

**An Economic Profile of
the Urban Poor
- Slum Dwellers of Madras**



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**Study Sponsored by
Madras Metropolitan Development Authority**

**Operations Research Group,
Madras.
January, 1980.**

ABOUT THE STUDY

'In line with National and State Goals, the development objectives of Madras Metropolitan Area (MMA) can be broadly stated as to gainfully employ and adequately service its growing population over the long-term, with attention given to the poorer segments of the population'. (The World Bank document on Appraisal of the Madras Urban Development Project, Annex 13, Page 1). With this perspective, Madras Metropolitan Development Authority (MMDA) sponsored a study entitled "Employment Base Study for MMA with particular emphasis on the Informal Sector".

This study was entrusted to Operations Research Group (ORG) as an integral part of Technical Assistance Programme of the World Bank. The work for the study was divided into several components. The two conceptual classifications of the contents of this study can be described as follows :

- * A profile of the economy of the city of Madras and rest of the areas in the metropolitan area emphasising on the aspects of employment growth and pattern in industrial and non-industrial sectors and the role of what may be called 'informal' sector now and in future.
- * Detailed socio-economic profile of the urban poor and informal sector activities (the two phenomena being integrally related) and identification of some of the strategies and programmes that would be considered effective to upgrade the economic status of the informal sector and to deal with the problem of urban poverty in a given context.

In view of the wide-ranging scope of the study and complexity and distinctiveness of various problems identified and studied, the study findings are being presented in four reports separately.

1. Economic Profile of MMA
2. Industrial Economy of Tamil Nadu and Madras Metropolitan Area
3. Economic profile of the Urban Poor - Slum dwellers of Madras city
4. Informal sector enterprises - a profile and strategy

While the first two reports refer to the first classification of the study described above, the third and fourth reports refer to the second one. Thus it is quite logical that in order to gain a comprehensive understanding of the problem and of urban poverty and a profile of informal sector enterprises the present report (third in the series) should be considered as an integral part of the subject which is presented in two parts, namely third and fourth reports. It is hoped that the fourth report will be also available to the readers in about a month's time from the date of release of the present report.

Regarding the present report which primarily deals with socio-economic profile of the slum dwellers who are identified as the core of the urban poor, the two important contributions appear to be :

1. An upto-date information base primarily on economic aspects of employment and income for the urban poor in the city of Madras
2. An understanding of the employment process particularly for those who are engaged in marginal and low income occupations in the informal sector activities.

The information for this exercise was generated through a large scale survey of households and workers in the identified (by TNSCB) slum locations in the city of Madras. The survey was carried out in two phases - the first phase involving a survey of about 3,700 households generating basic information on employment, income, occupations, demographic characteristics etc. and the second phase involving a survey of about 175 unemployed and 475 employed, most of whom were marginally employed and the rest being self-employed with enterprises of their own.

The study was carried out by a team of professionals of ORG led by Mr. DN Basu. The principal professional for the study was Mr. Chetan V Vaidya. Mr. Raghu Roy of ORG was particularly responsible for developing the theoretical expositions of the employment process as described in Chapter 6. Mr. KR Shaligram also made valuable contributions in different stages of the study. Mr. Soham Desai was exclusively responsible for all the computerised data processing and statistical jobs. Mr. MJ Mannan and G. Chandru helped in supervising field work and coding work. Mrs. G. Rajeswari and Miss. S. Shantni carried out all secretarial work for the study.

This study has benefitted significantly from the officials of MMDA at various levels. Mr. MG Balasubramaniam, ex-Vice Chairman of MMDA, did make a significant contribution to the conceptualisation of the problem of urban unemployment and poverty. Mr. LM Meneses, Member Secretary and Mr. G. Dattatri, ex-Chief Urban Planner both of MMDA

did take pains to spend a valuable part of their time, to improve upon the contents, with ORG team of professionals. Other members of MMDA who were helpful in different stages of the study are Mr. A. Lakshmanan, Senior Deputy Planner, Mr. KT Bellan, Deputy Planner, Mr. N. Sundararajan, Assistant Planner. In closing we must express our gratitude to Mr. BR. Deolaliker without whose encouragement this study would not have at all taken a start.

For OPERATIONS RESEARCH GROUP,

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Jan 1980

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CHAPTER I
INTRODUCTION

1.1 Background and Objectives

Madras is one of the fastest growing metropolitan cities in the country both in terms of population and employment growth. During the period 1961 and 1971, population and employment growth were recorded at 43% and 38% respectively. However, the employment growth has mostly occurred in the tertiary sector with predominance of what may be called 'marginal' occupations. The organised sector⁺ (public sector and large private sector, industrial non-industrial activities) as a whole employs about 37% of the total working force. The limited evidence⁺⁺ of growth pattern of the organised sector employment in recent years indicates sharp decline in the growth of the organised sector. The corollary of this is that most of the observed employment growth is accounted for by the so called unorganised sector occupations. Another evidence of this phenomenon is that proportion of non-establishment employment is the highest (50%)** in Madras compared to other metropolises in the country (varying between 15 to 35%). All these have resulted in the observed high proportion of marginal employment or under employment (used synonymously in many instances in the present report) in the aggregate employment **structure.**

⁺Refer Annexure to Chapter III for definitions of organised and unorganised sectors.

⁺⁺Available from Employment Market Information Reports

**Source : Census 1971

Added to that, there is also the problem of chronic unemployment estimated at about 4.5% of population which perhaps is not higher than the national average in the larger urban areas. The impact of this kind of disconcerting trend in the employment pattern in Madras is reflected in the larger incidence of poverty.

In 1974-75 the per capita monthly expenditure⁺⁺ of people in Madras was only Rs 75 (Rs 120 for Bombay). As much as 40% of the people lived below poverty line (expenditure less than Rs 55) compared to less than 10% and about 20% for Calcutta and Bombay respectively. However, the figure is not adjusted for cost of living index and houseless population which would tend to bring down the difference among different cities. It is estimated that about 3 lakh workers (35% of total workers) in city earn below a sum which is required to afford a minimum level of living⁺.

Thus the economy of Madras faces the problem of tackling the massive number of underemployed (in terms of income) along with the problem of the unemployed, a phenomenon integrally related to the problem of urban poverty. Creation of productive jobs for the population of the metropolis is thus a major concern. In this context the purpose of the present study is to examine the occupational structure and employment status of the urban poor in Madras. As most of the urban poor are living in the slums, it was hypothesised that slums would reflect the employment conditions of the urban poor. A survey of slum dwellers in

⁺⁺ National Sample Survey, 28th Round, 1974-75

⁺ Economic Profile of MMA - ORG 1978, Chapter 5

selected slums was, therefore, undertaken.

It is believed that a large number of urban poor are also staying in the continuous developed areas (mixed and old residential areas) of the city. But the present survey has not covered these areas as it is felt that the type of occupations in these areas is likely to be similar to that of the slum areas. However, the non-coverage is unlikely to introduce significant bias in the economic profile of the urban poor of the city.

The main objectives of the survey were to (i) prepare an inventory of occupations, (ii) study the socio-economic profile of the people (iii) identify their employment status (iv) identify the target group (unemployed and marginally employed) (v) to prepare a detailed profile of the target group and (vi) economics of selected enterprises of the target group

This survey in view of its representative nature of the entire slum situation also generated supplementary information of use for physical and economic planning. One such major information was on the relationship between location of jobs and place of residence for the slum workers. This analysis, which goes beyond the basic objective of the present study is presented in Appendix B of the report.

The survey was carried out in two phases. In the first phase, information pertaining to (i) to (iv) were collected. The second phase of the survey was primarily oriented to objectives (v) to (vi). The entire exercise is presented in two self-contained reports. The present report covering the bulk of findings with regard to objectives (i) to (iv) and partly (v) aims at providing a socio-economic profile of the slum dwellers and also the employment process and composition for the urban poor. The second report titled as "Informal Sector Enterprises-A Profile and Strategy" focuses on the economics of informal sector enterprises and ^{thereby} together with the analysis of profile of the target group attempts to evolve selected employment schemes and strategy appropriate to the slum dwellers in Madras City.

1.2 Background Information on Slums

TNSCB has conducted a survey of slums in Madras city in 1971. The survey has defined slums as, 'hutting areas with huts erected in haphazard manner without proper access, without protected water supply and drainage arrangement and so congested as to allow little free flow of air to get in'⁺. According to the above definition, there were 1202 slums in the city, as declared by TNSCB. The present survey has followed TNSCB's guidelines and the sampling was restricted to the same 1202 slum locations.

In 1971, one third of city's population lived in slums. The growth of slum households in absolute number has been very high, between 1961-71 the growth was about 67%⁺⁺. There were about 1.64 lakh households living in the 1202 slum locations (1971).

The magnitude of poverty in slums is reflected by very low household income - in 1971 as many as 95% of total households had a monthly income less than Rs 300/-. The problems of the slum population are also reflected by the fact that in 1971, slum population accounted for 30% of city's population and only 6% of land area. Only about 45% of slums were more than 11 years old and 68% of slum households were living on public lands.

+ Socio-economic survey of Madras slums, TNSCB, 1975 p5

++Subject to the limitations of the definitions of the slums in 1961 and 1971.

The percentage of literate to total population in slums was 42% (1971) which was much less than the corresponding figure for the city (62%). But the school enrollment level of 63% of the children in the age group of 5-14 years was fairly satisfactory.

Except for general socio-economic information collected by TNSCB on slum dwellers, there is however no comprehensive information on employment profile, occupations, under-employment and income distribution of slum dwellers. In view of the largeness of numbers and the need for a proper strategy to tackle the problem of urban poverty, it was felt essential to take up a sample survey of slums to understand the above mentioned aspects in a comprehensive manner.

The present survey has considered slums within the 1971 city limits and the slums which are on the periphery of the city or have cropped up after the TNSCB survey (1971) have not been covered. They were not covered as the sampling frame itself was not available for these slums and because the city slums account for the major part of the slum population. However, a pilot survey of four slums on the periphery of the city was also carried out later to fill in some important gaps in information. This pilot survey is although not statistically representative of the slums in the peripheral area, it is indicative of occupations, employment and income pattern of these slum dwellers. A short note on the survey is given in the Appendix A.

The present survey has also covered the slum tenements constructed by TNSCB as they form part of the slum population for all economic considerations.

1.3 Sampling Plan

The data for the present study has been obtained from a survey of slum households. As mentioned earlier the survey was carried out in two phases. Sampling frame for selection of slum locations in the first phase was provided primarily by the socio-economic survey of Madras Slums, 1971 (TNSCB).

Following is the sampling plan for the two phases of the survey :

The first phase of the survey was carried out for about 3700 households in 38 locations. The sampling plan was in two stages :

- (a) Selection of slums
- (b) Selection of households

(a) Selection of Slums

The TNSCB had enumerated 164 thousand households in 1202 slum locations in 1971. For selection of slums, all the slums were stratified on the basis of size of slum and location. These two were considered the most important criteria related to occupation and economic activities. The whole city was divided in five broad zones. The five zones were (i) Tondiarpet-Perumbur (industrial) (ii) Annanagar-Egmore (residential) (iii) George Town (commercial) (iv) Triplicane-Mylapore (residential-commercial mixed) and (v) Adyar-Saidapet (others). Among the five zones first four zones were covered by the survey to reflect adequately the occupations of the slum dwellers in the city. The

reason for non-coverage of the fifth zone is that the slums in this zone did not apparently reflect any dominating characteristic (eg industrial, services) but were of general type. About 70% of the total slum households lived in the surveyed four zones. Regarding size of slums, the slums were grouped in three groups ie, groups of size of huts⁺ 0-100, 101-200 and 200 plus. All the slums were grouped in 3x4 table ie by size and location (Refer table 1.1). Slums were selected from these groups in such a way that there was a minimum representation of each group. Number of others in each group ranged between 2 to 5. Larger number of slums were selected from smaller slums (0-100 size). This is also compatible with the fact that number of small slums is much more than larger size slums. After selection of the slums, care was taken to see that atleast a few slums covered under the World Bank programme were also represented to enable some comparative analysis between World Bank programme covered slums and the rest at the city level but not at the zonal level. In addition, seven tenements (constructed under Slum Clearance programme) were randomly selected from 97 locations with the constraint that atleast one location is selected from each zone.

+ Size of the slum was taken by number of huts and not households. In many huts more than one households are staying eg there were about 1.75 households per one hut in 1971 (refer table 1.1)

(b) Selection of Households

Household (not hut) was taken as the final sampling unit for the purpose of interview. Between 1971 and 1978 there was significant change in number of households in the slums. So there was need of updating the information about number of households living in the selected slums. For this purpose, first a hut listing was carried out and number of households living in each hut was collected. Then the households were selected in the following manner:

<u>Number of total households</u>	<u>Sample</u>
(a) Less than 100	All households in all huts
(b) Between 101 to 200	One household from each hut
(c) More than 200	One household from 50% of huts

In case of specific occupation slums (like fishermen etc) where most of the workers had similar occupation the sample size was decreased.

In case of tenements households were selected in the following manner :

<u>No of tenements</u>	<u>Sample</u>
Less than 200	50%
Between 200 to 400	25%
More than 400	16%

The sampling fraction based on the above principle of allocation of sample was adjusted for the non-coverage (including non-response) of households in course of field surveys for various reasons.

At household level, it was not possible to collect detailed data from all the working members. So random selection method for working member was adopted. The household member was listed in a random sequence. Each investigator was duly assigned a number (1, 2 or 3) for selecting one working member from each household. This procedure was followed because most of the households (more than 95%) have upto 3 working members. If there was only one working member in a household then he or she was automatically selected for detailed investigation. But if there were more than one employed person then the employed person was selected as per investigator's assigned number (investigator with number 2 selected 2nd employed person). In case if the number of employed persons in the household were less than the assigned number, then the preceding working member was selected. The investigator's assigned number was rotated (between 1, 2 or 3) daily.

Household background information like sex, activity status, education, age and current employment status were collected for all members of households. From one employed person detailed information regarding occupation, activity, income, place of work and employment status was collected.

Estimation Procedure and Reliability

The usual formula for stratified simple random sampling was followed to obtain the estimate of any characteristic. The details of estimation are provided in the Annexure to the Chapter. The estimates were developed mostly for the city as a whole and in a few cases by zones or

sizes (strata). There is however one important point of clarification. While for the estimates at the household level characteristics (eg age-distribution, income distribution), the sampling unit was household particulars, for the employed persons the sampling unit was the individual employed person randomly selected from the household. This has led to two different sets of estimates (often the difference statistically not significant) for some of the characteristics like broad occupational distribution of working force which could be derived both from the household particulars and individual employed particulars. Regarding statistical reliability of estimates, it was not possible to go by the formulae of standard error which involves cumbersome calculation. Instead, reliability was established through sub-sample estimates (two independent sub-samples). As expected, reliability would vary from one characteristic to another. Table 1.3 presents estimates of selected characteristics from the two sub-samples. It can be seen that for most of the characteristics, coefficient of variation is very small (1% to 3%).

Phase II

As indicated earlier, the main purpose of the phase II survey was an in-depth survey of a sub-sample of the target group (as also enterprises they are engaged in) identified in the first phase. A target group consisting of unemployed and marginally employed⁺ persons was identified for this purpose in the first phase. As

+ Refer section 3.2 for definition

the objective of the phase II survey was a better understanding of some of the characteristics of the target group rather than estimation of the target group suitably classified, mostly the sample estimates are presented. In addition, the findings of Phase II were also used to correct the observed bias or definitional anomalies in phase I survey.

Unemployed

The survey was carried out for about 175 unemployed persons. For selection of unemployed, all the unemployed identified in the first phase were stratified on the basis of sex (male, female) and age (15-24, 24-34, 34+). The unemployed were grouped in 2x3 table, and the sample was selected in such a way that there was a minimum representation of each group (refer table 1.4). A larger proportion of sample was selected in the age group of 15-24 as it accounts for about 70% of unemployed. Care was taken that unemployed in all the four zones were properly represented.

Marginally Employed⁺

About 250 marginally employed persons were surveyed in the second phase. First about 15 occupations were identified as marginal occupations (primarily in terms of income). Then all the persons in these occupations were grouped in a 15x2 table ie occupations and sex. The sample was selected with a constraint that at least six and not more than 25 persons are selected from each occupation (refer table 1.5).

+ Refer section 3.2 for definition

There was a gap of about 6 months between first and second phase of the survey. Activity status of some of the respondents had changed between this period. In some cases changes in details of occupation or employment status were reported. As the second phase survey was much in-depth in nature, necessary corrections in the first phase estimates were made, if changes were due to definitional problem. For this purpose, a matrix showing the changes in the activity status or broad occupations of persons interviewed both in the first phase and second phase was attempted. It was used for refining first phase estimates of the target group (wherever required) and also to reflect on observed phenomenon of transition from 'unemployed' status to 'employed' status and vice versa in some cases.

Table 1.1 Distribution of Slum Households by Zones and size of slums in 1971

Sl No	Zones	Distribution of households by size of slums (huts) in 1971			Total no. of households living (1971)
		0 - 100	101 - 200	200 +	
1.	Tondiarpet-Perumbur zone	13733	10726	23843	48302
2.	George Town zone	4479	4794	7593	16866
3.	Eqmore-Anna Nagar zone	11470	5508	9076	26054
4.	Triplicane-Mylapore zone	13661	9005	5061	27727
5.	Others	21612	11381	11862	44855
	Total	64955	41414	57435	163804
	Percentage	(39.65)	(25.28)	(35.07)	(100.00)
	Total Huts	33684	22409	37343	93436
	Total slums	936	162	105	1202

Source : Survey of Slums in Madras, TNSCB (1975)

Table 1.2 Distribution of Sampled* Slums/Tenements by size and Zone in Madras City

Zone	Slum/Tenement Size			Total slum/Tenement locations
	0-100	100-200	200 +	
Tondiarpet- Perumbur	6	3	4	13
George Town	2	2	2	6
Mylapore- Triplicane	4	3	2	9
Armanagar- Egmore	6	2	2	10
Total	18	10	10	38

* Selected for Phase I of the survey

Table 1.3 Reliability of Some Sample Estimates

Elements	Estimated from (in hundreds)			Standard deviation of the sample est (in actual number)-	Coefficient of variation
	Sub-sample 1	Subsample 2	Pooled est.		
Employed in the age-group (31-40)	873	929	901	2814	3.1%
Employed in the age-group (51-60)	297	247	272	2509	9.2%
Unemployed in the age-group (21-30)	277	265	271	590	2.2%
Students in the age-group (11-20)	777	705	741	3623	4.9%
Total employed persons	3372	3344	3358	1426	0.4%
Total unemployed persons	794	764	779	1503	1.9%
Total dependents (excluding students, housewives, and unemployed)	3105	3051	3078	2707	0.9%

Table 1.4 Distribution of sampled* unemployed by age and sex in slums - Madras City

Sex	Age (years)			Total
	15-24	25-34	34 +	
Male	78	22	6	106
Female	42	17	10	69
Total	120	39	16	175

Table 1.5 Distribution of Samples* of marginally employed persons by occupation in slums - Madras City

Occupation	Total
1a Washermen	20
b Barber	10
2 Rickshaw puller	18
3 Construction labourer	21
4 Cycle Repair	6
5 Tiffin/Tea maker	21
6a Vegetable/Fruit vendor	18
b Flower vendor	7
7 Pan/Cigarette	6
8 Fish/meat sales	12
9 Coal/Firewood/Kerosine sales	13
10 Salesman/Helper	17
11 Matchbox maker	7
12 Weaver	6
13 Vessel polisher	8
14 Helper/cleaner	21
15 Others	17
Total	228

* Selected for Phase II of the survey

ANNEXURE TO CHAPTER I
ESTIMATION PROCEDURE

Let the slums be divided into 'P' size groups. Let from ' k^{th} ' size group ($k = 1 \dots\dots P$), m_k slums be sampled out of total number of M_k slums. Let from the ' j^{th} ' slum ($j = 1, \dots\dots m_k$), n_{jk} households be selected in the sample out of a total number of N_{jk} households.

The following multipliers are defined :

1. R_k = (Total no. of households in M_k slums in 1971 (belonging to ' k^{th} ' size group)
(slum-level multiplier on the basis of 1971 frame) \div (Total no. of households in the m_k slums (sample slums belonging to k^{th} size group) in 1971

$$= \frac{\sum_{j=1}^{m_k} N_{jk}^{71}}{\sum_{j=1}^{m_k} N_{jk}}$$

2. R_{jk} = (Total number of households in j^{th} slum in k^{th} size group in 1978)
(Household level multiplier on the basis of sample data) \div (Total number of households selected in the sample from j^{th} slum in k^{th} size group)

$$= \frac{N_{jk}^{78}}{n_{jk}}$$

Now let there be L_{ijk} number of workers in i^{th} household belonging to j^{th} slum n_{jk} size group. One worker only was sampled from each household. Therefore total number of workers sampled is equal to total number of sample households.

The third multiplier can be defined as :

$$\begin{aligned}
 R_{jk}^w &= \text{(Total workers in the sample households in } j^{\text{th}} \text{ slum belonging to } k^{\text{th}} \text{ group)} \\
 &= \text{(Total no. of sample workers selected in } j^{\text{th}} \text{ slum belonging to } k^{\text{th}} \text{ group)} \\
 &= \sum_i^{n_{jk}} L_{ijk} / n_{jk}
 \end{aligned}$$

The estimate of the total number of slum households in Madras in 1978 is, therefore, given by

$$= \sum_{k=1}^p R_k \sum_j^{m_k} R_{jk} \times n_{jk}$$

Let there be 'L' occupations of workers. Let X_{ijk} denote the sampled worker from i^{th} household, j^{th} slum belonging to k^{th} size group. X_{ijk} can be represented as a vector given by $X_{ijk} = (X_{ijk1}, X_{ijk2}, \dots, X_{ijk1}, \dots, X_{ijkL})$

where $X_{ijk1} = 1$ if X_{ijk} belong to L^{th} occupation, $l = 1, \dots, L = 0$ otherwise.

Therefore, estimate of the total number of workers belonging to l^{th} occupation

$$= \sum_{k=1}^p R_k \sum_j^{m_k} R_{jk} \times R_{jk}^w \sum_i^{n_{jk}} X_{ijk1}$$

$$l = 1, \dots, L$$

Similar expression can be derived for employment status or other classification of workers.

CHAPTER II
HOUSEHOLD CHARACTERISTICS

2.1 Growth Rate

Growth of slum population (households) in Madras city between 1971-79 has been estimated in this section. The basis for the estimate is the enumeration of huts and households in the selected slums. The underlying premise is that number of slum locations are same as 1971 and the selected slums are representative of the city slums. Third premise is that the households living in slum tenements form part of the slum population. Total slum population is estimated at 11.06 lakhs in 1979 (April) in the city. Total number of households is about 2,12000 (including slum tenements) as against 163000 in 1971 (Refer table 2.1). Growth rate of households has been about 30% during the 8 year period (1971-79) - annual addition of about 6000 households.

This excludes formation of new slum locations, if any. Even assuming that there is insignificant growth of new slums, the natural increase itself is of alarming magnitude. This is all the more so if the slums outside the city, where the growth rate is higher, are considered.

The growth of slum households is estimated to be highest in the Annanagar-Egmore zone followed by Mylapore-Triplicane zone. The growth rate is lowest in George Town areas and close to average in Tondiarpet-Perumbur zone.

Table 2.1 Growth of Slum Households in
Madras City - 1971-79

	Number of slum households
1971	163804*
1979	212000
Growth rate (1971-79)	29.4%
Annual Growth of households	6000

*Source : Survey of slums in Madras City, 1971, TNSCB

2.2 Demographic Characteristics

It is generally believed that the demographic profile of slum dwellers is characterised by age and sex - selective migration, ie, there is a preponderance of the males particularly in the age group of 20-50 in the slum population. This is based on the assumption that a large proportion of slum dwellers are migrants and since the migration is mainly of adult males they bring about a demographic imbalance in the slum population. But the demographic imbalance is not evident in the slum population of Madras City (refer Table 2.2). In terms of sex ratio, there are about 990 females per thousand males which is higher than corresponding figure for Madras city (903). Even in terms of age-sex distribution, there does not appear to be a preponderance of adult in the age group of 20-50 - the percentage of males in this age group to total slum population is about 21% and the corresponding figure

for females is little over 19%. The percentage of children (0-14) to total population is higher in the slums (39%) than the city (35%). Demographic balance in the slum population perhaps indicates that there has not been significant migrant movement of predominantly adult males to the slum. The migrant movement may be of whole households. The rate and pattern of migration seems to be different for the peripheral slums, with more age-sex selectivity and higher proportion of migrants (refer Appendix A).

Table 2.2 Some Demographic Indicators - Slums & Madras City

	Slums (1979)	Madras City ⁺ (1971)
Females per 1000 males	990	903
% of males in 20-50 age group to total population	20.9	24.2
% of females in age-group of 20-50 to total population	19.1	19.2
% of children (0-14) to total population	39.2	35.04

+ Source : Census 1971

The average household size of the slum dwellers is about 5.2. About 21% of total households have household size between 1 to 3, 65% have size of 4 to 7 and only 13% have size above 7 persons. The average earners per household is about 1.59 and 40% households have more than one earner .

Worker participation rate in the slums is 30.2% which is marginally higher than that of the city (28.2% in 1971). The female participation rate of 11.8% is higher than the corresponding figure for the city (5.1% in 1971).

Table 2.3 Some Indicators of Usual Activity Status -
Slum Population and Madras city

	Slum Population 1979	Madras City 1971*-
% workers participation	30.3	28.2
% Male workers participation	48.2	49.5
% Female workers participation	11.8	5.1
% Unemployed to total population	6.4	4.5**
% Student population to total population	20.3	22.0

Source : * Census of India, 1971

** Estimated

There are a couple of factors which can explain the labour participation rate in the present context (i) Education levels (student population) (ii) Economic pressures and (iii) Work opportunities. The last factor is not relevant if we are considering labour force participation (total employed and unemployed persons currently seeking employment in the age group of 15-59). The first factor indicates that the higher the student population ratio to total population the lower is the labour participation rate. In case of Madras slums, the percentage student population to total population is very high both for males (21.8) and females (18.8) and sharp difference in labour force participation rates on this count is not expected. The second factor, economic pressure tends to increase the participation rates. As far as male labour participation is concerned, there should not be differences between city and slum population as financial pressures is not a very relevant factor for males. In a society like ours, employment for males is a must. Male labour force participation for slums is 51.7% which is not much different from the estimated figure of 51.6% for the city. But the female labour force participation rate of slum, 15.8% is much higher than the corresponding figure of 5.8% for the city. It is hypothesised that higher female participation is due to economic pressures.

This hypothesis was further analysed in second phase of the study. About 54% of the working females surveyed expressed that they were working due to household

economic pressures (63.2% in household income group below Rs 150/) and 15.4% felt that they had no other option (Table 2.4). So it is surmised that higher female participation rate in the slums is primarily due to household economic pressures.

Table 2.4 Percentage Distribution of Female Workers by reasons for present employment and household income

Household monthly income groups	Reasons				Total
	Household economic pressures	No other option	Higher income	Others	
0 -150	63.2	15.8	-	21.0	100.0
151-350	57.9	15.7	7.9	18.5	100.0
350+	42.9	14.3	9.5	33.3	100.0
All households	53.9	15.4	6.4	24.3	100.0

The economic pressures on the slum households are also reflected in high child labour participation and unemployment ratio. There are about 11000 employed children (0-14 age-group) in the slums and it is estimated that child labour in rest of the city is insignificant.

Ratio of unemployed to total population of 6.9% is also higher than estimated corresponding figure for the city (about 4.5%). The unemployment for males is 7.7% and 6.0% for females⁺. There are about 4500 disabled persons in the slums. In view of the observed seasonality or casual nature of employment in the Indian economy which is more relevant to the rural economy than to the urban economy, it is pertinent to make alternative estimates of employment/labour force by the 'usual activity status' (as presented in the earlier estimates) and 'current employment status'⁺⁺. Analysis of usual activity status and current employment status indicate that the difference between two employment status is not striking is only 2.08% (refer table 2.5). It appears that the problem of slum dwellers is the intensity of work which is not necessarily indicated by the difference between usual activity status and current employment status.

Table 2.5 : Estimated Distribution of Employed Persons in slums by current and usual employment status - Madras City

Age group	Usual activity status	Current employment status	% Difference
15 - 20	37700	37650	- 0.13
21 - 30	101480	99410	- 2.04
31 - 40	90090	88230	- 2.06
41 - 60	84980	82420	- 3.01
Total	314250	307710	- 2.08

+ The definition of 'unemployed' as adopted in the present survey is slightly different between males and females. The Phase II survey indicates that the unemployment rate for females would be less than 6% (refer section 3.4 for the definition).

++ Usual Activity status defines an employed as one who is usually employed irrespective of employment intensity. Current status defines a person as employed if he has worked for at least one day during last one week.

2.3 Literacy

Literacy rate (total literate as percentage of total population) in the slums is quite high, i.e. 55% as compared to slums in other cities (42% in 1972 for Ahmedabad). Literacy rate is estimated to be 64% in 1979 for the city as a whole. About 70% of the male population and 18% of female population in the slums have high school education (standard up to XI). Higher literacy among the slum population is further indicated by the fact that more than 67% of total slum workers are literate (75% for the city in 1971). However the proportion of workers with higher education is relatively higher in the city. As mentioned earlier, the percentage student population to total population is high (about 20%) and is comparable with that of city (22% in 1971).

2.4 Household Income

Extreme poverty among the slum households is reflected by the fact that as much as 83% of slum households have monthly income below Rs 350⁺ - an income just enough to afford food, clothing and shelter. Only about 7.2% of the households have income above Rs 450/- - threshold income beyond which surpluses over the basic necessities would be generated to pay for the different services or to save for the future investment in housing and other assets. The average household income could be derived in two ways. One way is to derive it from the household income distribution itself and other way is to derive it from the average income of earner multiplied by average earners per household.

⁺Only cash income is concerned. As income in kind is likely to be very small in an urban context, the estimated proportion of economically weaker section (EWS) i.e. income below Rs 350/- is not likely to be much less than 80%.

As the household income groups were broad and the nature of distribution is such that there is concentration in one or two groups, it is not possible to derive average household income from the distribution. So the latter method was used for deriving the average income and it is estimated at about Rs 282/-. This is likely to be on the higher side, in view of the fact that it is based on current income but the employment of slum population is not regular over the years. The average household monthly income adjusted for the irregularity of employment over the year is expected to be about Rs 250/-.

Table 2.6 Percentage Distribution of Households in-
Broad income-groups - Slum households and
Madras city

Monthly household income group (Rs)	Slum households	Madras City*
Upto 350	33.1	46.2
351 - 600	14.6	25.0
601 +	2.3	28.8
Total	100.0	100.0

* Derived under suitable assumption from ORG's survey of properties in Madras - Refer Annexure to this Chapter.

The average number of earners is generally associated with increasing average household income. The income is increasing partly due to increase in earners per household and partly due to increase in individual income.

It is estimated that little more than 50% of the city's total urban poor (EWS) (monthly household income less than Rs 350 at 1978 prices) live in slums. Viewed against the fact that slum dwellers account for 30% of the city's population, proportion of urban poor will be significantly less in the rest of the city (estimated at little less than 30%). An incidental comparison with the income profile of slum dwellers in Bombay and Ahmedabad (in Bombay only 50% of slum households earn below Rs 350 and corresponding figures adjusted for price index is 52% for Ahmedabad⁺) with that of Madras would support the view that the correlated features of under-employment and poverty are of much greater concern in the city. Viewed against the employment status profile of the slum dwellers as presented in the following chapter and the occupation profile as presented in the succeeding chapter, low personal and household income is a natural corollary. The hypothesis that the profile of slum population is basically dependent on the economic profile of the city is partly supported from some of the evidences presented here and in the subsequent chapters.

The household income in slums was analysed by different criteria like zone (location), World Bank project slums/ Non-World Bank project slums, size of slums and ownership of land (private/public). This analysis reveals that there is no significant difference in household income levels by these criteria. Both in tenements and slums, the percentage of households below Rs 350/- per month is about 83%. The evidence also indicates absence of any bias in selection of slums for World Bank project.

+ Slums in Gujarat (A Study of Seven Urban Centres)

ANNEXURE IABLE TO CHAPTER II
ESTIMATED DISTRIBUTION OF SLUM POPULATION BY AGE-GROUP AND USUAL ACTIVITY STATUS-MADRAS CITY

AGE GROUP	EMPLOYED	UNEMPLOYED	STUDENT	HOUSEHOLD DUTIES	DEPENDENT	DISABLED	TOTAL
0 - 14	11,660	-	2,06,210	2,390	2,13,610	830	4,34,700
15 - 24	71,230	49,940	18,450	44,320	36,590	950	2,21,480
25 - 34	85,290	13,010	-	54,040	4,890	440	1,57,670
35 - 44	83,230	4,480	-	37,610	5,180	490	1,30,990
44 - 59	68,370	2,640	-	19,280	21,110	1010	1,12,410
59 +	16,140	710	-	1,800	29,600	870	49,120
Total	3,35,920	70,780	2,24,660	1,59,440	3,10,980	4590	11,06,370
%	30.4	6.4	20.3	14.4	28.1	0.4	100.0

ANNEXURE TO CHAPTER IIHousehold Income Distribution - Madras City

Prior to the present survey there were two sources of data regarding distribution of households by income (or consumption expenditure) in Madras city. They were, MMDA study (1976) based on data obtained from ration cards and National Sample Survey, 28th round, 1974. The first source suffers from the use of incomplete or based information on income from a source like ration card in which information on income is either casual or used to define the limit to rationed commodities. The second source is basically expenditure classes of the households and is based on a small sample size.

The present survey provides data about household income distribution in the slum areas. Simultaneously, with the present survey, another survey for properties was also conducted. This survey has collected supplementary information regarding household income distribution of non-slum areas in the city. Data from the two sources was combined to develop the income distribution for the city. The property tax survey basically covered the non-slum areas in the city. Sample for this survey was selected by stratifying the city into various zones. Although all the zones were not proportionately represented in sample but all the typical zones in the city were represented. About six broad zones and 14 localities in these broad zones were selected for the purpose of this survey. The sampling fraction was

adjusted for deriving a representative estimate at the city level. This survey covered a sample of about 650 properties. Both owners and tenants were represented in the sample. Information on income from about 450 owners and about 600 tenants were collected. This surveys gives only broad income groups of the households. Estimated distribution of households by broad income groups for the non-slum areas in the cities is given below. This together with proper weighing of income distribution in the slum areas, gives also the estimate for the city as a whole.

Household monthly income group	Non-slum areas* of city	Slum areas	Madras City
Upto 350	28.1	83.1	46.2
351 -600	30.2	14.6	25.0
601 -1000	25.7	2.3	17.8
1000+	16.0	-	11.0
Total	100.0	100.0	100.0

* Source : Survey of Properties in MMA - ORG, 1979

CHAPTER III
EMPLOYMENT STATUS AND UNEMPLOYMENT PROFILE

3.1 Employment Status and Overall Employment Process

Expost employment status of slum dwellers is outcome of two primary forces (1) demand from different sections of the metropolitan economy for different types of labour and (2) resources and skills (including education, capital etc) available with this particular segment of the population. To understand the impact of these forces the employment status itself was divided into five broad categories⁺.

- (i) Employer and owners of family enterprises
- (ii) Employee (organised sector)
- (iii) Employee (unorganised sector)
- (iv) Family workers and
- (v) Self-employed (non establishment)

The first category of employer and owners of family enterprises is radically different from all the other categories. For this employment status, the individual must not only possess the necessary skills (including entrepreneurial abilities) but also necessary capital. A very small proportion of slum dwellers is expected to be in this employment status.

The next three categories (employee organised sector, employee unorganised sector and family workers) have one point in common, namely the method of remuneration, in money or in kind. Absorption of slum workers as employee (in the organised sector) is limited (as can be seen in the succeeding discussions in the chapter) due to lack of skills (supply aspect) and employment opportunities (demand aspect). Employment

⁺ Refer annexure to this chapter for definition

for family workers is directly related with number of family enterprises which itself is limited. Employee (unorganised sector) and self-employed⁺ (non establishment) use no capital or only a negligible amount of capital and very little skills in most cases. This makes entry into these two categories relatively easier than into the other categories. Our hypothesis is that a large number of slum workers are just pushed into these categories due to lack of skills, capital and opportunities. Job seekers prefer to be self-employed or marginal workers rather than wholly unemployed. This phenomenon is possible in the unorganised sector in view of divisibility of jobs. These observed characteristics of employment among the self-employed and employee in the unorganised sector in terms of easy entry to labour market, absence of any definite skill and access to capital resources, divisibility of jobs characterise also the conventionally defined informal sector⁺⁺ enterprises in an urban economy. Together with the fact that these two categories account for the majority of the working population living in slums, who, in turn, account for about 50% of such employment for the city as a whole, a profile of these two categories would also reflect the economic characteristics of a large part of the informal sector occupations in the city.

In Madras slums, as stated earlier, the first category of employers and owners of family enterprise account for only a small proportion of total employed persons (4.02%). The percentage of workers in employee (organised) category is 21.6% which is lower than the corresponding figure for the city (36%).

+ They may work either as employee or self employed with an enterprise of their own.

++Sathuraman, SV, "The Urban Informal Sector", Concept Measurement and Policy", International Labour Review Vol 114, No 1, 1976

About 72% of the workers fall in the categories of employee (unorganised) and self employed (non-establishment), the highest proportion of workers (about 50%) being in the self employed (non establishment) category. Apart from the fact that these two employment (status) categories exhibit the features of easy entry, low skill etc which are the important characteristics of informal sector occupations, the most important characteristic of these two categories (in the context of the economy of Madras) is what has been described in the present exercise as marginal nature of employment. Various types of evidences have been presented in this regard in the present exercise. The nature of the city's economy together with cumulative growth of job seekers and low employability of the marginally employed persons explain this phenomenon to a large extent. The process of employment for the urban poor has also been explained in a theoretical frame in Chapter VI.

Summarily speaking, an analysis of occupational structure and income of the self employed and employee in the unorganised sector (as attempted in the subsequent sections) and a disproportionately high proportion of self-employed people in the total working force for the Madras city compared to other metropolitan cities suggest marginal nature of employment for a large number of slum workers. This lends some evidences to our hypothesis that a large number of enumerated workers are just forced into these categories as entry to other categories (eg employment in organised sector) is not available to them and this becomes the only source of employment.

Table 3.1 Estimated Distribution of slum workers by Employment Status- Madras City

Category	Number	Percentage -
1. Employer & owners of family enterprises	13460	4.0
2. Employee-Organised sector	72580	21.7
3. Employee-Unorganised sector	72770	21.7
4. Family workers	8530	2.6
5. Self-employed(non-establishment)	167400	50.0
Total	334740	100.0

3.2 Income and Employment Status

In the previous section, the marginal nature of slum employment was hypothesised on the basis of proportion of workers in different employment status. Income is a more direct evidence of marginal employment. The income pattern of the different employment status has been analysed for this purpose. Marginality of employment can be theoretically explained in terms of declining marginal productivity of labour (which under certain circumstances) may tend to be 'zero' beyond the optimum point of labour utilisation. A crude evidence of this phenomenon is low average productivity and income of labour (including self employed). Thus, in the present exercise, income creation is used to assess the extent of marginality of employment among the slum workers.

In slums of Madras, the employer category has the highest average income of Rs 340 followed by employee (organised) ie Rs 287. The family enterprise owners/workers have a monthly average income of Rs 187. Employee of the unorganised sector and self-employed categories (which together account for 71% of total workers) earn on an average Rs 144 and Rs 140 per month respectively which is lower than average income of all the type of workers (Rs 177). Low labour income is partly explained by the fact that these occupations often represent sharing a given size of work/business by a larger number than the optimum. Less than full-time or regular employment (for employees) also explain low labour income.

Table 3.2 : Estimated income distribution of slum Workers by Employment Status

Employment Status	Monthly income group			Total %	Average monthly income (Rs)
	0-150 %	151-350 %	350 + %		
Self-employed (non-estd)	72	24	4	100	140
Employee (organised)	21	22	57	100	287
Employee (unorganised)	68	29	3	100	144
Family enterprise (owners/workers)	49	30	21	100	181
Employers	-	35	65	100	340
Total	58	25	17	100	177

In terms of income distribution about 70% of self-employed workers and employers in the unorganised sector earn less than Rs 150/- per month. The corresponding figure for organised sector is 21%. The same for family enterprise is also quite high (49%). In contrast there is no employer who earns below Rs 150/- per month; most of them (65%) earning above Rs 350/- but the employers form only about 3% of total employed persons.

Although the employees in organised sector in the slums have a relatively high average monthly income of Rs 287, it is even lower than average income of blue collar workers in the organised sector for the city as a whole (it is little over Rs 430 for factory sector worker⁺). This is primarily because the majority of the organised sector workers living in the slums hold relatively low income low skill occupations compared to the average for this sector (particularly industrial) as a whole. About 43% of the employees in the organised sector in the slum earn less than Rs 250 per month. So not only that the organised sector has a smaller contribution in providing jobs to the slum workers (21.7% of the workers in slums are in organised sector as compared about 37% for the city as a whole and about 45% for the non-slum areas), but even among them the poorer are staying in the slums. They generally perform manual tasks in the organised sector which require little skills.

+ Source : Annual Survey of Industries, 1976-77

Nevertheless, the role of organised sector in the aggregate income distribution of slum dwellers is significant as evident from the calculations given below. If the organised sector employees are excluded from the total workers, then the average monthly income of rest of slum workers decreases from Rs 177 to only Rs 146 and 68% of workers earn less than Rs 150 per month. On the other hand if the percentage of slum workers in organised sector is assumed to equal to city average of 37% then the average income increases from Rs 177 to Rs 198. Although the increase may not look that significant in view of already very low percentage of organised sector workers in the city, the average income differential is quite significant - Rs 287 per worker in organised sector and Rs 146 for unorganised sector in the slums⁺.

Table 3.3 Deviation in some characteristics found in self-employed (non-establishment) workers and employee (organised sector) from overall average of slum workers

	Self-employed (non-estd)	Employee (organised sect)
Average monthly income (Rs)	- 37	+ 110
% of workers earning below Rs 150 pm	+ 13	- 37
% workers with High school education	- 12	+ 26
% workers in age group of under 25	- 2.4	- 8.0

Note : Deviation = characteristics of the self emp/employee(organised sector) - overall average

⁺It is assumed that all the slum workers excluding employees in the organised sector are in the unorganised sector

3.3 Employment Status by Education and Age

Education

About 68% of slum workers are literate and the literacy rates are varying in the different employment status. The literacy rate is the lowest for self-employed workers (56%) followed by workers in unorganised sector and family enterprises. The proportion of high school educated total workers in organised sector is highest ie 62 (26% higher than average) and lowest for self employed workers ie 25% (11% less than the average). It appears that certain minimum level of education is a prerequisite for entering the organised sector.

Age

A larger proportion of child and young workers outside the prime working age group (say under 25) are expected to be in the unorganised sector. In the slums, the percentage of children and young workers (under 25) in the organised sector is 9.4% which is much lower than the corresponding figure for the unorganised sector (19.4%). It supports the popular image of the unorganised sector that it absorbs a large number of young people who are perhaps forced into this sector due to financial pressures and lack of opportunities to improve skills. It is interesting to note here that the highest percentage of children and young workers (under 25) is not in the self-employed category but in the categories of employees (unorganised) and family enterprises. The percentage of child worker to total worker is the highest in unorganised sector employee category (3.6%) as compared to 0.8% for self-employed (Refer table 3.4)

This lends evidence to our hypothesis that in a situation like that of Madras the first entry in the labour market for the younger people is as employees in the unorganised sector. These occupations are mostly in the nature of low paid marginal employment. As these younger workers (including child workers) grow older they look forward for better employment in the organised sector but more often than not in absence of suitable training and opportunities they lend themselves into some sort of self employment which is a better perceived employment status than that of remaining unemployed or casually employed. One indirect evidence of this is that while in the unorganised sector higher participation is observed in the age group 15-24 (26.2%), the same is true for self-employed in the succeeding age-group i.e. 25-34 (28.8%) (Table 3.4)

3.4

Unemployment Profile

Similar factors like limited job opportunities in the organised sector and access to capital and acquisition of skill which explain marginal nature of employment also explain unemployment among the slum dwellers in the city. In the city slums, a little more than 17% of total labour force (total employed and unemployed persons) are unemployed. Ratio of unemployed to total population is 6.9% (estimated at 4.5% for the city). The figure is more staggering in terms of absolute numbers i.e. 76000. It accounts for about 50% of the estimated total unemployed of the city

About 40% of total unemployed are female⁺ (32 thousands out of 76 thousands). As expected the majority of the unemployed are young - 70.7% of unemployed are in the age group of 15-24 years. More interestingly, a significant percentage of unemployed are in the middle age group. Unemployed in the middle age group of 25-34 years account for 20% of unemployment. About 8000 unemployed are in the age group of above 34 indicating casual nature of employment for many.

In second phase of the study the estimates of unemployed were further refined. Findings of the second phase survey indicate that the nature of unemployment of females is not of the same type as that of male unemployed. Many of the females due to household economic pressures would like to work for an easy job near their place of residence. The estimate of female unemployed will be sizably reduced given the same definition as male unemployed and it is estimated to be about 25 thousands (4.6% of female population). The survey also indicates that for a number of unemployed and casually employed people, the discrete division of "employed" and "unemployed" is sometimes misleading. (A revised estimate of unemployed is presented in Table 3.5).

Table 3.5 Estimates of Unemployed in Slums-Madras city

Male unemployed	43,600
Female unemployed(Phase I)	32,500
Female unemployed (adjusted for definition)	25,000
Total unemployed	68,600
% to total employed	20.4
% of population in age- group 15-59	11.0

+Male unemployed is defined as able-bodied males in age group of 15-59 currently seeking employment. Wherea for females the definition is more liberal. It is female in age group of 15-59 available for employment.

Most of the unemployed people have some level of education. About 59% of the unemployed have high school education (standard VI to XI) (refer table 3.6). Even among the female unemployed education level is quite high (51% have high school education). Higher proportion of unemployed among the female is perhaps due to financial pressures and higher literacy rate.

It is a redeeming feature that about 70% of the slum households do not report any chronically unemployed member⁺ and 82% have no male unemployed. A little more than 18% of households have one unemployed member and only 7% of households have more than one unemployed member. Proportion of unemployed is more or less the same in different household income groups. The profile of unemployed in the slums is characterised by a mix of young and middle aged labour force with relatively high education (usually basic or general education) and high proportion of females. The more important consideration is however the employability of the unemployed in the existing economic structure of the city. At a first glance, it would appear that the majority of new entrants to the labour market are without any formal or on-the-job training or capital resources. This has been discussed in further details in Chapter V.

+ Subject to the limited definition of 'unemployed' mentioned in the preceding paragraph.

Table 3.6 Profile of Unemployed in Slums - Madras City

	Male	Female+	Total
Number of unemployed (in thousands)	44	32	76
% of unemployed in the age-group of (15-24)	75	64	71
% literacy among unemployed	88	72	81
% of unemployed with high school education and above	64	51	58

+ See page 43 for definition.

ANNEXURE TO CHAPTER II

3A Definitions of Employment Status

Family Enterprises

It is defined as enterprise that is carried out at household level without employing any hired labour.

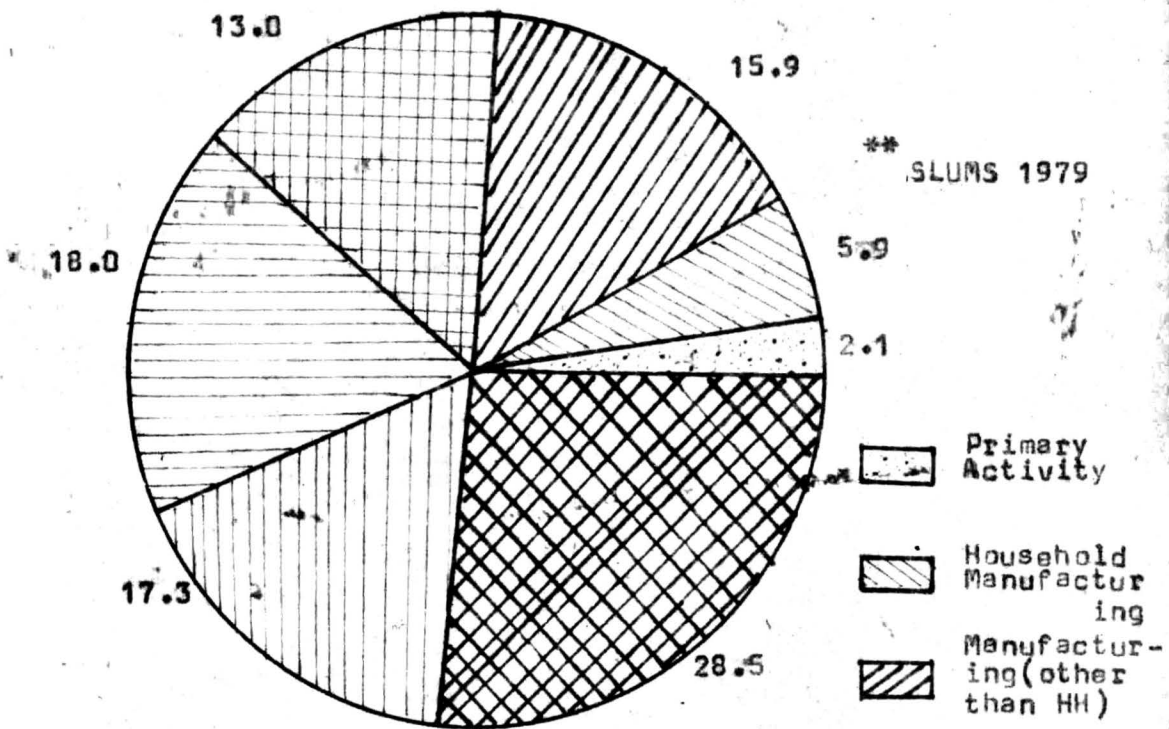
Organised Sector and Unorganised Sector

"Organised sector" includes all the public sector undertakings, manufacturing establishments regularly employing more than 10 persons using power and 20 persons without using power (ie establishments covered by the Factories Act) and trade and service establishment regularly employing more than 10 persons. The residual activities can be called 'Unorganised Sector' including both establishment and non-establishment (eg self-employed enterprise) sector. A major part of the 'unorganised' sector activity may be said to constitute the 'informal' sector. This statement is supported by evidences in the present exercise on the typical characteristics (associated with informal sector occupation) found in majority of the occupations in the unorganised sector.

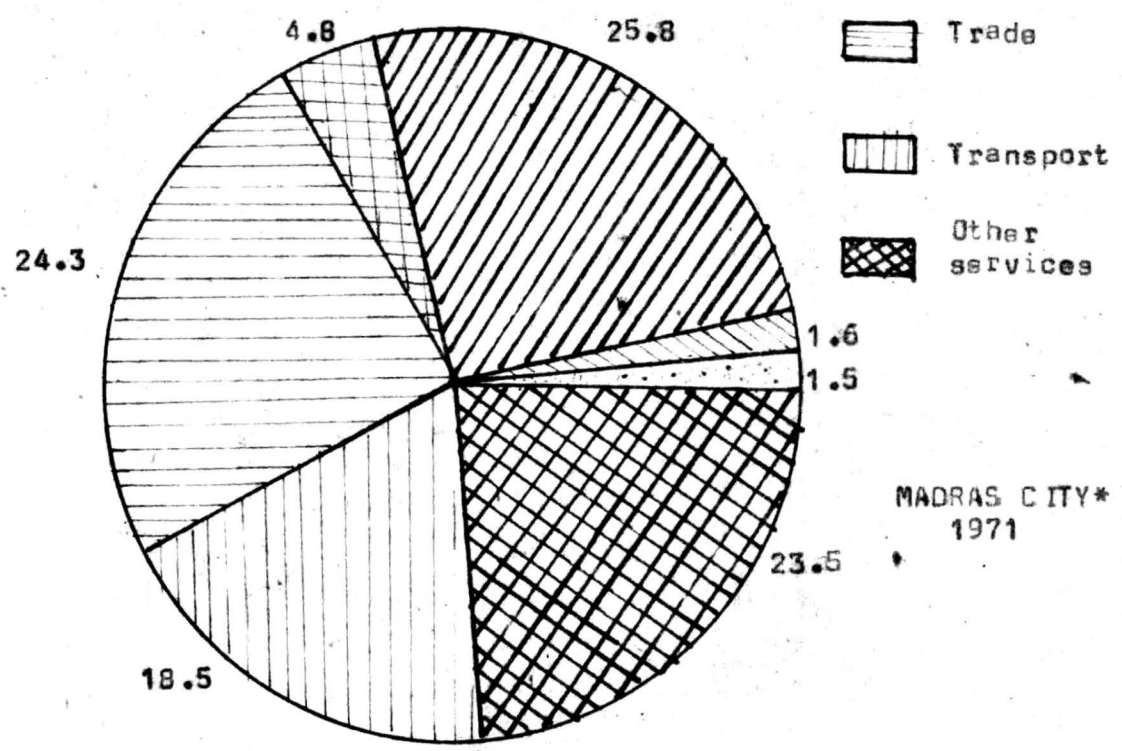
Self Employed (non-establishment)

Workers not attached to any specific establishment. They may work both as employee or as self-employed with own enterprise. The example of the former (employee type) is a 'mason' employed by different contractors on ad-hoc basis. The example of the latter is a 'carpenter' who takes up work from the household or industrial client and does the job on his own. In case of Madras, self-employed is usually associated with unorganised sector.

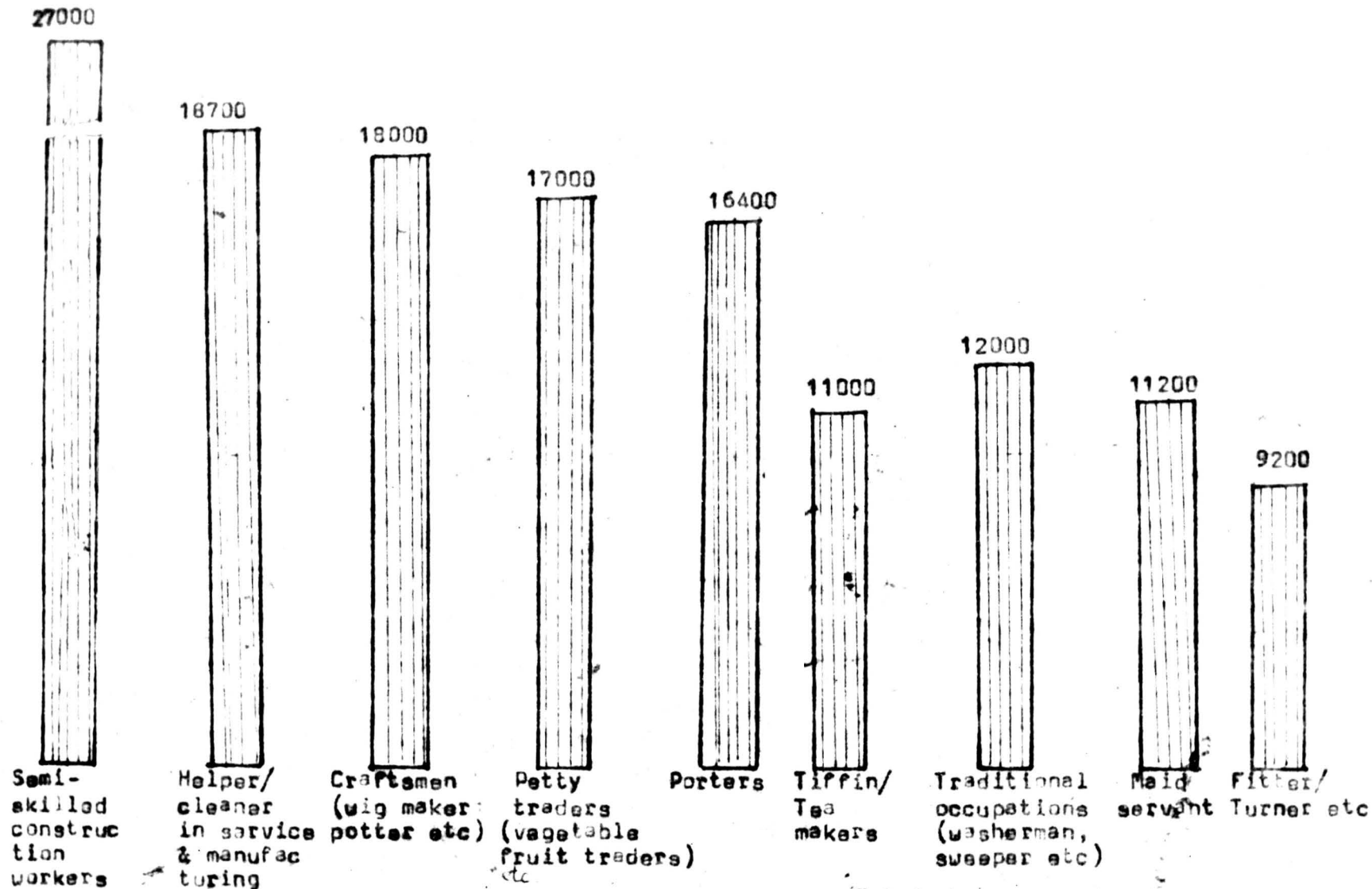
FIGURE 3: PERCENTAGE DISTRIBUTION OF WORKERS BY BROAD ACTIVITY PATTERN - SLUMS AND MADRAS CITY



** Source : Survey of 3700 slum households in Madras City, 1979 - ORG



*SOURCE : CENSUS, 1971



Total Workers - 335000

CHAPTER IV
OCCUPATIONS AND ACTIVITY CONCENTRATION

4.1 Background

There are about 3.35 lakh workers in the slums ie about 35% of the total city workers. An attempt has been made in this chapter to analyse the nature of occupations of such a large number of workers and the role they play in the economic activity of the city. The purpose of the analysis is to find out the extent of concentration or specialisation of the occupations of the slum dwellers, the contribution to the basic economic functions of the metropolitan economy and also to determine how far they (occupations) are marginal in nature. For this purpose, the occupations have been analysed in terms of skills, income, activity and income growth.

Some of the hypotheses which have been discussed in this chapter are :

- a) A large proportion of workers in the slums are absorbed in low skill occupations requiring low or marginal capital in view of limited job opportunities and easy entry to such occupations.
- b) Marginality of employment in many of the occupations is partly explained by the fact of sharing a given size of market/business by a larger number than required (or optimum).
- c) A large majority of slum workers are engaged in consumer oriented activities which mostly caters to non-basic functions in the metropolitan economy.
- d) For many of the occupations life-time income performance suggest a stagnation or decline in real sense over time particularly beyond a certain age. This phenomenon is also a reflection of marginality of employment among these occupations.

4.2 Skills and Occupations

As many as 66% of total slum workers are in the low-skill service and unskilled labour categories like petty traders, rickshaw-pullers, maid servants, porters, construction labourers etc. There are some skilled occupation workers like fitter, turner, repair mechanic, health worker, driver of mechanised vehicle etc, but their proportion to total employment is meagre (10%) (refer Table 4.1). Only 7% of workers are craftsmen. Remaining important occupations are semi-skilled construction workers, traditional services, peon etc.

In some occupations the proportion of educated workers appears to be higher than the others. In occupations like clerk/cashier, peon (services), book binder and turner/fitter, about 60% have high school education and above. Only in a few occupations like maid servants, tiffin/tea makers and beedi makers the proportion of workers below primary level education is more than 60%. It is interesting to note that there are workers with high school education in occupations which are otherwise regarded as unskilled and earmarked for uneducated people. As illustrated in Table 4.1 as much as 37% of workers have high school (post-primary) education, the percentage for unskilled occupations also being as high as 28%.

Table 4.1 Estimated Distribution of slum workers by levels of skills and education in Madras City

	Education		Total (including illiterate)
	Primary	Post-primary	
(a) Skilled	9300 (26.6)	25000 (71.4)	35000 (100.0)
(b) Semi-skilled	23300 (28.7)	38400 (47.4)	81000 (100.0)
(c) Un-skilled	51500 (23.5)	61500 (28.1)	219000 (100.0)
Total	84100 (25.1)	124900 (37.3)	335000 (100.0)

4.3 Activity

In terms of employment the tertiary sector is the most important sector accounting for 64.8% of total workers (refer table 4.8). It is followed by secondary sector (Manufacturing and Construction) with 34.1% of workers. Primary sector plays an insignificant role (2.1%). For an understanding of the role played by the slum population in the urban economic structure, it is essential to analyse the functions carried out by different activities within the sectors. For this purpose, the tertiary sector was divided into two types of tertiary activities, namely, "producer-oriented" and "consumer oriented" tertiary activities. The producer-oriented tertiary sector consists of basic economic activities like wholesale trade, banking, public services etc, whereas the latter type consists of consumer oriented activities like retail trade, personal services etc.

In the slums, about 85% of tertiary sector workers are in the consumer oriented tertiary activities and income generated in these activities is very low. Average income of workers in these sectors is only Rs 148/-.

The relatively high percentage in the secondary sector (manufacturing and construction) is not so much due to high industrial activity in the organised sector. The manufacturing activity (other than household) accounts for only 15% of workers which is much lower than the corresponding figure in the slums of other cities (for example it is 50% in Ahmedabad). The relatively high percentage in the secondary sector is primarily due to higher percentage of construction (13.0% as compared to 5% in the city in 1971). Despite definitional difficulties, it is crudely estimated that majority (56%) of the secondary sector activities in which the slum workers are engaged are in the consumer-oriented activities which comprises of construction activities pertaining to house-building and maintenance, household industry, and consumer goods industries in both organised and unorganised sectors. Taking into account both the secondary and tertiary sector, it is very crudely estimated that 70% (about 2.3 lakhs in absolute terms) workers are in the consumer-oriented sector (refer table 4.3). Such a large number of workers in consumer oriented activities by itself is not undesirable so long as it bears a proportional relationship to the consumer demand as estimated through population size and income per capita. Although it is difficult to link precisely the number of people

engaged in such consumer oriented activities to the aggregate consumer demand in the city, some of the facts, illustrated below, bear out that the proportion of workers engaged in such occupations is disproportionately large.

City level estimates of workers in all occupation and aggregate consumer demand derived from per capita income (Rs 880/- in 1971 as estimated by Directorate of Statistics, Tamil Nadu Government) were generated, on a crude basis, for the purpose. It is estimated that about 3.35 lakh workers (including self-employed) in 1979 engaged in such occupation cater to a city-level consumer expenditure (monthly) of about Rs 240 million, implying an average monthly consumer expenditure of Rs 720 per one unit of employment. Although employment and consumer expenditure cannot be directly related in view of more than one level of flow of goods and services to the final consumer, the average figure is suggestive of higher average employment (observed) per unit of output/turnover, particularly viewed against the fact that only a small proportion of turnover is accounted for as wage income. For example a case study⁺ indicates that retail expenditure (monthly) compatible with one (1) unit of nearly full-time employment works out at Rs 2500. This low average output or income per employed person is a reflection of the divisibility of job in such consumer-oriented occupation or in other words, sharing a given market demand by a larger number (of units/employed persons) than required. There are other evidences in this direction. Comparative analysis of sales or value added per trading household in Madras Calcutta and Bombay (Table 4.2A) would also corroborate this phenomenon of very low output and income in trade

+ ORG-Housing & Land Development in MPA-A Case Study, 1979

occupations in Madras. Even some simple calculation (Table 4.2 B) of how many households, on an average, are served by one petty trader (eg vegetable vendors) or ricksha puller would illustrate the disproportionately large number in such occupations. All these inevitably result in marginality of employment in terms of income as illustrated in next section.

The consolidated figures for consumer-oriented and producer-oriented activities are given in table 4.3. As expected the consumer-oriented activities have lower proportion of skilled workers than the producer-oriented activities which is compatible with the low average incomes in the consumer oriented activities.

Table 4.2 Some Indicators of relatively high proportion of workers in unskilled and consumer-oriented occupations in Madras city

A. Sales and Value added per non-registered trading household - 1969-70

Indicator	Madras	Calcutta	Bombay
1. Sales per month per retail trading household (Rs)	165	798	855
2. Gross earnings per month per household	98	325	395
3. Value added per month per household	87	299	364

Source : National Sample Survey (NSS), 24th Round (1969-70)

8. Number of Household per work in some typical Occupations

1.	Number of households per petty trader (vegetable, fruit, tea/tiffin etc)	17
2.	Number of households per slow moving vehicle puller (rickshaw puller, animal cart etc)	25

Source : Estimated on the assumption that 60% of these workers in city stay in the slums.

Table 4.3 : Estimated Distribution of Slum Workers by Levels of skills and broad activity

	Consumer oriented activities	Producer oriented activities	Total
Skilled	5000 (2.1)	30000 (29.4)	35000 (10.3)
Semi-skilled	62000 (26.6)	19000 (18.5)	81000 (24.1)
Un-skilled	166000 (71.3)	53000 (52.1)	219000 (65.6)
Total	233000 (100.0)	102000 (100.0)	335000 (100.0)
%	69.6	30.4	100.0

Figures in parenthesis indicate percentages to total

4.4 Income and Occupations

It has been hypothesised in the previous chapter that a large proportion of slum workers are forced to accept the self-employment status as the alternative is to be unemployed. This appears to be true for many of the occupations among the slum dwellers. Data on income distribution and percapita income of the earners among the slum dwellers provide supporting evidence for the phenomenon. Except for few skilled categories, monthly income in most of occupations is between Rs 100 to 180. Only four out of thirty four occupations (owner-trader, fitter/turner, mechanic and clerk/cashier) have average monthly income above Rs 350. If it is assumed that occupations where more than two-third of workers earn less than Rs 150/- per month are occupations of marginal nature then about 50% of total workers are in the marginal occupations (refer table 4.4). Some of these occupations are unskilled labourers/porters, maid servants, petty traders, construction labour, rickshaw puller etc.

Table 4.4 Distribution of slum workers in the monthly income range of Rs 150 in Madras &

Percentage of workers in monthly income group less than Rs 150	Number of occupations	Total workers
0 - 33	9	53180 (15.9)
34 - 65	10	112030 (35.6)
66 +	15	168810 (50.5)
Total	34	334020 (100.0)

The basic question is whether the low income of the slum workers is due to inherent low productivity or inefficiency of these occupations, or these are a result of various factors like inadequate capital, lack of demand (or keenness of competition) and unfavourable location. For this purpose all the occupations can be grouped in three broad groups.

In the first group there are occupations like coolies, maid servants, cart pullers, helper/assistant in trade and helper/cleaner in services sector which are inherently low skilled occupations and increase of income in such occupations beyond a certain point is not possible on productivity consideration under the given market conditions in a typical urban economy in India. This group accounts for about 30% of the slum workers and the average monthly income is Rs 140/-.

The second group has occupations like petty traders, semi-skilled construction workers, match box makers and craft where incomes are low not due to inherent low productivity of these occupations but primarily due to a combination of factors like keen competition, lack of access to acquisition of training, capital etc. These occupations in the second group are often a result of forced choice of job seekers in absence of adequate opportunities of gainful employment particularly in the organised sector. The number of employed in this category is not necessarily a reflection of proportionate growth in demand for goods/services catered to by them but often a result of sharing of a given market by larger number due to easy entry. Some of the characteristics of these occupations observed in the second phase of the survey tend to support the view that many of the people engaged in such occupation report their

present occupation as occupations of last resort. Moreover, the enterprises in these occupations also represent very low capital intensity (Table 4.5). This group accounts for about 50% of slum workers and average income is about Rs 180.

The third group consists of occupations like fitter/turner, repair mechanic, metal manufacturers which requires considerable amount of skills and in some cases, capital too. These occupations are not so severely threatened by competition owing to certain constraints in acquisition of skills and capital and consequently the supply of labour does not outpace the demand for the same. Average income in these occupations is reasonably high (above Rs 300 per month). This group accounts for little over 15%.

Table 4.5 : Some Indicators of Slum Occupations in Madras

Occupation	% reporting no other option for employment	Average capital per enterprise (among the self-employed with enterprise or working owner)
Washerman	52	300
Cycle repair	50	225
Cycle rickshaw puller	67	55
Tea/tiffin makers	86	70
Vegetable/fruit vendors	72	220
All workers (including others)	70	275

4.5 Age, Income and Occupation

In the previous section the nature of occupations has been analysed on the basis of their present income, pinpointing the marginality of employment and inadequate growth in demand to support the increasing number of employed persons in the occupations. Another approach for analysing the nature of employment particularly in the low-income low-skill occupations as in the case of slum dwellers is to understand the lifetime income performance of slum workers. It is hypothesised that income of workers in such occupations, whatever their earnings at the point of entry, would not increase considerably with age or at any rate, be significantly less than the income growth of workers in the skilled or organised sector occupations.[†] A very little upward mobility, in terms of income, is expected within the low skilled occupations.

For this purpose, age-income profiles for different occupations were prepared. As mentioned earlier, there are wide differences in income for different employment status (ie self employed, employee in organised and unorganised sector). Hence, in some cases, the occupations have been considered separately for different employment status.

In case of self-employed workers the average income in the age-group of 15-24 and 25-34 years increases from Rs 125 to 144 (15% growth rate) and remains almost stagnant, in the age groups of 35-44, and 45-59. Self-employment is normally regarded as a higher order of employment status. But in the slums where this employment status accounts for about 50% of the total

[†]Dipak Majumdar, "The Urban Informal Sector" World Development, 1976 Vol 4 No 8 p 655

workers, it is not a remunerative one. Most of the workers are forced to take up the self-employment status in absence of jobs in the organised sector. This is also reflected in the almost marginal increase of income of self-employed workers over a life time age period of 15-59 years (Refer table 4.6 and figure 5). It appears that with some increase in money income (about 15% over a period of 5 to 10 years) in the initial years of working life, even money income stands stagnant for the remaining working life span for the vast majority of self-employed persons in the slums.

Even in case of some semi-skilled occupations like carpenter (self employed) and construction workers average income does not increase more than 21% between age groups of 15-24 and 45-59 years. But the increase in income in some of the skilled occupations like fitter/turner, driver (mechanised vehicle), craftsmen, tailor is high. However, the average income for these occupations except turner/fitter is quite low. The highest increase is in the category of fitter/turner where income increases from Rs 145 to Rs 441 between age groups of 15-24 and 45-59 years. As the present analysis is not an exhaustive appraisal of all occupations, it is quite possible that there may be few more occupations in the third category.

Most of the slum workers are in the categories where income does not increase with age. Real income appears to have fallen if money incomes are adjusted for consumer price index. Low incomes discourage the attachment of workers to an individual establishment/ employer, and instability prevents acquisition of skill and perpetuates low income.

In the first phase the life-time performance of the workers in different occupations was examined by analysing average income for different age-group of workers. Another approach for studying the life-time performance could be by analysing growth of income for the same individual worker over time. This approach was adopted in second phase. In this phase slum workers in various occupations were selected and data regarding growth in their income over a period of time was collected. Annual growth rate of income (between 1971-78) for some of the occupations is presented in Table 4.7. As expected the growth rate of income for unskilled occupations like rickshaw puller, construction labour, vegetable/fruit, barber vendors has been low (varying between 1 to 6%) as compared to above 10% increase in price index. Corresponding growth rate has been usually lower for the workers in age group above 35 years. Growth rate is high for skilled occupations like tailors, fitter, machine operator etc. Mostly growth in money income has outpaced the increase in price index in such occupations which, however, account for a very small proportion (less than 20%) of slum workers. Preceding analysis of growth in earners' income both from cross-sectional data and time trends suggest declining marginal productivity* for the majority of the occupations particularly for the first two groups identified in section 4.4. The fact that for majority of these occupations annual growth in money income is much less than increase in price is a reflection of marginal nature of employment made possible through easy entry and divisibility of job.

*Assuming that wage/income earner would be directly proportionate to marginal product.

It can be summarised that a very large proportion of slum dwellers are in the low skill, low income occupations. They are mostly in the consumer-oriented activities which are non-basis to the metropolitan economy. Analysis of income and income growth in these occupations reveal that growth has been limited due to various factors like limited job opportunities in alternative gainful occupations and lack of capital and acquisition of skill for these segments of population.

The supply of labour has, in general, outpaced the growth in demand resulting in marginality of employment in the sense that a given output/work is shared by a number larger than the optimum. This is also reflected in the insignificant growth in life-time income performance for most of the occupations.

Table 4.6 : Distribution of average income in various occupations by age group (Rs)

Age Group	Tailor	Carpenter (self- employed)	Semi-skilled construction worker (Mason painter etc)	Driver (self-employed)	Craftsman	Turner/fitter	Self-employ- ed (all)
15 - 24	106	165	144	164	132	145	125
25 - 34	183	193	161	199	223	327	144
35 - 44	158	194	174	193	194	349	146
45 - 59	153	197	156	233	199	441	144
All age groups	141	187	161	199	193	319	140

Table 4.7 : Annual Growth rate in earners' income for various occupations in slum between 1971-78 in Madras City

Age	Construction labourer	Barber	Tiffin/ Tea maker	Rickshaw puller	Vegetable fruit vendor	Helper/cleaner	Tailor	Fitter	Machine operator
15-34	4.7	7.9	Nil	4.9	6.8	6.5	19.0	45.4	10.8
35+	6.5	1.4	0.7	2.5	2.1	6.0	7.9	10.9	16.9
All age-groups	6.0	2.6	0.7	3.7	2.8	6.2	12.2	24.1	13.3

Table 4.8 Percentage distribution of workers by
different activities - slums & Madras City

	Slums (1979)	City* (1971)
Primary	2.1	1.6
Manufacturing(household)	5.9	1.6
Manufacturing(other than household)	15.2 ⁺	25.8
Construction	13.0	4.8
Trade	18.0	24.3
Transport	15.0	18.6
Services(including govt)	30.8	23.3
Total	100.0	100.0

* Source : Census, 1971

+ It is about 50% for slums of Ahmedabad city.

Table 4.9 Important occupations of slum dwellers and their educational level in Madras City

Occupations	Primary	Post Primary	Total (including illiterate)
a) Fitter, turner etc	1800 (19.6)	6200 (67.4)	9200 (100.0)
b) Mechanic(repairs)	3300 (34.0)	5000 (51.4)	9700 (100.0)
c) Craftsmen (wig maker, potter etc)	4700 (25.5)	5400 (29.4)	18400 (100.0)
d) Drivers	3500 (29.2)	6800 (56.6)	12000 (100.0)
e) Semi-skilled constn. workers	8700 (32.2)	8800 (32.6)	27000 (100.0)
f) Traditional services(washerman, cobbler etc)	3100 (25.8)	3700 (30.8)	22000 (100.0)
g) Petty traders (vegetable, fruit flower etc, traders)	3200 (18.8)	3900 (22.9)	17000 (100.0)
h) Tea/tiffin makers	2500 (22.7)	1300 (11.8)	11000 (100.0)
i) Rickshaw puller	2200 (22.0)	2400 (24.0)	10000 (100.0)
j) Animal/Handcart pullers	1500 (17.2)	760 (8.7)	8700 (100.0)
k) Helper/cleaner in service & Mfg	5100 (27.3)	9000 (48.1)	18700 (100.0)
l) Porters	3700 (25.6)	5100 (31.1)	16400 (100.0)
m) Coolie(unskilled workers in trade and services)	6000 (24.9)	6510 (27.1)	24040 (100.0)
n) Constn.labourer	2900 (26.8)	2980 (27.5)	10830 (100.0)
Total(including others)	84100 (25.1)	124900 (37.3)	335000 (100.0)

Figures in paranthesis indicate percentages to total

Appendix Table to Chapter IV - Average monthly income and its Distribution by Occupations

Occupation	Average Cash Monthly Income (Rs)	Monthly Income Group			Total
		0 - 150	151 - 350	350+	
Maid, Servant	36	100.0	-	-	100.0
Servant (others)	173	65.4	30.3	4.3	100.0
Rickshaw Pullers	158	66.1	32.8	1.1	100.0
Animal/Hand Cart Pullers	145	71.9	28.1	-	100.0
Tiffin/Tea Makers	108	91.9	8.1	-	100.0
Tailor	141	66.0	31.6	2.4	100.0
Tradition Services(Washerman, Cobbler etc.)	141	69.3	27.0	3.2	100.0
Peon (Services)	269	15.4	78.0	6.6	100.0
Security Staff	277	20.2	57.2	22.6	100.0
Driver(Mechanised Vehicle)	228	24.6	69.5	5.9	100.0
Carpenter	182	42.5	57.5	-	100.0
Semiskilled/skilled construction workers (Mason, Painter, Plumber etc.)	161	66.0	33.4	0.6	100.0
Construction Labour	134	81.7	18.3	-	100.0
Petty Traders	145	70.4	28.7	0.9	100.0
Salesman/Helper in Trade	141	71.4	27.0	1.6	100.0
Working owner (Trade)	322	9.7	60.8	29.5	100.0
Working owner (others)	242	21.0	64.3	14.7	100.0
Beedi Makers	124	82.0	18.0	-	100.0
Vessel Making/Polishing	123	69.7	30.3	-	100.0
Hat-making, Weaving and other allied crafts	139	78.3	21.7	-	100.0
Book Binding/Match Box Making	141	73.0	21.8	5.2	100.0
Other crafts	193	55.7	35.0	9.3	100.0
Mechanic (Repairs)	202	44.2	46.8	9.0	100.0
Mechanic (others)	331	13.1	44.3	42.6	100.0
Turner, Fitter, Welder, etc.	319	27.2	32.8	40.0	100.0
Other operators (Manufacturing)	283	38.9	25.9	35.2	100.0
Helper/Cleaner in service and Manufacturing	169	56.0	39.0	5.0	100.0
Porter - Transport	191	47.4	46.2	6.4	100.0
Coolie (Unskilled workers in trade and services)	147	72.4	27.6	-	100.0
Clerk/Cashier	314	21.0	37.0	42.0	100.0
Professionals and Supervisory Staff(Teachers, Health workers etc.)	271	30.5	43.5	26.0	100.0
Other Services	218	4.6	45.6	11.8	100.0
Fisherman	169	62.9	30.3	7.1	100.0
All others	209	43.6	40.1	16.3	100.0

CHAPTER V
DETAILED PROFILE OF THE TARGET GROUP

5.1 Target Group - Unemployed and Marginally Employed

The primary reasons for the extreme poverty in the slums of Madras are the extent of unemployment and pre-dominance of low income marginal occupations. The target group for the slum population should include both the unemployed and marginally employed persons. The upper unit of the target group should include the unemployed persons and marginally employed persons in working age group (15-59). Total unemployed (1979) among the slum population is estimated at 68,600 (section 3.5). Marginally employed should include both those earning a very low income (say Rs 150 p.m) estimated at 1.82 lakhs (excluding earners below age-group 15) and those marginally employed in terms of time disposition but earning above Rs 150/- p.m. The second part of the estimate of the marginally employed people is excluded to define the target group. This inclusion would not materially change the estimated target group as the second group of the marginally employed people would account for less than 30,000 people. Thus it is estimated that the target group consists of about 2.5 lakhs (0.7 lakh unemployed and 1.8 lakhs marginally employed persons) in the slums which require new or better employment opportunities (Refer Table 5.1).

It is not possible to provide new employment to such a large number of people in a reasonable time limit. For economic uplift of the urban poor, a two-pronged strategy through both new employment programmes and income upgradation schemes is called for. To evolve such a programme, it is necessary to understand the target groups' employability in terms of past experience, skills, training, outlook and efforts made in past. For this purpose a detailed profile of the target group was prepared**

**Data for the profile was mostly collected in the Phase II of the survey.

Table 5.1 : Unemployed and Underemployed in slums-
Madras City

	Total	% in the age-group 15-24	% Literate
1. Total employed	334700	21.2	67.8
2. No of employed earning below Rs 150 per month			
a) Total	194200	21.2	42.1
b) Excluding child labour	182600	22.5	44.7
3. Total male un- employed	43600	75.0	87.5
4a Total female unemployed	32500	64.3	71.9
b Total female unemployed (adjusted for definition)	25000	64.3 ⁺	71.9 ⁺
Target group (2(b) + 3+4(b))	251200	35.8	54.8

+ Assumed same as 4(a)

The detailed profile has been divided in two distinct groups ie, unemployed and marginally employed. But one point of caution is that for a large number of persons the discrete division of employed and unemployed are mis-leading. These are time bound estimates. Analysis of first phase and second phase survey indicates that about 16% of unemployed in first phase of the survey were employed in second phase and 4% of employed persons in

first phase were unemployed in the second phase (refer table 5.2). Sporadic nature of employment is also reflected by the fact that about 50% of unemployed have some past experience and 14% of marginally employed persons work less than 15 days in a month.

Table 5.2 : Some Indicators of unemployed and marginally employed persons in slums - Madras city

(a) Percentage of employed persons in Phase I who were employed in Phase II	16
(b) Percentage of employed in Phase I who were unemployed in Phase II	4
(c) Percentage of unemployed (Phase II) with past experience	50
(d) Percentage of marginally employed (Phase II) working for less than 15 days in a month	14

+ There was a gap of about 6 months between first and second phase of the survey

5.2 Unemployed

Profile

Extent of unemployment problem in the slums has been discussed in Chapter III. It is estimated that there are about 43600 male and 25000* female unemployed among the slum population (refer table 5.1). There is age-selectivity among the unemployed - about 71% of the unemployed are in the age-group of 15-24.

As mentioned earlier, most of the unemployed have some level of education but majority of them have no training,

*adjusted for definition

(ie 75% - Table 5.3). A very large proportion of the trained unemployed have received on the job training (54.6%), compared to formally trained persons (38.6%). A small proportion of them have also been trained through apprenticeship programmes (6.8%).

Table 5.3 Percentage Distribution of trained unemployed by type of training received

	%
Formal	38.6
On the job	54.6
Apprenticeship	6.8
Friends & Relatives	-
Total trained(25% of total unemployed)	100.0

In terms of past experience of the unemployed as many as 51% of them have worked in past. But most of them have worked for very short duration - about 21% of the unemployed have worked for less than 6 months (Table 5.4). Most of the experienced unemployed have worked in unskilled occupations like construction labour, porter, helper/cleaner, petty traders (Table 5.5). There are some skilled occupations like fitter/turner, repair mechanic but their proportion is meagre (about 9%). This high proportion of experienced among the currently employed in unskilled low-income occupations is indicative of the instability in the employment process among the slum dwellers. (For details of the concept, see Chapter VI). It would appear that as much as 34,000 out of an estimated working population of 1,82,000 in the marginal occupation is looking for new jobs is about 19% of such employed people.

Most persons with past experience have worked in casual and low paid occupations. This is indicated by the fact that 40% of the past employed persons worked for less than 21 days in a month, 35% of them either changed their occupations or employers in last one year and 82% of them earned less than Rs 150/- per month. Due to casual nature of the employment it is not possible for the unemployed to get attached to some particular establishment and acquire additional skills.

Table 5.4 : Percentage distribution of experienced unemployed by duration of experience

<u>Duration of experience (months)</u>	<u>%</u>
Nil experience	48.6
Upto 6	21.1
7 - 12	8.6
13 - 36	8.6
36 *	13.4
	<u>100.0</u>

Table 5.5 Percentage distribution of unemployed by type of past experience

Electrician/Repair mechanic	1.6
Fitter/Turner	3.3
Other skilled/semi-skilled workers	4.0
Helper/cleaner/Peon	10.3
Salesman/Helper	5.7
Construction labour	5.7
Patty trader	4.0
Porter/labourer	5.7
Other skilled labourer	11.1
No past experiences	48.6
	<u>100.0</u>

Here it is important to understand the difference between male and female unemployed . Although out of 68600 unemployed 25000 are females, the nature of unemployment for males and females is not same. Many of the females are looking for easy jobs. This is also reflected by the fact that only 13% females ready to go out of Madras city for work but the corresponding figure for males is as high as 70%. Even in terms of employability, there is a difference between males and females. About 86% of unemployed females have no past training (compared to 68% for males) and about 65% of females have no past experience (compared to 38% for males).

It appears that the unemployed are equally divided into new entrants and previously employed people, mostly of short duration and in casual jobs. The employability of the unemployed in terms of formal or on-the-job training is very low.

Past Efforts

Significance of analysing the past efforts is to understand what efforts the unemployed have made in improving their employability, their awareness of various agencies etc. It also indicates the nature of efforts the unemployed made for getting employment.

A large number of unemployed have approached the prospective employers directly (42%), 26% have approached friends and relatives, and only 14% have tried through applications. An indicator of efforts made is the number of attempt/applications made. About 61% of the unemployed have made less than five attempts in last one year.

In terms of contacting agencies for employment, a smaller proportion of unemployed are registered with Employment exchange ie 41%. About 26% of the unregistered unemployed have not registered as they have no formal certificates of education (though most of them have basic education), 25% have not registered due to lack of education and another 11% feel that it is of no use. Limited knowledge of the unemployed about employment agency is reflected by the fact that about 20% of unregistered unemployed were not even aware of the employment exchange. Apart from the employment exchange very few unemployed have contacted other agencies. Almost a negligible unemployed have contacted banks (0.8%) and only 3% have contacted voluntary agencies. Most of the unemployed have made only one type of effort ie, seeking information about job availability (72%). But they have not tried to develop additional skills and a majority of them have not even tried to have an enterprise of their own (96%).

Expectations

Analysis of expectations has two-fold significance. Firstly, to understand the compatibility of their expectations with opportunities available to them and their preparedness. Secondly, to have some indication of their built-in preferences.

A majority of the unemployed have sought employee status (80%) and most of the unemployed want employment in organised sector (68%). Only a small proportion of the unemployed want to have an enterprise of their own (16%). Relatively larger proportion of past trained persons want to have an enterprise of their own than untrained persons (Table 5.6).

Table 5.6 : Distribution of unemployed by employment status+ sought and past training

	With training	Without training	Total
Employee (organised sector)	61.4	69.5	67.5
Employee (unorganised sector)	13.6	12.2	12.5
Working owner (enterprise)	13.6	3.8	6.3
Self employed (with enterprise)	11.4	9.2	9.7
Self employed (without enterprise)	-	5.3	4.0
Total	100.0	100.0	100.0

+ For definitions refer to annexure to Chapter III.

In terms of occupations a large proportion of the male unemployed opt for the occupation of peon (34%) (Table 5.8). There are a large number of male unemployed who want to take up unskilled occupations like petty traders, helper/cleaner, whereas preference for occupations requiring skills like fitter/turner, welder etc is small (about 17%). In case of female unemployed a large proportion of them want to be sweepers (28%) and cook/maid servants (24%). Other important occupations sought by the females are tailor (10%) clerk/typist (10%) and nursing (6%).

Most of the unemployed are looking for organised sector employment in occupations requiring little skills. It appears that the unemployed do not want to exert themselves for employment. This is also reflected by the type of assistance sought by them. As many as 57% of unemployed have asked for one type of assistance and that is "recommendations". About 10% of unemployed want information about job availability and almost an equal number want assistance from employment exchange. Only a small proportion of the unemployed have sought financial assistance (6%). Many of the unemployed (53%) have not sought any kind of training and 52% of those who have sought training want on the job training. Even most of those persons who have sought to have enterprise of their own have not actively tried for financial or other help. Only 14% of them have made efforts for finance in past, and about 11% have contacted training agencies (Table 5.7).

Table 5.7 Past efforts made by those seeking to have enterprise of own in future

	%
Efforts for employee status	71.6
Efforts for finance	14.2
Contacted training agencies	10.7
Others	3.5
	100.0

(% seeking enterprise to total unemployed)

(16%)

Table 5.8 Percentage Distribution of unemployed by future occupations sought & by sex

Occupation	Male	Female	Total
Peon	34.0	1.5	21.2
Helper/Cleaner	5.7	2.9	4.6
Security	2.8	-	1.7
Petty trader	5.6	5.8	6.3
Sweeper/Scavenger	3.8	27.9	13.2
Cook/Maid servant	-	23.5	9.2
Other unskilled occupations	9.4	2.9	5.7
Fitter/Turner	5.7	-	3.4
Tailor	0.9	10.3	4.6
Vessel polisher	3.8	-	2.3
Driver	9.4	-	5.7
Electrical worker	8.5	-	5.2
Clerk/Typist	6.6	10.3	8.1
Health worker	0.9	5.9	2.9
Other skilled	2.9	9.0	5.9
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

5.3 Marginally Employed

Marginality of employment can be expressed both in terms of income and disposition of labour time. In terms of income, as much as 58% of the slum workers earn less than Rs 150 per month. But in terms of disposition of labour time as many as 57% of the workers with monthly income below Rs 150/- were fully employed and 43% were marginally employed (upto 21 days) out of which about 14% were employed for less than 15 days in a month (refer table 5.9). For all categories of workers as much as 65% could be considered under full-time employment in terms of time disposition. It shows that in the context of the slum workers the marginality of employment is more in terms of income rather than disposition of labour time. For the purpose of present analysis income criteria of marginality of employment has been accepted; particularly in view of the fact that many of the full time occupations of slum workers are not really gainful employment. They often represent sharing a given work business by a larger than the optimum and thus exhibit features of declining, marginal productivity and low average income per unit of employment (see Chapter IV). The following analysis is limited to marginally employed persons defined in terms of income.

In order to identify the major occupation groups among the marginally employed group about 15 occupation were identified as marginal occupation implying that majority of the earners in the group of occupations earn below Rs 150 p.m. (see section 4.4). Some of the typical occupation in the group are maid servants, rickshaw pullers, petty traders, helper/cleaner in

services, porters, traditional occupations like barber/washerman, tiffin/tea makers, book binders, construction labour (refer annexure table for Chapter IV). These occupations account for 1.7 lakhs workers out of which as much as approximately 1.45 lakhs shall be below Rs 150/- per month. Thus these occupations, representing about 76% of all marginally employed people (Table 5.10) can be considered the representative group for our analysis.

Table 5.9 Percentage Distribution of slum workers by number of days worked in a month & income - Madras City

Monthly income group (Rs)	Number of days worked in a month			Total
	Less than 15 days	16-21 days	22 and above	
Upto 150	14.2	26.5	57.3	100.0
150 +	5.4	23.1	71.5	100.0
All workers	9.3	25.7	65.0	100.0

Table 5.10 : Marginal Occupations - Percentage to total workers & those earning less than Rs 150 per month

Occupations	Number of occupations	% to total number of workers	% to those earning less than Rs 150/month
Marginal	15	50.4	76.6
Others	19	49.6	23.4
Total	34	100.0	100.0

Profile

Female working force accounts for about 26% of the total working force in the marginal occupation. Although the education levels of the marginally employed persons are lower than the average slum workers but a large proportion of them are literate (60% - 8% less than average). About 30% of them have high school education.

In terms of training as many as 72% of them have no training. Most of the trained persons have received on the job training (about 78%) and only a small proportion have received formal training (3%). It is interesting to know that about 11% of the trained persons have received training informally through friends and relatives (Table 5.11).

Table 5.11 : Percentage distribution of trained marginally employed slum workers by type of training received

	%
Formal	3.1
On the job	77.7
Apprenticeship	7.8
Friend & relatives	11.4
Total trained (28% of all employed persons)	100.0
No training (72%)	

Many of the marginally employed persons are in casual jobs. About 33% have changed their occupation/ employer in last one year. A majority of the marginally employed are in consumer-oriented activities (92% as compared to 70%⁺ for all slow workers as a whole).

The striking feature of people employed in such occupation is that for many of them the present job was a forced choice. As many as 70% of the selected persons wanted to work in other kinds of jobs but they have been forced to take the present occupation because of various factors. Also about 67% of them have expressed that they have accepted present jobs due to economic necessity and no other job opportunities. Most of the marginally employed (88%) have taken up these jobs in view of low skill content or low credit requirement. As many as 64% are non-enterprise type and about 72% have not received any training - formal or on-the-job. Average capital employed for the enterprise is very low (Rs 376). A survey statement of such features is presented in Table 5.14.

The two characteristic features of these occupations are very low income and keen competition - a feature indicating the process of divisibility of jobs or sharing of a given work/business by larger number (see Chapter VI for the critical explanation of the process). Various evidences in this regard were generated in course of the second phase of the survey. A striking fact is that though the average income of the marginally employed people is as low as Rs 130, about 85% of them work for more than 8 hours a day (Table 5.12). The more direct evidence of this is decline in real income for most of these occupations during last 5 to 10 years. This is evident from Table 5.13 which depicts the growth in income from the recorded opinion/information of respondents in these occupations.

⁺Refer Section 4.3

Table 5.12 : Hours of Work and Employment Status of Marginally employed persons

Employment status	0 - 6 hrs	6.1 - 8 hrs	8+ hrs	Total
Employee in unorganised sector	-	6.8	93.2	100.0
Working Owner	10.2	1.7	88.1	100.0
Self-employed (non-establishment)	12.5	5.2	82.3	100.0
Total	9.7	5.0	85.3	100.0

The average annual growth rate of income is as low as 4.18% for the marginally employed group (among the surveyed occupations). It is only 3.49% for those in age-group 34 and above and 5.89 for the age-group 15-34.

Table 5.13 : Average annual growth rate of income for marginally employed by broad age groups

Age Group	%
15 - 34	5.88
34 +	3.49
All workers	4.18

The above analyses evidently suggest that for most of these occupations, income growth is even less than the rate of inflation (about 10% simpler per annum during 1971-79). One plausible explanation is the larger number of new entrants to these occupations which are made possible by easy entry and low requirement of credit and skill in such occupations. For example, for occupations like vegetable/fruit vendors, rickshaw pullers, the growth in number of people employed is not proportional to growth in demand. Often such occupations provide the only avenue for employment for low-skill job seekers and this results in the divisibility of business/output and consequent reduction in average income.

Table 5.14 Some Important factors of the marginally employed/
Marginal occupations

Occupation	% employed	% self employed with enterprise	% self employed without enterprise	Total	% Trained	% formally trained	Average capital on enterprise (Rs)
Traditional occupation (washermen, Barber etc)	28.5	48.5	22.8	100.0	57.1	2.8	950
Rickshaw puller	-	94.4	5.5	100.0	27.7	-	54
Constn. Labourer	-	-	100.0	100.0	5.2	-	-
Cycle repair	-	66.6	33.3	100.0	83.3	-	225
Tiffin/Tea makers	-	100.0	-	100.0	4.7	-	71
Petty traders (vegetable/fruit flower/pan/fish/meat)	-	100.0	-	100.0	9.3	-	200
Salesman/Helper	87.5	-	12.5	100.0	12.5	-	-
Helper/cleaner	100.0	-	-	100.0	38.4	-	-
Weaver/Match box maker	7.1	21.4	71.4	100.0	57.1	-	4100*
Others	42.8	57.1	-	100.0	30.0	4.7	242

* Only weavers

Past Efforts

As many as 89% of the marginally employed people are not satisfied with their present incomes but only 53% of them are looking for job change, and 73% of them have made no serious efforts (Table 5.15). In terms of agencies contacted 8% are registered with employment exchange and only 7% have contacted banks. Even lessor percentage has contacted training institutes or government agencies.

It clearly indicates that the marginally employed have not exerted themselves for improving their income status.

Table 5.15 Some indicators of marginally employed

	<u>% of all marginally employed</u>
(a) Not satisfied with present income	89
(b) Looking for job change	53
(c) Made serious past efforts	27
(d) Registered with employment exchange	8
(e) Contacted banks	7
(f) Contacted money lenders	4
(g) Contacted training institutes	1

Expectations

It is interesting to know that unlike the unemployed, many of the marginally employed people want to either have an enterprise of their own, or expand their present enterprise. As compared to only 16% among the unemployed seeking an enterprise of their own, it is 50% among the marginally employed people. About 36% of the

persons are looking for organised sector employment. About 27% of marginally employed persons presently having employees status want to have an enterprise of their own whereas the corresponding figure is as high as 67% for presently self employed persons (Table 5.16). The analysis of age-group and employment status sought indicates that in age group of 15-24 relatively less proportion of workers are seeking to have an enterprise of self employment (32%) as compared to age group of 24-34 (62%) (Table 5.17). It perhaps supports our hypotheses that in the age group 15-24 people try for employee status and it is in the age group (24-34) people seek self-employee status (Chapter III). Analysis of those seeking to have enterprise of own by past training background indicates that there is no significant difference between trained and untrained persons (Table 5.18).

Most of marginally employed are looking for unskilled occupations like petty traders, construction labour salesmen/helper, rickshaw pullers, traditional occupations, sweepers etc. Only 8% of the marginally employed want to take up skilled occupations like fitter, turner, auto drivers etc and only a meagre proportion wants to have a manufacturing enterprise. Majority of them do not want to take up any training programme (80%).

An interesting finding of the above analysis is that many of the marginally employed want to have an

enterprise of their own but most of them do not want to acquire skills for this. As many as 63% expressed that they want financial assistance but very few have contacted financial agencies like banks.

Enterprises of the Marginally Employed

This analysis, which also has a bearing on the extent of marginality of employment, is covered in the report on 'Informal Sector Enterprises' separately as mentioned in Chapter I. This aspect is all the more significant in view of a very high proportion of self-employed among the urban poor, many of whom have some enterprise of their own.

Table 5.16 Distribution of marginally employed by past employment status & future employment status sought

Present	Future	Employee in organ- ised sector	Employee in un- organis- ed sector	Working owner (enter- prise)	Self empl oyed with enter- prise	Self empl oyed with out enter- prise	Total
Employee		67.3	5.4	21.8	5.4	-	100.0
Self- employed		26.6	3.4	41.8	25.4	2.8	100.0
Total		36.4	3.9	36.8	20.6	2.3	100.0

Table 5.17 Distribution of Marginally employed by future employment status and age group

Age group	Employee in organised sector	Employee in Unorganised sector	Working owner (enterprise)	Self-employed with enterprise	Self-employed without enterprise	Total
15 - 24	62.5	4.2	22.9	8.3	2.1	100.0
25 - 34	33.9	1.8	42.8	19.7	1.8	100.0
35 - 44	29.4	8.8	44.1	17.7	-	100.0
45 +	25.0	-	33.9	35.7	5.4	100.0
Total	36.4	3.9	36.8	20.6	2.3	100.0

Table 5.18 Distribution of Marginally employed by future employment status and Past Training

Trained/untrained	Employee in organised sector	Employee in unorganised sector	Working owner (enterprise)	Self-employed with enterprise	Self-employed without enterprise	Total
Trained	35.8	1.5	53.7	7.5	1.5	100.0
Untrained	36.7	4.9	29.8	26.1	2.5	100.0
Total	36.4	3.9	36.8	20.6	2.3	100.0

Table 5.19 Percentage Distribution of Marginally employed by future occupations sought

<u>Future Occupation</u>	<u>Total</u>
Fitter, Turner, welder, Machine operator	2.7
Carpenter, Mason & Pandal worker	2.2
Driver	1.3
Auto-mechanic, electrical mechanic	2.3
Matchbox making	2.2
Wig, pottery, weaving	1.8
Other manufacturing workers	1.4
Trade owners	4.0
Salesman/helper, peon helper/cleaner	13.9
Rickshaw puller	5.4
Traditional occupations	12.6
Cycle hire/repair	4.0
Tiffin/tea makers	5.4
Petty traders	22.4
Construction labourers	1.8
Coolie transport	1.4
Sweeper	6.3
Servant/Maid servant	2.7
Security staff	1.8
Unskilled labourers	2.4
Others	2.0
Total	100.0

CHAPTER VI
THE EMPLOYMENT PROCESS FOR THE URBAN POOR -
A THEORETICAL EXPOSITION

6.1 An Overview

The most striking feature of the urban poor as identified with the slum dwellers is the 'marginality' of employment or what can be broadly called 'under employment' in the unorganised sector. While unemployment among slum dwellers estimated at about 69,000 is significant enough to explain partly the prevailing poverty, the crucial variable appears to be under-employment as evident from extremely low average income of the majority of the earners. As many as 1.94 lakh workers (about 58% of the total working population) earn below Rs 150 per month, a sum which is only 1/3rd of what an unskilled labourer earns in an organised industrial sector and the sum which is not even enough to support two dependents. The marginal occupations in which the slum workers are engaged are primarily consumer-oriented occupations (about 70%) characterised by easy entry, low skill content, and low average income. This process and composition of employment for the urban poor in the city of Madras is what could conceivably be in the absence of concomitant growth in productive employment opportunities in the organised sector and limited growth of productive enterprises in the unorganised or informal sector⁺. The choice of the new and relatively new entrants to the labour force

⁺ While informal sector is not treated as identical with the unorganised sector, the observed characteristics of the unorganised sector occupations among the slum dwellers are similar to the conventional characteristics identifying an informal sector activity.

is obviously those occupations where entry is easy and the market is divisible. Some of these typical occupations are vegetable/fruit vendors, helper/cleaner in service occupations, maid servants and other traditional occupations, tea/tiffin makers, beedi making, unskilled construction labour etc. The most direct evidence of the phenomenon is the observed decline in the real income per earner of many of the marginally employed people (about little over 4% growth annually in money income compared to an inflation rate of about 8%). The other indirect evidence of this is the disproportionately large number of self employed people not only in slums of the city of Madras but also for the entire city population. Such self employed people who are mostly engaged in the consumer-oriented occupations either as employees shifting from one employer to the other or as having a small enterprise of their own with no or little capital account for as much as 60% of the total working population. All these denote a particular process of employment creation among the urban poor which leads to instability in jobs and increased marginality of employment. The net result is that an increasing proportion of people, in absence of change in market conditions, technology and growth in organised sector, would be concentrated in such marginal occupations and there will be increasing instability in the sense that higher proportion of marginally employed people have to look for a change over quite a long period of their working span to get more stable and productive employment.

6.2 The Process

This typical process of employment creation leading to marginality of employment and consequent poverty can be described in terms of following distinct elements:

1. Total number of job seekers at any point of time would consist of both new entrants to the labour market and that proportion of the marginally employed people who are looking for a change for better employment along with the stock of unemployed
2. Given the fact that the economy creates lesser number of productive jobs than required to absorb all job seekers at any time point 't' to absorb gainfully in the productive jobs in organised and unorganised sectors, the result is either higher unemployment rate in the next period or higher number of marginal jobs or both.
3. Given the fact that the unemployment rate expressed as the ratio of unemployed to total labour force or working population is not increasing overtime (so far as overt unemployment is concerned), it would be a logical guess that the proportion of marginal jobs is increasing and the instability among the employed people is a consequent phenomenon. This process is possible because a large number of activities in the unorganised sector, particularly those consumer oriented activities are divisible in the sense that a given size of market and output can be catered to by a large number of workers than optimally required.
4. The preceding step leads to a situation where though unemployment rate does not increase or a dependency ratio shows a marked rise, the average income per earner decreases in real terms. A conceptualisation of this process is presented in simple mathematical terms in the next section.

6.3 Theoretical Interpretation of the Process

Let at period t

No. of persons employed in organised sector (called 'O' sector) (All jobs are presumed to be gainful and productive)	= E_t^O	(1)
No. of persons employed in unorganised sector (Called 'N' sector)	= E_t^N	
No. of persons overtly unemployed	= U_t	
No. of persons entering the job market for the first time	= M_t	

A characteristic feature of the unorganised sector employment is that a proportion (r_t at t) of them are employed marginally. Of those employed marginally, a further proportion (k_t at t) have unstable jobs and such employees persons are also looking for jobs by virtue of instability or low productivity.

Therefore job seekers at 't' is given by

$$N_t = M_t + U_t + k_t (r_t E_t^N)$$

The job seekers, N_t , go through an employment process during t to $t+1$, during which additional jobs are created in all sectors and types. The employment process is illustrated in Fig 6. At the end of period t , beginning $t + 1$, let the different situations be E_{t+1}^O , E_{t+1}^N and U_{t+1}

The additional jobs created in the two sectors therefore are given by :

$$A_t = E_{t+1}^O - E_t^O \quad - (2)$$

$$B_t = E_{t+1}^N - E_t^N \quad - (3)$$

and the total jobs created during t. to t+1 are $A_t + B_t$.

$$\therefore U_{t+1} = M_t + U_t - A_t - B_t \quad (1) \text{-----} (4)$$

The next question is - what determines A_t and B_t ?

Two assumptions are made

- (i) that jobs created in 'O' sector A_t , are determined exogenously (2)
- (ii) that the ratio of chronic unemployment to the labour force or working population does not vary significantly over time (a valid assumption based on experienced of Indian economy),

1. (i) $(A_t + B_t) > (M_t + U_t) \Rightarrow U_{t+1} = 0$, the most ideal but unrealistic situation.

(ii) $(A_t + B_t) < M_t \Rightarrow U_{t+1} < U_t$, an ideal but also not usually realised in developing economy

(iii) $(A_t + B_t) < M_t < U_{t+1} < U_t$, the most likely situation.

2. e.g. $A_t = F$ (Productive investment during t to t+1, Lag effect of past investments etc)

$$\text{ie, } \frac{U_{t+1}}{E_{t+1}^O + E_{t+1}^N} = \frac{U_t}{E_t^O + E_t^N} = c \text{ (say) --- (4)}$$

$$\begin{aligned} \Rightarrow U_{t+1} &= CE_{t+1}^O + CE_{t+1}^N \\ &= CE_{t+1}^O + CE_{t+1}^N + CA_t + CB_t \\ &= U_t + CA_t + CB_t \end{aligned}$$

$$\begin{aligned} \text{or } C(A_t + B_t) &= U_{t+1} - U_t \\ &= M_t - A_t - B_t \end{aligned}$$

$$\text{or } (C+1)(A_t + B_t) = M_t$$

$$\text{or } B_t = \frac{M_t}{C+1} - A_t$$

ie, given A_t exogenously determined (assumption (i)) and assumption (ii), B_t is determined.

The number of gainful and productive jobs in the unorganised sector say B_t^1 , will be determined by the market economy, say, by

$$B_t^1 = F(\text{population growth, } A_t) \text{ --- (5)}$$

The unorganised sector economy of the urban areas of developing countries is characterised by the phenomenon that B_t^1 is significantly lower than B_t (as derived from assumption (ii) above or any other realistic assumption reflecting the market employment situation).

The informal nature of the unorganised sector in the Indian urban centres (easy entry, low capital/skill requirement, divisibility of jobs etc) specifically the aspects of easy entry and divisibility of jobs (say 10 vegetable vendors serving a locality which can give productive employment to only 6 vegetable vendors) which operate at this stage, and though there exists a scope for only B_t^1 productive jobs, the divisibility of these jobs help provide employment to B_t persons. This process creates marginal employment.

A positive r_t ($r_t > 0$) is evidence to the cumulative existence of this phenomenon ($B_T^1 < B_T$, $T < t$) in the past.

Now if at period t

$$(i) \quad B_t^1 \geq B_t$$

under this situation, no new marginal employment will be created and when $B_t^1 > B_t$, this effects a reduction in existing stock of marginal employment

$$\text{ie, } r_{t+1} E_{t+1}^N < r_t E_{t+1}^N$$

$$\Rightarrow r_{t+1} < \bar{E}_t$$

$$\text{ii) } B_t^1 < B_t$$

which as indicated is suggestive of real situation.

This will create further marginal employment i.e.,

$$r_{t+1} E_{t+1}^N = r_t E_t^N + \delta_t \text{ -----(6)}$$

and $r_{t+1} > r_t$ or $r_{t+1} < r_t$ depending upon $(B_t - B_t^1)$ and divisibility of the marginal sector jobs.

The different types of jobs in the unorganised sector (say, trading, transport) will have different divisibility coefficients. Under a simplified assumption of common divisibility coefficient, say 'e', of all the unorganised sector jobs, we can define the parameter 'e' as

$e = M/E$ - (7) where M = Maximum number of people that can be employed for a given output P and technology level T, giving rise to an output - labour ratio which can be reduced only at the cost of reduction of total output.

and E = number of productive employment that can be created at an optimum scale of operation for the same output 'P' and technology level 'T'

' e_t ' can similarly be defined as $e_t = M_t/E$ ----(8)

Where

M_t = number of persons employed marginally to produce output 'P' at time t

and E is same as in (7).

' e_t/e ' describes the actual level of marginality existing at time 't'. It is evident that $\frac{e_t}{e} < 1$,

for a given level of current output in the economy.

Now from (6)

$$\begin{aligned} r_{t+1} E_{t+1}^N &= r_t E_t^N + \delta_t \\ &= r_t E_{t+1}^N + \delta_t - r_t B_t \quad (\text{from 3}) \quad \text{-----(9)} \end{aligned}$$

$$\begin{aligned} \therefore r_{t+1} &> r_t, \text{ if } \delta_t > r_t B_t \\ \text{and } r_{t+1} &\leq r_t \text{ if } \delta_t \leq r_t B_t \end{aligned} \quad \left. \begin{array}{l} \text{-----} \\ \text{-----} \end{array} \right\} \text{-----(10)}$$

To determine δ_t

Let us consider the following identity in the unorganised sector :

$$B_t = \dot{O}_t + (B_t - \dot{O}_t) \text{-----}(11)$$

(marginal jobs created during t to t+1)
 (productive jobs created during t to t+1)

Total number of market-determined productive jobs created during t to t+1 is B_t^1 (from (5))

For the given e_t , if (Condition A) B_t can be created through B_t^1 alone ie, from the additional stock of productive jobs created by the market without depleting the existing stock of productive jobs, $(1 - r_t) E_t^N$, (which is equivalent to the condition $e_t > B_t / B_t^1$)

then $B_t^1 = \frac{\dot{O}_t}{e_t} + B_t - \dot{O}_t$ - from the definition of

e_t and identify (11)

$$\text{or } \dot{O}_t = (B_t - B_t^1) \times \frac{e_t}{e_t - 1} \text{-----}(12)$$

Therefore, from (10) and (12)

$$r_{t+1} > r_t \quad \text{if } (B_t - B_t^1) > \frac{e_{t-1}}{e_t} \times r_t B_t$$

$$\text{and } r_{t+1} < r_t \quad \text{if } (B_t - B_t^1) < \frac{e_{t-1}}{e_t} \times r_t B_t \quad (13)$$

If, however, for the given e_t , it is not possible to create B_t from the additional stock of productive employment B_t^1 created (ie $e_t < B_t / B_t^1$) the market would tend to do the same through an increase in the value e_t to e_{t+1} such that $e_{t+1} = e_t + \Delta$ (say condition B). (This phenomenon would imply that additional marginal employment created would be at a different and higher order of marginality, as expressed through the relation $e_{t+1} > e_t$, than existing stock of marginally employed persons). The amount of increase, Δ , will be characteristic of the existing market condition and parametric relationship, $e_{t+1} < e$.

Now if the change of e_t to e_{t+1} is successful in creating B_t jobs out of B_t^1 the conditions expressed in expression (13) above will stand unchanged excepting change of e_t to e_{t+1} .

However, if the difference between B_t and B_t^1 is too large such that even at marginality level e_{t+1} , B_t^1 cannot provide all the B_t jobs (ie $e_{t+1} < B_t/B_t^1$) (condition c) then $B_t - e_{t+1} B_t^1$ jobs would be created from either or both of the following ways -

- (i) through extension of higher order of marginality ($e_{t+1} > e_t$) to the existing stock (a cumulative concept) of marginal employment, $r_t E_t^N$,
- (ii) from the existing stock of productive jobs in the unorganised sector, $(1 - r_t) E_t^N$, at time t.

In the former case, there will be no depletion to the existing stock of productive employment in unorganised sector (as the additional marginal jobs are created only through increasing the level of marginality) and in the latter case the same will be depleted.

$$\text{ie } (1 - r_t) E_t^N > (1 - r_{t+1}) E_{t+1}^N$$

$$\Rightarrow r_t < r_{t+1}$$

In an extreme case,

$$\text{if } e_{t+1} < \frac{B_t}{B_t + (1-r_t) E_t^N}$$

then,

$$e_t \rightarrow e \quad \text{and} \quad r_{t+1} \rightarrow 1$$

This implies a tendency to maximise the degree of marginality in both these ie observed degree of divisibility tends to the maximum value (ie e) and all jobs in the unorganised sector became margin ($r_{t+1} = 1$)

Some Critical Parameters and variables of the Employment Process

Let us make the following assumptions

- (1) A_t, M_t are exogenously determined
- (2) ' c ' ie overt unemployment rate is constant over time.

Under the assumption $B_t^1 < B_t$ (the usually observed phenomenon where the market-determined jobs (productive employment) in the unorganised sector fall short of the number of additional jobs required to equate the additional job-seekers at any time interval (t to $t+1$) with the number of jobs (productive as well as marginal available), the adjustment mechanism is a combination used in the above set of equations.

- i) $e_t \frac{B_t^1}{B_t} \approx B_t$ ie the degree to which the additional productive jobs (created during t & $t+1$) in the unorganised sector get divided ie marginal jobs are created
- ii) $e_{t+1} > e_t$ ie the degree of marginality or the number of marginal jobs per one unit of productive job.
- iii) $r_{t+1} > r_t$ ie the proportion of marginal jobs in the cumulative stock of productive jobs in the unorganised sector.

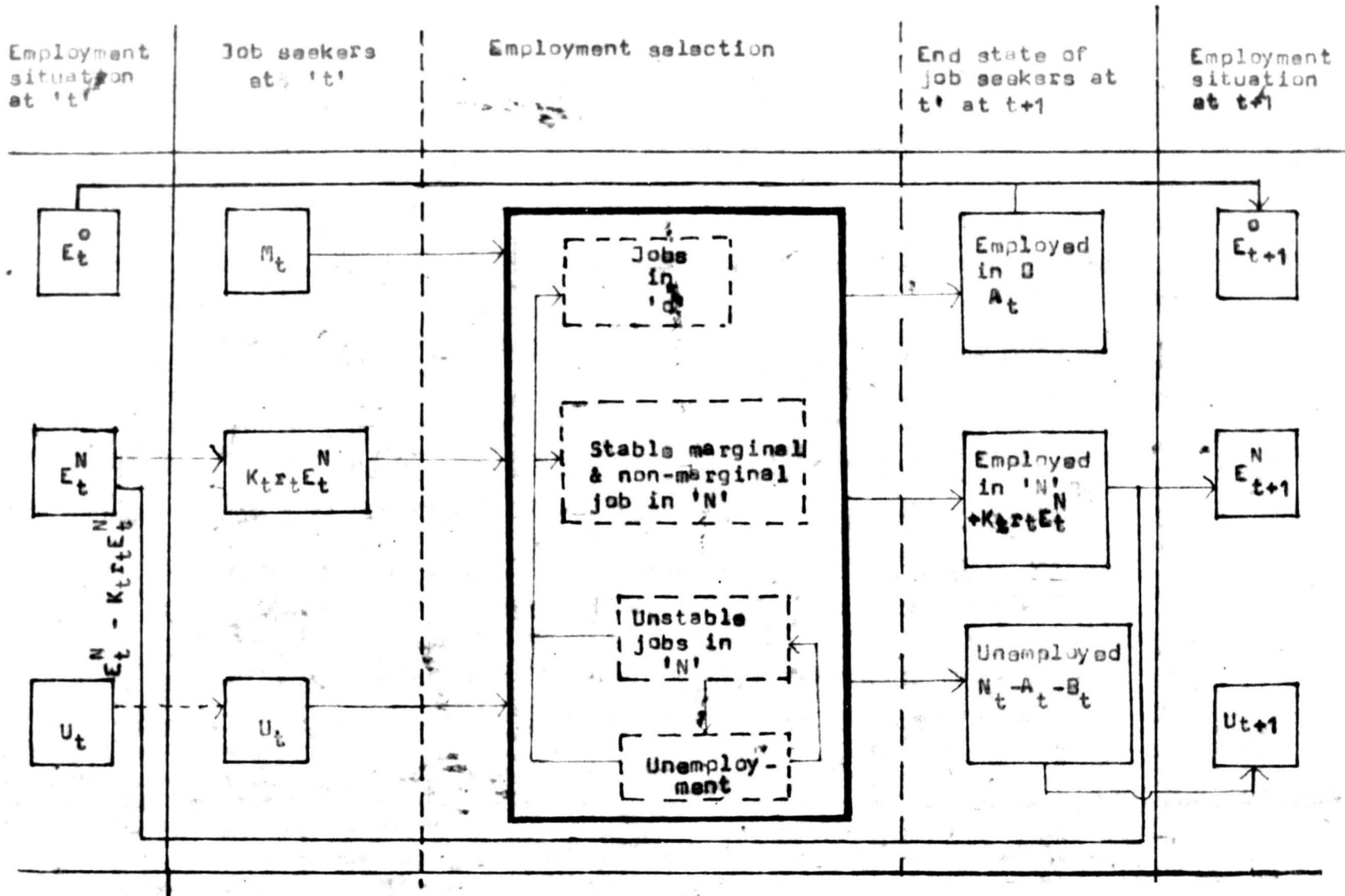


FIGURE : 5:EMPLOYMENT PROCESS - t to t+1

APPENDIX 'A'

A PILOT SURVEY OF SLUMS ON PERIPHERY OF MADRAS CITY⁺

It is estimated that in 1978, about 40 thousand slum households were living in the peripheral areas of Madras City⁺⁺. The ORG survey did not cover these slums initially. Subsequently a survey of four slums on the periphery of the city was carried out to fill up the gap in the information, particularly to bring out the difference between the characteristics of the city slum population and of the peripheral slums. This survey is indicative of broad occupations and employment status of the slum dwellers. However, the slums covered are not statistically representative of all the peripheral area slums. The four slums were randomly selected with the constraint that atleast one location is selected from each of the three broad zones of the peripheral urban area. The following are the findings of the survey :

Household Characteristics

Percentage of heads of households who have migrated to Madras in last 10 years is high (about 27%) as compared to the corresponding figure of 5% for the city. It was not possible to estimate the growth rate of slum households between 1971-79 as 1971 sampling frame was not available.

⁺Periphery is defined as area outside Madras city and within Madras Urban Agglomeration.

⁺⁺Source : Survey of Slums in MMA - MMDA, 1979

The demographic profile of the peripheral area slums is characterised by age and sex selective migration. Compared to 990 females per thousand males in the city slums and 903 for the city (in 1971), the female-male ratio for the peripheral area slums is only 812. There is also a predominance of adult males (age group of 15-59), accounting for 31.0% of the population whereas the corresponding figure for the females is only 25.1%. The demographic imbalance in the population perhaps indicates that there has been a migrant movement predominantly of adult males. The average size of households in the peripheral area slums is 5.1 and is not much different from that of the city slums (5.2).

Table A.1 Demographic Indicators - Peripheral areas slums and City slums

	<u>Peripheral area slum</u>	<u>City slums</u>
Females per 1000 males	812	990
% of males in age group of 15-59 to total population	31.0	29.1
% of females in the age group of 15-59 to total	25.1	27.1

Workers participation rate in the peripheral area slums is 27.6% which is lower than the city slums (30.2%). Ratio of unemployed to total population is 5.2%. A lower participation rate (all working population) inspite of male predominance is perhaps explained by lower female participation rates in the peripheral areas compared to same in the city. Analysis of labour force participation indicates that the male labour force participation for the

slums is 50.1% which is not much different from the corresponding figure for the city slums (51.7%). But the female labour participation in the slums is 8.1% which is much lower than the corresponding figure for the city slums (15.8%). The incidence of child labour in these slums is also significantly lower than the city slums. Income level of slum dwellers in the periphery seems to be little better than counterpart in the city. This is also reflected in the household income distribution where 72% of total households earn below Rs 350/- (83% for city slums) and the average monthly household income (adjusted for irregularities of employment) of Rs 280 which is higher than that of the city slums (Rs 250). Although the slum household income is relatively more than the city slums, still the incidence of poverty in these slums is much higher than the city as a whole.

Table A.2 Percentage Distribution of Households in Broad Income Groups and Average monthly household income - Peripheral area slums and city slums

Monthly household income(Rs)	Peripheral area slums	City slums
Upto 350	72.1	83.1
350 - 450	11.1	9.7
450 - 600	9.6	4.9
600 +	7.2	2.3
Total	100.0	100.0
Average household income(adjusted)(Rs)	280	250

Employment Status and Unemployed

Analysis of the employment status indicates that unlike the city slums where self-employed category accounts for the major proportion of the workers, in peripheral area slums the employee (unorganised sector) accounts for the highest percentage of workers i.e. 40.6%. There are about 26.7% workers in the self-employed (non-establishment) category. The two categories together account for 2/3rd of the total workers both in the city slums and peripheral slums. As mentioned earlier (Chapter III), a large proportion of workers in the self-employed and unorganised sector employee is reflection of high percentage of marginally employed workers. This is also reflected by the fact that about 52% of total workers in these slums have a monthly income below Rs 150 and are underemployed (in terms of income). The organised sector employee category has 31.7% of total workers which is higher than the corresponding figure for the city slums (21.7%). This is explained by higher proportion of manufacturing workers (25.7%) in the peripheral slums, compared to the city slums. This also explains some what better income distribution for peripheral slums. However the average income of the organised sector employee is about Rs 300 in these slums and is much lower than the corresponding figure for the city as a whole (Rs 400). This indicates that the workers with low incomes in the organised sector live in slums.

Table A.3 Percentage Distribution of slum workers by the Employment Status - Peripheral Area slums and City Slums

Category	Peripheral area slums	City slums
1. Employer & owners of family enterprises	0.9	4.0
2. Employee-organised sector	31.7	21.7
3. Employee-Unorganised sector	40.6	21.7
4. Family workers	1.1	2.6
5. Self employed(non-estb)	26.7	50.0
Total	100.0	100.0

Ratio of male unemployed to total males is 6.8% and the corresponding figure for females is 3.1%. As in the case of city slums, the major percentage of the unemployed are in the age group of 15-24 (72%) and a high proportion of them have high school education (62%).

Occupations and Activity Concentration

A large proportion of the slum workers are in the low-skill occupations (54%) like petty traders, construction labourers, unskilled labourers in manufacturing etc. The proportion of skilled workers like fitter, turner, mechanic (repairs) etc is 18% and is high as compared to the corresponding figure for the city slums (10%). Some of the occupations like rickshaw pullers, craftsmen, traditional service occupations which are predominant in the city slums are in a very small number in the peripheral area slums.

Table A.4 Distribution of Slum Workers by Levels of skills - City Slums and Peripheral Area Slums

	<u>City Slums</u>	<u>Peripheral Area Slums</u>
(a) Highly skilled	10.3	18.4
(b) Semi-skilled	24.1	27.5
(c) Low-skilled	65.6	54.1
Total	100.0	100.0

In terms of employment pattern the tertiary sector is most important ie 51.1% but its proportion to the total workers is low as compared to the city slum workers (64.8%). It is followed by secondary sector with 38.3% of workers. Primary sector plays a significant role in the employment pattern with 9.6% of workers in the peripheral slums. The proportion of workers in the organised manufacturing is 25.7%.

Summarily speaking there are distinct features of employment among the population living in the peripheral slum.

They are :

1. Manufacturing activity contributes to a larger proportion of the working force. At the same time, tertiary activities also play an important role.
2. Employment characteristics of slums in the peripheral area is a combination of industrial activities and upsurge of trade and marginal service activities.
3. There are certain service occupations like rickshaw pullers, craftsmen, porters etc, which are concentrated in the city and much less in the peripheral slums.
4. Economically peripheral slums may be little better off compared to city slums but in absolute terms they also represent a low economic status.

Table A.5 Percentage Distribution of workers by different activities - City slums and peripheral area slums

	<u>Peripheral area slums</u>	<u>City slums</u>
Primary	9.6	2.1
Manufacturing(household)	0.4	5.9
Manufacturing(other than household)	25.7	15.2
Construction	12.2	13.0
Trade	14.0	18.0
Transport	16.3	15.0
Other services	21.8	30.8
Total	100.0	100.0

APPENDIX BEMPLOYMENT LOCATIONS AND PLACE OF RESIDENCE IN SLUMS
OF MADRAS CITY

A variety of factors (like availability of employment, land value, transport etc) are responsible for location of slums in different zones within the city. The objectives of the present exercise are (i) to understand the relationship between place of residence and place of work of slum workers, and (ii) to determine relative indices of localisation of jobs with respect to the slum workers.

Place of residence of worker was determined from the location of slum in which the particular worker lived. Information regarding place of work was asked to each selected employed member from the sampled household. Place of work was identified as (a) same zone (b) no fixed location and (c) outside the zone of residence. Postal zones of place of work of the persons working in other zones were also collected.

Limitation of the data is that all the zones in the city were not covered adequately by the present survey. So the matrix of origin and destination of the slum workers is not complete. But it is indicative of employment and residential location patterns of the slum workers.

Place of Work in Relation to Place of Residence

The proportion of total workers with no fixed place of work (mobile) is 38.3%.⁺ About 38.7% of the workers have

⁺From the survey data it is difficult to estimate the locational spread of such employment. However, it is presumed that for most of the self-employment (except say auto-drivers, construction workers) no fixed location can be interpreted as 'same zone'.

place of work in the same zone. Little more than 11% of workers have place of work in nearby zones and only 11.5% work in distant zones. Number of workers with place of work outside MMA is almost negligible. A matrix of place of work and place of residence of slum workers is given in table 8.4 (refer figure 7). Relatively a larger proportion of employment (about 50%) in George Town and Egmore zones is drawn by people residing in other zones. Whereas the corresponding figures for Perumbur and Annanagar is low (less than 15%).

Basically there appears to be two patterns of distribution of place of work of slum workers in different zones. There are some zones with more number of workers by place of work than place of residence. These zones can be termed as receiving zones. There is another pattern where the number of workers by place of residence is more than that of place of work. In these zones workers are going out to other zones for work.

In the above context different zones have been analysed. In more specific terms the number of jobs by location has been compared with number of resident workers. The index for this comparison is taken by ratio of employment by location to employment by residence. For this purpose it is assumed that workers with no fixed place of work are working in the same zone.

The index is more than one in George Town and Egmore Zones and these are receiving zones (refer table 8.1)

Table 8.1 Relation between place of work and place of Residence of slum workers-Madras City

Zone	Workers by place of residence (1)	Workers by place of work (2)	Index ⁺ 2/1
Tondairpet	72500	66700	0.9
Perambur	77100	55800	0.72
George Town	45340	66100	1.46
Mylapore-Triplicane	54570	57200	1.01
Egmore	15880	17600	1.15
Annanagar	56610	44800	0.78

+ This index is subject to correction if the assumption that 'in the zones not covered the ratio of (1) & (2) is not significantly different from one (1)

The index is less than 0.8 for Perumbur and Annanagar zones indicating that there are more resident workers than jobs by location. The index is about 1.0 both for Tondiarpet and Mylapore-Triplicane zones and there does not seem to be a significant difference between jobs by residence and location in these zones.

Index of Attraction

An index of attraction has been developed to indicate the relative importance of a zone in terms of employment location compared to other zones. This index is at zone level and is defined as percentage of workers commuting from other zones to total employment (by location) of the

particular zone⁺. The following table clearly indicates that George Town and Egmore play important role in terms of employment of slum workers.

Table B.2 Index of Attraction

<u>Zone</u>	<u>Index of Attraction⁺</u>
Tondiarpet	11.5
Perumbur	12.5
George Town	56.0
Annanagar	15.1
Mylapore-Triplicane	24.1
Egmore	34.1

+See note in Table B.1

Index of Dispersal

The proportion of workers with place of work in other zones is relatively small in the slums (about 22%)*. So like most of the other cities a policy for slum rehabilitation at a distant place from the present location may not be compatible with current employment location pattern without any elaborate programmes for new employment generation. But it has been observed that the need for having residence near place of work is different in different activities. For analysing the shiftability of workers in any activity, a knowledge of the proportion of workers commuting from one zone

++ This index, it should be noted, is confined to the employment of the slum population only and is not necessarily representative of the city.

* It is assumed that workers with no fixed place of work are working in the same zone.

to another in that particular activity is important. If the proportion of workers commuting for an activity is high, there is less likelihood of dis-location of employment links as a result of shifting workers from the present place of residence. On the other hand, if the percentage of commuting workers is small, it becomes difficult to make a case for relocating these activities. It should be noted, however, there are various other considerations for relocation of activities. The index of dispersal developed is just condensed version of the relative mobility in different occupations. The index computed for each activity/occupation is as follows :

Index of dispersal = $100 - \text{percentage of workers with place of residence and work in the same zone.}$

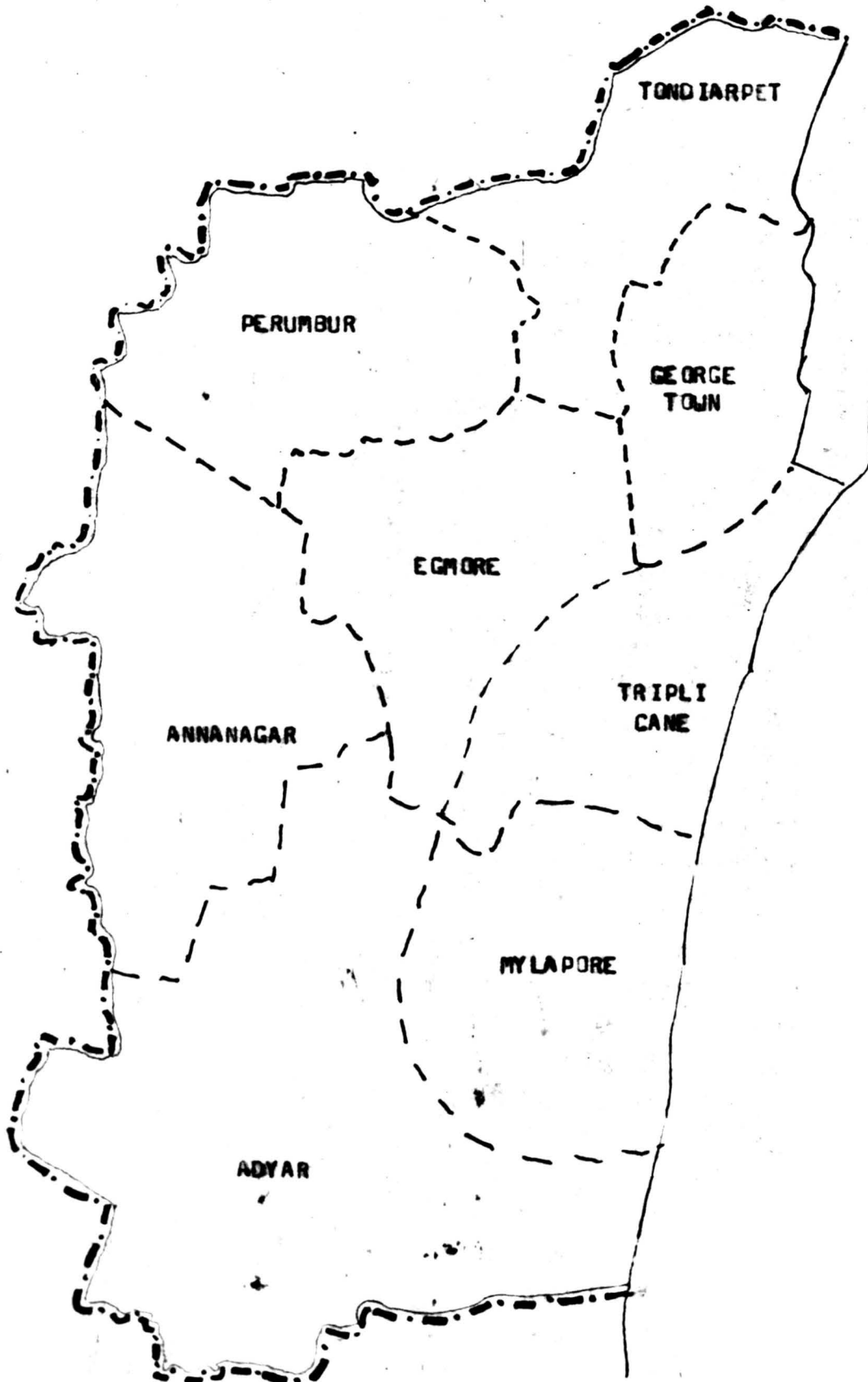
The activities which have relatively high index of dispersion are health and education, government services, public transport and manufacturing (other than household). Whereas activities with lower index are traditional services, tea/tiffin makers, household manufacturing and slow moving vehicles (refer Table B.3). It is interesting to note that there is some relationship between index of dispersal and level of earning. For example, in activities like Government service, manufacturing, index of dispersal is high and average earning of workers is also high. For occupations like traditional services, retail trade, tea/tiffin makers where average income is low, index of dispersal is relatively low. This has implications in terms of new programmes for relocation of slum population (or absorption of new slum population)

particularly when such programmes are integrated with employment generation programmes.

Table 8.3 : Index of dispersal for some important activities in slums - Madras City

<u>Activity</u>	<u>Index</u>
Traditional services	48.9
Health and Education	72.9
Government services	86.2
Repairs	52.6
Public transport	84.9
Slow moving transport	8.9
Provision stores	52.2
Tea/tiffin makers	18.3
Other trade	40.1
Household manufacturing	20.4
Manufacturing (other than household)	80.6
All activities	45.9

FIGURE 87



MADRAS CITY MAP - BROAD ZONES

APPENDIX-CCATEGORISATION OF OCCUPATIONS (WITH PARTICULAR EMPHASIS ON INFORMAL SECTOR OCCUPATIONS AMONG SLUM DWELLERS)

National Classification of Occupations (NCO) classifies occupations into 10 broad divisions each of which is further subdivided at 2 digit or 3 digit level. The total number of major groups is about 90. Such classification of occupations was found to be either irrelevant or too broad to classify the low income, low skill occupations of slum dwellers. This is because of the fact that whereas in NCO, high skill occupations in the manufacturing (eg engineers) and non-manufacturing sectors (eg doctors, accountants) are specified, low skill occupations are combined. These low skill occupations, on the other hand, are more numerous in the slums and exhibit the characteristics of informal sector activities. For example, a major group '98' of NCO combines all types of transport equipment operators but in terms of studying informal sector occupations, it is necessary to make a distinction between transport operators like rickshaw pullers, hand cart pullers, on the one hand and auto-rickshaw driver, car drivers, on the other hand. Each such sub-group is not only numerous among the slum dwellers but also shows some characteristic features. Hence, the approach adopted in the present exercise in developing occupational classification is to club together high-skill occupation particularly in the organised sector and classify further some typical informal sector occupations.

Another reason for developing a special occupation code was that for understanding the slum occupations, it is necessary to consider occupation along with its economic activity. For example, the employment conditions of

a peon in Government service is different from that of peon/helper in trade and service in the unorganised sector. Even in skilled categories like carpenter, repair (mechanical), the features of employment and earning level are different in those employed in the organised manufacturing sector and the self-employed and those employed in the unorganised manufacturing sector with similar occupations. For this purpose, the code developed includes details of the respective economic activity. The activity code (3 digit) consists of two parts - first digit represents broad economic activity like (trade, service, manufacturing) and the second and third digits representing sub-activity within an activity (eg household service within 'service' function, grocery trade within 'trade').

While developing occupation-code (1 digit), relevance of a particular occupation in a particular activity was generally kept in mind. For example, in metal product manufacturing activity, occupation like mechanic, fitter, blacksmith were specified. In household service, on the other hand, more predominant occupations like cook, maid servant were identified. In the intermediate category of activity like trade, occupations like helper, clerk etc were identified. The principle thus was to specify those occupations in a particular activity which are likely to be more numerous and characteristic of the activity and club together the rest. Another consideration was the identification of low skill and low income occupation. Examples of this principle of classification are indicated in Table C.1. In the process, a total of about 400 occupation x activity calls were identified. The next stage was to understand

the numerical significance of the 4-digit classification. In the final stage, both activities and occupations were further grouped to reflect the dominant occupations (classified by broad activities wherever necessary) among the slum dwellers in Madras many of which may be said to be in the informal sector activities. Final occupational classifications were developed in several stages. In the first stage, an exhaustive activity x exact occupation (type of job) was developed irrespective of the numerical significance of each code. From the detailed occupation codes, a list of 33 broad occupations was developed for the purpose of analysis. List of the occupations finally accepted for analysis are presented in table C.2.

Table C.1 : Some Examples of Detailed Occupation Code (4 digit)

Broad activity	Sub-activity	Occupation	Final code
Service (1)	Household Services(01)	Driver (1)	1011
		Cook (2)	1012
		Ayah (3)	1013
		Maid (4)	1014
		Servant (5)	1015
		Sweeper (6)	1016
		Tiffin carrier (7)	1017
		Gardener (8)	1018
		Others (9)	1019
Trade (2)	Grocery (01)	Working owner (1)	2011
		Supervisory staff (2)	2012
		Salesman (3)	2013
		Clerk/cashier (4)	2014
		Office boy/Peon (5)	2015
		Servant (6)	2016
		Porter (7)	2017
		Others (9)	2019
		Manufacturing(3)	Metal product(10)
supervisory staff (2)	3102		
Clerk/cashier (3)	3103		
Mechanic (4)	3104		
Black smith (5)	3105		
Operator (6)	3106		
Peon (7)	3107		
Porter (8)	3108		
Others (9)	3109		

Table C.2 : List of broad occupations as used in the survey analysis

<u>Broad occupation (as used for the analysis)</u>	<u>Detailed occupations (4 digit) - some examples</u>
1. Maid servant	a) Maid in household services b) Ayah in household services
2. Servants (others)	a) Servant (male) in household services b) Servants in trading establishments c) servants in manufacturing concerns
3. Cycle rickshaw puller	a) Working owner of rickshaw b) Rickshaw puller
4. Animal/Handcart puller	a) Working owner of Animal/Hand cart b) Animal/Hand cart puller
5. Tiffin/Tea maker	a) Tea/Tiffin makers b) Tea/tiffin sellers
6. Tailor	a) Master Tailor b) Tailor c) Tailor in garment manufacturing company
7. Traditional service occupations	a) Washerman b) Ironer c) Barber
8. Sweeper	a) Sweeper in household services b) Scavenger in govt/public services etc
9. Peon (services)	a) Peon in government office b) Peon in private offices c) Peon in banks etc
10. Security staff	a) Security staff in household services b) Security staff in public/Government offices c) Security staff in Banks etc

- | | |
|---|--|
| 11. Driver (mechanised vehicles) | a) Driver in household services
b) Driver in auto/taxi services
c) Driver in public transport |
| 12. Carpenter | a) Carpenter in building activity
b) Carpenter in furniture, manufacturing concern
c) Carpenter (set maker) in film production |
| 13. Semiskilled/skilled construction worker | a) Mason in building activity
b) Plumber in building activity
c) Painter in building activity
d) Htt/Pandal worker in building activity |
| 14. Construction labour | a) Unskilled worker in building activity |
| 15. Petty trader | a) Hawker/vendor (non-establishment) selling vegetable/fruit/flower
b) Hawker/vendor selling pan/beedi |
| 16. Salesman/helper in trade | a) Salesman/helper in wholesale/retail trade (establishment) |
| 17. Working owner (trade) | a) Working owner of trading establishment |
| 18. Working owner (others) | a) Working owner of service establishment
b) Working owner of manufacturing |
| 19. Beedi makers | a) Beedi makers at factory and household level |
| 20. Vessel making/polishing | a) Vessel polisher
b) Vessel maker in vessel manufacturing concern |
| 21. Wig making, weaving and allied crafts | a) Wig maker
b) Weaver
c) Jute/Cane product maker |

- | | | |
|-----|---|---|
| 22. | Book binder/Match
box maker | a) Book binder in printing press
b) Match box maker (in household and
factory level) |
| 23. | Other craftsmen | a) Embroidery
b) Potter
c) Earth doll maker |
| 24. | Mechanic (repairs) | a) Mechanic in auto repair services
b) Mechanic in electric repair
services |
| 25. | Turner/Fitter/Welder | a) Turner/Fitter/Welder in manufac-
turing concerns
b) Turner/Fitter/Welder in railways |
| 26. | Other operators
(manufacturing) | a) Machine operators in manufactur-
ing concern |
| 27. | Helper/cleaner in
manufacturing and
services | a) Helper/cleaner in manufacturing
b) Helper/cleaner in repair services |
| 28. | Porter-transport | a) Porter in public transport
services
b) Porter in private transport
services |
| 29. | Coolie (unskilled
worker in services
and trade) | a) Unskilled worker in trade
b) Unskilled worker in services |
| 30. | Professional and
supervisory staff | a) Doctor in health service
b) Nurse in health service
c) Teachers in school |
| 31. | Others in services | a) Other occupations in service |
| 32. | Fisherman | a) Fisherman |
| 33. | Others | a) Other occupations in manufactur-
ing trade and primary activities |