CHAPTER II
DATA BASE AND METHODOLOGY

2.1 Data base:

The principal source of data for the current study is through primary collection by primary surveys in the three towns under study, since no reliable secondary information is available for the purpose set out earlier. For the purpose of general uses, data from population censuses and other sources like the state directorate of economics and statistics etc. have been used.

2.2 Methodology:

The primary survey will be of two categories, (a) the establishment surveys and (b) the household surveys. The establishment survey is aimed at providing information regarding the nature of economic activities in the towns, including services that provide for work/occupational opportunities. For the purpose of this study, ‘establishment’ refers to all permanent or semi-permanent structures, private or public, operated regularly for at least, three days a week and six working hours a day. The establishments are suppliers of services (public or private) as well as they could be producers of manufactures. Temporary activities, like production at home (like tailoring by housewives), if there is no separation of work place from home, periodic markets, vending on streets and so on are necessarily excluded from the definition of ‘establishments’.

The definition of households is much clearly defined, i.e., all members of the household staying together in one house or separate houses within the same ‘holding’ (property) and partaking food cooked in the same hearth, irrespective of number of nuclear families involved. The households define the individuals performing various functions as
occupations. The households would also provide information about many functions and occupations which may not be covered under the definition of 'establishments’ strictly. Together, these two sources of primary data would constitute the data base of the study.

The data generated from the two surveys broadly will be as follows:

A. Establishments:

1. Nature of the establishment, main business/ services as carried out
2. Self-run, managerially run enterprises
3. Number of employees/ regular/ contracted/ casual worker including managerial staff
4. Classes of job descriptions
5. Broad salary/ wage ranges of different categories
6. Broad information regarding turn-over, profitability
7. Sources of finance (if private only), banks, personal sources, moneylenders/ private financiers

The classification of establishments is broadly into two such as public establishments and private establishments/enterprises, further details of classes are as follow:

1. Merchandise shop includes books and stationery, grocer, general merchandise, clothe, electrical, mechanical, durables and green grocery/ meat/fish
2. Educational institutions like primary school, middle school secondary, high school, college, and others such institutions.
3. Public offices
4. Agencies includes transportation, financial institutions (private excluding banking systems and others
5. Repairs of household articles, electrical, electronics and transportation equipments
6. Manufacturing includes garments/tailoring, knitting/mending, furniture, metal fabrication, weaving, metal-working, construction materials, printing and publishing and others similar activities.

7. Energy includes petrol pump, kerosene vendors and power generation.

8. Animal husbandry includes cattle, poultry, piggery and pisciculture etc.

9. Banking/finance includes commercial banks, co-operatives and insurance establishments.

10. Household/cottage industries include tobacco processing and rolling, cane and basketry, tea processing, spices and condiments, pickles, meat/fish processing etc.

11. Transport organisation includes taxis, buses, trucking and others.

12. Restaurants and hotels consist of restaurants, hotels and tea shops/eateries etc.

13. Food processing includes fruit canning, bakery and others.

14. Undertakers (contracting) includes the construction of house/buildings, roads/bridges and others.

15. Health Services includes druggist, pharmacists, doctors, veterinarians and others.

B. The household survey generates the following type of information:

Household demography

1. Income/expenditure profile of the households

2. Properties owned by households, agricultural/non-agricultural

3. Quality of housing and services

4. Educational qualifications of adults of 15+

5. Nature of occupation of the members (Adults above age 15)

6. Total time spent average per day (working day) on establishment
7. Salary/ wages/ earnings/ incomes from rents, profits and interests/ other sources of participating members etc.

The International Labour Organisation (ILO) scheme of occupational classification has been used for grouping occupations in the present study because classification of occupations into a reasonable number of categories is to permit international comparisons. There is a great deal of similarity in the industrial classification being adopted by a large number of countries. In India, the census has defined and modified its industrial classification considerably and has made it almost synonymous with that being followed by the United Nations. ILO occupation classification has been designed as applicable to all paid jobs currently done by economically active persons in a country. The object has been to group together occupations (basically by reference to job titles), which are deemed to be similar, taking simultaneous account of two main criteria. The ILO occupation classification uses the following criteria:

The level of skill and experience and formal qualification which is required to carry out competently the work activities typically involved in the occupation, and the nature of those work activities. These criteria are not new and have been implicitly or explicitly invoked in previous schemes of occupational classification (by ILO).

The second criterion is nature of work activities that may refer to any or all of a number of aspects of the work, including the materials handled by type of tools and equipment used and so on. However, it focuses specifically in all cases on work activities. Rather than on other aspects of the job such as, for example, whether the worker has trainee or supervisory status, or what industrial function the job serves. These are ignored by ILO, so that, for example, a ‘carpenter’, an ‘apprentice or trainee carpenter’ and a ‘foreman carpenter’ are all assigned exactly the same occupational group.
The classification of occupations made by International Standard Classification of Occupations (ISCO) used in the current study is as follow:

1. **Legislators, senior officials and managers**, which include
   - (112) Senior government officials
   - (123) Other departmental managers

2. **Professionals** include
   - (211) Physicists, chemists and related professionals
   - (212) Mathematicians, statisticians and related professionals (Accountants)
   - (213) Computing professionals
   - (214) Engineers and related professionals
   - (222) Health professionals (except nursing) (Compounder)
   - (223) Nursing and midwifery professionals,
   - (231) College, university and higher education teaching professionals (college and secondary school teacher and lectures)
   - (232) Secondary education-teaching professionals (Middle schools teacher),
   - (233) Primary and pre-primary education teaching professionals,
   - (235) Other teaching professionals
   - (242) Legal professionals (ADC)
   - (243) Librarians and related information professionals
   - (246) Religious professionals (Pastor etc)

3. **Technicians and associate professionals**, minor-groups are:
   - (311) Physical and engineering science technicians
   - (313) Optical and electronic equipment operators

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1 The numbers in the parentheses are the ILO classification numbers. It may be noted that only the relevant occupations considering the limited occupational diversity in the three study towns have been only used.
(322) Modern health associate professionals (except nursing)
(323) Nursing and midwifery associate professionals
(331) Primary education teaching associate professionals
(332) Pre-primary education teaching associate professionals
(334) Other teaching associate professionals
(342) Business services agents and trade brokers
(343) Administrative associate professionals
(344) Customs, tax and related government associate professionals
(345) Police inspectors and detectives
(348) Religious associate professionals

4. Clerks, Minor groups are:
   (414) Library, mail and related clerks
   (419) Other office clerks
   (421) Cashiers, tellers and related clerks
5. Shop and market sales workers include:
   (522) Shop salesperson
   (523) Stall and market salespersons

6. Skilled agricultural and fishery workers, Sub-groups are:
   (611) Market gardeners and crop growers
   (612) Market-oriented animal producers and related workers
   (613) Market-oriented crop and animal producers
   (614) Forestry and related workers
   (615) Fishery workers, hunters and trappers
   (621) Subsistence cropping
   (631) subsistence animal rearing
7. Craft and related trades workers
   (722) Blacksmiths, toolmakers and related trades workers
   (724) Electrical fitters
   (733) Handicraft workers in wood, textile, leather and related materials
   (741) Food processing and related trades workers

8. Plant and machine operators and assemblers, Sub-groups are:
   (816) Power production and related plant operators (on Govt service)
   (825) Printing
   (826) Textile, fur and leather producing activities/ operators
   (827) Food and related products machine operators (mill)
   (832) Motor vehicle drivers
   (833) Agricultural and other mobile plant operators

9. Elementary occupations Sub-groups are
   (912) other street services' elementary occupations (hawksers)
   (913) Cleaners and launderers (Sweeper),
   (921) Agricultural, fishery and related labourers (Cultivators)
   (931) Mining (including quarrying) and construction labourers
   (932) Transport labourers and freight handlers
   (941) Casual/Hired workers

10. Armed forces

2.3 Sampling Design

   The sampling design for establishment survey constitutes of all public offices and 50 percent samples of the rest of the private establishments. The 50 percent private establishment samples have been stratified by the sub-categories of establishments, like (a) shops, (b) garages and small-scale manufacturing, (c) cottage and home-based
manufacturing, (d) personal service enterprises like tailoring, laundry and barber/beauticians etc, (e) restaurants and eateries, (f) agro-services, (g) whole-selling, (h) construction services and real estates and (i) other establishments not covered by the above.

Table 2.1 Samples Drawn from the Three Towns of Serchhip District

<table>
<thead>
<tr>
<th></th>
<th>Serchhip</th>
<th>Thenzawl</th>
<th>N.Vanlaiphai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Households</td>
<td>327</td>
<td>107</td>
<td>67</td>
</tr>
<tr>
<td>No. of active worker</td>
<td>751</td>
<td>313</td>
<td>216</td>
</tr>
<tr>
<td>Establishments (Govt.)</td>
<td>40</td>
<td>29</td>
<td>18</td>
</tr>
<tr>
<td>Private enterprises</td>
<td>122</td>
<td>56</td>
<td>42</td>
</tr>
</tbody>
</table>

The household samples are a 10 percent sample of a 'population' of 5,500 households in the three townships (combined population of over 26,000), yielding approximately 550 household samples to be drawn by a random sampling system from geographical units of 200 to 250 households (localities), using standard systematic-random sampling procedure.

The questionnaires/schedules of household survey cover household demography of the member above 14 ages. It also contains the question to the head of the household whether they have changed occupation or not within 20 year back. The occupation of head of the household is used to reconstruct the past occupational structure of the population. The present occupational structure is formed from the total active workers of the given household. For the analysis of data, frequency distribution and percentage of change, coefficient of correlations and other simple descriptive statistics have been applied to understand the identified objectives. To analyse occupational diversity, the formula applied i.e.

$$\left[ 1 - \left( \frac{P_2 - P_1}{P_2} \right) \times 100 \right]$$

We have

Where $P_1$ = Numbers of similar occupations,
$P_2$ = Total numbers of occupations in household
2.4 Conceptual framework:

The study design could be understood by the following flow chart:

As seen the flow chart, the scheme of observations and explanations is formulated as follow:-

1. Urban economy is mainly constituted by production of goods and services. Public establishments and private enterprises render modes of production and services. They deal various kinds of developments, it indicates urban economic structures. The study of livelihood of the people and their participation in public establishments and private enterprises ascertain the understanding of urban economy.

2. The understanding of public establishments and private enterprises provides the dynamism of urban economy since it creates means of productions and provision of service to the people. It determines the production systems, salaries and income of the inhabitant of the urban centres. The capacity of employments in public establishments determines participation of the people since service plays very important role in the urban economy.

3. The apprehension of means of livelihood and mode of productions in the urban centres provides the understanding of economic structures. It confirms the question of growth processes and potential of growth of the urban centres.

4. The understanding of entrepreneurship environments (capital investments, profitability, operational area and problems of the private enterprise) provides the knowledge of potential growth and expansion of the private enterprises, which is the machine of economic growth of the towns. The growth and expansion of private enterprises stimulate economic changes and occupational changes.
Fig 2.1 Conceptual Frame (Flowchart)

- People
- The City
- Enterprises/ Public Services

The Urban Economy

- Occupations
- Incomes (salaries, profits, interests, rents)
- Production of goods/Services

Employment, self-employment, Entrepreneurship

Public and private Investments-economic expansion

Occupational Changes

Economic Changes

In-migration and population change

Changes in demand pattern

Change in threshold conditions

Changed Urban Economy
5. The study of occupational changes, changing pattern and causes of occupational changes determine growth processes of the urban economy and horizontal expansion of urban settlements. The economic structures, modes of production and occupational opportunities determine the nature of migration. The economic change, which is the corollary of the expansion and growth of the public and private establishments, combining with wide range of occupational opportunities attract immigrants. The attraction of immigrants leads economic changes to support the growth of urban centres.