

National Commission on Labour.

A Note on Labour in Small-Scale Industries
as revealed by the Research Programmes Committee
Reports.

The Research Programmes Committee of the Planning Commission have made a few studies on the small-scale industries and five of the studies have been published. The main emphasis in these studies among others are (i) their place in our economy and the possibilities of their development; (ii) Investment, output and employment aspects of these industries; (iii) Capital - output and capital-labour ratios; (iv) Employment and wages, etc. Labour as such has not been the main emphasis in these studies and reports. However, an examination of these reports reveal that some discussions scattered here and there on labour are available in these reports. Some of the aspects of labour in small scale industries brought out in these reports are:-

- (i) High proportion of self-employed and family labour;
- (ii) Seasonal employment as well as under-employment among the workers;
- (iii) Chaotic structure of wages;
- (iv) Low average earnings of workers;
- (v) Unregulated working hours with no weekly holidays or other privileges;
- (vi) Unremunerated apprenticeship system;
- (vii) Absence of trade unions amongst the workers;
- (viii) Absence of wage regulating and fixing machinery.

In this note it is proposed to bring out briefly the observations made on the above aspects in the following five Research Programmes Committee Reports:-

1. The Economics of Small-Scale Industries -
by Baljit Singh.
2. Small Industry in a big City - A survey in
Bombay by D.T. Lakdawala and J.C. Sandesara.
3. Small-Scale Industries in Delhi - A Study
in Investment, Output and Employment
Aspects - by P.N. Dhar.
4. Small-Scale & Cottage Industries in Saugor
District by J.N. Mishra.
5. Small-Scale Industry in Sivakasi and Sattur
by E.K.Warrior.

1. The Economics of Small Scale Industries -
by Dr. Baljit Singh.

Scope & Objective:

This study is based on a survey of small-scale industries of Moradabad undertaken during 1954-55 by the Department of Economics, Lucknow University, as a research project financed by the Research Programmes Committee of the Planning Commission. The data and analysis presented in this study bring into sharp focus the economic problems faced by the small scale industrial sector and help to formulate an integrated approach to solve these problems. In all, this study covered a sample of 788 small-scale industrial establishments besides dealers' establishments. The distribution of these 788 small scale establishments by industrial groups is given in the table below:-

<u>Industrial group</u>	<u>Total Establishments</u>
I Brasswares and brass foundries.	176
II Engraving & other ornamental works.	121
III Electroplating, polishing, enamelling and finishing.	66
IV Metal industries otherwise unclassified.	187

Metallic group.	550

V Food industries.	43
VI Leather, tobacco and textiles.	82
VII Wood industries.	46
VIII Bricks, tiles & potteries.	30
IX Paper & paper products.	14
X Other industries otherwise unclassified.	23

Non-metallic group.	238

Total establishments.	788

Salient features:

(1) A little more than 58 per cent of all establishments work exclusively with the help of family labour and the rest employ hired workers. The proportion of establishments depending entirely on hired labour is insignificant. In certain industrial groups i.e. potteries, leather, tobacco, textiles, wood industries and miscellaneous industries the proportion of establishments depending exclusively on family labour is as high as 80 per cent or even more. On the other hand, in the brassware industry proper and in brass foundries

as many as 70 per cent of the total establishments employ hired labour and the proportion of such establishments is quite high at about 60 per cent even in the case of electroplating, polishing and enamelling. Apart from the nature of an industry, the larger the number of workers employed in a unit, the larger is the proportion of establishments depending on hired labour. Out of the total labour force employed in the sample establishments, 46 per cent are hired workers. In the case of brasswares and brass foundries, electroplating etc. the proportion of hired workers increases to more than 60 per cent.

(2) The workers have been classified into skilled and unskilled. A worker is treated as a skilled worker if training for a minimum period of 6 months is required to do his job. By this standard only about 9 per cent of the total number of workers could be regarded as unskilled - their proportion being as low as 2% to 3% in certain industrial groups and as high as 16 to 20 per cent in engraving and ornamental wares and in brick kilns and potteries. An overwhelmingly large proportion of workers in cottage industries is either skilled or semi-skilled. Hence the development of such industries depends no less on the acquisition of proper skills and training than on the size of the market for their products. In any plan of development, therefore, a proper emphasis should be laid on enlarging facilities for training.

(3) Workers employed on a daily basis or from day-to-day have been classified as casual. The rest have been treated as regular workers. Most of the workers were found in regular employment and only 10% of the total could be regarded as casual. In certain industries the proportion of the casual workers is as little as 2 to 4 per cent although in brick kilns and potteries they account for nearly one-fourth of the total labour force. In the brassware and brass foundries and other metal industries their proportion is 10 to 12 per cent only.

(4) Very few women seem to be employed in the cottage and small-scale industries - their proportion being as low as 7.26 per cent in the total. In certain industries their proportion is almost insignificant. It is less than 2 per cent in brassware moulding and manufacture of brass sheet utensils. On the other hand, in such industries as spinning, embroidery and cotton-ginning or in brick kilns they constitute nearly one-fourth of the total labour force. They are employed in large numbers in pulse grinding, scraping of cutlery and manufacture of crucibles required for the moulding process in the brassware industry.

(5) About 13 per cent of the total number of workers are adolescents between the ages of 12-18 years, whereas another 2.5 per cent are children below 12 years. These, of course, do not include apprentices and if they are added, the proportion of adolescents may be as high as one-fifth of the total. In electroplating, polishing and enamelling about one-third of the total number of workers are either adolescents or children.

(6) All but 1.02 per cent of the establishments have been classified as perennial but out of the perennial establishments as many as 92 per cent have reported a slack season. Total employment, therefore, varies seasonally. The rate of this variation is indicated by the maximum and minimum number of workers employed in the various industries taken together during the year. Only about three-fourths of the total number of workers employed during the busy season or at the peak level find employment during the slack season. The number of hired workers is reduced to about 54 per cent of the number employed during the busy season and that of the seasonal and casual workers to less than 4 and 10 per cent respectively of their numbers in the busy season. The casual and seasonal workers who constitute more than one-fourth of the total labour force are practically all thrown out of the small-scale industries during the slack season. Not all among those who are employed in any particular month have employment on all working days. Even during the busy season about 5 per cent of the workers are employed for about less than 19 days in a month and only 54 per cent are employed fully throughout the month i.e. 25 days or more. The proportion of these latter who are employed throughout the month falls to less than 10 per cent during the slack season. In the moulding of brasswares and manufacture of brasssheet utensils only 34 per cent of the workers are employed fully during the busy season and less than 2 per cent are so employed in the slack season. More than half of the total number of workers in all the industries find employment for less than 25 days during slack season. More or less the same might be true about family labour although in their case the extent of forced idleness would be less than the extent of unemployment for the paid workers. There is, however, no doubt that for both types of workers there is considerable under-employment and all those who are employed in small-scale and cottage industries suffer considerably from disguised unemployment of varying degrees.

(7) While some of the establishments work on their own raw materials, a large majority of small-scale cottage establishments work with raw materials and semi-finished goods supplied by the dealers. Such enterprises simply contract out their labour although work is carried on in their own houses. Not less than 70 per cent of the total number of small-scale establishments are of this type. In a sense, their owners and operators can be regarded as workers contracting out their labour to the dealers, karkhanadars, and middlemen. But strictly speaking these workers do not fall into the category of contract labour as they have independent establishments selling out their product (service) in the open market.

(8) Less than one-third of the hired workers are employed on a time-rate and no less than 68 per cent are employed on a piece-rate basis. In particular this is true about the brassware and the metallic industries as a group where three-fourths to four-fifths of the total workers are employed on a piece-rate basis. In the non-metallic industries, piece-wages are less important and hardly 40 per cent of the workers engaged therein are employed on this basis. The wage structure

in the small-scale and cottage industries is even more chaotic than in the factory industries. As a rule, a small scale enterprise in the brassware industry undertakes only one process and the dealer or the karkhanadar passes the product from one establishment to another. These small-scale establishments, therefore, are not in a position to know the earnings of the dealers and the karkhanadars on their services and the actual charges paid to them as a group. Nor is there any uniformity with regard to a particular work or job being paid by piece or time. Enterprises engaged in one and the same process may some-times be paid by the amount of work done by them and at others by the time taken to do the job. Neither the time rates nor piece rates are for various jobs uniform, standardised or rationalised according to the time and skill required in a process. Thus a person who pulls the lathe and is an unskilled worker may be paid anything between 50 paise to Rs.1.50 per day or a piece rate which varies or a rate equivalent to one-third of the wage (time or piece) of the lathe-operator, the scraper. Such variations are very much more in the case of skilled labour. There is almost a total confusion both in respect of the wage structure and the wage-rates. From time to time, the workers have demanded certain minimum rates and their unions have enjoined on their members not to accept a lower price in such cases. These minima are sometimes accepted by the associations of the dealers and karkhanadars. But it is very seldom that these are enforced and accepted by the trade.

(9) The wage-rates are low and chaotic while an average worker is seldom employed throughout the month. Detailed figures about average earnings are available for 726 workers i.e. 50 per cent of the total hired workers employed in the sample units. These indicate that about 20 per cent of the workers in the busy season and nearly 30 per cent in the slack season earn less than Rs.30 per month. A monthly wage of Rs.75 may be regarded as the absolute minimum necessary to maintain a worker and his family to provide him at least some space in his house where he can work. Judged by this standard, earnings of more than 80 per cent of the workers in the small-scale establishments fall below the minimum wage level.

(10) Working hours are still unregulated even for hired workers. During the busy season as many as 25 per cent of the total hired workers were reported to be working for more than 54 hours per week and some were working for more than 72 hours although the normal weekly work is of 48 to 54 hours. During the slack season nearly two-thirds of the total workers found employment for less than 48 hours per week. This however does not mean shorter working week but simply reflects the extent of unemployment and under-employment.

(11) A weekly holiday is not given in all small-scale enterprises and only 66 per cent of the sample establishments reported weekly rest. The position differs from industry to industry and whereas most of the establishments in the brassware industries observe a weekly rest, there are not many such enterprises in industries like textiles, brick-making and potteries.

(12) Very few enterprises give a paid holiday and although many of them may be taking over-time work, not more than 10 to 15 pay an over-time wage. Wages are usually paid within a week of their being due but in no less than one-fifth of the total establishments there is no definite period within which wages may be paid after being due.

(13) In establishments where work is carried on in workers' homes, children begin to learn the craft of their parents from a very early age. Apart from this, in many of the establishments in the brassware industry, young boys enter as apprentices to learn a craft that is not carried in their own homes or to work under a master craftsman, known as ustad. This system is in vogue particularly with regard to training in the art of engraving. Nearly one-third of the enterprises engaged in engraving and other ornamental brassware work reported having an apprentice. The only other industrial group where apprenticeship prevails is that of brassware moulding. Outside the brassware industry the system is insignificant.

The most common age for beginning apprenticeship work is from 11 to 13 years and most of the apprentices finish their training or apprenticeship period before the age of 20 years.

Apprentices are unpaid in the beginning. They however start getting a remuneration after they have acquired some skill. This is increased as they develop their skill and proficiency in the job. Nearly 50 per cent of the apprentices were reported to be getting some emoluments but most of them were getting very little. Only one-fourth of the total apprentices were being paid Rs.20 or more per month.

(14) Taking establishments in all industrial groups together that about 50 per cent of the total units worked during this year at less than 70 per cent of their capacity, 20 per cent at 70 per cent to 80 per cent of their capacity and another 19 per cent at 80 per cent to 90 per cent of their capacity. Only 8 per cent of the establishments were reported to be working at full capacity. These figures disclose the tremendous amount of under-utilisation in the small-scale industrial sector.

Under-utilisation is more acute in enterprises and establishments that are not composite and depend on farmed out work. In the composite establishments a little more than one-third of the units were reported to be working at less than 70 per cent of their capacity. But in other establishments, no less than 54 per cent of the units reported work at less than 70 per cent of their capacity. Obviously, it is these establishments of the poor workers who work as contract labourers, that have to bear a large brunt of unemployment and under-employment.

It has also been found that surplus capacity and unemployment is more acute in the brassware industry than elsewhere. In the metallic industries less than 5 per cent of the units were reported to be working at full capacity,

while more than 54 per cent worked at less than 70 per cent of their capacity. In the brassware foundries and allied establishments more than half of the units were reported to be working in the year of enquiry at less than 70 per cent of their capacity. As against this, in the non-metallic industries while nearly 15 per cent of the units worked at full capacity only some 33 per cent worked at less than 70 per cent of their capacity.

(15) Taking full capacity output and employment as a measure of stability it is found that establishments that employ larger number of workers are more stable than those that employ less. Only 7 per cent of the establishments employing 2 to 4 workers were reported to be working at full capacity, 40 per cent between 70 per cent and 90 per cent of the capacity, 33 per cent between 60 per cent to 70 per cent and about 16 per cent at less than 60 per cent. In the next size of establishments i.e. those employing 5 to 9 workers daily, 17 per cent of the units were reported working at more than 90 per cent of their capacity, and only at less than 60 per cent of their capacity. In establishments employing 10 to 14 workers, more or less similar conditions prevail. But the largest size in the sample i.e. establishments, employing 15 to 19 workers, as many as 35 per cent were reported to be working at 90 per cent or more of their capacity. Here nearly one-fourth were working at their full capacity.

(16) According to the data the most important cause of working below capacity or under-utilisation in the small-scale industrial sector is the inadequacy of demand. This has been stated as the most important limiting factor by 88 per cent of the small-scale establishments in the sample and as the next most important cause of working below capacity by 23 per cent of the establishments giving the second important cause.

Nearly 90 per cent of the sample establishments have reported inadequacy of demand as the most important cause of production below capacity. Lack of finance has been suggested as the most important handicap by some 10 per cent of the establishments and as the second most important cause of working below capacity by some 65 per cent of them. These two are obviously the main handicaps to the growth of the small-scale sector. Demand can of course be stimulated by restricting imports of consumers' goods, manufactured by small-scale industry as well as by limiting the growth of factory industries for the manufacture of such goods. In so far as demand is responsive to prices, any steps taken to lower costs by improving efficiency through the adoption of better technology and organisation will go to enlarge the market of the small-scale industry. At the same time effective steps have to be taken to improve credit facilities for the small-scale industries so that it may get adequate finance.

2. Small Industry in a big city - A survey in Bombay
by D.T. Lakdawala and J.C.Sandesara:

Scope & Objective:

(1) This study (December 1954 to February 1956) was undertaken and designed with a view to collect the basic data regarding capital, employment and output with a detailed break-down in their structural components, and interpret them in their correlation so as to throw light on the productivity aspect of small-scale industries. It was also thought desirable to get factual information on the general nature, types and problems of small-scale industries, as also to obtain a picture of how and where they compete with large-scale units and their relative advantages.

(2) The investigation was confined to Greater Bombay, as the term was meant prior to February, 1957 i.e. Bombay island proper, suburban areas from Bandra to Jogeshwari on Western Railway side and Kurla to Bhandup including 88 villages.

(3) The study is based on a first hand investigation of more than 1000 units classified into three divisions viz. I relating to Food, textiles, leather and products thereof; II relating to metals, chemicals and products thereof; and III relating to Others not elsewhere specified.

Salient features:

(1) The typical form of organisation in small-scale industry appears to be single-man ownership. 833 or 78.5 per cent of the total units were of the private proprietorship type. With a wide lag followed joint-family and partnership units which totalled 126 and 92 or jointly about one-fifth. Only 5 were co-operative and 4 private limited units accounting together for about 1 per cent of the total. Not a single unit was organised on a public limited basis. Division II had a much larger proportion - 15.3 per cent - of partnership and a correspondingly smaller ratio of private proprietorship units.

(2) 253 or 24 per cent of the total were power-using, while the rest 807 or 76 per cent, depended entirely upon manual power. All flour mills were driven by power, while all the units in 10 industries - sweet-meat and farsana, bidi, dyeing and printing, footwear, cycle repair, boxes and packing cases, photography, photo and mirror framing, watch repair and stove and tin jobbing were completely manual. Engineering workshops industry had 88 per cent of its total units driven by power and printing presses about one-half, while in the other 7 industries non-power units dominated.

(3) The units were classified into perennial, intermittent, or seasonal according as whether they were working more or less continuously throughout the year, with breaks or lapses, or only in particular season for a period of six months or less. Of the 1,060 units, 887 or 83.7 per cent were perennial while 159 or 15 per cent intermittent. Only 14 or 1.3 per cent of the total firms were seasonal, 11 in the Division I and 3 in Division III.

(4) 269 or one-fourth of the total units were operated by self-employed persons - the proportion between one-man (i.e. owner himself) and the owner being assisted solely by family labour units being roughly equal. Employer units formed three-fourths of the total - with three-fifths being assisted solely by employees and in 1.3 per cent with them also by unpaid family workers. On the whole family labour did not find any place in the operation of little less than three-fourths of the total units. Division III contained a larger percentage, 21.3, of single-man units as against the corresponding percentage of 9 each in the other two divisions. Among the units engaging solely employees and jointly with family labour, stove and tin jobbing had only 10.3 and 3.4 per cent; while distinguished by a larger share was photography with 36.5 per cent among the latter.

(5) These 1,060 units engaged in all 4,711 persons. Of these, 28.8 per cent were owners and 9.2 per cent members of their family. 4.5 per cent were salary earners, 50.4 per cent skilled workers and 7.2 per cent unskilled ones. Division I showed a larger percentage of owners, while Division II of wage-earners. In flour mills, photo and mirror framing, watch repair and cycle repair, owners constituted as large as 55, 55.3, 57.6 and 65.4 per cent of the total labour force, respectively. The proportion of family labour was only 2.7 per cent in printing presses, while in leather products, stove and tin-jobbing, and footwear, it constituted 21, 26.9 and 28.2 per cent respectively. Salary-earners formed 12.9 per cent in boxes and packing cases. In the category of skilled workers, stove and tin jobbing contributed only 5.8 per cent, while the group of miscellaneous industries had as large as 18 per cent to contribute in the category of unskilled workers.

(6) On an average, for all the 1,060 units, a unit employed 4.44 persons. The respective averages for the three divisions were 4.09, 5.27 and 4.49. The number of workers per unit in major industries varied from the lowest of 1.79 and 2.06 persons in stove and tin-jobbing and cycle repair to the highest of 7.05 persons each in dyeing and printing and printing presses.

(7) Of the 1,355 owners who controlled 1,060 units, 687 or one-half were just literates or had studied up to vernacular standards. In the lower category of illiterates and of the immediately higher category of owners who had gone beyond that but had left their studies before matriculation was for almost an equal number, totalling one-third. The number of owners who had had the benefit of higher education was only 68 or 5 per cent - 25 (non-technical) undergraduates and graduates, 37 technical diploma holders and undergraduates and 6 technical graduates. Matriculate owners formed over two-fifths of the total in printing presses and undergraduates and diploma holder (technical) owners over one-fifth in photography and in electrical repair.

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(8) Of the 3,356 workers other than owners, as many as 3,067 or 91.4 per cent were male, 239 or 7.1 per cent female and only 50 or 1.4 per cent children (between 12-17). Female employees had a substantial share in Division I where they formed 14 per cent of the total. In the other two divisions, their share was negligible. Of the 239 female workers, only 13 or 5.4 per cent were members of owner's family. Again as many as 226 or 94.6 per cent were wage-earners. Bidi industry was the largest absorber, containing 192. Of the 50 child workers, only 15 or one-third were members of their family. 35 out of them were engaged as unskilled workers. 20 were found only in three industries - 10 in paper boxes and envelopes, a minor industry, and 5 each in umbrella, another minor industry, and footwear, a major industry.

(9) Of these, 3,356 workers, 1,956 or 58.3 per cent were permanent workers working in the units for three months or more, 1,163 or 34.6 per cent temporary working for less than 3 months and 237 or 7.1 per cent apprentices. Division I contained a smaller proportion of permanent workers, while Divisions II and III of temporary workers. While in temporary workers, leather products had nil, in apprentices it had as large as 56.1 per cent of the total workers.

(10) Of the 2,924 employees (excluding 432 workers of owner's family from the above), 68.7 per cent belonged to Bombay State. Uttar Pradesh and Hyderabad contributed 15.4 and 9.2 and Madras and Rajasthan 3.7 and 1.2 per cent respectively. The balance of 6.8 per cent was shared by the other states. The strength of the local pull appeared to be much smaller in Division I where Bombay contributed only 44.5 per cent as against the corresponding proportion of nearly four-fifths each in the other two divisions. Photography, boxes and packing cases, footwear and photo and mirror framing showed a strong local bias showing 96.5, 98.2, 100.0 and 100.0 per cent respectively of their total employees from Bombay. The proportion of employees coming from Uttar Pradesh was larger in dyeing and printing, sweetmeat and farsana and flour mills which showed 37.9, 45 and 54.3 per cent. Of the 268 employees coming from Hyderabad 244 or 91 per cent were in bidi alone, and of the total bidi employees, they formed 45.5 per cent. Of the 109 employees coming from Madras, 31 were again in bidi and 13 and 10 in dyeing and printing and in bakery (a minor industry) respectively; these three industries accounted together for nearly one-half of the total. Of the 35 employees coming from Rajasthan, 20 were in three industries - cloth bailing, paper boxes and envelopes (two minor industries) and automobile repair with 8, 7 and 5 respectively.

(11) Of the 791 units which engaged one employee or more, employees of only 37 or 4.7 per cent of them were members of trade unions. Of these, 30 were in bidi alone. The remaining 7 units were in the other six industries. Looked at from another angle, only 170 or 37.5 per cent of the total employees in these 7 industries were members of trade unions,

the industry-wise percentages varying from the lowest of 4.3 per cent in printing presses to the highest of 24.6 per cent in bidi. On the whole, however, expressed as a percentage of the total, this works out at only 5.8. None of the units complained of any strikes or lockouts or disputes raised by labour.

(12) Almost all the units, 612 out of 614 which reported were recruiting their labour directly from the market. Only 43 reported that they were experiencing some difficulty in recruitment of labour, of which 41 confined it to the recruitment of skilled workers. 134 or 12.6 per cent of the total units employed casual worker in busy season of which 106 or nearly four-fifths employed between 1-3 workers.

(13) Of the 39 which reported on the stoppage of work, only 2 related it to technical reason and the rest with personal and other reasons. The work-days lost varied from less than 60 days in case of 29 units to practically for the whole year (300 days) in case of three units.

(14) Excluding 211 salary-earners, we had 2,713 wage-earners of whom two-thirds were on a time-basis, while one-third on a piece-work basis. Piece-wage workers formed only 9.7 per cent in Division II and 21.1 per cent in Division III, while as large as 53.7 per cent in Division I. Bidi had the largest percentage, 83.2 per cent of such workers; it was followed by footwear with less than one-ha

(15) On an average an employee, speaking for all the units taken together, earned Rs.871 per annum. An unskilled worker, as could generally be expected, received the lowest amount, Rs.678 per annum. A salary-earner and a skilled worker received 1.5 and 1.3 times more, namely Rs.1,017 and 886 respectively. On an average as well as with respect to the type of work, an employee in Division I received the lowest sum: Rs.778; and Rs.582, 816 and 481 according as whether he was a salary-earner, a skilled worker or an unskilled one. The wide differences with respect to salary earners in Division I and the same in Divisions II and III might probably be due to part-time assistants in such industries like flour mills, sweetmeat and farsana, bidi etc. which come in Division I. On an average, an employee, in two out of the 20 major industries, namely cycle repair and stove and tin jobbing, earned Rs.500 or less per annum; in four - flour mills, metal tinning, bidi, and footwear - between Rs.501 to 750; and in another four - printing press dyeing and printing, watch repair and photography - between Rs.1,000 to 1,250. In the remaining 10 industries, he earned between Rs.751 to 1,000. The annual earning of a salary-earner varied from the lowest of Rs.304 in bidi to the highest of 2,830 in furniture; that of a skilled worker from the lowest of Rs.342 in cycle repair to the highest of Rs.1,277 in photography; and that of an unskilled worker from the lowest of Rs. 32 in bidi to the highest of Rs.1,435 in boxes and packing cases.

(16) On an average for all the industries taken together, an owner (including unpaid family member) earned Rs.1,881 per annum. The respective division-wise average stood at Rs.1,363, 2,855 and 2,081. The average varied from the lowest of Rs.73 per annum in cycle repair to the highest of Rs.3,414 per annum in engineering workshops. An owner in bidi earned Rs.434 per annum; in stove and tin jobbing, footwear, watch repair and flour mills between Rs. 501 to Rs. 1,000 per annum; in leather products, photo and mirror framing, metal tinning and automobile repair between Rs.1,001 to 2,000. In the other ten industries, the earnings exceeded Rs.2,000.

(17) The average annual earnings in the power units were higher than the same in manual units in 7 of the 10 selected industries, namely automobile repair, miscellaneous metal products, furniture, embroidery, leather products, paper boxes and envelopes and electrical repair. In the other three industries, namely printing presses, binding-ruling-indexing, and engineering workshops, the earnings were lower in power units. In 8 of these 10 industries, the differences were not very wide, varying from 2 per cent in two industries (printing presses and engineering workshops) to 35 per cent in one industry (leather products), while in the two, namely paper boxes and envelopes and electrical repair they were 2.2 and 2.9 times respectively (in favour of power unit workers).

(18) The underproduction due to lack of availability of labour appears more to be due to high turnover of labourers with respect to single units and the consequent lag, though small, in adjustment of labour to original production standards than due to its lack or scarcity as such.

(19) There was one startling conclusion which the Survey with all its limitations brought out: the scanty earnings of the workers and the producer-owners engaged in the small-scale units. The situation varied from industry to industry and calculations regarding the rewards of owner-workers are greatly complicated. It is not possible to make allowances for the return on capital invested by the owners, nor for the fact that not infrequently they devote only a part of their time to the industrial side of their business. When, however, every possible allowance is made for these counteracting factors, the picture does not substantially change. The problem of small-scale industries is more than anything else the problem of raising this low level of remuneration of persons engaged therein.

(20) A substantial proportion of the small-scale units find the main cause of their excess capacity, which is their most important problem, to be not competition with the factories but competition among themselves. The excessive number of small-scale units in relation to the market demand for their products is in many cases the essence of the problem. To the extent that this market demand is price-elastic, increase in the efficiency of units will raise the quantity demanded in the markets. Excess capacity will be reduced to this extent. With increase in incomes, there may be some change in demand for these products for the better. But by and large the solution must lie in decreasing the pressure on many of these lines by increasing employment opportunities in other fields. At this stage, the problem of small-scale units merges into the general problem of rapid economic development.

3. Small-scale Industries in Delhi - A Study in Investment, Out-put and Employment Aspects -
by P.N. Dhar.

Scope and Objective:

This study embodies the results of a survey of small-scale industries in Delhi conducted during 1954-55. The data collected pertain to the year 1953-54. The statistical information on small industries is scanty and whatever that is available is not wholly reliable and in view of the altered role of small industries, the need for reliable statistical information has become urgent. This study was therefore designed mainly to collect data which would throw light on (i) capital-out put ratios, (ii) capital-labour ratios, (iii) the net value added per worker, (iv) the surplus generated per worker, (v) the percentage share of the participating factors in the net value added by manufacture and (vi) the total productive capacity and the range of its utilisation. Altogether 326 units were covered in the 13 industries selected the details of which are given in the table below:

Name of the Industry	No. of Units which form the population	No. of sample units from which information can be collected.
(1)	(2)	(3)
1. Flour Mills	272	55
2. Printing Presses	267	54
3. Trunk Manufacture	225	38
4. Leather Foot-wear	180	34
5. Light Engineering	105	25
6. Electrical Goods	36	18
7. General Engineering	80	17
8. Hosiery	77	16
9. Soap	80	15
10. Foundries	51	14
11. Oil Mills	32	14
12. Drugs	50	13
13. Electroplating	76	13
Total =	1,531	326

Salient Features:

(1) Out of the 326 establishments surveyed over three-fourths (77.3%) employ less than 10 workers, and only 74 of them, or 22.3% of the total number of establishments included in the sample, employ 10 to 19 workers. Not only is there a general preponderance of smaller units, but

there are some industries where practically all the establishments employ less than 10 workers. In Soap, Drugs, Hosiery and Electroplating industries not more than one-fourth of the establishments employ more than 9 workers. In the Printing and Electrical Goods industries also the smaller establishments are larger in number. It is only in the Light Engineering, General Engineering and Foundry industries that the number of establishments employing more than 9 workers is larger. Incidentally, all the three industries are metal-using industries and a high percentage of their establishments use power. It would appear, therefore, that in metal-using industries the average size of the unit is distinctly larger than that in the other industries.

(2) A little less than half of the units included in the sample use power, their number being 159 or 48.8% of the total number of establishments surveyed. This percentage would certainly be higher if more power were made available. The entrepreneurs are well aware of the advantages of the use of electricity and complain about the difficulties in securing new power connections. Three of the industries, viz., Flour Mills, Oil Mills and Electroplating, are completely mechanised, as is indicated by the fact that all the establishments in these industries use power. On the other hand, the Leather Footwear, Soap and Trunk Manufacturing industries are worked wholly manually, i.e., none of the establishments in these industries use any mechanical power in their manufacturing operations. In all industries, except Drugs, 50% or more of the establishments use power. In the Drugs industry, however, only 2 out of the 11 establishments surveyed use power.

(3) The bulk of the units (282 out of 326) are single proprietary or family concerns. The largest number of units (154) are owned by single entrepreneurs. An equally large number (128) are family partnerships, i.e., they are owned by two or more members of the same family. There are only 42 non-family partnerships where the ownership is held by small groups which do not constitute a family. There are only two cases where family-owned units have taken in outsiders. There is a fierce tendency to keep the business within the bounds of the ownership of the family. It can safely be concluded that the ownership of small-scale manufacturing concerns in Delhi usually does not extend beyond the family though in a few cases non-family partnerships are also formed. Since these workers are either self-employed or have a special relationship with the employer they cannot be called wage earners. They may be called non-wage workers.

(4) The percentage of non-wage workers to the total labour force is significantly high in Leather, Footwear, Trunk manufacture, Flour Mills and Oil Mills. The majority of units in Footwear and Trunk manufacture are cottage units and, therefore, draw their labour chiefly from their own families. The percentage of non-wage workers is also high in Flour Mills and Oil Mills though they cannot be called cottage industries. The explanation for this lies in the fact that the size of labour employed per unit in these mills being small, the ratio of owner

workers' is bound to be high. In the remaining industries this percentage is small but not significant.

(5) Barring Drugs industry and Oil Mills all the industries carry a certain complement of apprentice labour varying from a significantly high percentage of 13.7 in Trunk manufacture to 0.8 per cent in Hosiery industry. The industries where apprentice labour is significant are Printing presses (7.6%), Trunk manufacture (13.7%), Foundries (10.5%), Electroplating (8%), General Engineering (6.8%) and Light Engineering (5.6%) industries. In all these industries the desire to acquire skill and earn a higher wage as skilled workers or in the alternative set up independent business, is the main incentive for apprenticeship. This incentive is fully exploited by some proprietors. About one fourth of the apprentices are not paid any wage what so ever.

(6) Drugs and Oil Mills are the only industries where there are no apprentices. In Drugs, the only really skill job is that of the chemist and training in this job is so specialised that it cannot be acquired while on work. But even where apprenticeship is possible, the proprietors discourage it. The reason for this discouragement arises from their anxiety to guard jealously their formulae and other secrets as the danger of piracy of those secrets is very great in this business. Apprenticeship is, therefore discouraged and apprentices are looked upon as potential rivals.

(7) In Oil Mills there is hardly any scope for skilled work and whatever little skill is needed to look after the electric motor, etc., is usually possessed by the proprietors themselves.

(8) The size of the skilled and unskilled labour is determined mainly by the nature of the manufacturing processes. These processes in practically all the industries surveyed require predominantly skilled workers. There is room for unskilled workers only on the fringes.

(9) The prevalent mode of payment in small industries in Delhi is the time-rate system inasmuch as 1382 out of the 1600 establishments of the total hired labour in the sample units function on this basis. On an industry-wise basis it will be seen that the piece-rate system is the prevalent mode of payment only in the Footwear and Hosiery industries. In the Hosiery industry the nature of work easily lends itself to the piece-rate system. In the Footwear industry the piece-rate system is really an indication of the extent to which production is based on the domestic system operated by shoe and leather merchants.

(10) There are hardly any pressures working towards uniformity of wage rates. Collective bargaining, conciliation agreements and adjudication awards, which play an important role in wage fixation, are generally absent in the case of small industries. In spite of the existence of large numbers of skilled workers, no categories exist which relate skills to remuneration. It is not surprising therefore, to find that rates of wages and earnings differ not only from industry to industry but from unit to unit in the same industry.

(11) The analysis of wage data also shows that even the introduction of more mechanised techniques does not necessarily lead to a significantly higher wage rate. Thus it would appear that employment in power-using establishments is preferred because of the greater legal protection granted by the Factories Act in their case. The increased real income in these cases is, therefore, more in the form of greater leisure and security.

(12) As already pointed out, a considerable part of labour is provided by the proprietors and their families. Very often they provide the most skilled labour, particularly in establishments where the owner is a master craftsman or machinist or electrician. This makes an inter-industrial comparison of wage rates difficult. Nevertheless, it will be seen that in industries where hired labour provides the bulk of skills as in the case of Printing, Electrical Goods and General Engineering, the wage rates are also high.

(13) Where the proprietor is a craftsman-entrepreneur rather than a merchant, who has moved up the ladder by proficiency in his craft the tendency to plough back surplus into business is very prominent. This trend is particularly evident among the refugee craftsmen who have set up small industries in recent years. In fact the keenness to ploughback profits into business gives a real meaning to 'abstinence' in their case. Their example, is having similar effect on others in the area—a very healthy case of demonstration effect.'

Contd.....p/18.

(A)	(B)	(C)	(D)
102	102	102	Shoe & Leather
171	171	171	Textiles
182	182	182	Hand work
84	84	84	Iron & Steel
73	73	73	Wood work
47	47	47	Oil expelling
36	36	36	Iron & Steel
70	70	70	Iron & Steel
16	16	16	Printing
17	17	17	Jewellery
20	20	20	Iron & Steel

4. Small-Scale and Cottage Industries in Saugor District by J.N. Mishra:

Scope and Objective:

The survey of "Small-scale and cottage industries in Saugor District" was started in February, 1956. Saugor is a district in the heart of Bundelkhand in Central India (Madhya Pradesh) and is very typical of the poor region of rocky soil, full of forests and hills all around. There are thirteen small-scale and cottage industries in this district in addition to a major All-India (small-scale and cottage industry) viz. biri industry. A separate pilot survey of biri industry was already undertaken on behalf of Research Program Committee some time ago and hence it has been excluded from the scope of this study. All the remaining thirteen industries are traditional or mixed small industries.

2. The survey has laid stress in bringing out the structure of small-scale and cottage industries, their capital structure, capital-output ratio, capital employment ratio, etc. Other problems of raw materials, marketing, finance, cooperation, employment and wages relating to these industries have also been examined.

3. The survey covered 388 units in 13 industries as per details given in the table below:

Name of Industry	No. of Units	No. of workers per unit	Average of workers
(1)	(2)	(3)	(4)
Shoes & Tanning	102	201	1.99
Earthenware	70	179	2.60
Bamboo work	69	162	2.35
Iron Implements and Tools	35	84	2.52
Wood work	35	73	2.09
Oil expelling and Soap	26	47	1.80
Bell metal and Brassware	18	36	2.00
Woolen Blankets	11	18	1.64
Dyeing and Printing	8	16	2.00
Jewellery	7	17	2.43
Agarbatti	3	50	16.66
Stoneware	2	3	1.50
Horn Comb	2	28	14.00
Total =	388	914	2.36

Salient Features:

(1) The 388 establishments surveyed altogether only 914 workers, the average number of workers per unit being 2.36. But in each different industry the average number of workers per unit varies from the highest of 16.66 in Agarbatti to the lowest of 1.50 in Stoneware.

(2) In Woollen Blankets, Dyeing and Printing, Stoneware and also in Earthenware and jewellery the hired workers are conspicuous by their absence. Whereas in the case of the former three industries, it is more because of their uneconomic condition, in the case of the latter two industries, it is probably due to their usual character to be always family concerns and secondly the smallness of the units themselves.

In all the different 27 units only 112 hired workers are engaged. However it is encouraging to find that Agarbatti, Shoe and Tanning and Bamboo Work employ 46, 21 and 16 hired labourers respectively. The processes of production in the above industries are such that a relatively specialised type of labour is required for better and finer finish of the products. There is great scope for increasing the employment possibilities in many of the industries presently having hired labour provided, of course, a little more capital and better tools are employed.

(3) A good number of the establishments i.e. 341 are perennial, indicating that the industries are the main source of employment in the district. Only during certain periods when people are spared from agricultural operations they seek employments in industries like shoe making, bamboo works and earthenware. Under the head 'Seasonal' there are only 6 industries. The maximum period for which work is available is 7 to 9 months and in shoe making and tanning, earthenware, iron implements and tools and wood work. For 3 months in a year during the monsoon period they remain idle. Heavy rains make most of the villages inaccessible and all the economic activities are more or less at a standstill. With a little more employment in the '7 to 9 months' category these could be turned into perennial ones.

(4) Only 27 units employ hired workers. This is, of course, a fraction of the total of 388 units surveyed. To put it another way, roughly 7% of the units employ hired workers. The total number of hired workers, both skilled and unskilled, is only 112. Of this, 75% of them are skilled workers. Employment of hired workers is restricted because of lack of capital and to a certain extent due to lack of demand for the products.

(5) The 27 units in total pay a wage bill of Rs.3,313 p.m. The average wage bill for a unit is Rs.122.7 p.m. and the average earning per hired worker, taking all the industries together, is Rs.29.58. The annual wage bill per unit is Rs.38,011. The average wage bill per unit is the highest in Agarbatti, namely Rs.366.66 and is the lowest in Iron tools and Implements.

(6) The average wage earning per worker is the highest in Bell metal and Brass-ware and the lowest in Agarbatti namely Rs.48 and Rs.29.9 respectively. This is due to the fact that whereas in the former considerably higher skill required in the latter case skill and ingenuity do not play such an important part. Secondly, on account of immobility of labour due to various reasons, certain particular communities specialised in and sticking on to particular industries. Moreover where, for the acquisition of skill a particular line one has to undergo training for decades it is only natural that the wage earning after such long training should also be high. Besides the Bell metal and Brass-ware industry, Shoe and Tanning, Wood work and Horn comb also register high wage rate. However, although it requires high technical skill, the average wage earnings per worker is ridiculously low in Iron Implements and Tool namely Rs.23.2. Serious competition which this industry has to face from machine-made goods is probably responsible for this low wage rate.

The earnings of workers in other industries are low and this may be attributed to the fact that the industries are mainly managed by family units and employment of hired workers is resorted to only where it is absolutely essential.

(7) Out of the 914 workers in the seasonal and perennial units of this district 104 of them are employed in seasonal units. It is the highest in Earthenware industry i.e. 67. This is due to the fact that this industry is handicapped by variations in climatic conditions.

(8) Out of a total of 104 workers employed in seasonal units (who do not work throughout the year) 58 of them are employed for periods of 7 to 9 months and 43 of them are engaged for periods of 4 to 6 months. This shows that nearly 11% of the workers are employed for periods not less than 9 months. Nearly half of these workers find employment only for periods less than 6 months. Taking all the units of the industries in the district it is estimated approximately that 500 workers out of a total of 4050 are under-employed. This figure is really high considering the existing low earning per worker.

(9) Lack of demand and antiquated methods of production are the main factors responsible for present state of affairs. Any programme of developing the industries with a view to increased employment and higher earnings must be preceded by expansion of markets and marketing facilities. Markets can be developed both in the district and outside. Moreover capital structure and methods of production need a complete re-orientation. Workers should be initiated into new methods of production and given facilities to acquire capital equipments through loans and other benefits. If a systematic and scientific approach is thus made, these industries can in all probability serve not only as a good receptacle to the existing unemployed and underemployed but also solve partially the problem of increasing rural population.

(10) The Small Scale and Cottage Industries in Saugor District have been divided into three groups viz. (A) those which are making good profits i.e. industries providing profi

(Shoe making and Tanning, Bamboo work, Brassware, Agarbatti and Jewellery); (B) those which are just able to pay their wages i.e. industries yielding subsistence level income (Oil extracting and Soap, Earthenware, Wood work, Iron Implements and Tools; (C) those that are struggling and carrying on for want of any other openings for inheritors of family skills - old and traditional i.e. sweated industries (Woollen, Dyeing and Printing, Stoneware and Horn comb). The industries under group (C) are likely to die a natural death gradually unless immediate and proper attention is given to them. The industries under groups (A) & (B) are able to stand on their own and if any aid is given to these industries it would have an immediate and salutary effect on them unlike the industries in the group (C). Further-more it is only in the case of these two groups i.e. (A) & (B) there is any possibility for the introduction of power machines.

(11) The suggestions for improving the efficiency and expansion of the industries in groups (A) & (B) are advanced on the following lines:

Firstly, the primary need of any business is capital and it is primarily responsible for the present pitiable plight of these industries. Hence the credit facilities on easy terms either through government agencies or through cooperative banks should be offered in all possible manner and complaints and grievances with regard to the granting of loans by the cooperative banks have to be looked into and defects remedied.

Secondly, modern machines and other necessary equipments should be made available to the workers on part payment system and electricity should also be supplied at cheap rates.

Thirdly, as a corollary of the above, more and more people should be given training facilities in modern techniques of production.

Fourthly, raw material should be supplied on credit through cooperative societies.

Fifthly, to alleviate the marketing problem transport facilities should be increased by construction of roads in each and every village.

Sixthly, to have the desired effects, these industries should be organised as far as possible on cooperative basis.

And lastly, a slight concession in the rate of terminal tax would provide great relief to all and especially to those engaged in Bell metal and Shoe and Tanning industries.

5. Small Scale Industry in Sivakasi and Sattur by E.K. Warriar.

Scope & Objective:

(1) This survey (1954-55) was originally planned to cover small-scale industry in Sivakasi, with special reference to the cottage match industry. But during the pilot survey it was decided that the match factories of Sattur also should be included within the survey, because the hand-made match industry in Sivakasi and Sattur operates in practice as a combined unit in all common affairs, having the same Manufacturers' Association, and exactly the same types of problem. Therefore, the team investigated the Cottage Match Industry in Sattur as well as in Sivakasi.

(2) As this survey was originally intended to cover "small-scale industries" in a general sense, though with special reference to the "cottage match industry", the team of investigators gathered particulars regarding such other "small-scale industries" as were formed in Sivakasi, but not in Sattur, their attention in Sattur being confined only to the match industry and nibs.

Salient features:

(1) The match industry is the predominating economic interest of the Sivakasi-Sattur region. It provides some sort of employment in the factory or at home, whether whole-time or part-time, to 44% of the total population of Sivakasi-Sattur. The fireworks manufacturing industry engages another 4% of the combined population. The other industries on the list are of negligible magnitude and in many cases owe their origins to the two leading industries and to their auxiliary, namely, the litho-printing trade.

"A" and "B" Class Match Factories*

(2) The total annual wage bill of the factories, according to their own figures, is Rs.25,79,544. Dividing this by the total number of workers, that is, 14,216, we get an average annual wage of Rs.181 and an average monthly wage of Rs. 15 $\frac{1}{2}$. The reason for this very low average wage per month is partly that many of the "employed persons" are part-time and domestic workers, and many are also children. There is no doubt that if work is taken home by a single member of a household, all others, and in particular, the children, take part in its completion, but they do not appear in the listed labour population.

(3) The remuneration paid to the domestic workers for processes is on a piece-wage system, and is the same practically everywhere, with the exception of two factories whose wage rates were found to be 1/12 anna to 1/4 anna higher per gross than elsewhere for two processes only, namely frame filling and box filling.

* "A" Class factories are those producing more than 5 lakhs grosses per year.

"B" Class factories are those producing more than 100 gross per day but not more than 5 lakhs gross per year.

(4) Out of a total of 14,216 workers in these industries 449 only were skilled. Out of the remaining 13,767, some were semi-skilled and some unskilled.

(5) In several cases that even in respect of domestic piece-work a middle-man (or black-marketeer) is sometimes, officiating as an intermediary between the factory where he commands influence and the household, and makes a living by taking work from the factories for Rs.0.0.6 per gross, and handing it over to needy households at Rs.0.0.4 per gross, earning the difference of Rs.0.0.2 per gross for the service. This practice should be firmly put down by the industry, and it can be done only if the employers co-operate to protect the domestic workers for whom they profess such deep concern.

(6) The publicists of the match industry sometimes claim that the industry employs much larger numbers but such a statement can be justified to some extent only if all the match factories in the South, and not merely in Sivakasi-Sattur and the considerable number of children who become "associate employees" when work is taken home, and who, therefore, do not enter the lists are taken into consideration. Like-wise, the work taken home by the "piece-work" middlemen is also distributed by them to "families" - implying that each such middlemen whose name appears on the list is equal to a few families and may be covering 25 to 50 or more working persons. Some factories have themselves mentioned in the schedules that they have got, for example, "571 families" on their list of outside workers.

(7) An assessment of per capita wages does not, in a cottage industry like the match industry, give a realistic idea of the magnitude of the wage benefit to the population of the community. In the first place, daily earnings differ for men, women and children. Secondly, that "age group" which provides the required labour force is most elastic in range including practically all persons above the age of three. In the third place, very wide variations occur in the daily personal earnings, which depend upon (a) the age, (b) the experience and (c) the length of time devoted to work all of which affect the quantity of work accomplished upon the basis of which remuneration is paid.

(8) The total wage bill has been divided by the total listed labour force to arrive at the average wage estimate given above. If, however, it becomes possible to reckon in the unlisted labour also, such as (a) the unlisted child labourers, and (b) households to which work is distributed by contractors, the so-called average wage given above would, no doubt decrease still further. There are, however, reasons for believing that a very considerable decrease will not occur in the estimate of average wage (a) because the factories do not, as a rule distribute work through contractors to unlisted working class households, though they do so in a very few exceptional cases, and (b) because the total quantity of work done by unlisted children must also be small relative to those who are listed as engaged in work.

(9) The concept of an average per capita wage is, therefore, not a very useful one in a study of the match industry. On the other hand, the concept of an average daily earnings is more realistic and useful though here also a wide range of variation in actual daily earnings due, of course, to the fact that age, experience and time devoted to the work determine the quantity of work done, and the resulting wages.

(10) The sample survey of house-holds engaged in the match industry suggested that the representative households engaged in the match industry consists of members comprising one adult male, one adult female and two children. Assuming that the entire family is dependent solely upon the match industry, and taking the mean income of the family members at the rate of Rs.1-4-0 per day per male, Rs. 1-0-0 per female and Rs.0-6-0 per child, the annual income of the family unit for a year of 300 working days would be Rs.900/- and the monthly income Rs.75/-. This assessment probably gives a more accurate idea of the remuneration received by the labour population dependent upon the cottage match industry.

(11) The phrase "labour population has been used in preference to the expression "labour force" because it becomes practically impossible to define the labour force properly in an industry (a) in which labour absorption is so elastic in quality and so wide in range as to include children of four as well as persons in their nineties, from the age point of view (b) which can also provide employment to all kinds of disabled persons including even the blind and (c) which permits of part-time work to any desired extent. The listed labour force is only the visible part of the labour force and any reasonable guess at the concealed number of persons who contribute labour to the industry become impossible because there are no differentiating or limiting considerations to demarcate those who may be taking part in match industry work and those who do not do so. Even persons who during day time are engaged in other full-time activities like agricultural labourers, small shop-keepers and traders or school-teachers and children, all sit down when they have a little leisure at home and take a hand at frame-filling or box-making. Thus it becomes finer in the cottage and match industry to speak of a "labour population" consisting of a community of households of all of which are gainfully employed either wholly or partly, in work connected with the match industry. This visible labour force constitutes 44% of the total population of Sivakasi and Sattur.

Labour Conditions in Match Industry:

(12) Domestic industry and cottage industry cannot excuse the exploitation of child labour which is found in Sivakasi-Sattur. The larger factories run "Kindergartens" where larger numbers of children, sometimes even precocious mites of 3 to 4 years, are found engaged in frame-filling. The factories claim that they are paying the children the same rates as the adults for piece-work, and believe that such an argument exonerates them completely. The whole question

of child labour in the Sivakasi-Sattur area is a very pathetic one. The enforcement of total prohibition of child labour will reduce the incomes of many families and will, probably react upon the availability of food to the children at home. The whole question therefore be studied in detail by a sympathetic welfare officer, and that it may laid down, once for all, to what extent the association of children with matches work can be allowed.

(13) The industry has been in existence in the locality only for about 25 years and occupational dangers to health, particularly to the large numbers of girls and children employed, are not yet prominently visible. Much of the domestic work being done in insufficient light, particularly at night, and many of the hand-processes in both matches and firework should therefore be investigated for possible after-effects upon lung health as well as in the form of illness similar to writer's cramp.

Fire Works Industry:

(14) It was suggested that this industry deserves governmental investigation with a view to give full protection. It was considered desirable that all imports of foreign manufactured fireworks into India should be completely prohibited, because the local industry was quite capable of supplying all the country's requirements, if given the opportunity to do so.

Miscellaneous Industries:

(15) As regards Miscellaneous Group of Small Industries, it has been pointed out that it will certainly be beneficial if small grants-in-aid or recoverable loans are made available, under the State Aid to Industries Acts, but sympathetically and with less of frightening formality, to the Printing Ink manufacture, Glue making, Varnish-making, Paper Toys and Paper Fans manufacture, Soap manufacture, in Sivakasi and Sattur. These have been selected because these are either (a) ancillary industries or are (b) occupations which can be conveniently based upon available waste-products and by-products, and other locally available materials.