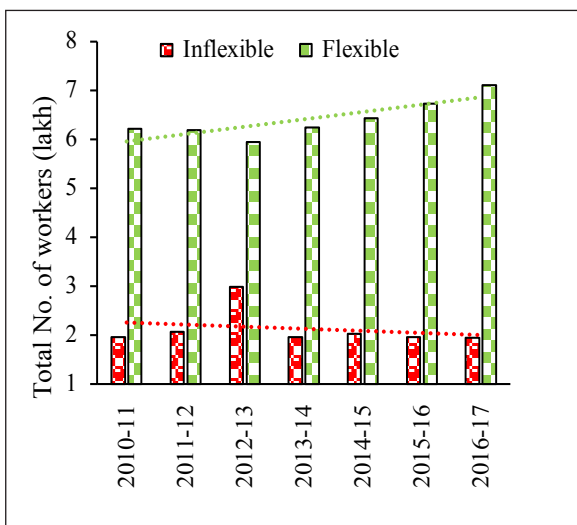
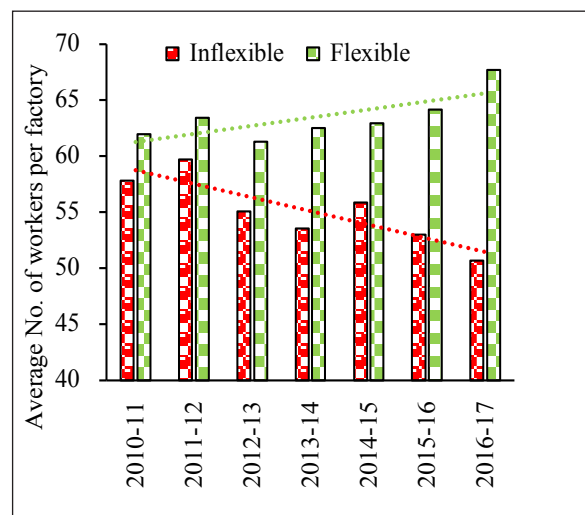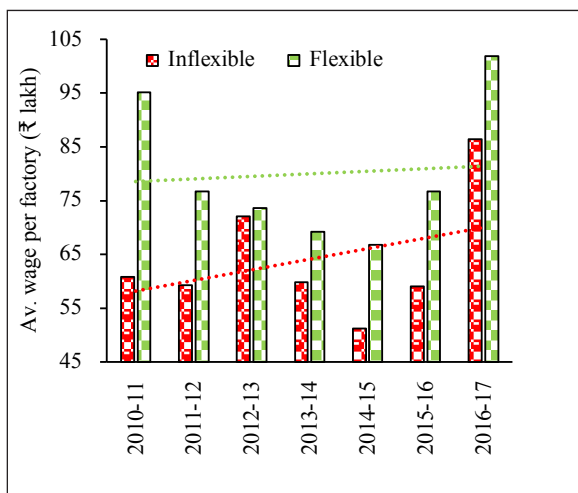

(b) Total Fixed Capital in the State*
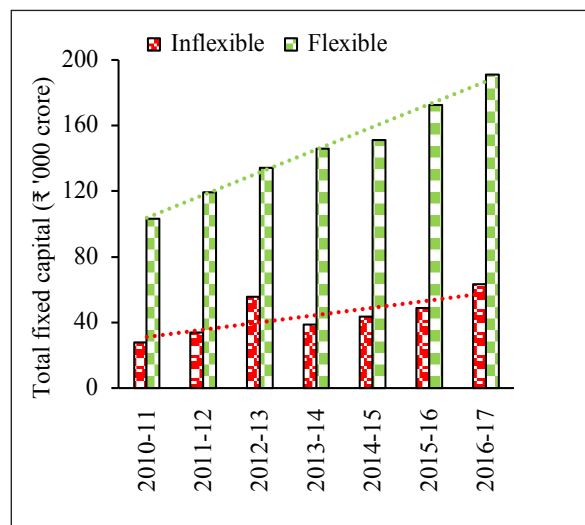
(c) Total NVA in the State*

(d) Average Number of Workers per Factory

(e) Average Wages per Factory

(f) Average Fixed Capital per Factory

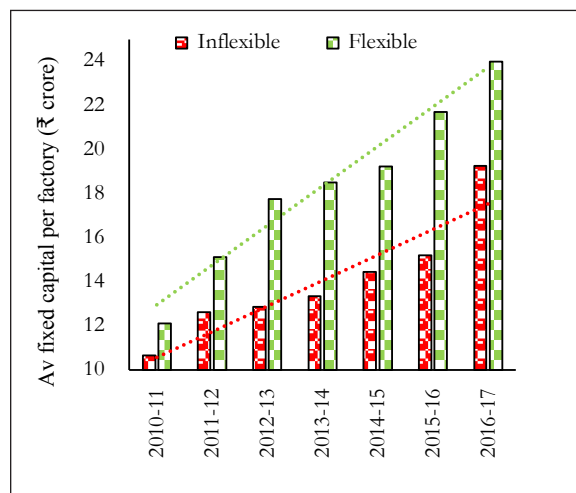
Source: ASI data (2011-17).
* shows mean values per state per year

3.18   Thus, the evidence comparing the Flexible states to the Inflexible states with respect to the rigidity of their labour laws clearly shows that the inflexible states are suffering in all dimensions. They are unable to create enough employment, cannot attract adequate capital into their states and their wages are lower as their productivity is lower. Furthermore, these parameters are either deteriorating or growing at a slower pace in the Inflexible states when compared to the Flexible states.

Impact of the labour law change in Rajasthan

3.19   Studies have found that on average, plants in labour-intensive industries and in states that have transited towards more flexible labour markets, such as Uttar Pradesh or Gujarat, are 25.4 per cent more productive than their counterparts in states like West Bengal or Chhattisgarh that continue to have labour rigidities (Dougherty, Frisancho and Krishna, 2014). In this context, the case study of Rajasthan is examined, which implemented labour reforms in 2014-15. The factory level data from ASI from 2011 to 2017 is analyzed to see the effect of the said labour law amendments.

3.20   As described in Table 2, the major reforms undertaken by the State of Rajasthan included the amendments in IDA, 1947, Factories Act, 1948, The Contract Labour (Regulation & Abolition) Act, 1970 and the Apprentices Act, 1961. The summary of the major amendments made in these legislations to make the labour market more flexible are stated in Table 2.

Table 2. Summary of labour reforms in Rajasthan

| Labour Acts	Amendments introduced in Rajasthan as part of Labour Reforms
Industrial Disputes Act, 1947	• To form any union, requirement of membership as a proportion of total workmen increased from 15 per cent to 30 per cent. • No government nod required for companies employing up to 300 workers for retrenching, laying off or shutting down units. Earlier limit was 100 workers. • A worker should raise an objection within three years. There was no timeline set in the earlier version with regard to discharge or termination.

Factories Act, 1948	• Threshold limit increased from 10 or more workers with power to 20 or more workers with power.
	• 20 or more workers without power to 40 or more workers without power.
	• Complaints against the employer about violation of this Act would not receive cognizance by a court without prior written permission from the State government.
The Contract Labour (Regulation and Abolition) Act, 1970	• Applicable to establishments that employ 50 or more workers on contract against the earlier 20 or more workers.
Apprentices Act, 1961	• Fix the number of apprentice-training related seats in industry and establishments.
	• The stipend for apprentices will be no less than the minimum wage.
	• To encourage skilling, government to bear part of costs of apprentice training.

Source: Ministry of Labour & Employment and Survey compilation

3.21 The effect of the amendments in labour laws in Rajasthan on various outcomes are evaluated in Figures 7 and 8 using data from ASI. Figure 7 shows the time-series of the average number of factories having more than 100 employees for Rajasthan and the Rest of India[1]. The measure for the Rest of India[4] is averaged over all the states. As the law changes occurred in 2014-15, we examine this variable from two years before to two years after the law change. In 2014-15, the average number of firms with 100 employees or more are similar for Rajasthan and the Rest of India. However, following the law change, the number of firms with 100 employees or more have increased at a significantly higher rate in Rajasthan than in the Rest of India. This figure illustrates in essence the difference-in-difference that is estimated: the before-after difference for Rajasthan vis-à-vis the same estimate for the Rest of India. As the law change that Rajasthan effected did not occur for the Rest of India, Figure 7 clearly shows that the law change increased the number of larger firms.

Figure 7. Average number of factories employing at least 100 workers in Rajasthan and Rest of India
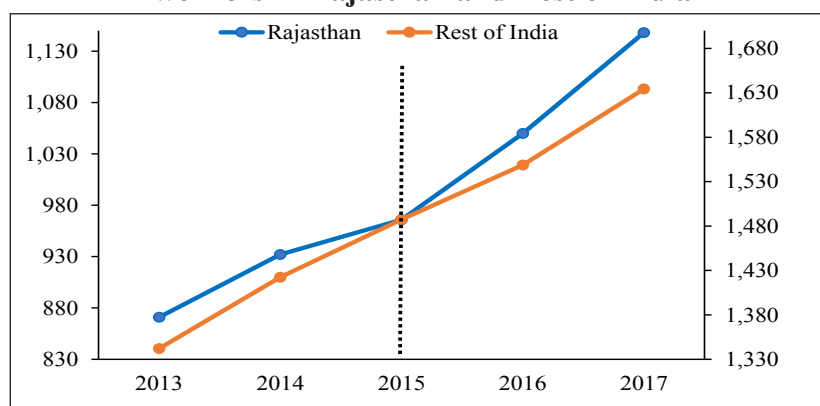
Source: Survey Computations using ASI, 2013-2017.

Note: Averages are computed for Rajasthan and for the Rest of India (RoI) separately.

---

[4] Rest of India includes 20 biggest states of India namely, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Andhra Pradesh &Telangana, Tamil Nadu, Uttarakhand, Uttar Pradesh, and West Bengal. These states cumulatively constitute over 95 per cent to Net Value Added.

3.22 Figure 8 shows explicitly the change in Compound Annual Growth Rates (CAGR) two years before and two years after the law change. We compare the number of operating factories employing more than 100 employees in the state, average number of workers per factory in a state, total output in the state and total output per factory in the state. It can be clearly seen that, for all variables, CAGR post labour reforms in Rajasthan has increased significantly vis-à-vis the Rest of India. Table 3 shows the results of estimating this difference-in-difference in a panel data setup including tighter controls for various confounding factors. The results remain unchanged from those seen in Figure 8. Thus, overall the evidence clearly demonstrates that each of these outcomes was positively impacted by the labour law change in Rajasthan.

Figure 8. Impact of Deregulation of Labour market in Rajasthan (as reflected in CAGR of the variables)

a) Number of factories with >100 employees
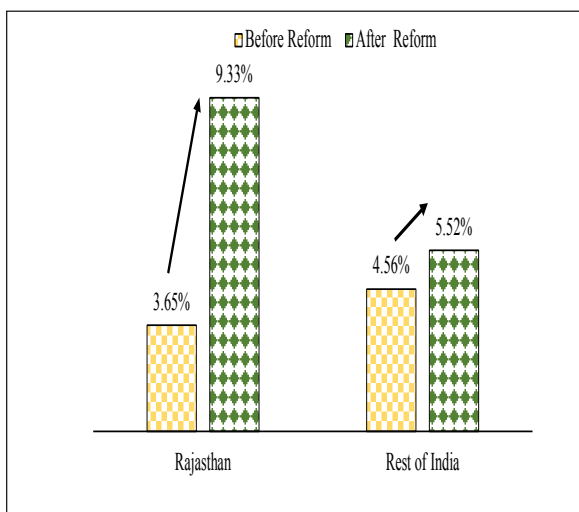
(b) Total output
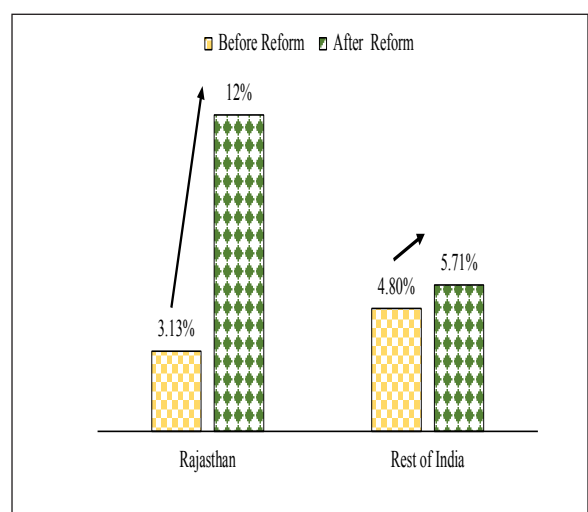
(c) Number of workers per factory

(d) Total output per factory

Source: Survey Computations using ASI, 2011-2017.
Note: Averages are computed for Rajasthan and for the Rest of India separately.

Table 3. Difference-in-Difference estimates of Labour Law Amendments in Rajasthan

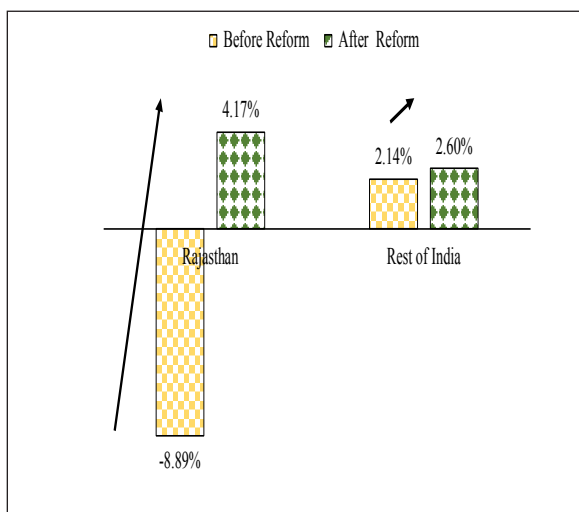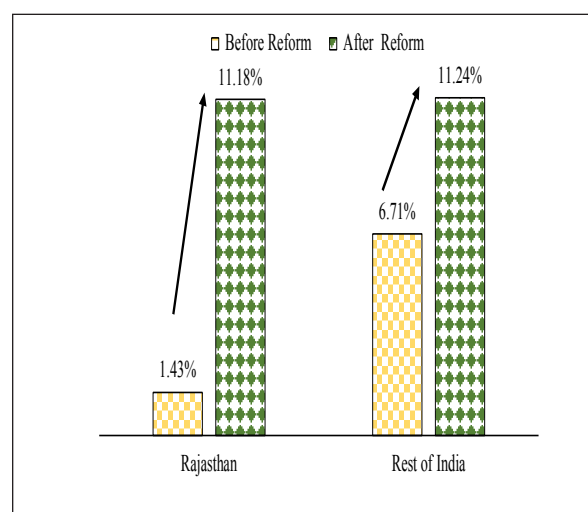| Variables	Log (No of Factories with >100 employees)	Log (No. of Workers)	Log (No of Workers per Factory)	Log (Total Output)	Log (Total Output per Factory)	Log (Total Wages)	Log (Wages per Factory)
Difference-in-difference estimate	0.04***	0.02**	0.05***	0.04***	0.05***	0.04***	0.05***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Observations	146	146	146	146	146	146	146
R-squared	0.9924	0.9957	0.9605	0.9933	0.9735	0.9921	0.9655
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: Computations based on ASI data.

Robust standard errors in parentheses

Note: *** and ** denote statistically significant at 99 and 95 per cent level of significance.

Impact of Small Scale Reservation

3.23   The policies targeted at the small firms referred to as the MSMEs include priority sector lending, incentives/exemptions till they reach an investment upper limit quantified in terms of investment in plant & machinery. As Table 4 shows, all these policies promote small firms irrespective of their age.

Table 4. Incentives Available to Small Scale Firms (irrespective of their age)

| Scheme	Objective
Priority Sector Lending	Direct and indirect finance at subsidized interest rates shall include all loans given to micro and small enterprises, irrespective of their age.
Credit Guarantee Fund Scheme	This scheme makes available collateral-free credit to the micro and small enterprises, irrespective of their age.
Purchase Preference Policy	A group of items (Group IV) are reserved for exclusive purchase from small scale units, irrespective of their age. Group V items are to be purchased from MSMEs, irrespective of their age, up to 75 per cent of the requirement.
Price Preference Policy	For selected items that are produced by both small scale and large scale units, price preference is provided to small firms, irrespective of their age. This price preference amounts to a 15 per cent premium over the lowest quotation of the large-scale units.
Benefits in tendering	MSMEs, irrespective of their age, can avail benefits such as availability of tender sets free of cost, exemption from payment of earnest money deposit, exemption from payment of security deposit.
Raw Material Assistance Scheme of National Small Industries Corporation (NSIC)	This scheme aims to help MSMEs, irrespective of their age, with financing the purchase of raw material (both indigenous and imported).

Marketing Assistance Scheme	Provides assistance to MSMEs, irrespective of their age, for the following activities: organization of exhibitions abroad, co-sponsoring of exhibitions organized by other organizations, organizing buyer-seller meets, intensive campaigns and marketing promotion activities.
GST Composition scheme	Scheme allows MSME firms, irrespective of their age, to pay GST at a flat rate. The turnover limit for businesses availing of the GST composition scheme is set at ₹1.5 crore.
Exemption under Central Excise law	Small scale units below a turnover of ₹4 crore, irrespective of their age, manufacturing good specified in SSI are eligible for exemption.

3.24 The Small Scale Industries (SSI) reservation policy was introduced in 1967 to promote employment growth and income re-distribution. Given the predominance of dwarfs in the Indian economy and the low productivity and employment generation, as shown above, it is crucial to examine the role of the SSI reservation policy.

3.25 Figure 9 below plots the share of establishments manufacturing de-reserved products minus the share of establishments manufacturing reserved products within a (size, age) cohort in the year 2007. A positive value indicates that a firm in the (size, age) cohort is likely to manufacture the de-reserved product while a negative value indicates that a firm in the (size, age) cohort is likely to manufacture the reserved product. The figure clearly shows that dwarfs, i.e., firms that are small and old, are significantly more likely to manufacture reserved products than any other category of firm. Also, larger firms (above 50 employees) and younger firms are significantly more likely to manufacture de-reserved products than smaller firms.

Figure 9. Use of Small Scale Reservation by Firms of Different Size and Age
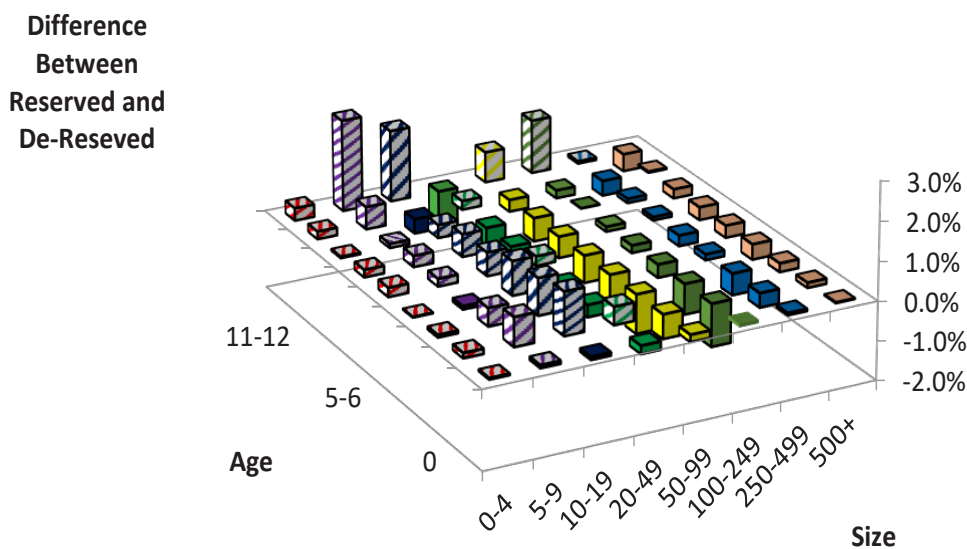
Source: Martin, Nataraj & Harrison, 2014.
Notes: The chart plots the share of establishments manufacturing de-reserved products minus the share of establishments manufacturing reserved products within a (size, age) cohort as of 2007. A positive value indicates that a firm in the (size, age) cohort is likely to manufacture the de-reserved product while a negative value indicates that a firm in the (size, age) cohort is likely to manufacture the reserved product.

3.26 From 1997 to 2007, several product categories reserved for small-scale firms were eliminated in a phased manner. Martin, Nataraj & Harrison (2014) analyse the impact of this phased de-reservation on job creation and destruction among incumbents and entrants by their size and age. Figure 10 examines whether the size based reservation was limiting in the first place or not. As MSMEs were defined based on the size of their plant and machinery, this figure examines the change in the plant, property and equipment among the incumbent firms; the vertical line in the figure shows the threshold averaged across various product categories. It is clear from the figure 6 that plant and machinery increased the most among incumbent firms just below the threshold in the 9-10 million category. In contrast, plant and machinery decreased among incumbent firms below the thresholds in the 0.1-0.5 million and 0.5-1.5 million categories. Thus, this analysis at the threshold clearly suggests that small-scale reservation limited the incumbent firms that intended to grow before de-reservation but could not do so without losing out the benefits provided by the reservation.

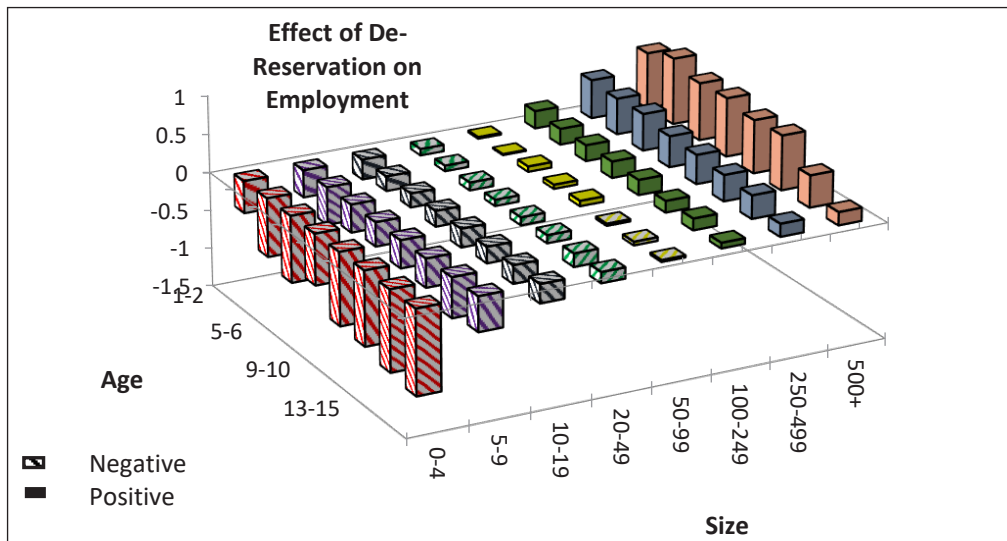**Figure 10. The Impact of Small Scale Reservation at the Threshold**
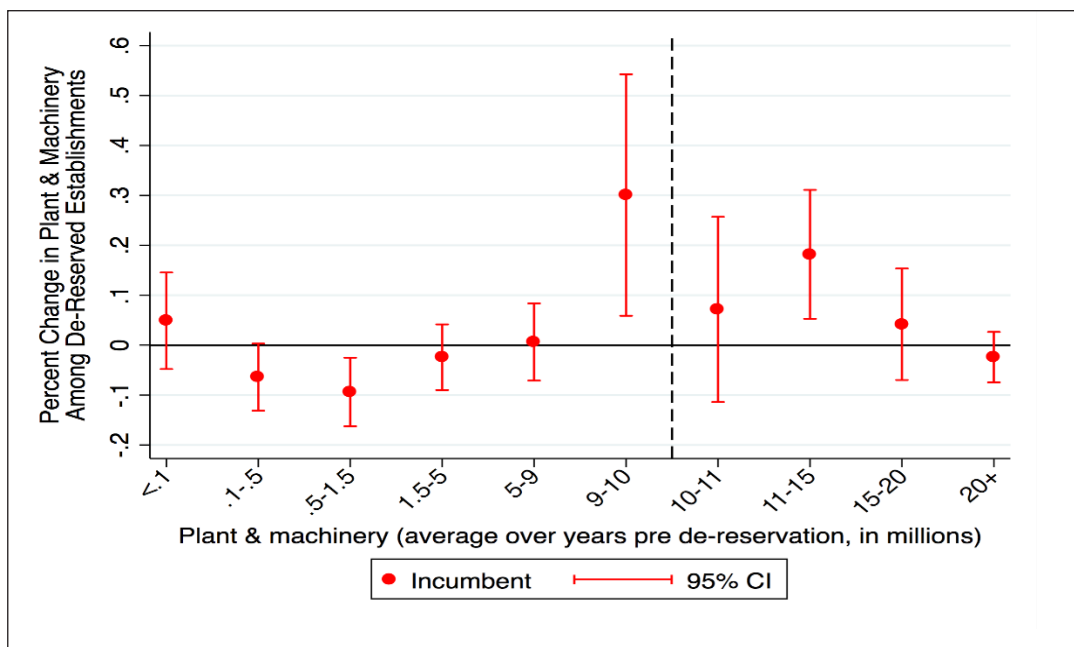
Source: Martin, Nataraj & Harrison, 2014.

3.27 Figure 11 shows the impact of the phased elimination of small scale reservations on employment (from Martin, Nataraj & Harrison, 2014). This figure clearly shows that while small firms lost jobs following de-reservation, large firms created jobs. In fact, across all age categories, the effect of de-reservation on net job creation (negative in the case of job destruction and positive in the case of job creation) monotonically increased with firm size. Specifically, within each age cohort, job destruction was the maximum among the smallest firms (1-4 employees) and least among the firms with 50-99 employees. In contrast, within each age cohort, job creation was the maximum among the largest firms (500+ employees) and least among the firms with 50-99 employees. This figure also shows that across the various size categories, the effect of de-reservation on net job creation decreased with firm age.

**Figure 11. Impact of Removal of Small Scale Reservations on
Employment by Size and Age**

Source: Martin, Nataraj & Harrison, 2014.

3.28   Figures 12 and 13 display the impact of the phased elimination of small scale reservations on employment for both incumbents and entrants by their size and age category respectively (from Martin, Nataraj & Harrison, 2014). Figure 12 shows the impact by size categories while Figure 13 shows the impact by age categories.

Figure 12. Use of Small Scale Reservation by Firms of Different Sizes
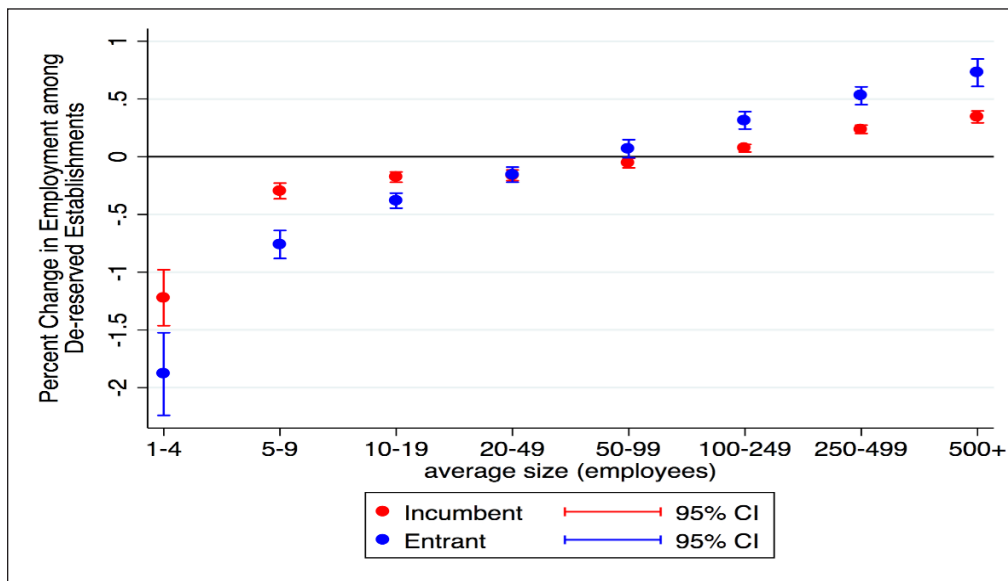
Source: Martin, Nataraj & Harrison, 2014.
Notes: The chart plots the point estimate and the 95% confidence interval for the effect of the de-reservation of products on employment. The chart shows the effect for both new entrants and incumbents by different size categories.

3.29   Figure 12 provides several key takeaways. First, on average, after the elimination of reservations, large firms – be it new entrants or incumbents – have created more employment than small firms. Across both new entrants and incumbents, the small firms destroyed jobs while the large firms created jobs. Second, net job creation

(negative in the case of job destruction and positive in the case of job creation) increased with firm size for both new entrants and incumbents. Specifically, job destruction was the maximum among the smallest incumbent firms (1-4 employees) and least among the incumbent firms with 50-99 employees.[5] In contrast, job creation was the maximum among the largest entrant firms (500+ employees) and least among the entrant firms with 50-99 employees. Third, large entrants

created the maximum employment as seen in the effect of entrants with more than 500 employees. Finally, the growth in employment was both by the entrants that started producing the de-reserved products, especially the large incumbents that were constrained by the ceilings on production owing to the SSI reservation policy. Among firms with at least 50 employees, job creation by entrants was greater than job creation by incumbents.

Figure 13. Use of Small Scale Reservation by Firms of Different Ages
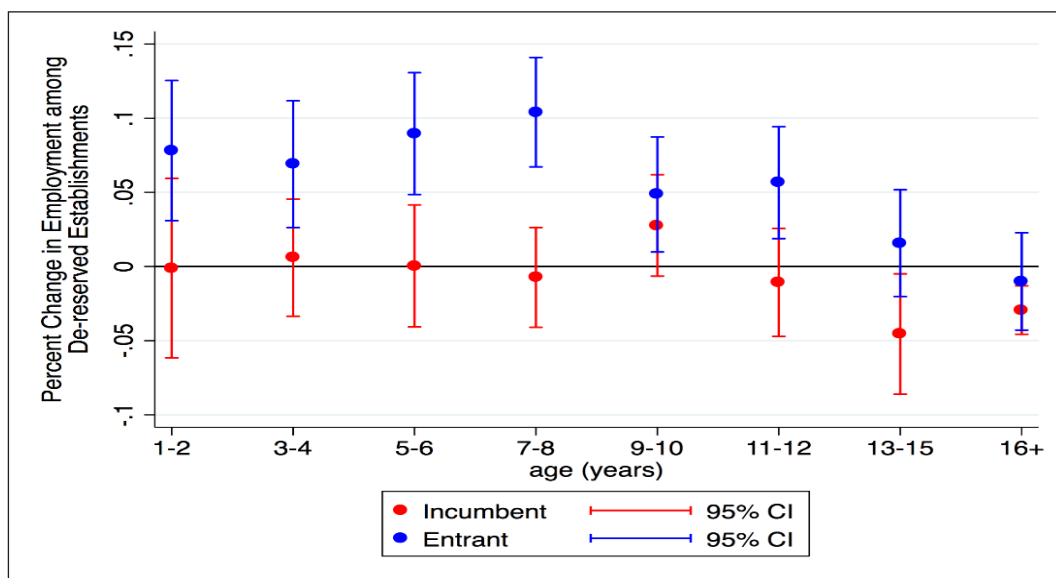
Source: Martin, Nataraj & Harrison, 2014.
Notes: The chart plots the point estimate and the 95% confidence interval for the effect of the de-reservation of products on employment. The chart shows the effect for both new entrants and incumbents by different age categories.

3.30   Figure 13 provides the following takeaways. First, when the effects of de-reservation on incumbent firms are examined by their age, i.e., when one averages across all size categories among firms of a particular age, a very different picture emerges from that observed in Figure 12. Specifically, across all age categories, incumbent firms either lost jobs or did not create jobs. The oldest incumbents (firms that are 13 years

or older) lost jobs; however, the effect was insignificant for the younger incumbents. In contrast, younger entrants (firms that are 12 years or younger) created jobs; however, the effect was insignificant for the older entrants.

3.31   Overall, when benefits reserved for small firms are eliminated, younger and larger entrants create the most jobs while older and smaller incumbents destroy the

---

5   As the coefficient is the log of labour, the economic magnitude has to be calculated as exp(coefficient) – 1. For instance for the 1-4 category, the economic magnitude is calculated as exp(-1.1)-1 = -67%.

maximum jobs. Together with the fact that older and smaller firms utilize the reservation policies the most, this evidence highlights further that benefits provided to small scale firms irrespective of their age create perverse incentives for firms to remain dwarfs and thereby limit their contribution to jobs. In contrast, infant firms, especially new entrants, create the most jobs. These findings are consistent with the evidence provided by Li and Rama (2015), who show that in developing countries young firms experience rapid gains in productivity and employment making them one of the most important sources of economic growth.

3.32   Santana and Pijoan-Mas (2010) find that the distortions brought forth by size dependent policies like SSI reservation have resulted in substantial misallocation of resources and productivity losses to the Indian economy. They provide empirical evidence that the lifting of the SSI reservation policy would increase output per worker by 3.2 per cent, capital per worker by 7.1 per cent and aggregate Total Factor Productivity (TFP) by 0.8 per cent in India. When focused only within the manufacturing sector, lifting of the SSI reservation policy would increase output per worker would increase by 9.8 per cent, capital per worker by 12.5 per cent and TFP by 3.6 per cent.

3.33   The misallocation of resources due to SSI reservation policy originates from four sources (Santana and Pijoan-Mas, 2010). First, SSI policies substantially lower the average capital to labour ratio when compared to the efficient level. Second, because of the lower capital accumulation, the overall demand for labour and the market wage rate are much lower due to SSI policies than the efficient level. Third, SSI policies result in inefficient allocation of managerial talent, which in turn affects productivity.

Fourth, the inefficient allocation of resources results in price of manufactured products in restricted economy being too high, which then renders these products uncompetitive in a global economy.

3.34   Overall, the evidence clearly shows that infants, not dwarfs, contribute significantly to job creation and productivity in the economy. As young firms are usually small though all small firms are not young, there is a strong correlation between firm size and firm age. Earlier data on firm age was not so easily available. So, the effect on employment of firm age could not be distinguished from the effect of firm size. But, with availability of such data that distinguishes firm size and age, the evidence for both U.S. and India clearly shows that young firms, not smaller firms, produce more jobs (Haltiwanger, Jarmin and Miranda, 2012 for the U.S. and Martin, Nataraj & Harrison, 2014 and Li and Rama, 2013 for India).

WAY FORWARD

3.35   MSMEs that grow not only create greater profits for their promoters but also contribute to job creation and productivity in the economy. Our policies must, therefore, focus on enabling MSMEs to grow by unshackling them.

3.36   The evidence provided above highlights that dwarfs, i.e., small firms that have continued to remain small despite aging, have low productivity and low value added in manufacturing. In contrast, infants, i.e., small firms that are small when they are young but can grow to become large firms as they age, have high productivity and higher value added in manufacturing. Therefore, while dwarfs consume vital resources that could possibly be given to infant firms, they contribute less to creation of jobs and economic growth as compared to infant firms. This necessitates

re-calibration of policy towards supporting infant firms as detailed below:

3.37 Incentivizing 'infant' firms rather than 'small' firms: With the appropriate grandfathering of existing incentives, they need to be shifted away from dwarfs to infants. When such incentives are provided to firms irrespective of their age, the incentives create "perverse" incentives for firms to stay small. Such perverse incentives would not be there if age is the criterion. Misuse of the age based criterion can be easily avoided using Aadhaar. For instance, if a promoter starts a new firm, utilizes the benefits for ten years when the age-based policy is available and then closes the firm to start a new one to avail the age-based benefits through this new firm, then the Aadhaar of the promoter can alert authorities about this misuse. Therefore, given the benefits of Aadhaar, the age-based policies can be implemented to ensure removal of the perverse incentives. Once small firms know that they would receive no benefit from continuing to remain small despite aging, their natural incentives to grow would get activated. This will generate economic growth and employment.

3.38 Re-orienting Priority Sector Lending (PSL): As per extant policy, certain targets have been prescribed for banks for lending to the Micro, Small and Medium (MSME) sector that exacerbates perverse incentives to firms to remain small. As per PSL guidelines, 7.5 per cent of Adjusted Net Bank Credit (ANBC) or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher is applicable to Micro enterprises.[6]

Under MSME's PSL targets, it is necessary to prioritize 'start ups' and 'infants' in high employment elastic sectors. This would enhance direct credit flow to sectors that can create the most jobs in the economy. The table below shows the high employment elastic sub-sectors and their employment elasticity.

Table 5. Employment Elasticity of Various Subsectors in Manufacturing

Subsector	Employment Elasticity
Rubber and Plastic Products	0.85
Electrical and Optical Equipment	0.48
Transport Equipment	0.27
Electricity, Gas and Water Supply	0.22
Machinery	0.15
Basic Metals and Fabricated Metal Products	0.10
Chemicals and Chemical Products	0.07
Textiles, Textile Products, Leather and Footwear	0.02
Other Non-Metallic Mineral Products	0.02
Wood and Products of wood	0.01

Source: Derived from KLEMS data from 2005-06 to 2015-16

3.39 Sunset Clause for Incentives: With appropriate grandfathering, every incentive for fostering growth should have a 'sunset' clause, say, for a period of five to seven years after which the firm should be able to sustain itself. The policy focus would thereby remain on infant firms.

---

[6]   As on 28th December 2018,for classification under priority sector, no limits are prescribed for bank loans sanctioned to Micro, Small and Medium Enterprises engaged in the manufacture or production of goods under any industry specified in the first schedule to the Industries (Development and Regulation) Act, 1951 and as notified by the Government from time to time. The manufacturing enterprises are defined in terms of investment in plant and machinery under MSMED Act 2006. Bank loans to Micro, Small and Medium Enterprises engaged in providing or rendering of services and defined in terms of investment in equipment under MSMED Act, 2006, irrespective of loan limits, are eligible for classification under priority sector, w.e.f. March 1, 2018.

3.40 Focus on High Employment Elastic Sectors: The manufacture of rubber and plastic products, electronic and optical products, transport equipment, machinery, basic metals and fabricated metal products, chemicals and chemical products, textiles and leather & leather products, are the sub-sectors with highest employment elasticities. To step up the impact of economy growth on employment, the focus has to be on such high employment elastic sectors.

3.41 Focus on Service Sectors with high Spillover Effects such as Tourism: Developing key tourist centres will have ripple effects on job creation in areas such as tour and safari guides, hotels, catering and housekeeping staff, shops at tourist spots etc. It is possible to identify 10 tourism spots in each of the larger 20 states and 5 spots in the 9 smaller states and build road and air connectivity in these tourist attractions, which would boost economic activity along the entire route and would also reduce the migration of the rural labour force who form a major proportion of the total labour force.

CHAPTER AT A GLANCE

➤ MSMEs that grow not only create greater profits for their promoters but also contribute to job creation and productivity in the economy. Our policies must, therefore, focus on enabling MSMEs to grow by unshackling them.

➤ Job creation in India, however, suffers from policies that foster dwarfs, i.e., small firms that never grow, instead of infant firms that have the potential to grow and become giants rapidly.

➤ While dwarfs, i.e., firms with less than 100 workers despite being more than ten years old, account for more than half of all organized firms in manufacturing by number, their contribution to employment is only 14 per cent and to productivity is a mere 8 per cent. In contrast, large firms (more than 100 employees) account for three-quarters of such employment and close to 90 per cent of productivity despite accounting for about 15 per cent by number.

➤ The perception of small firms being significant job creators pervades because job destruction by small firms is ignored in this calculus: small firms destroy jobs as much as they create. In contrast, large firms create permanent jobs in larger numbers. Also, young firms create more jobs at an increasing rate than older firms.

➤ Size-based incentives that are provided irrespective of firm age and inflexible labour regulation, which contain size-based limitations, contribute to this predicament.

➤ To unshackle MSMEs and thereby enable them to grow, all size-based incentives must have a sunset clause of less than ten years with necessary grand-fathering.

➤ Deregulating labour law restrictions can create significantly more jobs, as seen by the recent changes in Rajasthan when compared to the rest of the States.

➤ Direct credit flow to young firms in high employment elastic sectors to accelerate employment generation by re-calibrating Priority Sector Lending (PSL) guidelines.

➤ Focus must be on service sectors such as tourism, which has high spillover effects on other sectors such as hotel & catering, transport, real estate, entertainment etc. Identifying and promoting tourist spots for development will help create jobs.

REFERENCES

Chang-Tai Hsieh, Peter J. Klenow. 2014. "The Life Cycle of Plants in India and Mexico." *The Quaterly Journal of Economics*.

John C. Haltiwanger, Ron S. Jarmin, Javier Miranda. 2012. "Who Creates Jobs? Small vs. Large vs. Young." *NBER* Working Paper No. 16300.

Leslie A. Martin, Shanthi Nataraj, Ann Harrison. 2014. "In with the Big, Out with the Small: Removing Small-Scale Reservations in India." *NBER* Working Paper No. 19942.

Manuel Garcia-Santana, Josep Pijoan-Mas. n.d. "Small Scale Reservation Laws and the Misallocation of Talent." Working Paper wb2010_1010,*CEMFI*.

Sean Dougherty, Veronica Frisancho,k Krishna. 2014. "The costs of employment protection." *Ideas for India*, April 30.

Yue Li, Martin Rama. 2015. "Firm Dynamics, Productivity Growth, and Job Creation in Developing Countries: The Role of Micro- and Small Enterprises." *The World Bank Research Observer, Volume 30, Issue 1*.