Chapter 8

Summary and Conclusions

During past three decades or so, the Unorganised Manufacturing Sector (UMS) in India faced two broad policy regimes: ‘protectionist’ and ‘liberalized’. During the ‘protectionist’ policy regime that continued till about mid-1980s, the Government’s focus was on creation of an environment conducive for the domestic industries, both organised and unorganised, so that they could grow steadily without facing much competition from the foreign producers. As a consequence, the then trade policy of the country emphasized on applications of instruments like import licensing, quantitative restrictions on imports, high tariff rates, restrictions on foreign direct investment, etc. During this period, the UMS enjoyed additional protection in terms of various fiscal supports including product reservations, tax concessions, direct subsidies, etc., given to them by the Government.

On the contrary, the period of ‘liberalized’ policy regime witnessed adoption and implementation of policies that were by and large at variance with those implemented during the ‘protectionist’ period. During the era of liberalization, policies were taken for reduction of tariff rates, abolition of quantitative restrictions on imports, withdrawal of restrictions on foreign direct investment, which allowed the foreign goods to enter the Indian market freely. Thus, both the organised and unorganised segments of the manufacturing industry faced stronger competition from their overseas counterparts during this period.

As the level of competition faced by the manufacturers of the UMS intensified further, it became gradually difficult for them to expand employment and gross value added, especially in the early phase of the liberalization era (Kundu et al., 2001; Chadha, 2003; Mukherjee, 2004; Rani and Unni, 2004). This is so notwithstanding the fact that the Government adopted various policies right from the beginning of the planning era to improve the performance of the UMS. However, as a result of tardy growth performance of the sector, questions have been raised at the levels of individual researchers as well as policy-makers about the effectiveness of such polices to improve the health of the UMS in India (see, for example, ISID, 2004; Majumder, 2004; Papola, 2004; Damodaran, 2008; NCEUS, 2009). It is only recently that the Government appears to have realized the challenges faced by the sector in the ongoing phase of intense competition that prompted it
to devise policies that would focus specifically to ensure adequate credit supply, infrastructure, technology, and marketing facilities so as to raise the level of competitiveness of the enterprises in the UMS.

As against above background, the main purpose of our study was to find answers to the following questions: (a) How the size and structure of the UMS in India and her major states changed over time? (b) Did the growth performance of the UMS (with respect to indicators like the number of enterprises, gross value added, employment, and capital utilization) improve over time? (c) What has been the performance of the UMS in respect of growth of labour productivity? (d) How the patterns of employment in the industry of UMS changed over time? (e) What has been the incidence of inter-firm linkage (or subcontracting) in respect of the UMS in India, and what are the determinants of the same? (f) What should be the policies to improve future performance of the UMS in India?

We sought to find out answers to above questions by analyzing the NSSO data for three survey rounds. These are surveys on the ‘Unorganised Manufacturing Sector’ for 40th (1984-85) and 51st (1994-5) Rounds, and the survey on the ‘Unincorporated Non-agricultural Enterprises (Excluding Construction)’ for 67th Round (2010-11). While we used data available from the published report for the 40th round, the unit-level data have been used for the remaining two rounds to generate comparable data tables to understand performance of the UMS during our study period. It needs mention here that as no data are available on Directory Manufacturing Establishments (DMEs) from the published report of the NSSO for the year 1984-85, we used the data available from the ‘Directory Manufacturing Establishments Survey’ for 1984-85, published by the Central Statistical Office (CSO).

Another important point to note in respect of our data set is that the coverage of the 40th and 51st Rounds of survey was somewhat different from the coverage of the 67th Round survey. Two specific points need mention here: (i) while the NSSO in its 40th and 51st Rounds surveys considered the unorganised manufacturing sector alone at the time of data collection, for the latest round it collected data for the unorganised manufacturing, trade and other services sectors together. To overcome this problem, we extracted the data for the unorganised manufacturing sector only from the unit-level data files for the 67th Round (i.e., excluded the data on trade and other services sector enterprises) by using the NIC-2008 table. (ii) The surveys for the 40th and 51st Rounds had excluded those manufacturing units which were registered under sections 2m(i) and 2m(ii) of the Factory Act 1948, and also
bidi and cigar manufacturing units which were registered under the Bidi and Cigar Workers (Conditions of Employment) Act 1966. However, the 67th Round survey additionally excluded those ownership categories of manufacturing units which were government and public sector enterprises, cooperatives as well as those which were not registered under the Companies Act 1956. Thus, the coverage of unorganised manufacturing sector survey was higher in the 40th and 51st Rounds as compared to the 67th Round. However, a detailed inspection of the 40th and 51st Rounds data revealed that the shares of enterprises that were either government/public sector enterprises or cooperatives were negligible. Further, the shares of registered units in the 40th and 51st Rounds surveys were found to be negligible. Hence, the data sets used by us, after necessary adjustments, appear to be quite useful to build an understanding about the performance of the UMS in India during the period under consideration (1984-85 to 2010-11).

For the sake of understanding the performance of the UMS under different policy regimes, we divided the entire period of our study into two sub-periods: 1984-85 to 1994-95 and 1994-95 to 2010-11. The former period captured the initial impact of economic reforms on the UMS, when the sector faced strong competition from their organised counterpart, both domestic as well as international. However, the period of 1994-95 to 2010-11 is characterized by intensifying competition as a consequence of adoption of more liberalized trade policies as also adoption of more focused policies for this sector that are expected to raise their levels of competitiveness.

The main findings emerging from this study are summarized in the following sections.

8.1 Size and Structure of the Unorganised Manufacturing Sector at the All-India Level

In India, the UMS enterprises played an important role as regards generation of employment by utilizing the locally available resources. In 1984-85, at the All-India level, there were 17.7 million UMS enterprises. The number of such enterprises reduced to 12.55 million in 1994-95, although it increased to 17.78 million in 2010-11. These units provided jobs to more than 35 million people in 2010-11, which was higher than the number of persons employed by this sector in 1984-85 (34.28 million) and 1994-95 (29.97 million). Overall, it appears that the UMS in India has grown over time both in terms of number of enterprises as well as level of employment generated by it. However, the performance of the
sector from the perspective of expansion of the gross value added (GVA) was not satisfactory, especially during the period of 1984-85 to 1994-95. Of course, some improvement in this respect is clearly visible during the later period of 1994-95 to 2010-11 when the GVA increased from Rs. 145 billion to Rs. 514 billion (at 1993-94 constant prices). Clearly, the recent policy initiatives by the Government seem to have paid some dividends as far as output performance of the UMS is concerned.

We examined the shares of the rural and urban areas in total UMS enterprises, employment, and GVA to test empirical validity of the oft-mentioned hypothesis that the UMS in India is predominantly rural. In this regard, our main observation is that the rural areas have larger shares in total UMS enterprises and employment at all three time points chosen for our study. However, the shares of rural areas in these respects declined over time, more vigorously during the later period of 1994-95 to 2010-11. A contrary picture prevails in India in respect of the shares of rural and urban areas in total GVA of the UMS. It is found that not only the share of the urban areas in total GVA of the UMS was higher compared to the share of the rural areas at all time points, but also such a share increased further with the passage of time. Our data revealed that while the share of the urban areas in total GVA of the UMS was about 54 percent in 1984-85, the same increased to 58 percent in 1994-95 and 66 percent in 2010-11. The broad conclusion emerging from this part of our study is that notwithstanding the dominance of the rural segment of the UMS from the point of view of its shares in number of enterprises and employment, the urban segment of the UMS not only enjoyed higher share of the total GVA at all time points but also improved its shares in all aspects (number of enterprises, employment, and GVA) over time.

An important feature of the UMS in India is its heterogeneity as regards the size of the units (defined primarily in terms of number of workers employed) and varieties of products manufactured by them. Thus, we examined the structure of the UMS by focusing on its three different size-classes/subsectors (which are Own Account Manufacturing Enterprises/OAMEs, Non-Directory Manufacturing Establishments/NDMEs, and Directory Manufacturing Establishments/DMEs, as classified by the NSSO surveys\(^1\)), and also the types of products manufactured by it (at the two-digit level of NIC).

As regards the structure of the UMS at the All-India level, our observation is that it is overwhelmingly dominated by the OAMEs, especially in respect of the number of

---

\(^1\) The OAMEs are enterprises run without any hired worker fairly on a regular basis; the NDMEs operated with less than six workers with at least one hired worker; and the DMEs employed six or more workers with at least one hired worker.
enterprises and employment. Thus, even in 2010-11, considering rural and urban areas together, the OAMEs accounted for 84 percent of total UMS enterprises and 60 percent of UMS employment. However, the UMS in India has been subjected to a kind of structural shift so that the shares of the NDMEs/DMES with regard to the number of enterprises, employment, and GVA increased over time and those for the OAMEs declined. The obvious implication of this type of development is that the bigger units within the UMS have gained more prominence with the progress of time.

Another important aspect as regards the structure of the UMS in India is that this sector is dominated by the less capital-intensive traditional sector activities. In 1984-85, seven traditional sector activities (viz., ‘food and food products’, ‘beverages, tobacco and related products’, ‘cotton textile, wool, silk and man-made fibre textiles, jute and other vegetable fibre textile’, ‘textile products including wearing apparel’, ‘wood and wood products; furniture and fixture’, ‘paper and paper products and printing, publishing and allied industries’, and ‘leather and products of leather, fur and substitutes of leather’) together accounted for more than 80 percent of total employment of the UMS (considering rural and urban areas together), and their share in total GVA was around 72 percent. However, the traditional sector as a whole suffered some decline during next 25 years or so in terms of its share in total UMS employment although its share in total GVA increased marginally. On the whole, it can be said that the dominance of traditional sector activities within the UMS continued during the period of our study inasmuch as this sector accounted for as high as 72 percent of UMS employment and 75 per cent of GVA even in 2010-11.

Focusing separately on the rural and urban areas, we observed that the former area is dominated (in terms of shares of total UMS enterprises, employment and GVA) by the OAMEs as compared to the NDMEs/DMEs. This is true for all three time points. However, the shares of the OAMEs in total UMS enterprises, employment, and GVA declined over time in rural areas. The dominance of the OAMEs continued in urban areas (with respect to total number of enterprises and employment) as well during our study period (1984-85 to 2010-11) though not to the same extent as observed for the rural OAMEs. It is also noticeable that the share of the OAMEs in employment in urban areas declined slightly over time although their share in GVA improved.

Further, when we looked into the employment and GVA shares of the traditional and modern activities in the rural and urban areas, it was observed that these were higher for the traditional activities compared to modern activities in both the areas and at all time points.
However, there is a clear tendency of employment share of the traditional sector activities declining over time, both in rural and urban areas. On the other hand, in respect of the GVA share, the traditional sector (activities) lost over time in rural areas, but gained in urban areas. On the whole, it appears that the smallest size-class of the industry (i.e., the OAMEs) as well as the low-capital intensive ones (representing the traditional sector) experienced reduction in their relative importance in rural areas during 1984-85 to 2010-11 as evidenced by their declining shares of both employment and GVA. However, a reverse trend is observed in urban areas, which implies that the OAMEs and the traditional sector activities here were able to expand their business even under a more competitive environment, and hence enjoyed expansion of the GVA share.

Our detailed analysis of the traditional and modern sectors within the UMS further revealed that the former has been much more diversified compared to the latter. Thus, while the shares of five out of seven different activities within the traditional sector in employment and GVA (exceptions being ‘paper and paper products and printing, publishing and allied industries’, and ‘leather and products of leather, fur and substitutes of leather’) have been more or less uniform, only three out of a total of eight activities within the modern UMS occupied the most of employment and GVA of that sector. These three activities are ‘other manufacturing’, ‘non-metallic mineral products’ and ‘machinery and equipments other than transport equipments’.

8.2 Size and Structure of the Unorganised Manufacturing Sector in the States

We examined the size and structure of the UMS in 16 major states of India. An interesting finding here is that the structure of the UMS differed substantially between the advanced and the backward states. Specifically, we found that while the majority of the UMS employment in the backward states (Bihar, Orissa and Assam) has been generated through the rurally-located enterprises, an opposite picture prevailed in the advanced states (Gujarat, Maharashtra, Delhi, etc.) where the urban-located enterprises accounted for the majority of the UMS employment. However, following the All-India trend, majority of the states irrespective of their development status experienced decline in relative share of rural areas in total UMS employment over time.

The analysis of shares of different sub-sectors of the UMS in employment and GVA in the states revealed that high proportions of employment and GVA are generated by the
OAMEs in the backward states. In contrast, in the advanced states, these are generated more by the two establishments (NDMEs and DMEs). Further, following the All-India trend, the shares of OAMEs in total employment and GVA declined over time in all states (developed and backward).

Looking at the performances of different activities within the UMS in the states, we found that only three to four traditional sector activities (which are ‘food and food products’, ‘cotton textile, wool, silk, man-made fibre textile, jute and other vegetable fibre textile’, ‘textile products including wearing apparel’, and ‘wood and wood products; furniture and fixture’) and one modern sector activity (‘non-metallic mineral products’) accounted for most UMS employment in majority of the states at all time points. However, there is clear evidence of emergence of some modern sector activities from the viewpoint of employment generation in some states in the recent period of 2010-11. These are ‘machineries and equipments other than transport equipments’ in the states of Delhi, Punjab and Haryana, ‘metal products and parts except machinery equipments’ in Maharashtra, and ‘other manufacturing’ in Rajasthan, West Bengal and Gujarat. Since only a handful of activities dominated over the UMS in most of the states, the level of industrial concentration as measured by the Herfindahl Concentration Index (calculated by considering employment shares of different production sectors in total UMS employment of a given state) is found to be quite high. However, as regards the changes in the level of concentration during 1984-85 to 2010-11, we observed a clear difference between the backward and the advanced states. It is found that while the backward states (namely, Assam, Bihar, Orissa, Rajasthan, and Uttar Pradesh) experienced increasing level of industrial diversification, the advanced states (Delhi, Gujarat, Maharashtra, Punjab, Haryana, and West Bengal) experienced higher level of concentration over time. It is quite possible that the unorganised manufacturing units in the advanced states preferred to specialize in production of goods in which they have comparative advantage that explains their higher levels of industrial concentration. On the other hand, as the producers in the backward states are compelled to diversify their activities in their efforts to eke out a means of living, their structure of the UMS is more diversified.

8.3 Growth Performance of the Unorganised Manufacturing Sector at the All-India Level

At the All-India level, the UMS as a whole suffered from negative growth rates with regard to the number of enterprises and employment during the period of 1984-85 to 1994-
95, both in rural and urban areas. As regards gross value added, although the UMS recorded negative growth rate (-0.98 percent per annum) in rural areas during this period, it experienced low but positive growth rate (0.65 percent per annum) in urban areas. By and large, the same trend is visible for the OAMEs and NDMEs, both in rural and urban areas. However, the DMEs experienced positive growth rates of number of enterprises, employment, and GVA in both the areas (rural and urban) during this period.

The scenario observed for the period of 1994-95 to 2010-11 is somewhat different. During this period, in urban areas, the UMS as a whole as well as three of its sub-sectors revealed a dramatic turnaround in respect of growth rates of number of enterprises, employment, and GVA as compared to the previous period (1984-85 to 1994-95). On the other hand, in rural areas, although the sector as a whole recorded positive growth rates as regards number of enterprises and GVA, it suffered a decline in terms of growth of employment (declining at the rate of -0.64 percent per annum). This negative growth trend of employment for the rural UMS as a whole during this period might be explained in terms of negative employment growth experienced by the OAMEs as the other two segments (NDMEs and DMEs) experienced positive growth of employment during this period.

As regards the level of capital utilization (defined as the value of fixed assets owned per enterprise, at 1993-94 constant prices), the UMS (considering rural and urban areas together) recorded appreciable growth rate (7.80 percent per annum) during the period of 1994-95 to 2010-11, after experiencing a negative growth (-3.50 percent per annum) during the previous period (1984-85 to 1994-95). The negative growth trend of capital utilization observed by the UMS as a whole during 1984-85 to 1994-95 may be explained in terms of negative growth of fixed assets owned per enterprise by the OAMEs as the same for the NDMEs and the DMEs was positive. It seems that with the beginning of the new competitive environment in early 1990s, the OAMEs started facing difficulties to improve their capital base which got reflected through negative growth rate of capital utilization by them during this period. However, with the passage of time, the enterprises of all sizes in the UMS were able to improve their capital base, though at varying degrees, possibly because of more effective implementation of the promotional policies of the Government in this regard. Thus, during 1994-95 to 2010-11, the growth rate of capital utilization of the OAMEs was found to be as high as 8.58 percent per annum, which for the NDMEs and DMEs were 6.74 and 8.45 percent per annum, respectively.
Another positive aspect as regards the UMS in India during 1994-95 to 2010-11 was that of a rising trend of labour productivity. Considering rural and urban areas together, the UMS is found to have recorded 6.39 percent per annum growth of labour productivity during this period, which is much high compared to 1.02 percent growth of labour productivity during the previous period (1984-85 to 1994-95). This rising trend of labour productivity for the UMS is visible both in rural and urban areas as well as for all its subsectors (OAMEs/NDMEs/DMES). However, it needs mention here that the growth rate of labour productivity during the recent period has been higher for the smaller-sized units (OAMEs/NDMEs) as compared to the bigger units (DMEs). Clearly, the smaller units within the UMS in India have started catching up their larger counterparts in terms of labour productivity in recent years.

An important conclusion that follows from above discussion is that as all categories of enterprises within the UMS, including the OAMEs, recorded superior growth performance (as regards number of enterprises, GVA, capital utilization, and labour productivity) during the recent period of 1994-95 to 2010-11 compared to the previous period, the view of some scholars that the OAMEs represent the distressed segment of the industry (see, for example, Chadha, 2003; Mukherjee, 2004) doesn’t hold good any more.

When we looked into the growth performance of the 15 major production sectors (considering rural and urban areas together) within the UMS, we found that growth rates of GVA and labour productivity were higher during 1994-95 to 2010-11 as compared to 1984-85 to 1994-95 for majority of them. This conclusion holds for both the areas – rural and urban. However, as regards the growth rate of employment, we found that although it increased for a good number of activities for the combined areas (rural plus urban) during 1994-95 to 2010-11 compared to the previous period, there were five activities for which such a growth rate turned negative. Of these activities, four belonged to the traditional sector (which are ‘food and food products’, ‘cotton textile, wool, silk, man-made fiber textile, jute and other vegetable fiber textile’, ‘wood and wood products: furniture and fixture’, ‘leather and products of leather, fur and substitutes of leather’) and one to the modern sector (‘other manufacturing’). The negative employment growth experienced by these activities during 1994-95 to 2010-11 was largely due to the negative growth of employment in their rurally-located activities when the same for the urban-located activities was positive.
8.4 Growth Performance of the Unorganised Manufacturing Sector in the States

Examining the growth performance of the UMS in the states in respect to GVA, employment and labour productivity, we found that this sector as a whole performed better during 1994-95 to 2010-11 as compared to 1984-85 to 1994-95 in majority of the states. Considering the rural and urban areas together, we found that the growth rate of the GVA was higher during 1994-95 to 2010-11 as compared to 1984-85 to 1994-95 in all the states. Moreover, 10 out of 16 major states experienced higher growth of employment during the former period as compared to the latter. By and large, the same pattern is observed for the individual subsectors of the UMS when rural and urban areas are considered together.

However, when we considered the rural areas separately, we found that employment growth in the OAMEs was negative for majority of the states in both the periods. As regards the rural NDMEs, such a growth was negative during the first sub-period in majority of the states which, however, turned positive during the second sub-period. On the other hands, the DMEs in rural areas enjoyed positive growth rate of employment in majority of the states in both the periods. The situation is somewhat different in the urban areas to the extent that while growth of employment in all subsectors of the UMS was negative in majority of the states during the first sub-period (1984-85 to 1994-95), the same turned positive during the second sub-period (1994-95 to 2010-11) in almost all states (the exception being Bihar).

As regards the growth of labour productivity in the UMS (considering rural and urban areas together), we found that nine out of 16 major states recorded negative growth rate during 1984-85 to 1994-95. This turned positive in all the states during the period of 1994-95 to 2010-11. The same trend prevails when the rural and urban areas are considered separately. Another noteworthy point about the growth of labour productivity in the UMS during the second sub-period (1994-95 to 2010-11) is that it ranged between 4 to 6 percent per annum in the high-income states like Gujarat, Maharashtra, Tamil Nadu and Delhi, and became even higher in some of the lagging states like Assam (10.22 percent per annum), Orissa (10.10 percent), Bihar (6.81 percent) and Rajasthan (6.60 percent). Overall, it can be said that there is clear sign of inter-state gap in labour productivity declining over time for the UMS in India. Such a conclusion gets reinforced through the formal test of ‘beta convergence’ conducted by us. This, however, does not necessarily mean that the relative ranks of the states too changed over time. In fact, the Kendall’s Test of Concordance
showed that the relative ranks of the states with regard to labour productivity in the UMS remained by and large same during our study period (1984-85 to 2010-11).

8.5 Composition of Employment in the Unorganised Manufacturing Sector

In the context of discussion on employment in the unorganised manufacturing sector in India, another issue that drew some research attention is the composition of workers in this sector. In this context, some scholars argued that, in order to gain ‘flexibility’ while employing labour, the UMS enterprises might be interested to recruit more of part-time workers or family workers rather than full-time workers (see Mukherjee, 2005; Unni and Rani, 2003). Our study examined the composition of the UMS workers from two angles: (i) shares of ‘full-time’ and ‘part-time’ workers in total UMS workers\(^2\), and (ii) shares of ‘owner-workers’, ‘hired workers’ and ‘other workers’\(^3\) in total UMS workers.

As regards the shares of the ‘full-time’ and ‘part-time’ workers, our observation is that nearly 90 percent of the workers in the UMS in India (rural and urban areas together) worked on a ‘full-time’ basis. The same picture is obtained when rural and urban areas are considered separately. Considering three subsectors of the UMS separately, we observed that the incidence of ‘part-time’ workers has been lower in the NDMEs/DMEs (less than 5 percent) compared to OAMEs (which is around 15 percent) at all points of time. By and large, this observation stands valid when considered separately for the rural and urban areas.

Another important feature of the employment structure in the UMS is that of higher incidence of the part-time workers among the females compared to males, both in rural and urban areas, and in all sub-sectors of the UMS. Moreover, the incidence of part-time workers among the females increased substantially over time in urban areas (increasing from 10.4 percent in 1994-95 to 20.4 percent in 2010-11) although it remained almost unchanged in rural areas. The increase in the incidence of part-time workers in the UMS in urban areas might be due to greater involvement of the urban women as part-time workers,

---

\(^2\) ‘Full-time’ workers are those who work more than half of the period of normal working hours of an enterprise fairly on a regular basis, while ‘part-time’ workers work in the enterprise for less than or equal to half of the normal working hours.

\(^3\) The category of ‘owner workers’ consists of those proprietors who work in their own enterprises on a fairly regular basis. The ‘hired workers’ are those workers who receive salary/wages on a regular basis. The category of ‘other workers’ is comprised with the family workers who work for the enterprises without regular salary/wages.
especially in the OAMEs. Some studies revealed that more women joined the workforce in recent years in the capacity of unskilled workers in the construction sector and/or as domestic help who possibly worked more on a part-time basis as they have to simultaneously perform domestic duties and outside work (NCEUS, 2007).

Further, our activity-level analysis revealed that the incidence of part-time workers has been higher in ‘traditional’ or low-capital intensive activities, both in rural and urban areas. The lower incidence of part-time workers in ‘modern’ or high-capital intensive activities within the UMS highlights the case of their demand for workers having higher skill-levels, which are unlikely to be possessed by the part-time workers.

We carried out some multiple regression exercises using the NSSO unit-level data for the 51st and 67th Rounds to find out some important determinants of the incidence of part-time workers in the enterprises of the UMS in India. In our multiple regressions, the explanatory variables considered were proportion of female workers to total workers, value of investment in plant and machineries per worker (which is a measure of capital-labour ratio), types of enterprises (OAMEs/NDMEs/DMEs), and location of the enterprises (rural/urban). Our regression results reinforce some of the observations made above with regard to the incidence of part-time workers in the UMS in India. Thus, we conclude that the proportion of part-time workers is higher for the enterprises that have higher proportion of female workers, the enterprises belonging to the category of OAMEs rather than NDMEs/DMEs, the enterprises that are less capital-intensive, and the enterprises that are located in rural areas. The estimated coefficients of all the explanatory factors are found to be statistically significant at 1 percent level. These findings are very much consistent with our usual expectations. As the females are required to give attention to the domestic works, it is natural that in the enterprises dominated by them, they would work more as part-time workers. Similarly, the enterprises having higher investment in plant and machineries would like to produce optimally to maximize their profits that required employing more of full-time workers to avoid any disruption in the process of production. Again, the smaller manufacturing units (e.g., the OAMEs) which have lower scales of production but dominated by the domestic workers are likely to have higher incidence of part-time workers as many of their workers would get involved into multiple activities to augment their earning levels. Further, as the possibility of practicing multiple activities is comparatively higher in rural areas, the workers in such areas are likely to participate in different types of farm and non-farm activities, which would become possible when they worked on part-time
basis. Hence there is higher incidence of part-time workers among the UMS workers in rural areas compared to urban areas.

The distribution of the workers as ‘owner workers’, ‘hired workers’, and ‘other workers’ could be analyzed in respect of two establishments (NDMEs and DMEs) of the UMS, and for two of our chosen time points (1994-95 and 2010-11).

Our main finding here is that both the NDMEs and DMEs are dominated by the hired workers at both the time points. In 2010-11, considering rural and urban areas together, nearly 60 percent of the workers in the NDMEs were hired workers, which in the DMEs was 84 percent. This dominance of the hired workers in the NDMEs and DMEs of the unorganised manufacturing sector is visible both in the rural and urban areas as well as among the male and female workers. Thus, the establishments in the UMS in India are run more by the hired workers rather than by family or other workers. It also appears that such a dependence on the hired workers has been increasing over time presumably because of expansion of their scales of production as also their tendency to replace the low-skilled family workers by the better-skilled hired workers.

8.6 Inter-firm Linkages: Incidence, Patterns, and Determinants

Information on inter-firm linkage in the unorganised manufacturing sector is available for two of our selected NSSO survey Rounds, which are 51st and 67th. However, it needs to be noted that the definition of ‘inter-firm linkage’ for the 51st Round is different from that for the 67th Round. This difference arises because while the NSSO in its 51st Round survey directly asked the enterprises ‘whether they were ancillary to the parent firm or not’, they inquired ‘whether the surveyed units had undertaken any work on contract basis during the reference period of the survey’ in the 67th Round survey. This definitional difference compelled us to analyze the two sets of data separately. The issues that figured in our discussion on inter-firm linkage or subcontracting are its incidence, coverage, and some aspects of contractual arrangements. We also sought to identify some important determinants of the subcontracting status of the enterprises in the unorganised manufacturing sector in India.

---

4 This is because the OAMEs are by definition family-worker based, and no information on this aspect is available for the year 1984-85.
Analyzing the data for 1994-95 (51st Round), we found that the incidence of inter-firm linkage in terms of ancillarization was abysmally low for all three subsectors of the industry of unorganised manufacturing in India, and it varied between 2.6 per cent for the rural OAMEs to 8.9 percent for the urban DMEs. However, when the data for 2010-11 (67th Round) were considered, it appeared that 19.7 percent of the UMS enterprises (considering the rural and urban areas together) were involved in sub-contracting arrangements. Our further analysis at the subsector level revealed that the incidence of subcontracting (measured in terms of the proportion of subcontracted units to total number of enterprises) was higher for the OAMEs (21.4 percent), followed by the DMEs (16.9 percent), and the NDMEs (8.5 percent).

In our study of inter-firm linkage or subcontracting, we considered the marketing agreements reached by the subcontracted units of the UMS. We found that for 85 to 90 percent of such units, the agreement was to supply whole of their produce to their parent units. The same pattern is observed for the subcontracted enterprises in rural and urban areas. Another important point to note is that while 70 percent of the subcontracted OAMEs served the single parent unit throughout the year, 57 percent of the subcontracted NDMEs and 47 percent of the subcontracted DMEs are reported to have worked for more than one parent unit. Thus, it seems that larger production scale of the subcontracted establishments (NDMEs/DMEs) enabled them to serve multiple customers/parent units simultaneously while lower scale of production of the subcontracted OAMEs compelled them to satisfy demand from single parent unit throughout the year.

It is to be noted that the subcontracting arrangements for the UMS enterprises were not confined to the marketing agreements only. We found that the majority of the subcontracted units of the UMS depended on the ‘master units’ for getting raw materials as well as design specification simultaneously, both in rural and urban areas. Such type of dependence on the ‘master units’ for getting raw materials and design specification was higher among the OAMEs as compared to the establishments (NDMEs/DMEs). However, there were very few cases of obtaining plant and machineries from the parent units, especially by the OAMEs and the NDMEs. In most cases, the subcontracted units from these two categories themselves arranged for necessary machineries and/or equipments for production.

Another important indicator to assess the functioning of contractual arrangements is whether or not the contractors or ‘master units’ allowed the subcontracted units to raise
product prices in the event of escalation of input prices after finalization of contracts. In this context, our observation is that only about one-fourth of the subcontracting units enjoyed such a freedom. In other words, a vast majority of the unorganised manufacturing enterprises in India did not enjoy independence in the matter of setting prices for their products, and were thus subjected to exploitation by their parent units. As expected, among all enterprises, those belonging to the category of OAMEs were subjected to higher level of exploitation compared to the bigger units (NDMEs/DMEs) because of their weaker bargaining strength.

We used NSSO unit-level data for 2010-11 to identify some factors that determine subcontracting status of an enterprise in the UMS (i.e., whether the enterprise would enter into a subcontracting arrangement or not). For this purpose, we estimated a logit regression model. The explanatory variables considered in such a model are sex of the proprietor, registration status of the enterprise, whether or not the enterprise faced any problem related to power supply, credit, availability of raw materials, etc., type of enterprise (OAME/NDME/DME), and location of the enterprise (rural/urban). Our main conclusion here is that the probability of getting involved into a subcontracting arrangement is higher if the owner of the enterprise is female, the enterprise is unregistered, and it faced some operational problem during one year preceding the survey date. Among three types of enterprises, the probability of entering into subcontracting arrangement is greater for the DMEs compared to the NDMEs. However, NDMEs have greater probability of entering into subcontracting arrangements when compared with the OAMEs. The location of the enterprise also matters in that the enterprises from rural areas have higher probability of entering into subcontracting arrangements compared to those in urban areas. The estimated coefficients of all these factors are found to be statistically significant. These findings are very much consistent with our usual expectations. As the females are required to give more attention to the domestic works, it is natural that they would avoid the risk of marketing their products by entering into subcontracting arrangements. Again, as the registered units are more likely to enjoy various government facilities, their necessity of entering into subcontracting arrangements is relatively less compared to the unregistered units. Moreover, as some of the problems faced by some enterprises of the UMS (e.g., inadequate supply of raw materials, damped market demand, poor financial base, etc.) could be solved by entering into subcontracting agreements, the units suffering from such problems are more likely to enter into subcontracting arrangements. It also seems that the probability of
entering into subcontracting arrangements is higher for the bigger units because their parent units (mostly in the formal or organised sector) usually preferred to outsource to them because of their superior capital base and manpower that would ensure both quality and on-time delivery of products. It is also possible that the extent of marketing bottlenecks being higher in rural areas, the enterprises located there have a higher tendency to get involved in subcontracting arrangements.

Our broad conclusion with regard to the effect of the economic reforms policies on the sector of unorganised manufacturing in India is that such polices did have some impact on it. It seems that as a consequence of policies affecting this sector, some segments of it improved their performance as regards growth of gross value added and labour productivity. Moreover, although employment performance at an aggregative level has not been satisfactory during the post-1994 period of economic reforms, there is clear evidence of growing importance of the skilled workers, especially in the larger-sized units or establishments. Another striking development of the post-1994 period of economic reforms era is growing importance of the subcontracting arrangements which seemed to have benefitted both the parties – contractors and contracted – that explains its increasing incidence in the unorganised manufacturing sector as a whole.

8.7 Policy Implications

In the light of our findings, the following policies may be suggested.

(1) Our study of growth performance of the unorganised manufacturing sector in India clearly revealed that this sector expanded quite appreciably in terms of popularly used indicators like number of enterprises, gross value added, capital utilization, and labour productivity during the period of 1994-95 to 2010-11. Such type of performance by this sector is at variance with what was observed during the preceding period (1984-85 to 1994-95). On the whole, it seems that the policy changes initiated during the decade of 2000s helped the sector to grow in terms of the indicators mentioned above. However, one dark spot during this otherwise healthy-growth phase for the UMS is unsatisfactory employment growth. In the light of this unsatisfactory employment performance by the UMS which happens to be one of the largest employment generator in India, The Manufacturing Plan in India (Government of India, 2013) that targeted generation of 100 million additional
employments in manufacturing sector by 2025 seems to be quite ‘over-ambitious’. However, to accelerate the pace of employment expansion in the UMS, we cannot recommend a policy that will be detrimental to the process of higher level of capital utilization by the sector. As a matter of fact, improvement in capital utilization signifies modernization of production technology, which is one of the essential requirements for the UMS to survive in the newly emerging competitive environment. So our recommendation is that, besides taking initiatives to improve the level of capital utilization, the government should take steps to remove the marketing bottlenecks faced by the enterprises of this sector. It is expected that better access to markets would encourage the UMS units to expand their scales of production which will help generation of more employment.

(2) We observed that quite a good proportion of the workers in the UMS worked on a part-time basis, especially in OAMEs. There is also a tendency among the better endowed segments of the UMS (i.e., establishments) to prefer full-time and/or skilled hired workers. In any case, the unskilled/semi-skilled family workers who were involved in the UMS on a part-time basis have started losing their importance over time. As these workers represent the most vulnerable segment of the UMS workers, specific attention needs to be focused to improve their levels of skills so that they obtain full-time jobs in future. Efforts should also be made to encourage or incentivize these workers to participate in the training programmes which they had been avoiding in the past (Damodaran, 2008; NCEUS, 2009).

(3) The pattern of subcontracting in the UMS in India represents a picture of exploitation of the enterprises, especially the smaller ones (OAMEs) by their master units due to their low bargaining strength and poor access to markets (both inputs and output). It is also possible that being dependent on the master units in many different ways, the subcontracting units hesitated to protest against contract violation by their masters, for instance, in the event of delayed payment which is a recurring problem for the smaller units (Chadha, 2003; NCEUS, 2009). Thus, if the smaller units are to be saved from the exploitation generated by the system of subcontracting, their bargaining strengths would have to be improved. In this context, the Government agencies should play a more proactive role by supplying credit, technical know-how, and marketing infrastructures and information to the weaker/smaller production units. Hopefully, such intervention by the Government would help to reduce their level of exploitation although the system of subcontracting might also continue, which is not necessarily bad always.