

Growth and Determinants of Employment in Unorganized Manufacturing Sector of Urban Punjab

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ABSTRACT

Though, agriculture always works as the actual basis of economic substance, industrial activity too has been an equally important source of livelihood for the people. Theoretically, the growth of the industries is recognized as the main remedy for relieving the excessive pressure on agriculture which is one of the reasons of the impoverishment of the agricultural communities. Among the states in India, Punjab is an ideal state to study an economy that has been based on agriculture for past several decades. But for balanced and sustained development of an economy, it is imperative to develop its manufacturing base. Moreover, at this point of time agriculture growth curve in the state has reached a plateau and so it alone cannot improve the overall development of the economy. Undoubtedly, the future of Punjab's economy lies in the promotion of non-agricultural activities and being self sufficient in agro based raw materials the growth of traditional industries can be the best option for the state. It can also improve the earning capacity of the rural people who have been finding it hard to survive with agriculture due to increased costs of the inputs and lower profitability. Besides, it may give a solution to the problem of seasonal as well as open unemployment in the state. In this perspective, present paper is an attempt to explore the issues of growth and determinants of employment in unorganized manufacturing sector in urban Punjab. For this purpose, Unit level NSSO data on Unorganised Manufacturing Enterprises (51st, 56th round and 62nd Round) has been used. NSSO provides extensive data on three types of enterprises viz. own account manufacturing enterprises (OAMEs), non-directory manufacturing enterprises (NDMEs) and directory manufacturing enterprises (DMEs). All of these enterprises come in the category of small scale industries. Using this data, this paper explores the growth and productivity of these enterprises in urban Punjab.

Keywords: *Growth, Employment, Manufacturing, Urban Punjab*

1. Introduction

Employment generation is an important factor to be taken care of in an economy like India with huge unskilled pool of labour. Twelve million people enter the job market in India every year. A recent International Labor Organization study states that of the 17 million new formal sector jobs created between 2009-10 and 2011-12, as much as 85 per cent offer no employment benefits and social security. This means that though more people are working now, their quality of work and livelihood is going down. Until 2000, informal employment constituted 90 per cent of the jobs sector but that number went down to 82 per cent by 2011-12. So though ostensibly more formal sector jobs are being created, in reality many of those can be categorized as informal since they lack employment benefits and social security.

On one hand, there has been high economic growth rate in the Indian economy in the last two decades; on the other, this growth has not been accompanied by high growth rate of employment. The root problem is that the growth of modern industry and services has not been employment intensive. In the development process, workers should come out of low-productive agriculture sector to higher productive non-agricultural sector. According to Mehrotra et al. (2012), this is happening in India at a slower pace, as is evident

from declining employment elasticity of non-agriculture sector. Employment elasticity of output in India has declined over the last decade of 2000s (it declined from 0.44 to 0.01), leading to jobless growth. The Statistics of Punjab shows that agriculture has already left with no excess capacity for the absorption of labour. Manufacturing sector has turned out to be highly capital intensive. Punjab has remained an agrarian state since the times of Green revolution. Being the granary of India, it exhausted its potential for agriculture as its main occupation. Agricultural sector in the state has reached a plateau. This has raised the level of unemployment in the Punjab economy. Though, it is being recognized that for sustaining the growth of the economy, it is vital to strengthen its manufacturing base, but due to its remoteness, absence of mineral resources, highly sensitive political border and other drawbacks, it is difficult to establish large industry in Punjab. Small scale industry and unorganized sector is the predominant feature of this state. Unorganized sector comprising of relatively small units and less investment has been mushrooming in the state over the years. This study is based on the following objectives:

- a. To examine the growth of enterprises in unorganized manufacturing sector of urban Punjab.

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- b. To identify the growth and determinants of employment and wages in unorganized manufacturing sector of urban Punjab.

2. Review of Relevant Literature

Employment is the major problem of developing economies. It was assumed that globalisation would absorb the workforce in the organised manufacturing creating white collared jobs, but actually it has failed to absorb the burgeoning labour. The labour intensive organised manufacturing has contracted over time due to stringent labour laws, infrastructural bottlenecks and protection given to small scale industries for years. On the other hand, unorganised sector which has become an Integral part of the economy has large potential for job creation as it is a labour intensive sector that absorbs a major part of the workforce in India. Several studies have focused their analysis on the impact of unorganised sector on Indian economy. Singh and Jain (2006) found that the unorganised manufacturing sector continued to survive and thrive in an era of liberalisation mainly due to its direct or indirect linkages with organised sector units. There has been a growth in both the number of units and the number of workers. The analysis of the size structure reveals that these are the OAMEs, which dominate in terms of number of units and workers. The establishments (NDMEs and DMEs), on the other hand, dominate the structure of Punjab's unorganised industry in terms of output, gross value added and the usage of fixed capital. Share of organized sector in employment was only 16 per cent in 1983-84; it declined to 13 per cent in 1999-2000 and further to 11 per cent in 2004-05 (Papola, 2008). Various reasons have been highlighted for stagnation in employment generation in organized manufacturing sector by Bhalotra (1998), Nagaraj (1994) and Papola (1994). As a result of structural adjustment programme, organized sector becomes modern and technology oriented and entry to the same becomes difficult. Therefore, workers join the army of casual labourers in unorganized sector with low productivity and low wages (Ghose, 1992 and Bhalla, 1996). Dev (2000), Nagaraj (2004) and Bhattacharya and Mitra (1993) observed rapid increase of employment in unorganized sector than the organized sector in post-reforms era. There was a steep rise in the growth of employment in non-agricultural sector (4.7 per

cent per annum during the period of 1999-2000 to 2004-05). This growth was largely contributed by the unorganized sector (Planning commission, 2008). The elasticity of employment with regard to output in the unorganized sector was 0.46 while that in the organized sector was 0.15, implying faster growth of employment in the former (*ibid*). According to NCEUS (2007), the unorganized enterprise workers constitute 92.4 per cent of all workers. Unni and Rani (2003) observed an increase in employment during 1995-2001 (3.8 per cent) after registering negative growth rates for two consecutive periods of 1985-90 and 1990-95. Chadha and Sahu (2003) observed a higher growth of employment for urban units during 1995-2001 than in the preceding decade of 1984-85. Dhesi and Wadhwa (1994) observed the labour intensiveness of the informal sector enterprises. They also found that the most important variables influencing productivity, earning and employment potential have been found to be ownership status. Realizing the immense potential of unorganized manufacturing sector in employment generation, the present paper focuses on the growth and determinants of employment in the unorganized manufacturing sector of Punjab since liberalization.

3. Data Source and Methodology

Conceptually, the unorganized manufacturing sector includes all unregistered manufacturing units (not covered/registered under factories act, 1948). It is composed of three segments - own account manufacturing enterprises (OAMEs), non-directory manufacturing enterprises (NDMEs) and directory manufacturing enterprises (DMEs). The OAMEs are defined as the enterprises which do not employ a hired worker on a fairly regular basis, NDMEs are defined as the manufacturing units employing less than 6 workers including household workers and DMEs are the manufacturing units with at least one hired worker but not registered under the Factories Act (NSSO, 2008). This study is based on secondary data. The NSSO provides extensive data on various aspects of the enterprises in the unorganized manufacturing sector. The survey is conducted once in five years (quinquennially) as a follow up survey of economic census. Till date, six rounds of surveys on this sector have been completed by NSSO. Data for the study has been drawn from these large scale national surveys conducted by the NSSO in the three rounds.

Trends of Growth in Employment

Table 1
Number of Enterprises and Employment in Unorganized Manufacturing Sector in Punjab by type of Enterprise

YEAR	Type of Enterprise	Number of Enterprises			Employment		
		Rural	Urban	Combined	Rural	Urban	Combined
1994-95	OAMEs	111331	71472	182803	165979	139159	305138
	NDMEs	15922	38439	54361	37058	110876	147934
	DMEs	1972	12382	14354	25776	85802	111578
	All enterprises	129225	122292	251518	228813	335838	564651

2000-01	OAMEs	166102	90627	256729	224507	128860	353367
	NDMEs	17849	46211	64060	48531	149935	198466
	DMEs	2674	17132	19806	59626	133254	192880
	All enterprises	186625	153970	340595	332664	412049	744713
2005-06	OAMEs	128006	82281	210287	177827	124602	302429
	NDMEs	15234	43433	58667	36101	146575	182676
	DMEs	2696	10244	12940	19456	82020	101476
	All enterprises	145936	135958	281894	233384	353324	586581

Source: Calculated from unit level records of NSSO survey on Unorganized Manufacturing Sector in India (various rounds).

Table 1 shows the number of enterprises and employment in different types of enterprises for the period 1994-95 to 2005-06. During the year 1994-95, there were about 250000 units in the unorganized manufacturing sector of Punjab which provided employment to 565000 persons. The number of enterprises was more in rural areas whereas employment was more in the urban areas as compared to their rural counterparts. In this period OAMEs accounted for 1.82 lakh units followed by NDMEs and DMEs. Similarly, in case of employment OAMEs have provided employment to 3.05 lakh persons, followed by NDMEs (1.47 lakh) and DMEs (1.11 lakh). In an economy which is mainly agrarian in character, the number of persons employed was more in urban Punjab as more of the NDMEs and DMEs are located in the urban areas. During 2000-01, the number of enterprises increased to 3.40 lakhs providing employment to 7.44 lakh persons.

Both number of enterprises and persons employed was more in OAMEs (i.e. 2.45 lakhs and 3.53 lakhs respectively) followed by NDMEs and DMEs. The rural-urban divide during this period shows that number of enterprises and persons employed were more in OAMEs in case of rural areas whereas the trend was otherwise in case of employment in NDMEs and DMEs i.e. these types of enterprises provided more employment as compared to OAMEs in urban areas. During 2005-06 both enterprises and the number of persons employed showed a substantial decline as compared to their number in 2000-01. Whereas the number of enterprises in absolute terms is more in rural Punjab during all three periods, number of workers employed has been more for urban enterprises. This trend can be more clearly explained with the help of growth rates during these periods.

Table 2

Growth of Number of Enterprises and Employment in Unorganized Manufacturing Sector in Punjab by Type of Enterprise

Year	Type of Enterprise	Number of Enterprises			Employment		
		Rural	Urban	Combined	Rural	Urban	Combined
1994-95	OAMEs	8.33	4.86	7.03	5.03	-1.28	2.45
To	NDMEs	2.31	3.75	3.34	4.50	5.03	4.90
2000-01	DMEs	6.28	6.71	6.65	13.98	7.34	9.12
	All Enterprises	7.63	4.71	6.25	6.24	3.41	4.61
2000-01	OAMEs	-5.08	-1.60	-3.91	-4.66	-0.67	-3.11
To	NDMEs	-3.12	-1.03	-1.74	-5.92	-0.45	-1.66
2005-06	DMEs	0.16	-8.21	-8.16	-22.40	-9.71	-12.84
	All Enterprises	-4.80	-2.05	-3.71	-7.09	-3.08	-4.77

Source: Calculated from unit level records of NSSO survey on Unorganized Manufacturing Sector in India (various rounds)

Table 2 highlights that during the period 1994-95 to 2000-01, the enterprises in the unorganized manufacturing sector have registered an annual growth of 6.25 per cent per annum in comparison to the growth in employment to the tune of 4.61 per cent per annum. It implies that the growth of employment in unorganized manufacturing sector does not correspond to the growth of enterprises. The growth of

enterprises and employment was not uniform for different types of enterprises. The above trend implies that during the period 1995-2001, as compared to growth of enterprises, growth of employment in DMEs and NDMEs is much more whereas the OAMEs registered the highest growth in terms of enterprises but the lowest one in terms of employment. The rural-urban break-up shows that the growth of

enterprises is more in rural areas and that of employment is more in urban areas during 1994-95 to 2000-01. The growth of employment in OAMEs and DMEs has been higher in the rural areas in comparison to urban areas. The rural-urban classification shows that the rural areas have registered a

decline of 4.80 per cent per annum in comparison to the negative growth of 2.05 per cent per annum in urban areas. The growth of employment has been negative in both rural and urban areas, but the fall is steeper in case of rural areas.

Table 3
Gender wise Distribution of Employment in Unorganized Manufacturing Sector of Punjab (Urban)

Industry	1994-95		2000-01		2005-06	
	Male	Female	Male	Female	Male	Female
Agro Foods	94.6	5.84	97.22	2.79	96.68	3.32
Textiles	85.61	14.39	80.99	19.04	86.31	13.69
Wearing Apparel	0	0	75.05	24.95	67.43	32.57
Leather	76.67	23.33	72.29	27.71	94.60	5.40
Wood	92.36	7.64	95.64	4.31	97.47	2.53
Papers/Paper Product	87.78	12.22	93.46	6.54	91.41	8.59
Chemicals	99.23	0.77	99.85	0.15	67.52	32.48
Rubber/Plastic	84.92	15.08	96.63	3.37	97.41	2.59
Non -metals	84.53	15.47	65.38	34.64	93.75	6.25
Metals	97.88	2.12	99.24	0.76	90.75	9.25
Machinery	99.09	0.91	99.35	0.65	99.51	0.49
N.E.C.	94.35	5.65	91.61	8.39	77.52	22.48
All	93.27	6.77	89.18	10.82	84.91	15.09

Source: Calculated from unit level records of NSSO survey on Unorganized Manufacturing Sector in India (various rounds)

Table 3 shows that the share of female workers in employment in urban unorganized manufacturing sector of Punjab has increased from 6.77 per cent in 1994-95 to 10.82 per cent in 2000-01 and then to 15.09 per cent in 2005-06. During 1994-95, their share in employment was relatively higher in the Manufacturing of Leather & Leather Products (23.33 per cent) followed by Non-metallic Products (15.47 per cent), Rubber/Plastic (15.08 per cent), Textiles and Textile Products (14.39 per cent) and Paper and Paper Products (12.22 per cent) as compared to their share in overall employment in the unorganized manufacturing sector of urban Punjab. During 2000-01, their share was relatively higher in Manufacturing of Non-metallic Products (34.64 per cent), Leather (27.71 per cent) followed by Wearing Apparel

(24.95 per cent) and Manufacturing of Textiles & Textile Products (19.04 per cent) as compared to their average share in total employment again during 2005-06 the industries in which women have shown relatively higher share vis-à-vis their average share in total employment in the unorganized manufacturing sector of Punjab were Wearing Apparel (32.57 per cent) followed by Manufacturing of Chemicals & Chemical Products (32.48 per cent) and Manufacturing of Textiles (13.69 per cent) while Textiles, Leather and Non-metallic Products the share of females in employment in these sectors fell down and the relative share also fell below the overall average share. Though the share of female workers has increased substantially in some of the industry groups, but it is much less than the share of male workers.

Table 4
Gender wise Growth Rate of Employment in Unorganized Manufacturing Sector of Punjab (Urban)

Industry	1994-95 To 2000-01		2000-01 To 2005-06	
	Male	Female	Male	Female
Agro Foods	2.92	-12.73	-7.60	-0.57
Textiles	-0.80	5.54	-1.72	-10.48
Wearing Apparel	—	—	-4.24	5.70
Leather	-2.98	0.68	12.37	-25.50

Wood	0.31	-18.41	-2.39	-3.12
Papers/Paper Product	0.34	-11.69	1.65	8.22
Chemicals	-5.64	-37.01	-5.70	114.47
Rubber/Plastic	-0.29	-8.71	-1.50	-29.39
Non -metals	-4.24	16.33	-2.11	-47.00
Metals	0.23	-17.30	-11.86	40.16
Machinery	0.50	-5.76	-5.82	-10.80
N.E.C.	0.01	6.52	-3.98	19.75
All	2.70	11.05	-4.08	3.81

Source: Calculated from unit level records of NSSO survey on Unorganized Manufacturing Sector in India (various rounds)

If we see the growth rate of employment amongst males and females from 1994-95 to 2000-01 we can observe a substantial increase in the growth of female workers (11.05 per cent per annum) as compared to growth of male workers (2.70 per cent per annum). The growth of female workers is the maximum in Manufacturing of Non metals (16.33 per cent per annum) followed by Manufacturing of Textiles (5.54 per cent per annum) while this declined very sharply in Manufacturing of Chemicals, Wood, Metals and Agro-foods. For males during this period, the growth rate of employment was positive in Agro-foods, Metals and Machinery only and it seems that the employment for male workers during this period increased in the unorganized manufacturing sector of Punjab mainly due to increase in employment in the Manufacturing of Agro-foods only as in majority of the male dominant sectors the growth of employment for males has declined. During 2000-01 to 2005-06, growth of employment among males has been negative, whereas employment among females has shown a positive growth of 3.81 per cent per

annum. Except for Manufacturing of Chemicals, Metal & Metal Products, Wearing Apparels and Paper & Paper Products other enterprises have shown negative growth in female employment; while for males the employment increased only in the sectors of Manufacturing of Leather and Paper and Paper Products and rest of the sectors the employment for males declined during the period 2000-01 to 2005-06. If we compare the growth and per cent share of females in rural and urban areas, we find that the growth of female workers has increased sharply in urban areas as compared to rural areas during both the time periods while the share of females in overall employment is still higher in rural areas.

After analyzing the contribution of both male and females in various industry groups in urban areas, it would be important to analyze the share of three types of enterprises i.e OAMEs, NDMEs and DMEs in various industry groups and their growth patterns.

Table 5
Sector-wise Distribution of Workers by Enterprise Type in Unorganized Manufacturing Sector of Punjab (Urban)

Industry	1995-96			2000-01			2005-06		
	OAME	NDME	DME	OAME	NDME	DME	OAME	NDME	DME
Agro Foods	36.68	36.41	26.91	29.05	46.96	23.98	23.19	59.37	17.43
Textiles	28.23	29.70	42.07	32.71	23.88	43.41	19.23	34.61	46.16
Wearing Apparel	—	—	—	42.60	38.96	18.44	56.20	33.45	10.35
Leather	61.81	28.41	9.77	60.12	25.73	14.14	77.75	21.72	0.53
Wood	39.42	49.68	10.90	0.00	67.71	32.29	33.40	51.15	15.45
Papers/Paper Product	49.50	42.66	7.84	24.12	39.03	36.84	29.59	56.01	14.40
Chemicals	46.62	26.95	26.43	21.56	43.81	34.63	77.86	0.00	26.93
Rubber/Plastic	18.43	45.67	35.90	16.24	34.45	49.31	1.73	40.79	55.26
Non -metals	16.22	31.25	52.53	85.13	4.17	10.70	34.02	31.12	34.86
Metals	20.02	54.63	25.36	11.74	43.06	45.20	17.02	55.93	36.25
Machinery	51.10	9.96	38.93	11.89	36.33	51.78	19.83	42.67	29.14
N.E.C.	44.81	37.07	18.12	34.06	35.28	30.65	38.58	39.43	21.99
All	41.44	33.01	25.55	29.66	37.24	33.10	35.52	41.34	23.13

Source: Calculated from unit level records of NSSO survey on Unorganized Manufacturing Sector in India (various rounds)

Table 5 depicts the number of workers by type of enterprise in urban areas and it exhibits that during 1995-96 maximum number of workers were absorbed by OAMEs (41.44 per cent) followed by NDMEs (33.01 per cent) and DMEs (25.55 per cent). If we compare the composition of share of employment in different types of enterprises during this period in rural and urban areas, we find that the share of NDMEs and DMEs in employment is much more in urban areas as compared to rural areas. During 2000-01, share of OAMEs in employment fell to 29.66 per cent and that of NDMEs and DMEs increased to 37.24 per cent and 33.10 per

cent, respectively. These share further changed in the year 2005-06 when out of total employment in urban areas, 35.52 per cent, 41.34 per cent and 23.13 per cent were contributed by OAMEs, NDMEs and DMEs, respectively. Though the share of DMEs in total employment of unorganized manufacturing sector of Punjab has remained constant over the years, share of NDMEs increased and that of OAMEs declined over the years. The growth of employment gives a further elaboration of positive contribution of various types of enterprises in total employment across sectors. This can be observed from Table 6.

Table 6
Sector-wise Growth of Workers by the Type of Enterprise in Unorganized Manufacturing Sector of Punjab (Urban)

Industry	1994-95 to 2000-01			2000-01 to 2005-06		
	OAME	NDME	DME	OAME	NDME	DME
Agro Foods	1.92	10.04	3.88	-11.91	-2.72	10.72
Textiles	5.08	-1.01	3.15	-13.71	4.34	-7.61
Wearing Apparel	0.00	0.00	0.00	4.17	-4.42	10.55
Leather	-8.84	-10.03	-2.22	12.79	4.25	16.22
Wood	0.00	10.56	23.50	0.00	1.48	16.29
Papers/Paper Product	0.11	10.61	37.88	6.22	9.36	10.51
Chemicals	-31.13	-10.18	-13.78	27.81	0.00	0.00
Rubber/Plastic	-5.44	-8.02	1.96	-47.85	0.36	-6.81
Non -metals	51.91	-9.31	-2.23	-28.92	29.64	10.77
Metals	4.28	9.21	22.80	-2.70	-4.90	-5.87
Machinery	-26.69	19.17	2.36	4.37	-2.63	-9.72
N.E.C.	-12.45	-8.71	0.89	1.91	1.64	4.45
All	-2.55	5.03	7.34	1.07	7.56	-10.91

Source: Calculated from unit level records of NSSO survey on Unorganized Manufacturing Sector in India (various rounds)

Table 6 shows that during the period 1994-95 to 2000-01, the growth of employment was the highest for DMEs (7.34 per cent per annum), followed by NDMEs (5.03 per cent per annum) while the employment in the OAMEs showed a negative growth rate. During this period, the sectors which have shown a positive rate of growth were Agro-foods, Textiles, Paper, Non-metals and Metals for OAMEs; Wood, Paper, Metals and Machinery for NDMEs; and Agro-foods, Textiles, Wood, Paper, Rubber/Plastics, Metals and Machinery for DMEs showing that the DMEs were the main drivers of growth of employment in urban areas during this

period. During the period of 2000-01 to 2005-06 OAMEs and NDMEs registered a positive growth while for DMEs the employment fell by 10.91 per cent per annum. Among the OAMEs, the Manufacturing of Chemicals and Leather seem to be major drivers of growth of employment while for NDMEs these are Non-metals and Paper and Paper Products and for DMEs, the main contributors seem to be the sectors producing Leather goods and Wood and Wood Products. The above trends show the dominance of NDMEs in the unorganized manufacturing sector of Punjab.

Table 7
Growth Rates of Workers by Nature of Employment and Sex (1994-95 to 2005-06)
(Urban)

Industry	1994-95 to 2000-01				2000-01 to 2005-06			
	Full Time		Part Time		Full Time		Part Time	
	Male	Female	Male	Female	Male	Female	Male	Female
Agro Foods	49.61	24.94	19.23	21.71	-8.73	-4.96	27.84	7.33
Textiles	5.41	-26.03	-67.57	51.58	-1.48	-10.13	-15.99	-11.44
Wearing Apparels	—	—	—	—	-4.95	2.18	9.41	14.94
Leather	42.12	-11.54	13.88	195.88	6.07	-21.68	35.96	-42.47
Wood	59.2	-35.69	-37.65	38.94	-2.73	-7.61	4.79	10.99
Papers/Paper Product	20.12	-47.3	-30.51	39.92	1.61	14.87	7.19	-0.76
Chemicals	55.73	—	-17.59	—	-13.76	114.47	—	—
Rubber/Plastic	18.2	-36.4	—	—	-0.38	-51.37	—	—
Non -metals	64.84	-25.37	-2.43	81.79	-4.82	-44.95	-1.82	-49.04
Metals	82.68	-69.66	—	—	-11.83	45.49	30.90	20.23
Machinery	68.95	-71.44	-7.61	—	-6.42	-18.73	36.99	5.68
N.E.C.	49.8	-71	-58.73	—	-4.23	38.31	8.43	-2.17
All	43.04	-37.56	-35.65	35.53	-4.80	5.32	15.27	0.38

Source: Calculated from unit level records of NSSO survey on Unorganized Manufacturing Sector in India (various rounds).

During 1994-95 to 2000-01, full time employment amongst male workers increased by 43 per cent per annum whereas it declined by 37.56 per cent for female workers. There was a growth of part time employment among the female workers during the same period. This trend was reversed from 2000 to 2006, i.e. there was a growth of full time female employment by 5.32 per cent per annum and growth of 15.27 per cent

employment in case of male workers. Though full time employment declined for male workers, it increased substantially for female workers. The income generated by this sector as well as the economic conditions of the workers can be analyzed by the growth of emoluments paid to hired workers.

Table 8
Growth Rate of Annual Emoluments per Hired Worker in Unorganized Manufacturing Sector in Punjab by Industry Group at Constant prices (1993-94 prices)

Industry	1994-95 to 2000-01			2000-01 to 2005-06		
	Rural	Urban	Combined	Rural	Urban	Combined
Agro foods	5.97	8.20	8.32	4.24	-10.64	-10.22
Textiles	-15.50	8.28	8.06	23.60	-0.78	-0.72
Wearing Apparels	—	—	—	-39.46	-11.68	-10.39
Leather	14.25	3.64	7.59	-54.12	5.13	4.49
Wood	10.06	5.85	5.79	-22.15	-15.85	-15.66
Paper	12.51	5.47	8.37	-14.31	7.22	7.05
Chemical	4.43	11.45	10.30	-31.28	-1.33	-1.15
Rubber/Plastic	0.82	5.62	5.98	21.57	13.55	13.70
Non-metals	8.18	-24.84	6.29	-6.10	-1.41	-7.88
Metals	6.04	5.01	6.23	-0.93	-6.66	-6.42
Machinery	-1.76	3.21	2.99	-16.46	6.38	6.71
N.E.C.	-1.83	7.98	6.32	-28.90	-1.04	-0.91
All	3.22	5.70	5.76	0.85	-2.08	-3.08

Source: Calculated from unit level records of NSSO survey on Unorganized Manufacturing Sector in India (various rounds)

From 1994-95 to 2000-01, the overall growth in annual emoluments per hired worker is calculated as 5.76 per cent per annum. Maximum growth is registered in the industry of Chemical and Chemical Products, Paper and Paper Products, Agro-foods and the Manufacturing of Textiles. The rural-urban break-up shows a much higher growth of emoluments in urban areas (5.70 per cent per annum) as compared to their rural counterparts (3.22 per cent per annum). In urban areas, the manufacturing of Non-metals registered a negative growth of 24.84 per cent. Higher growth has been registered in the Manufacturing of Chemical and Chemical Products (11.45 per cent per annum), Textiles (8.28 per cent per annum) and Agro food (8.20 per cent per annum). In rural areas, the Manufacturing of Textiles and Machinery registered negative growth of 15.50 per cent and 1.76 per cent per annum, whereas the Manufacturing of Leather, Paper and Wood Products registered high growth in annual emoluments (4.25 per cent, 12.51 per cent and 10.06 per cent per annum respectively).

From 2000-01 to 2005-06, overall growth in annual emoluments has been -3.08 per cent per annum. Most of the industry groups registered negative growth in emoluments. Comparison of rural and urban areas during this period shows that the emoluments for hired workers in the unorganized manufacturing sector of Punjab declined in urban areas while the rural areas registered a positive growth of 0.85 per cent per annum. In urban areas the industry groups which showed huge increase in emolument are Rubber and Plastic (13.55 per cent) and Machinery (6.38 per cent). On the other hand, in the Manufacturing of Wood and Wood Products and Wearing Apparel, there is a substantial fall in emoluments. During the same period, there is a fall in emoluments in the majority of industry groups in rural areas except for the Manufacturing of Textiles, Rubber/Plastic and Agro-foods. For further analysis, calculation of annual emoluments and their growth is done by the type of industry in the following tables.

Table 9
Growth Rate of Annual Emoluments per Hired Worker in Unorganized Manufacturing Sector of Punjab by Type of Enterprise at Constant Prices (1993-94 prices)

YEAR	Type of Enterprise	Rural	Urban	Combined
1994-95 to 2000-01	NDMEs	8.10	8.79	10.79
	DMEs	0.56	6.10	5.26
	All Enterprises	3.22	5.70	5.76
2000-01 to 2005-06	NDMEs	4.39	-4.63	-3.35
	DMEs	0.90	1.79	0.49
	All Enterprises	0.85	-2.08	-3.08

Source: Calculated from unit level records of NSSO survey on Unorganized Manufacturing Sector in India (various rounds).

Table 9 shows that during 1994-95 to 2000-01, the emoluments grew at a positive rate both for the NDMEs and DMEs in rural as well as urban areas. This growth is mainly contributed by NDMEs. The table shows that the growth of emoluments in NDMEs (10.79 per cent per annum) is almost double of that of DMEs (5.26 per cent per annum). However, during 2000-01 to 2005-06 the fall in average emoluments per worker is mainly contributed by fall in the same in urban NDMEs where the average emoluments declined by 4.63 per cent per annum while in rest of the categories, the emoluments have increased at a positive rate. Thus, we have observed that the performance of unorganized manufacturing sector in Punjab has varied according to type of enterprise,

the location of the enterprise and the sector of activity. Therefore, it is important here to just have a broader look in to performance of these enterprises in creation of employment which will give an insight in to the trends of employment generation by the broader categories of Organic and Inorganic industry i.e. the traditional and modern industry. Organic industries are the industries relying mainly on traditional or organic raw materials, and the modern or inorganic industries are the ones using inputs of chemicals, metals, and manufactured intermediate goods. Table 11 shows the distribution of enterprises and workers according to these broader categories.

Table 10
Distribution of Enterprise and Employment in Unorganised Manufacturing Sector of Punjab by broad category of Organic and Inorganic Industry

Year	Number of Enterprises			Number of Employees		
	Organic	Inorganic	All*	Organic	Inorganic	All*
Rural						
1994-95	62974 (84.83)	11260 (15.17)	74234	107896 (68.52)	49579 (31.48)	157475
2000-01	166829 (93.09)	12377 (6.91)	179206	242911 (75.93)	76998 (24.07)	319909
2005-06	124032 (90.80)	12569 (9.20)	136601	182720 (83.54)	35992 (16.46)	218711
Urban						
1994-95	45038 (67.25)	21930 (32.75)	66968	126028 (61.23)	79792 (38.77)	205820
2000-01	97207 (78.82)	26115 (21.18)	123322	230442 (69.63)	100528 (30.37)	330970
2005-06	87025 (81.62)	19598 (18.38)	106623	207656 (75.27)	68216 (24.73)	275871
Combined						
1994-95	108012 (76.49)	33190 (23.51)	141202	233924 (64.39)	129371 (35.61)	363295
2000-01	264036 (87.28)	38492 (12.72)	302528	473353 (72.73)	177526 (27.27)	650879
2005-06	211057 (86.77)	32167 (13.23)	243224	390376 (78.93)	104208 (21.07)	494582

*excluding the enterprises not elsewhere classified (N.E.C.)

Source: Calculated from unit level records of NSSO survey on Unorganized Manufacturing Sector in India (various rounds).

Table 10 shows that during the period 1994-95 and 2000-01, the number of enterprises increased from 1.41 lakh to 3.03 lakh but a greater increase was witnessed in organic (traditional) industry as compared to the inorganic (modern) industry which resulted in to an increase in share of the former from 76.49 per cent in 1994-95 to 87.28 per cent in 2000-01. But by the year 2005-06, the number of enterprises in the unorganized manufacturing sector of Punjab declined but since the fall in number of enterprises was greater in case of organic industries vis-à-vis the inorganic ones, the share of the former declined to 86.77 per cent while that of the latter increased to 13.23 per cent, where we can easily observe that this fall is due to fall in share of rural enterprise (which declined from 93.09 per cent in 2000-01 to 90.80 per cent in 2005-06). The rural-urban break-up shows that the share of organic industries in total enterprises as well as employment has always been higher than the inorganic industries but we can find a greater share of the organic industries in rural areas as compared to the urban ones.

However, comparison of the share of these two broader categories in enterprises and employment shows that although the share of the organic industries is higher in total enterprises, yet their share in total employment is lower than that of the inorganic industries but over a period of time this share has increased from 64.39 per cent in 1994-95 to 78.93 per cent in 2005-06. In 2005-06, the organic industry has about 87 per cent share in number of enterprises as compared to about 79 per cent in total employment and this gap is higher in urban areas as compared to the rural ones (the gap in share in enterprises and employment is about 9 percentage points in urban areas as compared to 7 percentage points in rural areas). This would have been due to the reason that the enterprises in the organic industries would have been mainly OAMEs while the modern or inorganic industry would have been dominated by NDMEs and DMEs. Employment is a function of certain variables and correlation of employment with some of these important variables is calculated as under.

Table 11
Number of Workers per Enterprise by Broad Group of Industry and Enterprise Type

Year	Organic Industry				Inorganic Industry			
	OAME	NDME	DME	All Types	OAME	NDME	DME	All Types
Rural								
1994-95	1.53	2.97	2.38	1.71	2.52	2.84	30.60	4.40
2000-01	1.34	2.65	3.06	1.54	1.68	3.02	26.74	6.22
2005-06	1.34	2.45	7.97	1.47	1.68	3.29	19.87	2.86
Urban								
1994-95	1.81	3.15	7.57	2.80	2.52	3.40	8.28	3.64
2000-01	1.34	3.17	7.92	2.37	1.93	3.35	7.52	3.85
2005-06	1.47	3.19	4.42	2.56	1.93	3.38	7.25	3.48

Source: Calculated from unit level records of NSSO survey on Unorganized Manufacturing Sector in India (various rounds).

Table 11 shows that the per enterprise number of workers employed by the organic industry is 1.47 workers in rural areas and 2.56 in urban areas while in case of the inorganic industry the same is 2.86 and 3.48, respectively. Another interesting point that comes clearly out of the Table is that in each type of enterprise, both in rural and urban areas, per enterprise employment generated is higher in case of the inorganic industry as compared to the organic industry. This has an important policy implication that if we want to increase the employment in the manufacturing sector of

Punjab in quantitative as well as qualitative terms greater emphasis should have been on promotion of the enterprises in the inorganic sector. Finally, in order to find the determinants of employment in the unorganized manufacturing sector of Punjab, an attempt has been made to correlate it with productivity of the enterprises as well as the workers, the fixed asset employed by each enterprise and the emoluments of the workers. This is shown in Table 12.

Table 12
Correlation of Employment with Certain Variables

Variables	Rural				Urban			
	OAME	NDME	DME	All	OAME	NDME	DME	All
1994-95								
GVA/Enterprise	0.889**	0.739**	0.948**	0.750**	0.925**	0.907**	0.906**	0.916**
GVA/Worker	0.894**	0.768**	0.936**	0.808**	0.921**	0.880**	0.895**	0.908**
Fixed Assets/worker	0.881**	0.705**	0.873**	0.670**	0.950**	0.887**	0.889**	0.918**
Emoluments/Worker	0.741**	0.922**	0.823**		0.911**	0.866**	0.899**	
2000-01								
GVA/Enterprise	0.712**	0.766**	0.903**	-0.325	-0.363	-0.260	-0.001	0.253
GVA/Worker	0.708**	0.781**	0.880**	-0.471	0.022	-0.216	-0.217	-0.109
Fixed Assets/worker	0.667*	0.727**	0.915**	-0.634*	0.45	-0.267	-0.271	0.409
Emoluments/Worker	0.752**	0.367	-0.642*		-0.176	0.258	-0.186	
2005-06								
GVA/Enterprise	0.630*	0.670*	0.574*	-0.472	-0.259	0.746**	-0.131	-0.562
GVA/Worker	0.657*	0.719**	0.378	-0.382	-0.210	0.766**	-0.203	-0.354
Fixed Assets/worker	0.721*	0.621*	0.297	-0.109	0.018	0.702**	0.441	-0.269
Emoluments/Worker	0.611*	0.644*	0.029		0.02	-0.101	-0.267	

* Correlation is significant at 0.05 level (2 tailed test)

** Correlation is significant at 0.01 level (2- tailed)

Source: Calculated from unit level records of NSSO survey on Unorganized Manufacturing Sector in India (various rounds).

Table 12 depicts correlation of employment with certain variables like GVA per enterprise, GVA per worker, fixed assets per worker and emoluments per worker in rural and urban enterprises during three rounds. Since no hired workers are present in OAMEs, therefore the variable of emoluments is not taken in case of OAMEs. We can easily observe that employment in any enterprise is positively associated with productivity of the enterprises, the labour productivity as well as fixed capital per worker and these relationships had remained statistically significant for all types of enterprises all through the years except for urban OAMEs and DMEs in 2005-06. Interestingly, the employment in rural areas is found to be positively associated with wages in 2005-06 which shows that the enterprises which pay higher wages also employ more number of workers. In short we can say that more productive and the enterprises with higher amounts of fixed capital employ more of the workers.

4. Conclusions and Policy Recommendations

To sum up, it is concluded that for the unorganized manufacturing sector of Punjab, the period of 1994-95 to 2000-01 registered an absolute increase in number of enterprises and employment whereas the period of 2000-01 to 2005-06 registered an absolute decline in both. Among all types of enterprises, the DMEs have registered the sharpest decline both in terms of enterprises and employment. The sector-wise distribution shows that in unorganized manufacturing sector of Punjab, the dominant sectors are the Textiles, Agro-Foods and Wearing Apparels. The two sectors of Agro-Foods and Wearing Apparels are the main sectors offering maximum prospects of female employment. The distribution of enterprises by their type shows the dominance of OAMEs. But, from 2000-01 to 2005-06, there is a shift from the dominance of OAMEs in favour of DMEs in rural areas. It has been found that, the OAMEs had always been a major source of overall employment in the sector under consideration and their performance in terms of growth of employment had remained positive even in the slowdown period. The distribution of workers according to the status of employment, shows that a majority of the workers in the unorganized manufacturing sector of Punjab are employed as working owners, followed by hired workers and unpaid family support. But the gender division of the status of employment in this sector reveals that the females have relatively a greater share in unpaid workers and a lower one in the hired workers. Over the period of time, the share of female workers as working owners has gone up. While the employment opportunities declined for all types of workers in case of male workers, it increased for all types of workers in case of female workers. Though unorganized manufacturing sector is livelihood of lakhs of people in Punjab, still, it has not come up as a permanent and consistent source of income for female workers. During the period 2000-01 to 2005-06 in

urban areas, the employment in full time work in the unorganized manufacturing sector declined for both the sexes and this decline was sharper for the females as compared to males. While studying the emoluments in this sector, it is observed that emoluments in urban areas are higher than in the rural areas for most of the industry groups. The share of organic industries in total enterprises as well as employment has always been higher than in the inorganic industries. The rural-urban break-up shows greater share of the organic industries in rural areas as compared to the urban ones. In the unorganized manufacturing sector of Punjab, we have observed a decline in the number of enterprises as well as employment during the period of 2000-01 to 2005-06. But within this sector we can easily identify the sub-sectors which have been able to generate additional employment opportunities even during this period of general decline. We have found that in each type of enterprise, both in rural and urban areas, per enterprise employment generated is higher in case of the inorganic industry as compared to the organic industry. This has an important policy implication that if we want to increase the employment in the manufacturing sector of Punjab in quantitative as well as qualitative terms greater emphasis should have been on promotion of the enterprises in the inorganic sector. At the same time we have also observed that the traditional sector employs an increasing number of female workers. Therefore, due care should also be taken to remove the problems of the traditional industries, particularly the rural units as these units employ more of the female workers as compared to the urban ones.

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