

CHAPTER III

METHODOLOGY AND PROFILE/

Among the basic requirements of successful research, a clear and effective methodology enjoys a place of prime importance. If a methodology adopted by the researcher is designed well including efficient tools of analysis and interpretation the very work becomes interesting and enlightened. It is hold that the entire research plan will become workable and brilliant if a masterly methodology with updated devices and intputs are used.

(This chapter presents the methodology adopted highlighting the choice of the study area, scope of the study, sampling method, collection of data, tools of analysis, terminology and a short profile of the study area.

(Choice of the Study Area:

Tirunelveli district is one of the most vibrant and promising parts of Tamil Nadu economy. It is endowed with rich natural and human resources. The process of exploration and utilisation of resources towards higher optima has gained momentum a little belatedly. The necessary vigour and rigour are being added to such a process in recent years.)

(This district is on the path of transition from agrarian to industrial economy is noticeable, bringing with it urbanisation and modernisation; which encourage construction activities.)

The very first Specialised Economic Zone (SEZ) in the country with a huge investment is inaugurated in the nearby Nanguneri of Tirunelveli district. A most modern macro technological park is planned here.)

(According to 1991 census, 2.92 per cent of the total construction workers of Tamilnadu were in Tirunelveli district. This figure seems to be significant. The construction sector of this district provides assured employment to the agricultural labourers who frequently migrate to urban areas to tide over the loss of employment arising from seasonal variations in rainfall and crop failures. Construction of several types of buildings, public utilities and modern shopping complexes are coming up at a rapid pace and that adds to the employment opportunities to labourers with and without skill. Thus, construction industry is growing in importance in Tirunelveli district, hence, this study. It is based mostly on primary data collected from a sample of construction workers and their employers.)

(**Scope of the Study:**

This study covers the skilled, semi-skilled and unskilled male and female construction workers of urban and rural areas of Tirunelveli revenue district.)

The study gives adequate importance to the socio-economic aspects of construction workers. The living and working conditions are studied by choosing necessary variates of significance.

Period of the Study:

The period of the present study pertains to the year 1998-99. Necessary field surveys were carried out during the months from October 1998 to March 1999.

Sampling Method :

Tirunelveli district is the universe of the study. Within that universe there is difference in construction activities between urban and rural areas, because government offices, business premises and even residential buildings are concentrated around cities and they differ in qualities also from rural constructions. Therefore, the universe is divided into two strata: 1) urban areas (the area of operation of Tirunelveli municipal corporation) and 2) rural areas (areas beyond a radius of three kms. from the municipal corporation limit). The worksites which include the construction of private houses, lodges, hospitals, factories, hotels, housing board flats, shops and marriage halls were identified at the first stage for the selection of construction workers in both urban and rural areas in the district. Road and bridge construction sites were not taken into account in the survey since they

were transitory and scattered in nature. There were three different categories of respondents namely construction workers, maistries and contractors.)

(Of the three categories, the construction workers were selected first because their socio-economic condition was the main subject of the study. Considering both the time available for the study and the need to have a sufficiently large sample to allow statistical analysis the sample size was fixed at 300 construction workers equally distributed between urban and rural areas. Important work sites stratum were listed with the help of district officials and recognised building contractors. There were 15 work sites in urban areas and 15 in rural areas. Then the sample of 300 workers was distributed among the work sites in probability proportion to the number of workers in them. Finally the required number of workers were selected by simple random sampling method from the list of all workers in each site. Thus it was a stratified two stage random sampling method.

Further, 50 maistries and 20 contractors, 25 and 10 in each from urban and rural areas respectively were randomly selected.

The construction workers were again seen to have three categories, namely, skilled, semi-skilled, and unskilled workers. The skilled workers are those who are involved as the masons, carpenters, painters, plumbers, electricians, lift erectors,

electric stone cutters, wood polishers, mechanics, and those engaged in plastering and layering were skilled workers .

The semi-skilled workers included stone cutters, bar benders, fitters, welders, mechanic operators, centering and scaffold makers and mosaic polishers.

The unskilled category consisted of female coolies, male coolies, watchmen, earth workers, waterers, stone breakers and helpers to carpentry and bar bender.

The sample of 300 construction workers was post stratified into the above three categories and the distribution is presented in Table 1.

Table: 1.- Distribution of Sample by Strata and Category

Category	Urban (150)		Rural (150)	
	Male	Female	Male	Female
Skilled	47 (31)	–	49(33)	–
Semi-skilled	24(16)	–	26(17)	–
Unskilled	33(53)	46 (100)	39(50)	36 (100)
Total	104	46	114	36

Note: Figures within parentheses denote percentages to total.)

As could be seen in the table, out of 150 construction workers in urban area 47 workers (31 per cent) were skilled; 24 workers (16 per cent) semi-skilled and 79 workers (53 per cent) unskilled.

In rural areas, among 150 workers 49 (33 per cent) were skilled; 26 (17 per cent) semi-skilled and 75 (50 per cent) unskilled. Female workers were not found in the skilled and semi-skilled category of the selected sample construction workers, and it was found only in unskilled category of workers. In the urban areas, out of 79 unskilled workers 33 (42 per cent) belong to male workers and remaining 46 (58 per cent) belong to female workers. In the case of rural areas out of 75 unskilled workers 39 (52 per cent) belong to male categories and 36 (48 per cent) belong to female workers.)

Collection of Data:

Both primary and secondary data were used in this study. A reconnaissance survey was made in the selected area to get acquainted with the nature of construction work and various activities involved under this sector with different categories of workers. On the basis of information collected a comprehensive interview schedule (Appendix I) was drafted, field tested and used to collect primary data by personal interview method. Before undertaking the main survey, a tentative interview schedule was prepared and administered to five workers in each category

namely, skilled semi-skilled and unskilled workers and in each area- urban and rural , in order to assess its comprehensive coverage of data needs, changes required if any were made and the schedule was finalised. The selected respondents were contacted in person and the objectives of the study were explained to them clearly and their co-operation was ensured. The details regarding the general characteristics of the sample respondents, income, expenditures, consumption pattern, nature of work migration and working conditions and other information relating to the overall objectives of the study were collected from the sample respondents through the direct personal interview method.

Two separate interview schedules were prepared to collect the required particulars from the contractors and maistries. Specific details regarding fixation and payment of wages, and their views on supply of labour, extraction of work, provision of security to workers were collected. In the same manner information regarding the problems in getting government funds and their views on trade unions were also obtained.

The secondary sources of data related to wages, welfare schemes, labour acts and the method of compensation, if any. Such secondary data were collected from the Collectorate, Tirunelveli, Central and State Departments of Labour, the Office of the Deputy Commissioner of Labour, Tirunelveli, The Tamil Nadu Construction

Workers Welfare Board, Thirumangalam, Chennai, and the Central and State Statistical Offices.

The researcher collected good information from the Madras Institute of Development Studies (MIDS), Chennai and the Centre for Development Studies (CDS) Trivandrum, and also from a few magazines, journals and newspapers.)

Tools of Analysis:

[Conventional tools of analysis like, percentages and averages were used to discuss the general characteristics and the living and working conditions of the construction workers.] In order to examine the level of consumption of workers of different categories, a log linear regression model with annual household disposable income and the size of the family as independent variables was used. Further, the marginal propensity to consume (MPC) and the marginal propensity to save (MPS) were derived from the above fitted regression model for both urban and rural areas separately.

In order to analyse the standard of living of construction workers the standard of living index (SLI) comprising of (i) the index of consumption expenditure (ICE) ii) index of quality of residence of the households (IQH) and iii) index of basic facilities (IBF) was computed by using score values.)

(With a view to identify the factors influencing the standard of living of construction workers, a log linear regression model is fitted for urban and rural workers separately.)

(For the purpose of examining the variables which determine the wages of construction workers of different categories for urban and rural areas a log linear regression model was fitted separately for the three categories of workers.)

Models and Methods of Estimation:

Detailed specification of regression models, methods of estimation of these models and methods of construction of index numbers are described in the following chapters where the results of analysis are discussed. This is just for convenience of easy reference.

Statistical Tests:

[In evaluating estimated parameters of the models, t, and F-statistics are employed. To test statistical significance of partial regression coefficients 't-tests' is used. To evaluate the statistical significance of the value of the coefficients of multiple determination (R^2), F-test is used. If R^2 is statistically significant, the estimated multiple regression model is considered to be valid for drawing inferences.]

In all cases, statistical significance is tested for five per cent and one per cent levels only.

Terminology :

(A few key terms as adopted in the study are given below:

Construction Workers:

[The term 'construction workers' stands for all types of workers like skilled, semi-skilled, and unskilled as well as the male and female workers of both the urban and rural areas of Tirunelveli district who are engaged in construction activities for earning an income. They discharge work by physical labour. This term does not include any other worker like contractors, maistries and supervisors in this study (child labour is excluded because it is illegal).]

Construction Sector:

'Construction Sector' implies all those segments, network of functions and activities, which are utilised in the construction works. It includes men, materials, machines, money, market and methodology in the creation of utilities and formation of capital and welfare through building houses and other infrastructural facilities.)

Urban Area:

The area which comes within the Tirunelveli Municipal Corporation (TMC) limits is treated as urban area.)

Rural Area

'Rural area' refers to the area beyond a radius of three kilometers from the Tirunelveli Municipal Corporation (TMC) limits.)

Skilled Workers:

'Skilled workers' are mason, carpenter, painter, electrician, lift erector, electric stone cutter, wood polisher, plastering worker, laying worker and mechanics.)

Semi-skilled Workers:

'Semi-Skilled' workers include stone cutter, bar bender, fitter, welder, machine operator, centery workers, and moasic polisher.

Unskilled Workers

'Unskilled workers' are male coolie, female coolie, stone breaker, carpentry helper, earth worker, water sprayer, watchman and helper.)

Contractor:

A 'Contractor' is one who enters into an agreement with persons desiring to construct or modify buildings on certain rates of remuneration, terms and conditions. In this study all types of contractors are treated as contractors. Maistries, supervisors and construction workers are employed by the contractors on mutually agreed terms and conditions. Usually the contractor is responsible for the quality of the construction work and completion of the work within the stipulated period of time.)

Maistries:

'Maistries' are a sort of employment brokers who arrange jobs for the workers for a charge or commission and they interact between contractors and the workers.)

Living Condition:

Living condition of construction workers include facilities in accommodation, shelter, family conditions rent, monthly income, consumption pattern monthly expenditure, savings, owning of assets, debt position and the general standard of living.)

Working Conditions:

'Working condition', in this study, refers to the conditions of work place, working hours, rest hours, overtime work, security of job and job satisfaction.)

Trade unions:

The term 'Trade Union' is used in the study as it is used in labour economics. A trade union is an association of workers that functions to preserve and promote the common good of the working class - in this study the construction workers. It may be formal or informal, but finds recognition only when it is registered under an appropriate department of the government.

Study Area:

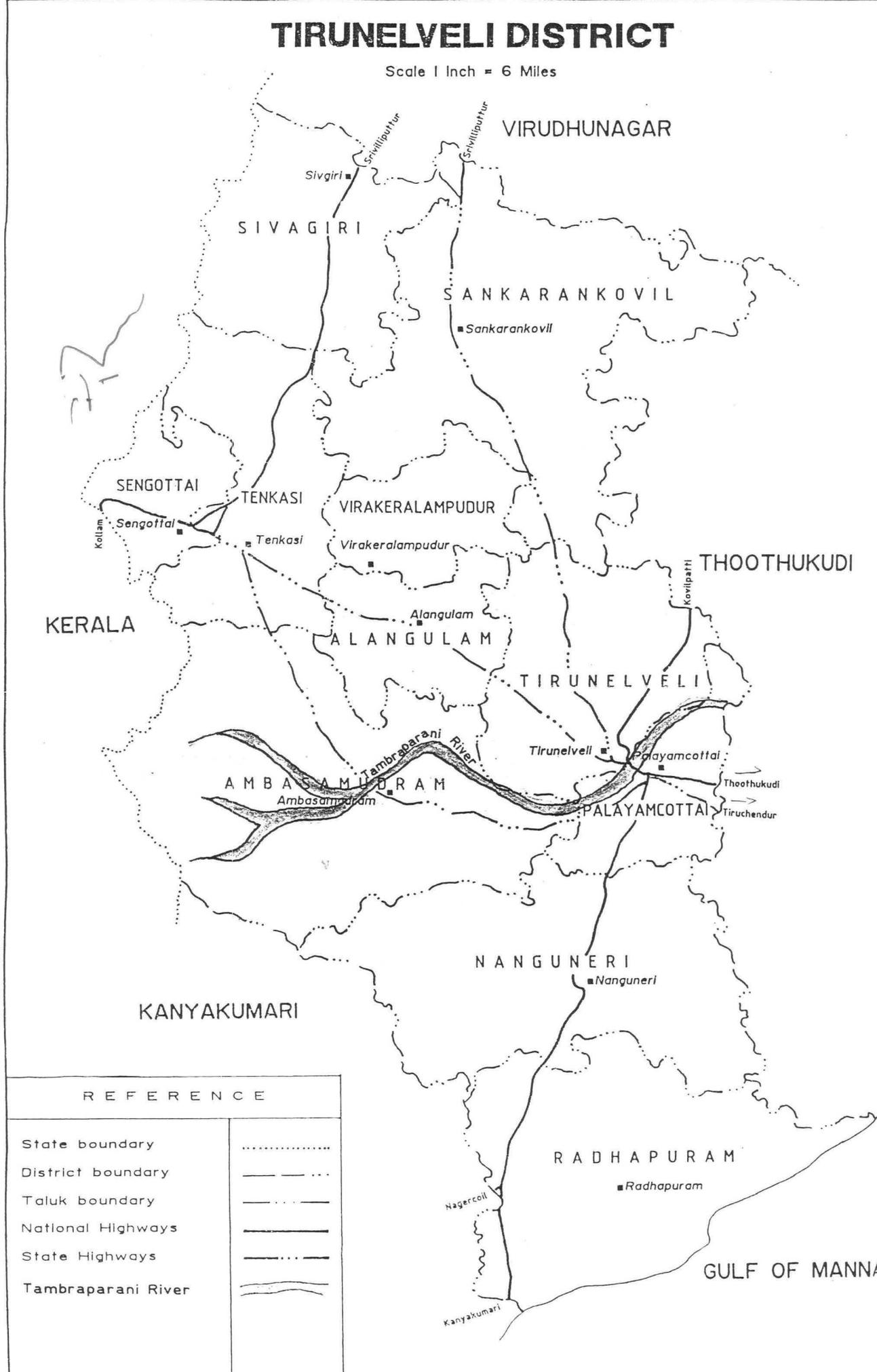
A short profile of the geographical, socio economic and demographic features of the Tirunvelveli district is given below.

The Name:

The name 'Tirunelveli' has a prefix 'Tiru' which means sacred in Tamil. The words 'nel' and 'veli' mean paddy and hedge. The full name indicates that the place is surrounded by green paddy fields which present a beautiful greenish outlook. It is a veritable feast to human eyes. This name has certain legendary annotations also.)

TIRUNELVELI DISTRICT

Scale 1 Inch = 6 Miles



REFERENCE

State boundary
District boundary	-----
Taluk boundary	-----
National Highways	=====
State Highways	-----
Tambraparani River	~~~~~

Location and Area:

Tirunelveli district is located at the southern end of India. It lies between $8^{\circ}05'$ and $9^{\circ}30'$ of Northern latitudes and $77^{\circ}05'$ and $78^{\circ}.25'$ of Eastern longitudes. Its contour is bounded by the Virudhunagar district in the north, western Ghats in the west, Kanyakumari district in the south, and Tuticorin district in the east.

The district has a total geographical area of 6,823 sq.kms. Nearly 1,370 sq.kms are under the forest area. The wet land is 79668 hectares. The district has an area of 39274 hectares as wasteland.

The total cultivated area of Tirunelveli district is reported to be 1,51,806 hectares. The net area sown is found to be 1,22,047 hectares. The gross area comes up to 1,07,822 hectares.

Weather, Climate and Rainfall:

The district enjoys equable seasonal and weather conditions. The climate remains dry and hot during April and May. At the end of June south-west monsoon sets in. From September onwards, north east monsoon starts. The district is mainly benefited by north-east monsoon. The average rainfall is 888.70 mm in this district.

The river Tambaraparani is the perennial life line of the district. The origin of Tambaraparani lies on the eastern slopes of Western Ghats at an attitude of about

2000m. The river and its tributaries, more than twelve in number, originate at the peaks of Western Ghats.

Administration:

The district has a healthy and decentralised revenue and panchayat administrative arrangement. There are three revenue divisions namely Tirunelveli, Cherenmahadevi and Tenkasi. There are ten taluks in Tirunelveli district. They are 1. Tirunelveli, 2. Palayamcottai, 3. Sankarankovil, 4. Tenkasi, 5. Shencottai, 6. Sivagiri, 7. Ambasamudram, 8. Nanguneri, 9. Radhapuram and 10. Veerakeralamputhur.

The district has 19 community development blocks; one municipal corporation; five municipalities; 38 town panchayats and 424 village panchayats. There are 631 revenue villages.

Demographic Features:

Demographic characteristics play a strategic role in the growth and development of an area. The size of population and its quality are strong determinants of the pattern of progress and potentials. Tirunelveli district enjoys a mixed blend of several leading religions castes and communities. Hinduism is the religion of majority of the population of the district. The leading demographic features of Tirunelveli district are briefly presented below:

The total population of the district was 25,01,832.¹ Out of this total the male population was 12,29,902 and the female 12,71,930. The urban, rural divided in terms of population was 7,93,176 and 17,08,656. The density per sq.km. was 367.

The district is predominantly rural in character with 557 villages and urban centres. The sex ratio is 1034 females for every 1000 males. Nearly 18 per cent of the total population belongs to scheduled castes. Just 0.5 per cent belongs to scheduled tribes. The combined birth rate is 17.22 per thousand population and the death rate is 6.90 per thousand population.

The literacy rate of this district is 65.58 percent which is higher than the State and the national rates.

As per 1991 census, the total workers of Tirunelveli district were 11,80,369. Among them 5,86,798 were male workers and 5,93,571 female workers. The percentage of workers to total population in Tirunelveli district stood at 47.18 in 1991.

There were 3,49,069 agricultural labourers and 2,51,257 cultivators.

¹1991 Census figures.

This district had 14306 construction workers out of which 600 were female. This works out 0.57 per cent in the total population and 0.14 per cent in the total main workers of Tirunelveli district.

According to 1991 census, there were 4,89,270 construction workers in TamilNadu and 14,306 in Tirunelveli district. The district percentage works out 2.92 out of this total.

A table showing district-wise population and construction workers in Tamil Nadu is given in the Appendix No. II.

Welfare Schemes for Construction Workers:

In accordance with international and national trends in introducing useful welfare schemes to construction workers, the state of Tamil Nadu has been evincing due importance to provide necessary welfare schemes to the construction workers. The number of schemes and programmes available for the construction workers of Tamil Nadu have been increasing over the years. These welfare schemes are made available for the workers who have registered themselves with the labour office and obtained the identity card on payment of a nominal fee. (The following are the major welfare schemes, available for construction workers.²)

²Data collected from the Records of the Office of Deputy Commissioner of Labour, Tirunelveli.

1. Assistance for marriage is given. An amount of Rs. 2000 is paid as marriage assistance for the heir of the construction worker.

2. For maternity, abortion and family planning operation Rs. 2000 is paid. It is available for two children only.

3. For the education of children of construction workers an amount of Rs. 1,000 is paid for 10th Standard. and Rs. 1500 for 12th Standard for each child.

4. In the event of natural death of a registered construction worker, Rs. 5000 and for any other type of death, Rs. 2000 is paid to the heirs of the workers for cremation and last rites.

5. If a construction worker dies while working (in duress) due to some accident, then the government pays Rs. One lakh to the family.

6. While on work, if a worker sustains injuries or damages leading to permanent disablement, then an amount Rs. 50,000 as assistance is paid

Many of the construction workers seem to be indifferent towards registration with the welfare board. They do not evince adequate interests in the trade union activities also. Many do not know and others do not care as for as their rights are concerned.