

Income and Income Differentials among Workers in Small-Scale Manufacturing Enterprises in Calcutta

Some Survey Results

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This paper presents some results of a sample survey of small-scale manufacturing enterprises operating within the jurisdiction of the Calcutta Municipal Corporation area. The main purpose of this survey was to collect information on wage-earnings and other benefits received by different categories of workers engaged in small-scale manufacturing enterprises producing diversified products. A sample of 316 enterprises and about 2,162 hired workers engaged in these enterprises was taken. The sample was drawn in the form of interpenetrating sub-samples which facilitated calculation of standard errors, by using a properly designed sampling scheme from a list of units registered with the State Directorate of Small-Scale Industries. The data collected in this survey, permits estimation of not only the distribution and average earnings of hired workers by industry groups but also makes it possible to analyse variation in income across occupation categories and to examine influence on income of such factors like the level of education, skill, tenure of employment, size of the unit and so on. The information brings out very clearly the dismal condition of the workers in this sector.

I Introduction

It is well known that there is a serious dearth of data on levels of income and its distribution in India. The stray and scattered evidence which is available is not enough to provide a comprehensive picture about income or earnings of different sections of the population over some specified period of time. The obvious and main reason for such a situation is the difficulty in collecting reliable information on personal income.

The situation is somewhat better for workers engaged in the industrial sector. The Annual Survey of Industries (ASI), for example, publishes regularly information on wages of workers employed in the registered factories. The labour Bureau also brings out some information on wage earnings of workers in the registered factory sector. But for the small-scale industrial units, which do not come under the purview of the Factories Act, 1948, virtually no information is available on a regular basis. Specific surveys like those conducted by the NSSO or the information obtained through Economic Census, etc, do throw up considerable volume of data about the small-scale sector but still lot more is needed in order to have reasonable idea about income/earnings and its differential, as well as about the changes over time, of workers engaged in this sector.

On the other hand, this is a sector which constitutes an important segment of our economy. Considering the growth and employment potential, in particular, lot of emphasis has been given in our planning effort to this sector while evolving a strategy for economic development in our country. This is amply demonstrated by the targets which were set in the Seventh Five-Year Plan for this sector. It is, therefore, desirable that a well-designed system be developed for the regular and systematic collection of at least

some vital information regarding the functioning of the small-scale sector. Until this is done, we have to depend on the results of individual studies for an understanding of this sector.

The purpose of the present paper is to make available some information on the wage-earnings of workers employed in small-scale enterprises operating within the jurisdiction of the Calcutta Municipal Corporation. The main purpose of this sample survey was to collect information on wage-earnings and also about certain other benefits received by different categories of workers engaged in the small-scale enterprises producing a wide range of products. We present here only some selected results and the details are being released in a report on the survey separately.

II The Survey

The survey was conducted during 1983-84 among small-scale manufacturing enterprises located in the Calcutta Municipal Corporation area. An enterprise or unit was defined to be an undertaking engaged in the production of some goods and services by using household and/or hired labour. It was defined to be a small-scale unit if the invested capital in plant and machinery of the unit was less than Rs 2 million (Rs 2.5 million in the case of ancillary units) on the date of registration with the State Directorate of Small-Scale Industries. (The upper limit on investment (in plant and machinery) has subsequently been raised from Rs 2 million to Rs 3.5 million and in the case of ancillary units from Rs 2.5 million to Rs 4.5 million.) This definition of 'small-scale' is different from that in the Factories Act, 1948, which is based on the size of employment rather than that of capital and hence an enterprise registered as a small-scale unit, according to

the definition adopted here, may also come under the purview of the Factories Act. It may also be mentioned that registration with the state directorate is voluntary and despite various benefits and incentives provided to the registered units, the possibility of some units not getting registered cannot be ruled out.

Considering the fact that the nature and intensity of work as well as the earnings of the people engaged in these small-scale enterprises may differ as between different types of workers, a number of distinct categories were identified and information on each of the groups was collected separately. The different categories considered in this survey were (i) self-employed, i.e. the owner(s) working as an employer or own-account worker in the enterprise, (ii) household labour defined to include all persons belonging to the household of any proprietor and working in or for the enterprise without regular salary/wage, and (iii) hired labour referring to those outsiders who are hired in lieu of some regular specified payment of salary or wages in cash and/or in kind according to some written or unwritten contract with the owner(s) of the enterprise. Since the focus of the present study was on the wage-earnings of the hired workers, this group was further sub-divided according to the tenure of their employment.

The main problems one faces in conducting a sample survey concerning the small-scale units is the non-existence of a readily available reliable sampling frame. The best that could be done within the constraints was to use, as mentioned earlier, the list of small-scale units registered with the State Directorate of Small-Scale Industries. A probability sample of 316 enterprises was first drawn in the form of 8 independent and interpenetrating sub-samples. These enterprises had a total of 2,988 hired workers. However, for collecting detailed information

a further selection of 2,162 hired workers was made, following a particular scheme, from among the workers in the selected enterprises. The interpenetrating sub-samples provided valid estimates of the parameters and facilitated calculation of standard error. The details of the sampling scheme and the method of estimation are given in the appendix.

For most of the items on terms and conditions of employment and wage-earnings, information was collected for a moving reference period of 30 days preceding the date of enquiry. In some cases like 'bonus', however, a reference period of 365 days preceding the date of enquiry was used. For questions on provision of 'other benefits' no specific reference period was used. These questions were intended to find out the normal practice in these enterprises.

III

The Results

EMPLOYMENT BY INDUSTRY

Although the sample was drawn in the form of eight independent sub-samples, the results have been presented here only for the combined sample. In only a few cases, the half-sample estimates are given for the 'all-industries'. These estimates have been ob-

tained by combining sub-samples 1, 3, 5, 7 and 2, 4, 6, 8 for half-samples 1 and 2 respectively. It should also be noted that in many of the tables, the standard errors for the 'all-industries' combined sample estimates have been presented. These standard errors were calculated using all the sub-sample estimates by the formula given in the appendix.

Before we discuss the results on the wage-earnings, it would be worthwhile to look at the estimates of employment and the distribution of enterprises by type of products. For this purpose, we first present the distributions of estimated and sample enterprises along with the standard errors of estimates in Table 1.

The first thing which may be noted from this table is that the total number of small-scale enterprises in the Calcutta corporation area was estimated to be only 7,900 with a standard error of 452—much less than that listed in the records of the state directorate. It has already been mentioned that our sample was drawn in the form of eight sub-samples. Actually we wanted to select about 300 enterprises and so we started the work with the first four sub-samples. The other four sub-samples were kept in reserve to be used only if the required size is not achieved. It turned out, however that there were large

number of casualties and all the extra four sub-samples had to be used up to reach the target. More specifically, the rate of casualty was of the order of 50 per cent and our actual sample size came to 316 for all the eight sub-samples taken together. The phenomenon of casualty is very common with the small-scale industries and the reasons for this are not far to seek.

So far as the distribution of the enterprises by type of their products is concerned, it may be seen from the table that the most important industry is 'metal products' (18.36 per cent). This is followed successively by 'paper and paper products' (12.98 per cent), 'chemical and chemical products' (11.71 per cent) and 'machinery and tools' (10.76 per cent). None of the other industries account for even one-tenth of the enterprises. It is thus clear that there is no particular concentration of the enterprises in the production of a specific type of product. In other words, there is no single industry which can be considered to be overwhelmingly important.

We may now consider the employment of various categories of workers. In Table 2 we have presented the distributions of the three categories of workers, mentioned earlier, by type of their products. These figures show,

TABLE I: DISTRIBUTION OF ENTERPRISES BY TYPE OF PRODUCT AND HALF-SAMPLE

Sl No	Type of Product	Number of Sample Enterprises			Estimated Number of Enterprises			Percentage of Estimated Number of Enterprises		
		Half-Sample 1	Half-Sample 2	Combined	Half-Sample 1	Half-Sample 2	Combined	Half-Sample 1	Half-Sample 2	Combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Food and products (including beverages)	4	7	11	200	350	275 (92.1)	2.5	4.4	3.5
2	Textile and textile products	16	14	30	800	700	750 (145.2)	10.2	8.9	9.5
3	Wood and wood products	6	8	14	300	400	350 (62.7)	3.8	5.1	4.4
4	Paper and paper products (including printing and allied industries)	22	19	41	1100	950	1025 (95.9)	13.8	12.0	13.0
5	Rubber, plastic, petroleum and coal products	17	14	31	850	700	775 (88.1)	10.7	8.9	9.8
6	Chemical and chemical products	17	20	37	850	1000	925 (64.5)	10.7	12.7	11.7
7	Metal products	27	31	58	1350	1550	1450 (287.2)	17.4	19.5	18.4
8	Machinery and tools	13	21	34	650	1050	850 (98.2)	8.2	13.3	10.8
9	Electrical machinery	17	10	27	850	500	675 (155.6)	10.7	6.3	8.5
10	Other miscellaneous products	19	14	33	950	700	825 (127.8)	12.0	8.9	10.4
	All	158	158	316	7900	7900	7900 (452.0)	100.0	100.0	100.0

Note: Figures in parenthesis are the standard errors.

quite expectedly, that the overwhelming majority (86.0 per cent) of those employed in the small-scale units is hired labour. Only 13.3 per cent of the total employment were self-employed and the proportion of household labour was negligible. The close agreement between the half-sample estimates of these percentages is worth noting in this context. In absolute terms, the estimated total number of persons engaged was about 87 thousand of which 74,700 were hired workers. A survey (3, 5) conducted around the same time about the unregistered (non-factory) small-scale units using iron-and-steel as an input and located in the Calcutta Metropolitan Development area showed that hired workers accounted for about 70 per cent of those engaged in these units. Despite the differences in the definition and coverage of the present survey, the estimates seem to be quite comparable with those obtained in the other surveys.

Looking at the industry-wise estimates, it may be noticed that considerable variation in the estimates of absolute number of hired workers exist. The industries employing relatively large number of hired workers were 'paper, printing and allied processing' (Group 4), 'chemical and chemical products' (Group 6), 'metal products' (Group 7), and 'other manufacture' (Group 10). On the other hand, 'food and food products' (Group 1) had the lowest number of hired workers. The percentage of hired workers was, however, more or less the same (85 per cent) in most of the industries.

We next pass on to the size distribution of the enterprises. Table 3 gives the estimated size distribution of the enterprises by the size class of total employment. For some industries like 'paper, printing and allied processing' (Group 4) there is considerable variability in the size distribution; but for 'food and food products' (Group 1) it is relatively much more concentrated. For the 'all industries', the distribution is found to be quite dispersed with about 64.9 per cent of the units having employment of less than or equal to 9 and 12.6 per cent engaging 15 or more persons. About one-third (32.6 per cent) of all the enterprises had employment lying between 4-6 which is also the modal class. It may also be noticed that 9.8 per cent of the enterprises employ 20 or more workers and hence, independent of whether power is used or not, at least these enterprises are required to be registered under the Factories Act. Hence because of treating the relatively large units as 'small-scale', it is only to be expected that the average size of the enterprises would be greater than what one would normally expect for the small-scale sector. The exact values of average sizes may be seen from the last column of Table 3. The over-all average number of persons employed in an enterprise is found to be 11, but for 'paper, printing and allied processing' the figure is as high as 15.1. Even the smallest average of 8.0 for 'metal products' is considerably higher than the average of little over 5 persons found in the other survey referred to

earlier. The discrepancy however, can be, to a large extent, explained by the difference in the definition of small scale adopted in the two surveys.

WAGE-EARNINGS AND WAGE DIFFERENTIALS

Let us now look at the wage-earnings of the hired workers employed in this sector. It should be pointed out that the wages received by the workers in lieu of the services rendered do not, strictly speaking, represent their income since other sources were not considered. Our concern in this study, however, was only with their earnings from this sector. Earning for this purpose was defined to include the basic pay, if any, and all types of allowances as well as overtime payments actually received or receivable in cash and/or in kind during the last month. By definition, incentive or production bonus which is generally paid regularly along with the wages was taken into account, but the bonus received half-yearly or yearly or employer's contribution to provident fund, pension, gratuity, etc, as well as social security charges, if any, were excluded.

The most important piece of information in Table 4 relates to the average monthly earnings. For the 'all industries' it is found to be Rs 423.22. It would be interesting to compare our results with those of other similar studies. The study made by Nagraj (1, 2) based on the all-India RBI survey on small-scale industrial units conducted in 1976-77 indicated an annual average earning per worker as Rs 2,119 with a range from Rs 1,096 to Rs 8,024. The ISI study referred to earlier gave a monthly average earning of hired workers as Rs 339.01. The scope and coverage of these studies were not quite the same as those of ours. But still these figures provide some order of magnitude which can be used for the purpose of comparison. While comparing with those estimates, however, we may note that the RBI survey was conducted quite sometime back and so the difference between the present and the RBI survey estimates may be explained largely by the time difference. As for the estimate from the earlier ISI survey, we may point out that it covered only the unregistered small-scale units while the present survey included quite a significant proportion of relatively large units and, as will be seen later, the size of an unit seems to have a positive impact on the earnings of the workers. On the whole, the estimates obtained here seem quite reasonable and consistent with common knowledge and experience.

We would however, like to draw attention to the striking inter-industry differences in the average monthly earnings of hired workers. The average is as high as Rs 605.8 for 'paper, printing and allied processing' (Group 4) and as low as Rs 286.0, and Rs 298.8 for 'metal products' (Group 7) and 'electrical machinery' (Group 9) respectively. Noticeable differences are also observed in the industry-wise distributions. While all

the distributions are positively skewed the extent of dispersion and the degree of inequality as reflected by the Lorenz ratio vary considerably. The Lorenz ratio is highest for 'paper and paper products' (Group 4) and 'miscellaneous' (Group 10) and lowest for 'food and food processing' (Group 1) followed by 'electrical machinery' (Group 9). For 'food and food processing' (Group 1), 'rubber, plastic, etc', (Group 5), 'electrical machinery' (Group 9) the distributions are spread over relatively low range. No worker in industry groups 1 or 5 had an income of more than Rs 700 per month; on the other hand, for 'wood and wood products' (Group 3), 'paper and paper products' (Group 4), 'chemical and chemical products' (Group 6) and 'miscellaneous' (Group 10), there are workers, not quite negligible in number, whose monthly earnings were as high as Rs 1,500 or more.

As mentioned earlier, the present survey focused attention also on the terms and conditions of employment and individual characteristics like level of education, skill, etc, of the hired workers. The idea was to ultimately relate and explain the variation in the wage-earnings in terms of these factors. To illustrate the variations, we have presented in Table 5, income distributions by tenure of employment of the workers. For this purpose, the workers were classified into four different groups. A worker was treated as 'permanent' if he is permanent for all practical purpose, even though the legal position is not so clear. In the small-scale sector one would rarely find any document declaring a worker to be permanent. So one would have to go in this case by the practical situation rather than by the legal position. A 'temporary' worker, on the other hand, is one who is appointed for a more or less definite period not less than one month. The term 'badli' refers to a kind of appointment which is strictly in place of some other worker for the period of his absence. Casual workers work intermittently or irregularly and even though they may be employed for a fairly long period, there would be breaks in service and the term of appointment, if any, is less than one month. The apprentices are helpers and others who are supposed to be undergoing on-the-job-training while working in the enterprises. They are generally paid much less even though they often put in considerable labour.

It has been mentioned earlier that the total number of hired workers employed in the sample enterprises was 2,988. But for the purposes of collecting detailed information on wages and other conditions of employment a further selection of hired workers was made in accordance with the procedure described in the sampling design. To repeat, information about all the hired workers was collected if the total number in a unit was less than or equal to 12. But for units employing more than 12 workers a selection was made. The total number of hired workers thus covered came to 2,162.

TABLE 2: DISTRIBUTION OF WORKERS BY TYPE OF PRODUCT AND CATEGORY OF WORKERS

Type of Product	Number of Workers in the Sample Enterprises				Estimated Number of Workers				Percentage of Distribution of Workers by Categories			
	Self-Employed	Household Labour	Hired Labour	Total	Self-Employed	Household Labour	Hired Labour	Total	Self-Employed Labour	Household	Hired Labour	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	16	1	87	104	400	25	2175	2600	15.3	1.0	83.7	100.0
2	45	—	252	297	1125	—	6300	7425	15.2	—	84.8	100.0
3	28	1	167	196	700	25	4175	4900	14.3	0.5	85.2	100.0
4	55	3	563	621	1275	75	14075	15525	8.9	0.4	90.7	100.0
5	41	5	278	324	1025	125	6950	8100	12.7	1.5	85.8	100.0
6	63	—	363	426	1575	—	9075	10650	14.8	—	85.2	100.0
7	82	1	382	465	2050	25	9550	11625	17.6	0.2	82.2	100.0
8	44	6	286	336	1100	150	7150	8400	13.1	1.8	85.1	100.0
9	38	4	191	233	950	100	4775	5825	16.3	1.7	82.0	100.0
10	52	4	419	475	1300	100	10475	11875	11.0	0.8	88.2	100.0
Combined	464	25	2988	3477	11600	625	74700	86925	13.3	0.7	86.0	100.0
All H S 1	215	14	1467	1696	10750	700	73350	84800	12.8	0.8	86.4	100.0
H S 2	249	11	1521	1781	12450	550	76050	89050	13.9	0.6	85.5	100.0

TABLE 3: DISTRIBUTION OF ENTERPRISES BY TOTAL EMPLOYMENT AND TYPE OF PRODUCT

Type of Product	Percentage Distribution of Enterprises by Size of Total Employment							Average No of Workers Per Enterprise	No of Enterprises	
	1 - 3	4 - 6	7 - 9	10 - 14	15 - 19	20 and above	All		Sample	Estimated
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	—	36.4	18.2	36.4	—	9.0	100.0	11	275	9.5
2	20.0	23.3	16.7	26.6	6.7	6.7	100.0	30	750	9.9
3	—	28.6	14.3	28.6	—	28.5	100.0	14	350	14.0
4	12.2	34.1	19.5	17.1	2.4	14.7	100.0	41	1025	15.1
5	—	51.6	22.6	19.4	—	6.4	100.0	31	775	10.5
6	10.8	32.4	10.8	32.4	2.8	10.8	100.0	37	925	11.5
7	17.2	36.2	19.0	19.0	3.4	5.2	100.0	58	1450	8.0
8	20.6	17.6	26.5	20.6	2.9	11.8	100.0	34	850	9.9
9	3.7	48.2	18.5	22.2	3.7	3.7	100.0	27	675	8.6
10	21.1	18.2	27.3	18.2	3.0	12.2	100.0	33	825	14.3
Combined	12.7	32.6	19.6	22.5	2.8	9.8	100.0	316	7900	11.0
All H S 1	10.8	36.7	21.5	20.9	0.6	9.5	100.0	158	7900	
H S 2	14.5	28.5	17.7	24.0	5.1	10.2	100.0	158	7900	
No of Combined sample enterprises	40	103	62	71	9	31	316			
HS 1	17	58	34	33	1	15	158			
HS 2	23	45	28	38	8	16	158			
Estimated No of Enterprises	1000 (189)	2575 (286)	1550 (250)	1775 (294)	225 (110)	775 (100)	7900 (452)			
Enterprises HS 1	850	2900	1700	1650	50	750	7900			
HS 2	1150	2250	1400	1900	400	800	7900			

Note: Figures in brackets are the standard errors.

TABLE 4: DISTRIBUTION OF HIRED WORKERS BY TYPE OF PRODUCT AND AVERAGE MONTHLY EARNINGS

Type of Product	Percentage Distribution of Hired Workers by Average Monthly Earnings (Rs)									Average Monthly Earnings (Rs)	Lorenz Ratio	Number of Hired Workers	
	Up to 100	101-250	251-350	351-500	501-700	701-1000	1001-1500	Above 1500	All			Sample	Estimated
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	—	20.7	48.3	28.7	2.3	—	—	—	100.0	322.2	0.152	75	2175
2	2.4	25.9	43.7	16.5	4.4	4.5	2.6	—	100.0	350.2	0.266	203	6300
3	—	32.8	29.2	26.9	3.6	5.5	0.6	1.4	100.0	369.5	0.292	117	4175
4	1.4	13.8	16.2	19.2	19.0	14.1	13.1	3.2	100.0	605.8	0.346	298	14075
5	2.2	30.9	19.7	17.0	30.2	—	—	—	100.0	369.0	0.264	200	6950
6	1.4	21.7	16.2	34.5	14.8	10.0	0.8	0.6	100.0	434.3	0.273	256	9075
7	4.4	39.9	33.7	16.9	3.6	1.0	0.5	—	100.0	286.0	0.236	358	9550
8	4.7	24.7	29.0	33.3	4.8	3.1	0.4	—	100.0	338.1	0.231	241	7150
9	0.5	41.3	27.8	27.3	2.6	0.5	—	—	100.0	298.8	0.203	177	4775
10	1.0	15.3	21.2	27.0	15.1	10.5	7.7	2.3	100.0	530.5	0.346	237	10475
All	2.0	25.0	25.5	23.9	11.9	6.7	4.0	1.1	100.0	423.2	0.320	2162	74700

The first thing which may be noted from this table is the wide differences in the average monthly earnings of workers having different tenures of employment. Quite expectedly the average monthly earnings of permanent workers was highest (Rs 451.3). It was much higher than those of all the other groups. The ordering of the various groups of workers in terms of their average earnings seems to be quite in conformity with common expectation. Like the average, the distributions also show wide differences. While for permanent workers not even one-fourth receive Rs 250 per month or less, for temporary or badli/casual workers about half of the workers are paid as low as Rs 250 or even less per month. On the higher side, little over 25 per cent of the permanent workers get above Rs 500 per month. The corresponding figures for the other groups were extremely low. So far as the apprentices are concerned, the distribution, though based on a very small sample size, seems to be quite reasonable.

Another important factor which one might expect to be affecting the earnings of the hired workers is their level of skill. In order to examine this an attempt was made to find out the level of skill of the workers. A worker was defined to be skilled if any other person without any training or experience would not be able to do the job. All other persons were defined as unskilled. Actually, the group defined as unskilled did really include workers with varying levels of expertise. But considering the difficulty of identifying the level of skill of a person and the fact that for classifying a worker as skilled or unskilled, one usually has to depend on the answer given by the respondent, all those who were not described as skilled were merged into one group called unskilled. The estimated numbers of the two categories of workers and their average monthly earnings

are presented in Table 6. These figures show that the estimated number of skilled workers was about one and a half times the number of unskilled. Also, the average earnings of the skilled was about 10 per cent more than the unskilled. However, since the difference in the average monthly earnings between the two groups was only about Rs 40, one may hesitate to conclude that there is a significant skill-effect. The quite large difference in the half-sample estimates of average monthly earnings of skilled workers may also be noted in this context.

In Table 7 we examine the variation in the average monthly earnings in terms of the differences in the size of the enterprises. The first column gives the size classes of employment where size has been measured by the number of hired workers in an enterprise. It should be noted that whereas the figures in columns (4) and (5) give the number of hired workers in the sampled enterprises and the corresponding estimates, the averages in column (6) are based on the detailed information collected from the selected workers in the sampled enterprises.

It is striking to note the way average earnings increase steadily as the size of the enter-

prises become larger and larger. From a figure of Rs 261.8 for the lowest size class the average rises to as high a level as Rs 589.2. There may be various reasons for this. It may be a reflection of greater bargaining strength of the workers, higher productivity of the workers, greater availability of capital and so on. As noted earlier, the relatively large units in our samples are likely to be registered under the Factories Act and the workers in those units are protected by various acts. We may also mention that a similar analysis was tried out with invested capital of the units as a measure of size. But the picture was not as clear as the one above. The problems of using invested capital as a measure of size are quite well known and hence the reasons for such a result are quite understandable.

OTHER BENEFITS

So far we dealt with only the earnings of the hired workers. We now want to highlight some results to indicate the extent of certain other benefits enjoyed by these workers.

It is well known that workers in the registered factories, representing what is

TABLE 7: AVERAGE MONTHLY EARNINGS (Rs) OF HIRED WORKERS BY SIZE CLASS OF HIRED WORKERS IN THE ENTERPRISES

Size Class of Hired Workers	Number of Enterprises		Number of Hired Workers in the		Average Monthly Earnings (Rs)
	Sample	Estimated	Sample Enterprises	Estimated Number of Enterprises	
(1)	(2)	(3)	(4)	(5)	(6)
1 - 3	89	2225	223	5575	261.8
4 - 6	76	1900	354	8850	289.7
7 - 9	60	1500	474	11850	316.9
10 - 14	58	1450	667	16675	337.3
15 - 19	6	150	107	2675	383.9
20 and above	27	675	1163	29075	589.2
All	316	7900	2988	74700	423.2

TABLE 5: DISTRIBUTION OF HIRED WORKERS BY AVERAGE MONTHLY EARNINGS AND TENURE OF EMPLOYMENT

Tenure of Employment	Percentage Distribution of Hired Workers by Average Monthly Earnings (Rs)										Average Monthly Earnings (Rs)	Number of Hired Workers	
	Up to 100	101-250	251-350	351-500	501-700	701-1000	1001-1500	Above 1500	All	Sample		Estimated	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
Permanent	0.9	22.2	24.2	25.4	13.8	7.4	4.8	1.3	100.0	451.3	1722	63056	
Temporary	5.1	41.3	33.2	15.4	2.9	2.1	—	—	100.0	284.1	239	6000	
Badli/casual	10.5	38.0	31.3	17.8	1.6	0.8	—	—	100.0	260.9	192	5419	
Apprentice	22.2	66.7	11.1	—	—	—	—	—	100.0	176.2	9	225	
All	2.0	25.0	25.5	23.9	11.9	6.7	4.0	1.9	100.0	423.2	2162	74700	
Number of sample hired workers	8	256	395	515	355	276	255	102	2162				
Estimated number of hired workers	1502	1868	19018	17878	8859	4975	2988	799	14700				

TABLE 6: EMPLOYMENT AND AVERAGE MONTHLY EARNINGS (in Rs) OF HIRED WORKERS BY LEVEL OF SKILL

Level of Skill	Number of Sample Workers			Estimated Number of Workers			Average Monthly Earnings (Rs)		
	H S 1	H S 2	Combined	H S 1	H S 2	Combined	H S 1	H S 2	Combined
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Skilled	634	673	1307	45735	43665	44700	468.8	400.6	439.6
Unskilled	421	434	855	27615	32385	30000	400.1	397.8	398.9
All	1055	1107	2162	73350	76050	74700	448.0	399.4	423.2

TABLE 8: EXTENT OF VARIOUS BENEFITS ENJOYED BY THE WORKERS BY SIZE CLASS OF HIRED WORKERS

Size Class of Hired Workers	Percentage of Enterprises Providing												Number of Enterprises		
	Sundays or Weekly Rest			Any Other Holidays			Leave with Pay			Medical Benefit		Accident Benefit		Sample	Estimated
	Days with Pay			with Pay			Yes	No	Mixed	Yes	No	Yes	No		
	Yes	No	Mixed	Yes	No	Mixed	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 - 3	48.3	50.6	1.1	76.4	22.5	1.1	10.1	87.6	2.3	3.4	96.6	6.7	93.3	89	2225
4 - 6	65.8	30.3	3.9	80.3	14.5	5.2	17.1	80.3	2.6	18.4	81.6	19.7	80.3	76	1900
7 - 9	63.3	20.0	16.7	78.3	8.3	13.4	33.3	53.3	13.4	33.3	66.7	30.0	70.0	60	1500
10-14	56.9	12.1	31.0	69.0	5.2	25.8	43.1	36.2	20.7	43.1	56.9	37.9	62.1	58	1450
15-19	50.0	16.7	33.3	66.7	—	33.3	50.0	16.7	33.3	50.0	50.0	33.3	66.7	6	150
20 and above	81.5	7.4	11.1	88.9	—	11.1	74.1	18.5	7.4	74.1	25.9	66.7	33.3	27	675
All	59.8	28.5	11.7	77.2	12.3	10.5	28.5	62.7	8.8	26.9	73.1	25.6	74.4	316	7900
Number of sample enterprises	189	90	37	244	39	33	90	198	28	85	231	81	235		
Estimated number of enterprises	4725	2250	925	6100	975	825	2250	4950	700	2125	5775	2025	5875		

sometimes called the organised sector, enjoy various kinds of benefits besides the direct monetary wage payments and are, in fact, protected by various laws. It is also more or less a common knowledge that workers in the small-scale sector are deprived of many of those benefits. What is perhaps not so commonly known is the extent of deprivation which these workers have to go through compared to their counterparts in the organised sector.

In Table 8 we present the percentages of enterprises 'allowing' or 'not allowing' certain facilities to the workers by size class of employment of hired workers. The column indicated as 'mixed' refers to those enterprises which grant a particular benefit to some but not all the workers. One may note from this table that a large proportion of enterprises does not provide their workers with even minimum benefits enjoyed by those in the organised sector. About three-fourths of the enterprises do not extend any medical or accident benefit. The percentage of enterprises not providing any leave with pay, other than possibly the weekly rest day, is also remarkably high. More than 28 per cent of the enterprises do not allow even a weekly rest day with pay.

Another important feature which is borne out by this table is the relationship between these percentages and the size of the enterprises. As the size becomes larger the percentages of the enterprises extending such benefits also increase. It seems, once again therefore, that size of an enterprise has an important role to play.

IV Conclusions

In this paper we tried to throw up some information about the small-scale industries—a sector which has played a vital role in the development of the economy and is still expected to do so. In spite of various constraints, this sector is claimed to have registered an impressive performance and the targets set for the Sixth Plan have been

achieved. But still this is a sector which "suffers from lack of data base and also from its flow at regular intervals" (4). The experience of the present survey also indicates that, because of the high mortality rate, any assessment about the small-scale sector particularly its number, based on the records of the registered units available with the state directorates is likely to be overestimated and misleading.

The focus of the present study was, however, on the hired workers engaged in this sector. While much has been said in the plan documents about the development of this sector, the workers employed in this sector still seem to be very much neglected. Our results bring out very clearly the dismal condition of the workers. The level of income is very low in absolute terms and also relative to those in many other sectors. Also even among the workers in the small-scale sector, significant differences in their earnings exist. On the other hand, the result that the size of the units has a significant influence on the level of earnings and other conditions of work seems quite revealing.

Appendix Sampling Design

This appendix is devoted to a description of the sampling design used in this survey. But before doing this, it would be worthwhile to make a few comments about the sampling frame.

Sampling Frame

One of the major problems in conducting a sample survey of small-scale manufacturing enterprises is the non-availability of any reliable, up-to-date and exhaustive list of enterprises which could be used as the sampling frame for the purpose of drawing the sample. A number of possible sources like the Economic Census, surveys of small-scale enterprises carried out by the National Sample Survey Organisation, etc. were explored. But no readily available list of small-scale units, which might be suitable for

our survey was available. It was, therefore, decided to use the list of small-scale units registered with the State Directorate of Small-Scale Industries.

The state directorate maintains lists of registered units (along with some basic information) for each district separately. These are consolidated lists and new units are added to it as and when fresh registration takes place. These lists are published from time to time in the form of directories. To get an updated list of the units located in the Calcutta Municipal Corporation area, we had to use a number of such directories as well as some unpublished registers. By collating these documents we could finally prepare a list updated up to April 1981. However, as mentioned earlier the list did not provide classification of the units by product-type or any other important characteristic. Hence, it had to be treated as one single continuous frame and no stratification was possible.

It would be worthwhile to note the limitations of the frame. First of all, the definition of small-scale used by the state directorate is based on invested capital rather than employment. This makes it somewhat

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difficult to compare the results with much of whatever little information is available on small-scale industries. Secondly, the registration with the state directorate is voluntary which implies that there could be some unregistered units in operation. In fact, a study (3) conducted sometime back indicated the existence of considerable number of unregistered units in spite of some incentives given to encourage registration. Finally, while conducting the survey it was noticed that many of the registered units do not actually exist because of various reasons.

Sampling Scheme

While the focus of the present survey was on the wage-earnings of hired workers employed in the small-scale enterprises, the selection of such workers could not be made directly. What was done, therefore, was to first select enterprises from the list mentioned above and then to sample hired workers employed in the selected enterprises. The selection of enterprises was made by adopting the method of linear systematic sampling with a sampling interval of 200. However, while drawing the sample of units no distinction could be made between units belonging to different types of industries since the consolidated list of units was arranged according to the date of registration only. In order to facilitate calculation of standard errors, the sample of enterprises was drawn in the form of eight independent and interpenetrating sub-samples. The total number of enterprises finally surveyed was 316.

For the selection of hired workers, a list was first prepared in the selected enterprises. If the total number of hired workers in an enterprise was more than 12 then all or twenty per cent of the total workers, whichever was greater, were selected by circular systematic sampling. For all enterprises with less than or equal to twelve hired workers, information about all the workers was collected. The total number of hired workers in the sample thus came to 2,162.

Method of Estimation

It should be clear that the methods of sampling followed for the selection of enterprises and hired workers call for the use of different multipliers for obtaining aggregate estimates. For items relating to the enterprises as a 'unit', the multiplier was $M_{1i} = 200$ for all $i = 1, 2, \dots, n$ where i stands for enterprise and n for the number of enterprises selected. In other words, the design was self-weighting which implied that for estimation of simple proportions, averages, etc., no weighting was necessary. However, for getting estimates for the population of all enterprises from the data on the sub-sample, it was necessary to multiply the sample counts/totals based on the sub-sample by 200. It should be noted that each sub-sample provided valid estimates of aggregates/proportions/averages. To get combined estimates based on all the eight sub-samples, we took simple mean of sub-

sample-wise estimates of aggregates/proportions/averages.

For the items of information which related to the hired workers, a different set of multipliers was necessary for obtaining the estimates. This is because only a sample of hired workers engaged in an enterprise was covered. The relevant multipliers for those characteristics were

$$M_{2i} = 200 \times \frac{m_{1i}}{m_{2i}} \quad i = 1, 2, \dots, n$$

where m_{1i} = number of hired workers employed in the i -th enterprise; and m_{2i} = number of sample workers of the i th enterprise covered in the survey.

The second factor in the above expression was unity if the number of workers in an enterprise was 12 or less for in such cases every worker was covered. Clearly then, multipliers for the characteristics of hired workers varied from enterprise to enterprise and estimates of averages/proportions/aggregates had to be weighted ones. That is, Estimated total of a characteristic X

$$= \sum_{i=1}^n M_{2i} \left(\sum_{j=1}^{m_{2i}} X_{ij} \right)$$

where i stands for enterprise, j for worker within the enterprise, X_{ij} for the data on the characteristic X and M_{2i} for the multiplier for the workers in the i -th enterprise.

Since the sample of enterprises was drawn by using the technique of interpenetrating sub-samples, it was possible to compute the standard error of combined estimator by using the following formula

$$se(\bar{t}) = \left[\frac{1}{7.8} \sum_{i=1}^8 (t_i - \bar{t})^2 \right]^{1/2}$$

where t_1, t_2, \dots, t_8 are the eight sub-sample estimates and \bar{t} their sample mean, the overall estimate. Then $\bar{t} \pm \bar{t}_{0.95} se(\bar{t})$ provide the 95 per cent confidence interval for the true value.

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