Who Creates Large Number of Good Jobs in India's Organized Manufacturing? Small Versus Large and Start-Ups Versus Old

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1 Introduction

There are two general perceptions about employment in the small-scale sector. First, this sector provides large number of jobs thus require special policy attention. Based on this, policies are in place to promote small-scale industries in India. Second, the quality of jobs in this sector is not highly productive, therefore, generally, labour force aspires to work in larger firms. These popular perceptions are easily extended to employment in small-scale unorganized manufacturing sector, and taken for granted in small-scale organized manufacturing sector too.

Evidence for low quality (wages and employment benefits) of new jobs created in the formal/organized component of the Indian manufacturing sector during 1995–2005 is taken to argue that India's organized manufacturing has not been doing well (Maiti and Mitra 2010; Goldar and Agrawal 2010). However within the organized manufacturing sector the employment and its quality dynamics may be different as per size-structure and age of the firms.

The literature dealing with size-structure characteristics of manufacturing (Vaidyanathan and Eapen 1984; Nagaraj 1985; Little 1987; Mazumdar 2001; Mazumdar and Sarkar 2008; Hasan and Jandoc 2013; and Hsieh and Olken 2014) helps understand the constraints and requirements of various sizes of firms and the designing of policies to optimize the potential of the manufacturing sector.

However, most of these studies are either very old or they explored only a few characteristics of size category. Similarly, it is difficult to find studies in case of India which examined the characteristics of employment as per age-structure of firms. In

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view of this, the present study proposes to use sets of simple criteria examining employment characteristics by age and size structure of organized manufacturing firms in India.

2 Data and Methodology

The study uses evidence from other studies along with aggregate and unit-level data from Annual Survey of Industries (ASI) for 2012–13 and 2011–12. The plant size is categorized as 'small' if the employment size is less than 49.[1] The rest are categorized as 'medium' (50–499 employees), 'large' (500–4999 employees), and 'ultra-large' (>5000)—the classification which is also followed in earlier studies. The age is measured from the date of commencement of the production by the plant.

The criteria used are size of employment, its growth, quality (regular/contract, wages), and sustainability (diversification/concentration of jobs, and vulnerability to business cycles). Using these criteria we prepare a scorecard of manufacturing firms by age and size class in order to gauge the potential of manufacturing firms for creating ample quality and sustainable jobs.

The Herfindahl Index (HI), is one of the commonly used measures for estimating concentration. The index is defined as $H = \sum_{i=1}^{n} pi2$, where p is the share of each 'i' industry at 5-digit of NIC. The value of the index ranges between 0 and 1. The lower the value, the higher is the diversification of employment in the category and vice versa.

3 Data Analysis

(i) ***Size and growth***

Size of employment

Before nineties reforms, there was a consensus that either small or large factories employed mostly manufacturing workers in India, while employment in medium-sized units was very less. Dhar and Lyndall (1961) found high level of concentration in employment in the highest size group while middle was somewhat thin. More precisely, as per Little (1987) medium size factories (50–500) workers accounted for less than one-third of employment in the organized manufacturing during 1960s and 1970s. Mazumdar (2001) and Mazumdar and Sarkar (2008) examining the overall manufacturing sector (organized and unorganized) found bipolar distribution of employment during 1989–90. While employment was found concentrated in categories below 10 workers or above 1000 workers, the middle was almost missing. This phenomenon was also called as 'missing middle'. Economic reasoning is said to be

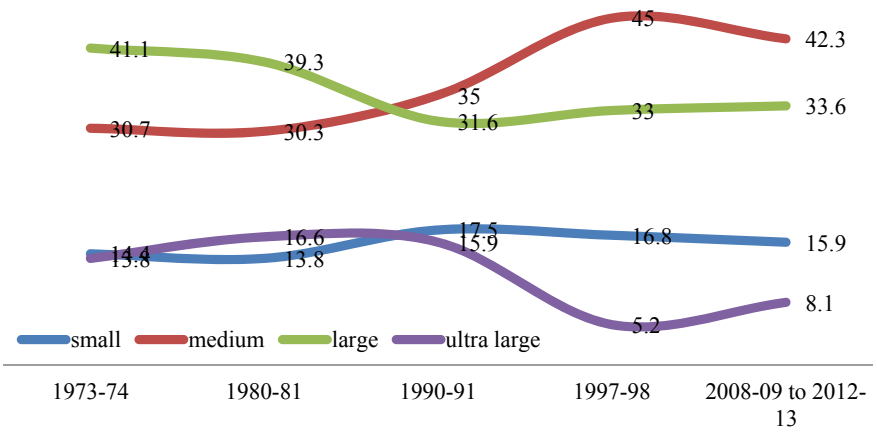
[1] Little (1987) argues that in developing countries average plant size is smaller, so small is taken as 1–49 workers.

working behind this phenomenon which stems from policy incentives and regulation prevalent in India.

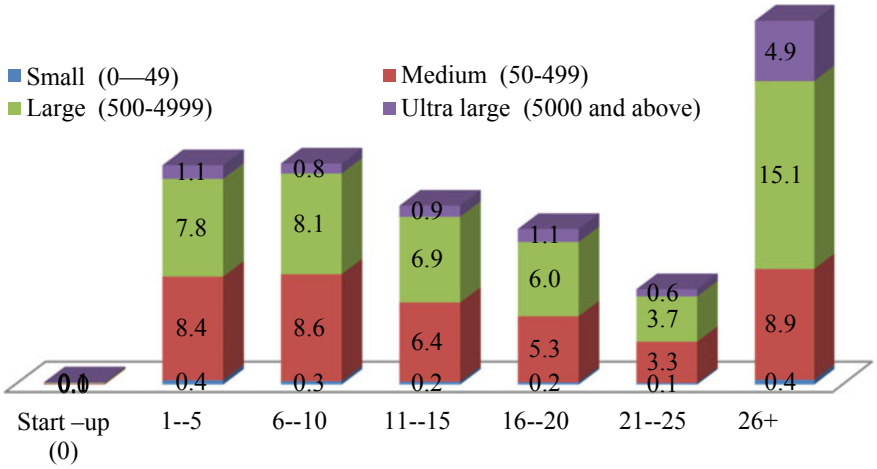
In other words, the factor responsible for 'missing middle' before 1990s was mainly related to industrial policy. Little (1987), Goldar (2000), Nagaraj (1994) argued that the policy promoting large-scale public enterprises and policies promoting small-scale industries might have created this bipolar concentration of employment in the manufacturing sector. Mazumdar and Sarkar (2008) concluded that differential application of labour legislations, biased education policy towards promotion of tertiary and neglecting primary and secondary education, protection to small-scale industries, and hysteresis (persistence of old phenomenon in economic agents and institutions) have been responsible for this distribution. Hasan et al. (2012) urged that the labour legislations have contributed to size distribution of employment.

The distribution of employment in organized manufacturing since 1973–74 to 2012–13 is presented in Graph-1. It shows that the situation has changed gradually after the 1990s reforms. During 2008–09 to 2011–12, it is the medium and large firms which employed about 75% of total employment in organized manufacturing. The share of medium firms has increased significantly especially subsequent to 1990 reforms. The share of small factories has been more or less stable between 14 and 17% and that of ultra-large projects has declined considerably.

The liberalization policies of the nineties, comprising de-licensing of industries, de-reservation of industries from public sector and small sector, firms' access to capital market due to financial liberalization, opening up of economy for foreign investment, economic integration of economy pushed by the trade agreements, and policies promoting industrial infrastructure and investment through Special Economic Zones and industrial clusters, have probably improved the scale in the sector.



Graph 1 Distribution of organised manufacturing employment. *Source* Goldar (2000) and from 2008–09 to 2012–13 compiled from ASI reports. *Note* The plant size is categorized as small (<49 employees); medium (50–499 employees), large (500–4999 employees) and ultra-large (>5000)



Graph 2 Share of Employment by age and size in 2012. *Source* Calculated from Unit-Level data of ASI

These liberalization policies have been able to remove considerable institutional constraints as argued by Nagaraj (1985).

The Graph-2 presents the share of employment by age and size of a plant in 2011–12. The young firms, i.e., 1–10 years old, account for the largest share of employment in the organized manufacturing except the plants with an age of 26 years and above. In general, the employment share of the plants declines as age increases till the firms reach the threshold limit of 25 years. Turning to size, young (1–10 years age), medium, and large plants accounted for much of the employment. On the other hand, the contribution of start-ups is seen to be less than one percent.

Growth of Employment

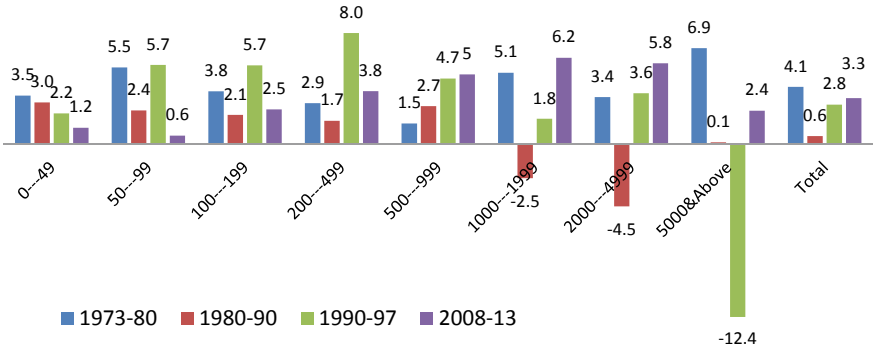
The employment growth across size category is presented in Graph-3. The overall growth in employment in organized manufacturing increased during 1990s and 2008–13. However, it varies across categories. The growth in small factories declined continuously during 1990s and 2008–13. On the other hand, the growth in employment in large factories, i.e., 500–999, has continuously increased.

The Graph-4 plots the change in the share of employment in 2012 over 2011. It may be seen that most of the increase in employment is reported by young medium and large plants. The increase in employment in ultra-large and small plants is small. On the other hand, maximum destruction of employment is reported to have taken place in the old plants (age group of 10–25 years). The role of start-ups in creating employment does not appear to be significant.

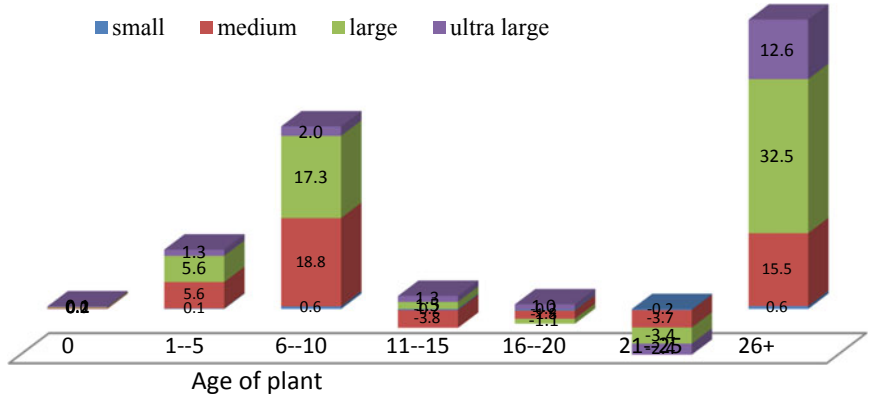
(ii) ***Quality of Employment***

Intensity of Contract workers

The quality of employment here is measured in terms of two indicators: one, the intensity of contract worker, and another, average wage rate paid by firms in a size/age



Graph 3 Growth of Employment (%). *Source* Goldar (2000) and 2008–09 to 2012–13 compiled from ASI reports



Graph 4 Share of employment changed in 2012 over 2011 (%)

class. Though both are not independent, generally the contract workers are paid lower wages in comparison to the regular workers. However, there are other factors also which influence the demand for contractual workers and wage rate in the size group. The contention is that intensity of contract worker decreases with an increase in firm size and age. But economic reasoning works both ways. First, as the firm grows in size, the marginal productivity of hired worker also declines. So the firm tends to hire workers with low wage, who are preferably contract workers. If this reasoning has to yield, the technology should remain the same for all firms, which is not the case. Second, both marginal and average productivity are relatively high in large firms compared to small firms mainly due to their high capital intensity. Thus, large firms tend to pay better to hired workers. In addition, the deployment of higher levels of capital and superior technology in a relatively large firm creates the need for relatively better skilled workers who can be attracted through regular and high wage jobs. In addition, in India, the labour regulation, Industrial Dispute Act (IDA),

Table 1 Share of contract workers in total workers in 2012 (%)

Age (years)	Small	Medium	Large	Ultra-large	All
0	40.2	43.1	14.5		25.0
1–5	39.1	49.7	33.7	76.4	43.7
6–10	36.6	45.3	30.4	26.7	38.3
11–15	34.7	41.3	33.3	41.9	37.3
16–20	34.9	39.6	27.4	15.6	31.9
21–25	33.0	41.4	30.3	12.5	33.7
26+	34.1	36.7	27.0	52.6	34.7
All	35.9	42.3	29.4	44.0	36.6

Source Computed from ASI unit-level data

tends to create threshold effect, according to which firms directly employing 100 and more workers need prior government permission (which generally rarely granted) for retrenchment, layoff of workers and closure of firms. As a result of IDA, firms wish to remain small in terms of directly employed workers by employing more and more contractual workers (Ramaswamy 1994).

Srivastva (2015) infers, though the contractualization has increased and the growth of contract workers has been much higher than the growth of total workforce in organized manufacturing in India, protection laws are not the binding constraint and have not deterred employment growth. These trends of rising contractualization in organized manufacturing have also been confirmed in other studies (Mitra 2013), which may have been pursued with a view to reducing the labour cost.

Table 1 presents contract intensity (measured as percentage of contract worker in total person engaged) across firms by age and size. It is observed that intensity of contract workers is much higher in medium and ultra-large factories, lower in small and lowest in large factories. These observations conform to the findings of Srivastva (2015) that contract intensity is not higher in small factories.

Further, intensity of contract workers is found to be lowest at 25%, in start-ups, which peaks at 43.7% in young factories (1–5 years of age of firms) and declines thereafter with an increase in age of the factory up to 20 years. It appears to be increasing in start-ups with a decrease in size of the plant. It is also found high in ultra-large factories: among these factories those with 6–10 and 16–25 years of age tend to employ very low percentage of contract workers compared to the others.

Wages

There are two important propositions one, that the older firms pay higher wages, and second larger firms pay higher wages.

First strand of literature argues that older manufacturing plants pay higher wages to their workers include Dunne and Roberts (1990), Davis and Haltiwanger (1991), Troske (1998). However, Blanchflower and Oswald (1994), Brown and Medoff (2003) could not confirm the relationship statistically. The argument of worker quality (seen in Brown and Medoff 2003) propagated that older firms can pay higher wages

because their workers are more experienced and have longer tenure. This view is also supported by the ability to pay argument propagated by Pakes and Ericson (1998) who argued that wages are likely to be higher in an established firm.

The second argument is that the younger firms have a higher probability of closing down without being able to stay in the market, which is a negative job characteristic. This implies that young firms would have to offer higher wages in order to attract a given quality of worker (seen in Brown and Medoff 2003). Further, since non-wage benefits to workers such as pension, health insurance, flexibility in working times and locations and housing facilities are better in old firms, they can attract good quality workers even at lower wages (Table 2).

Table 3 presents wage in Rs. per day for a person employed in Indian organized manufacturing by age and size. The wages are reported to be highest at Rs. 590 in start-ups and then declines to Rs. 338 in young factories (1–5 years) and recorded the lowest at Rs 318 per person in firms with 6–10 years of age. Thereafter, beyond 10 years of age, wage increases as the unit gets older. The start-ups pay the highest wage which is consistent with the argument that their probability to close down being

Table 2 Wage for contract workers (Rs. per day)

Age (years)	Small	Medium	Large	Ultra-large	All
Start-ups (0)	411	242	188	–	339
1–5	286	233	263	192	260
6–10	234	224	242	306	230
11–15	218	285	273	261	251
16–20	212	230	292	390	225
21–25	227	227	247	200	228
26+	253	256	267	148	255
all	245	242	264	201	245

Source Computed from ASI unit-level data

Table 3 Wage for persons employed (Rs. per day)

Age	Small	Medium	Large	Ultra-large	All
Start-ups (0)	648	489	457	–	590
1–5	276	381	442	284	328
6–10	268	364	429	326	318
11–15	274	378	477	569	330
16–20	282	386	458	459	339
21–25	296	395	474	857	352
26+	263	398	606	698	361
All	275	383	509	617	338

Source Computed from ASI unit-level data

very high they have to offer higher wages in order to attract a given quality of worker (Brown and Medoff 2003). The low survival rate of start-ups may not be permitting them to commit on non-wage benefits to workers; therefore, to attract workers they may be required to pay relatively higher wages. Another observation is that a smaller size start-up needs to pay relatively higher wages than a larger start-up.

Further, a relatively larger size factory pays higher wage as reflected in Table 3. The results show that small factory paid Rs. 275, medium Rs. 383, large Rs. 509 and ultra-large Rs. 617.

(iii) ***Sustainability***

Diversity

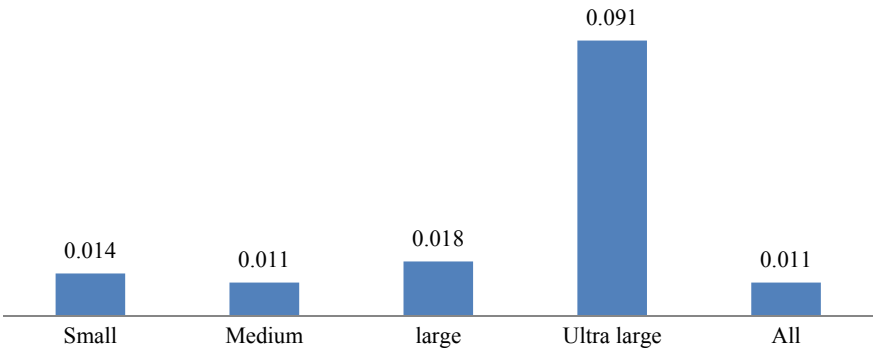
The sustainability of employment is measured in terms of two indicators. The first one is diversification of employment over age and size. And, the second indicator is the vulnerability of employment to the business cycles. The diversity of employment is measured in terms of Herfindahl Index and the vulnerability to business cycle is measured in terms of share of exports of a plant.

The Graph-5 presents the results of Herfindahl index, which shows that the employment is most diversified in medium-sized plants followed by their small and large counterparts. It is most concentrated in the ultra-large plants.

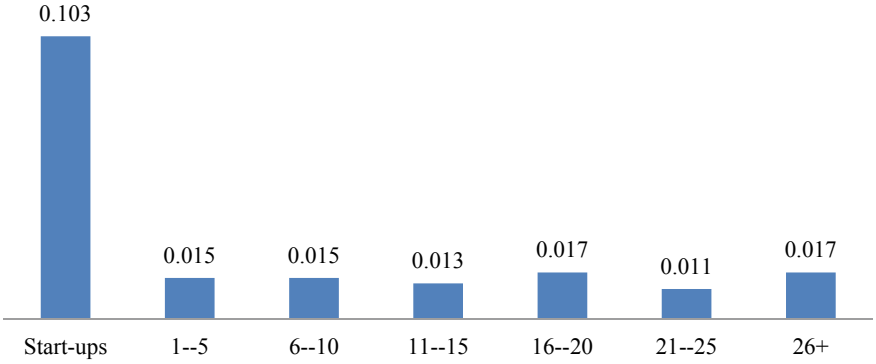
The Graph-6 presents the Herfindahl index by age of the plant. It is observed that the highest concentration of employment is in the start-ups. The diversity tends to rise as the plant gets older.

Vulnerability

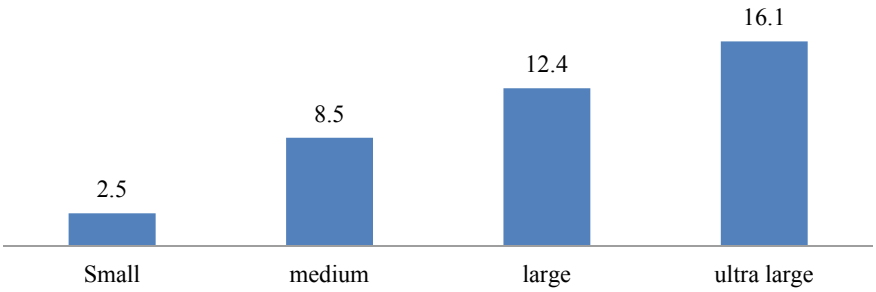
The vulnerability to business cycles as measured in terms of share of product directly exported by a plant is presented in the Graph-7. It is observed that the share of export rises with the increase in the plant size. However, no such trend is witnessed in the share of export by age group. The vulnerability is observed lowest for the start-ups and the oldest plants (26 plus) while it is on the higher side for the older plants (Table 4).



Graph 5 Herfindahl Index by size



Graph 6 Herfindahl Index by age



Graph 7 Share of product directly exported (%)

Table 4 Share of product directly Exported (%)

Age	Small	Medium	Large	Ultra-large	All
0	1.0	0.0	15.0		1.7
5	3.0	9.0	10.0	5.0	5.6
6	3.0	10.0	16.0	25.0	6.7
11	3.0	9.0	15.0	4.0	5.8
16	3.0	10.0	16.0	20.0	6.7
21	3.0	9.0	16.0	13.0	6.4
26	2.0	6.0	9.0	9.0	4.3
All	2.5	8.5	12.4	16.1	5.8

Scorecard

The score for each indicator based on its value broadly infers three extremes: lowest (L), highest (H), and medium (M). These categories facilitated gross comparison and helped in drawing broad conclusions from the above discussion. Size and age wise scoreboard is presented in Table 5.

Table 5 Age and size wise scoreboard of plants characteristics

S. No.	Indicator	Small	Medium	Large	Start-up	Young	Mature
1	Share	L	H	M	L	M	H
2	Growth	L	H	M	–	–	–
3	Contract intensity	L	M	H	L	H	M
4	Wages	L	M	H	H	L	M
5	Diversity	H	M	L	L	H	M
6	Vulnerability	L	M	H	L	H	M

L = lowest; M = medium, H = highest: assigned comparing. Contrary to the perception, both the share and the growth of employment in small-scale sector of organized manufacturing in India is the lowest. It simply indicates that the small-scale organized manufacturing plants are neither the dominant employer nor the highest job generator. On quality of jobs, the wages are also low. However, it is good to see that contractualization is low along with highest diversity of jobs and lowest vulnerability to export cycles makes the jobs in this sector relatively sustainable.

Instead, the medium-scale plants are the dominant employer and are also creating the largest number of jobs in organized manufacturing. This fact emphasizes that at least in organized manufacturing sector the 'missing middle' is no more a phenomenon. The wages paid are also relatively better than small-scale sector, though, intensity of contract worker is relatively higher. However, the sector stands in the middle on diversity and vulnerability fronts.

Although, the contribution of start-ups in terms of employment is very low, they create quality jobs in terms of wage payment, contract workers intensity, and vulnerability to export cycles.

The employment provided by young plants is significant and very diverse. However, the quality is low and most vulnerable to the export cycles. The mature plant contributes the most in terms of employment with average quality and sustainability.

Regression analysis

In order to assess the sensitivity of employment with respect to growth and wages across units of various sizes and ages a regression equation, is estimated. Employment is taken to be a function of value added, wage rate and number of days worked per person in a year along with several slope dummies representing size and age groups of the units.

The results (Table 6) show that the growth elasticity of employment, wage elasticity, and elasticity with respect to the number of days worked per person tend to vary across size and age of plants. In comparison to plants which are very old (more than 50 years) and very large in size (employing 500 and more employees) the employment elasticity with respect to growth tends to decline across lower size categories and relatively younger firms. The new comers and the small ones seem to be generating least employment in relation to growth. Similarly, the wage sensitivity

Table 6 Regression Results on employment elasticity across units of different size and age

Age is in years and size is measured in terms of number of person engaged; gva = Gross Value Added	Dep. Var.: ln_person	Coef.	Std. Err.	t	P > t
	ln_gva	0.511	0.014	36.420	0.000
	ln_days worked by a person in a year	−0.150	0.010	−15.300	0.000
	ln_wage	−0.444	0.045	−9.830	0.000
Interaction with ln_GVA					
D1 = age_5*size up to 50	ln_gva*D1	−0.230	0.015	−15.500	0.000
D2 = age_5*size51_99	ln_gva*D2	−0.258	0.017	−14.920	0.000
D3 = age_5*size100_499	ln_gva*D3	−0.206	0.016	−13.200	0.000
D4 = age_5*size 500+	ln_gva*D4	−0.126	0.019	−6.480	0.000
D5 = age6_10*size up to 50	ln_gva*D5	−0.202	0.015	−13.330	0.000
D6 = age6_10*size51_99	ln_gva*D6	−0.243	0.018	−13.490	0.000
D7 = age6_10*size100_499	ln_gva*D7	−0.176	0.016	−11.250	0.000
D8 = age6_10*size500+	ln_gva*D8	−0.073	0.020	−3.720	0.000
D9 = age11_20*size up to 50	ln_gva*D9	−0.175	0.015	−11.880	0.000
D10 = age11_20*size51_99	ln_gva*D10	−0.193	0.017	−11.140	0.000
D11 = age11_20*size100_499	ln_gva*D11	−0.141	0.015	−9.310	0.000
D12 = age11_20*size500+	ln_gva*D12	−0.035	0.017	−2.010	0.044
D13 = age21_50*size up to 50	ln_gva*D13	−0.144	0.015	−9.690	0.000
D14 = age21_50*size51_99	ln_gva*D14	−0.182	0.018	−9.990	0.000
D15 = age21_50*size100_499	ln_gva*D15	−0.145	0.015	−9.610	0.000
D16 = age21_50*size500+	ln_gva*D16	−0.026	0.016	−1.610	0.107
D17 = age > 50*size up to 50	ln_gva*D17	−0.081	0.021	−3.820	0.000
D18 = age > 50*size51_99	ln_gva*D18	−0.246	0.028	−8.770	0.000

(continued)

Table 6 (continued)

D19 = age > 50*size100_499	ln_gva*D19	−0.161	0.017	−9.530	0.000
Interaction with ln_Wage					
D1 = age_5*size up to 50	ln_wage*D1	0.230	0.047	4.840	0.000
D2 = age_5*size51_99	ln_wage*D2	0.503	0.054	9.280	0.000
D3 = age_5*size100_499	ln_wage*D3	0.466	0.050	9.300	0.000
D4 = age_5*size500+	ln_wage*D4	0.362	0.064	5.660	0.000
D5 = age6_10*size up to 50	ln_wage*D5	0.161	0.048	3.350	0.001
D6 = age6_10*size51_99	ln_wage*D6	0.458	0.056	8.120	0.000
D7 = age6_10*size100_499	ln_wage*D7	0.377	0.050	7.480	0.000
D8 = age6_10*size500+	ln_wage*D8	0.195	0.064	3.020	0.003
D9 = age11_20*size up to 50	ln_wage*D9	0.081	0.047	1.710	0.087
D10 = age11_20*size51_99	ln_wage*D10	0.319	0.054	5.880	0.000
D11 = age11_20*size100_499	ln_wage*D11	0.273	0.049	5.600	0.000
D12 = age11_20*size500+	ln_wage*D12	0.071	0.056	1.270	0.206
D13 = age21_50*size up to 50	ln_wage*D13	−0.012	0.047	−0.250	0.804
D14 = age21_50*size51_99	ln_wage*D14	0.288	0.057	5.080	0.000
D15 = age21_50*size100_499	ln_wage*D15	0.297	0.049	6.100	0.000
D16 = age21_50*size500+	ln_wage*D16	0.056	0.052	1.080	0.281
D17 = age > 50*size up to 50	ln_wage*D17	−0.193	0.062	−3.090	0.002
D18 = age > 50*size51_99	ln_wage*D18	0.486	0.086	5.630	0.000
D19 = age > 50*size100_499	ln_wage*D19	0.350	0.054	6.440	0.000
	Constant	0.532	0.054	9.820	0.000
	Statistics				
	Number of obs	41946			

(continued)

Table 6 (continued)

	R-squared	0.892			
	Adj R-squared	0.891			
	Root MSE	0.522			
	F(21, 41924)	8399.710			
	Prob > F	0.000			

Note Firms very old (more than 50 years) and very large in size (employing 500 and more employees) comprise the comparison category
Source Based on unit-level data of ASI

of very large and the oldest firms is the maximum and it tends to decline (with a few exceptions) as size and age fall.

This would mean that labour deregulations may have favourable impact in very large and old firms whereas the small and new comers do not have much scope to enhance employment with a reduction in wage rate. This latter category in the face of capital intensive technology seems to be engaging the least required labour which does not show much flexibility in the sense of declining in response to wage increase or vice versa. In fact, in some of the relatively young and medium-sized units employment and wage go hand in hand, which could be a reflection of engaging highly skilled employees with higher wages.

4 Summary of Observations

The first observation is that the missing middle as highlighted in the literature is on the decline after the liberalization period as the employment share of medium-sized plants has increased significantly subsequent to the reforms of the 1990s. The employment shares of small and large units have been more or less constant while the share of ultra-large firms has declined. In addition, it is the young plants which employ the most in the organized manufacturing in India, and employment share declines as firms grow older.

Second, it is the medium and large young plants which create most of the new jobs in the organized manufacturing in India. Most of the jobs are destroyed in the plants in the age group of 11–25 years and the contribution of start-ups in creation of new jobs is very low.

Third, the intensity of contract workers is much higher in medium and ultra-large factories, lower in small and lowest in large factories. Among young factories, it is the medium and ultra-large factories which employ contract workers even more than half of their total workers. The intensity of contract workers is found lowest in start-

ups, which peaks when plant is young and declines thereafter with an increase in age of the factory up to 20 years. Further, the wages are reported to be at the highest level in start-ups, then they decline as plants grow young and reach the lowest level in the older plants. However, beyond 10 years of age, wage rate increases as the factory gets older.

Fourth, employment is most diversified in medium-sized plants followed by their small and large counterparts. It is most concentrated in the ultra-large plants. Further, the highest concentration of employment is observed in the start-ups. The diversity tends to rise as the plants get older. In addition, the share of export rises with the increase in the plant size which could be an indicator of susceptibility to the influence of business cycles. However, no such trends are witnessed in the share of export by age group. The vulnerability is found at the lowest for start-ups as most of them are catering to the domestic markers. Surprisingly for the oldest plants as well (26 plus) the export share dwindles at a low level. It is on the higher side for the older plants.

In brief, it is the young middle and large-sized plants which not only account for most of the employment but also create most of the new jobs in the organized manufacturing sector. These jobs are although relatively low in terms of quality as measured through contract intensity, wages paid are relatively better by young firms. This group is also generating sustainable jobs as the diversity of jobs in this segment is high and vulnerability to business cycle is also relatively low. In view of these observations, it is suggested that the policy promoting employment in organized manufacturing in India should focus on the most dynamic group, which comprises middle-sized young factories, to generate the largest number of new and sustainable jobs. These are, however, preliminary and the observations and results are tentative. Further, the study is limited to the unit-level data of the organized manufacturing (provided by ASI) for two years 2011 and 2012 only. The regression exercise also brings out very interesting results, indicating that the employment elasticity is the highest in the largest and the oldest firms. Given the large volume of employment in these units, it is equally important that employment growth is encouraged in large industries alongside the medium-sized units.

Annexure

See Tables 7, 8, 9, 10, 11, 12, and 13.

Table 7 Share of employment as per plant size

Employment range (persons)	Total persons engaged	1973–74	1980–81	1990–91	1997–98	2008–09 to 2012–13
0–49	1876686	14.4	13.8	17.5	16.8	15.9
50–99	1237320	8.2	9	10.8	13.1	10.6

(continued)

Table 7 (continued)

Employment range (persons)	Total persons engaged	1973–74	1980–81	1990–91	1997–98	2008–09 to 2012–13
100–199	1566216	9.4	9.2	10.7	12.9	13
200–499	2358880	13.1	12.1	13.5	19	18.7
500–999	1764538	11.6	9.7	12	13.6	13.7
1000–1999	1416130	12.8	13.7	10.1	9.4	10.5
2000–4999	1218717	16.7	15.9	9.5	10	9.4
5000 and above	***979356***	***13.8***	***16.6***	***15.9***	***5.2***	***8.1***
Total	12417843	100	100	100	100	100

Source Goldar (2000). 2008–09 to 2012–13 is compiled from various ASI reports

Table 8 Change in employment in 2012 over 2011 (persons)

Age (years)	Small	Medium	Large	Ultra-large	All
>1	1,228	8,415	9,329	7,076	26048
1–5	6116	267573	263665	63430	600784
6–10	26706	891468	819327	94742	1832243
11–15	−9870	−180155	72378	60411	−57236
16–20	−11637	−86872	−49863	47156	−101216
21–25	−8774	−177928	−162562	−113154	−462418
26+	29485	736035	1541557	599542	2906619
All	33254	1458536	2493831	759203	4744824

Source Computed from unit-level data from ASI

Table 9 Growth and share of employment in organized manufacturing industries in India (%)

Employment range (persons)	2012–13					
	Total persons engaged	1973–74	1980–81	1990–91	1997–98	Average of 2008–09 to 2012–13
0–14	480466					3.8
15–19	261786					2.3
20–29	432418					3.7
30–49	702016	14.4	13.8	17.5	16.8	6.1
50–99	1237320	8.2	9.0	10.8	13.1	10.6
100–199	1566216	9.4	9.2	10.7	12.9	13.0
200–499	2358880	13.1	12.1	13.5	19.0	18.7
500–999	1764538	11.6	9.7	12.0	13.6	13.7

(continued)

Table 9 (continued)

Employment range (persons)	2012–13					
	Total persons engaged	1973–74	1980–81	1990–91	1997–98	Average of 2008–09 to 2012–13
1000–1999	1416130	12.8	13.7	10.1	9.4	10.5
2000–4999	1218717	16.7	15.9	9.5	10.0	9.4
5000 and above	***979356***	***13.8***	***16.6***	***15.9***	***5.2***	***8.1***
Total	12417843					100.0

Source Calculated from Annual Survey of Industries (ASI)

Table 10 Growth of employment in organized manufacturing industries in India (%)

Employment range	19973–80	1980–90	1990–97	2008–13
0–49	3.5	3.0	2.2	1.2
50–99	5.5	2.4	5.7	0.6
100–199	3.8	2.1	5.7	2.5
200–499	2.9	1.7	8.0	3.8
500–999	1.5	2.7	4.7	5
1000–1999	5.1	−2.5	1.8	6.2
2000–4999	3.4	−4.5	3.6	5.8
5000 and above	6.9	0.1	−12.4	***2.4***
Total	4.1	0.6	2.8	3.3

Table 11 Share of employment by age and size

Age	Small (0–49)	Medium (50−499)	Large (500–4999)	Ultra-large (5000 and above)	All
Start-up (0)	0.01	0.06	0.07	0.05	0.19
1–5	0.36	8.36	7.83	1.09	17.64
6–10	0.28	8.63	8.07	0.80	17.77
11–15	0.24	6.39	6.88	0.89	14.40
16–20	0.19	5.34	5.96	1.05	12.54
21–25	0.14	3.33	3.66	0.58	7.70
26+	0.39	8.94	15.05	4.85	29.23
Others (nec)	0.01	0.23	0.22	0.07	0.52
All	1.61	41.29	47.73	9.38	100.00

Source Computed from unit-level data ASI 2012

Table 12 Share of employment change in 2012 over 2011 (%)

	Small	Medium	Large	Ultra-large	All
0	0.0	0.2	0.2	0.1	0.5
1–5	0.1	5.6	5.6	1.3	12.7
6–10	0.6	18.8	17.3	2.0	38.6
11–15	−0.2	−3.8	1.5	1.3	−1.2
16–20	−0.2	−1.8	−1.1	1.0	−2.1
21–25	−0.2	−3.7	−3.4	−2.4	−9.7
26+	0.6	15.5	32.5	12.6	61.3
All	0.7	30.7	52.6	16.0	100.0

Source Computed from unit-level data ASI 2012

Table 13 Herfindahl Index

Size of plant	*Herfindahl Index*
Small	0.014
Medium	0.011
Large	0.018
Ultra-large	0.091
All	0.011
Age of plant	*Herfindahl Index*
Start-ups	0.103
1–5	0.015
6–10	0.015
11–15	0.013
16–20	0.017
21–25	0.011
26+	0.017

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