CHAPTER 3
RESEARCH DESIGN AND METHODOLOGY

3.1 Statement of the Problem

Up till date, four all India Census have been conducted for the MSME sector which was earlier known as the Small Scale Industries (SSI). During the Third Census of the SSI sector in Nagaland, conducted for units permanently registered till 31.03.2001, a total of 1114 units were surveyed. Out of which, 534 units were found to be working and 580 units were found to be closed. In the fourth all India census for MSME, data for Nagaland State showed that out of a total of 2332 registered units, 64.26 percent of the units were found to be closed. This high rate of closure of units in the registered sector was witnessed both during the Third Census of Small Scale Industries (SSIs) and Fourth All India Census of MSMEs, i.e., 52.06 percent and 64.26 percent respectively. Data from the Fourth Census also revealed that among the eight Northeastern states, Nagaland had the highest rate of closure of registered MSME units (Final Report 60).

The review of literature reveals that while MSMEs have proven their potential for bringing in economic and social growth in an economy, they are also hindered by a number of problems in terms of production, finance, labor, marketing and also interferences of government officials. It should be mentioned that in Nagaland, there is scarce availability of capital, production is mostly traditional and techniques are outdated. In addition, its geographical isolation, chronic insurgency problem and the terrain discourages potential investors from investing in the state. MSMEs on the other hand do not require huge capital but generates employment opportunities within a short period. The size and diversity of activities of MSMEs makes them highly adaptable, provided the environment in which they operate facilitates their growth and development.

Bharti and Desai stated that in order for industrialization to take place, requires the promotion and growth of small scale industries, now known as MSMEs (Rahman & Day 8-9). The research is, therefore, proposed to identify and study the problems encountered by such enterprises so that measures can be taken to support and assist them.

3.2 Objectives of the Study

The objectives of the study are:

i) To carry out a comparative analysis of policies for MSMEs in Nagaland with the other North Eastern States;

ii) To identify and study the problems faced by registered MSMEs in the State;

iii) To formulate a policy framework for better working of MSMEs in the State.

3.3 Scope of the Study

The scope of the study has been classified into three categories which are explained as follows:

i) **Geographic Scope -** The research is restricted to the state of Nagaland, which comprises of 11 districts, namely, a)Kohima, b)Dimapur, c)Phek, d)Mokokchung, e)Zunheboto, f)Peren, g)Longleng, h)Kiphire, i)Wokha, j)Mon and k)Tuesang. Out of these 11 districts, 3 districts were selected:

   a. *Kohima* – It is the Capital of Nagaland and all major offices are located in this district. Thus, there is easy accessibility to the offices and financial institutions catering to the needs of MSME units.

   b. *Dimapur* – Apart from having the maximum concentration of MSME units, this district is also the most accessible district of the State, connecting Nagaland to the rest of the country through roadway, airway and railway. It is also known as the "commercial hub" of the State (Imnasenla 7).

   c. *Phek* – It is considered as one of the backward region of Nagaland (District Human Development Report-Phek 11). The lower number of MSME units as well as its remoteness from the major offices and financial institutions made it important to consider this district.

ii) **Periodic Scope** – MSMEs registered with the District Industry Centre (DIC) from the year 2006 to 2012 in the 3 selected districts were considered. The primary data was collected in Nagaland from September 2013 to December 2014.

3.4 Limitations of the Study

The study is likely to suffer from the following limitations:

i) The primary study area is restricted to the State of Nagaland covering three districts namely, Kohima, Dimapur and Phek.

ii) Due to lack of proper records of accounts as well as the respondents' reluctance to disclose details of the enterprises' sales, expenses information, only the approximate amounts could be collected.
iii) The study has taken into account only the enterprises that are registered with the DICs.
iv) Last but not the least, the study also suffers from the dearth of information on the MSME sector in Nagaland.

3.5 Research Design

The study is both exploratory and descriptive in nature.

3.5.1 Objective 1:

In order to fulfill the first objective, secondary data was utilized. The State Industrial Policies of the eight (8) North-Eastern States were studied and compared.

3.5.2 Objective 2:

The second objective was achieved through the collection of primary data from the enterprise owners. A schedule was used for the purpose where the problems were classified into problems of finance, production, marketing and labour, based on literature review. Effect of the socio-economic background of the respondents, such as gender and educational qualification, on how they perceive the various problems, was also studied.

3.5.3 Objective 3:

The third objective has been achieved with the help of data and information gathered from the 1st and 2nd objectives and also discussion with the key personnel of the Directorate of Industry and Commerce, Nagaland.

3.6 Data Sources

Data for the study is based on both primary and secondary sources:

3.6.1 Primary Sources: Primary data was collected with the help of a schedule and also discussion with key personnel of the Directorate of Industry and Commerce, Nagaland.

3.6.2 Secondary Sources: In addition, secondary data was also used which includes annual reports of the Ministry of MSME, MSME Act, Industrial Policies of the 8 NE States, journals, newspaper articles and other online resources.

3.7 Preliminary Research

The pilot survey was carried out twice, once in Kohima district and the other in Dimapur. Based on the difficulties faced during the first pilot study, necessary changes were made in the research instrument and this was tested for the second time in Dimapur. In both the districts, a total of 30 units each were selected and administered the schedule.

3.8 Research Instrument

The main research instrument used for collection of the primary data was a schedule which was administered to the owners of the MSME units. Discussions with the personnel of the Directorate of Industry and Commerce, Nagaland were also carried out in order to gather the information.

3.9 Sampling Design

3.9.1 Population: The population for the study is defined as follows:

i) *Sampling Frame and Extent:* It comprised of the enterprises registered with the District Industry Centers of Kohima, Dimapur and Phek districts in Nagaland.
   Total sampling frame = ***2258 units***

ii) *Sampling Unit:* The enterprise.

iii) *Element:* Enterprise owner.
   Total sample size = 600 units.

The sample size for the study is based on the following related studies as shown in Table 3.1:

Table 3.1: Related Studies for Sample Size Selection

Author	Study Area	Sample Size
Jha and Agrawal (2010)	The authors carried out a case study to assess the potentials, measure the prospects and identify the problems of small scale industries in the district of Varanasi, Uttar Pradesh.	250 units
Bekele and Worku (2008)	The authors studied women entrepreneurship in MSMEs in Ethiopia, with the objective to identify the key predictors for the viability and long term survival of small businesses and also to find id male operated units performed better than female operated units.	500units

Reddy (2007)	The author carried out the study in Viti Levu of Fiji island, to examine how small businesses had contributed towards increasing the household income and also identify the problems that were plaguing these units.	300 units
Onugu (2005)	The author studied the SMEs in Nigeria to find out if the SME sub-sector had performed its role in driving the country towards industrial transformation and development as was seen in other developed countries.	300 units

3.9.2 Sampling Technique:

Since the total number of *small and medium enterprises is 78 units*, all the units under these two categories were selected for the study. Micro enterprises on the other hand comprised of the major share, coming to a total of *2180 units*. Therefore, *proportionate stratified sampling* was used *to determine the proportion of micro enterprises* under the three districts. The total number of small and medium enterprises was deducted from the total sample size as well as the total population and the following procedure was used:

$$= \frac{\text{Elements in each stratum}}{\text{Total Population}} \times \text{Sample size} \qquad \text{(Kumar 204; Kothari 63)}$$

Sample size of micro enterprises = (600 – 78) units

= ***522 units***

Total population for micro enterprises = (2258 – 78) units

= ***2180 units***

Finally, Simple Random Sampling technique with the help of Random Number Generator from www.stattrek.com was used to select the micro enterprises. Tables 3.2, 3.3 and 3.4 show the bifurcation of the units in all the three districts.

Table 3.2: Number of Units Selected in Kohima District

Kohima	**Manufacturing Enterprises**			**Services Enterprises**			**Total**
	Micro	**Small**	**Medium**	**Micro**	**Small**	**medium**	
Total Number	479	3	0	34	11	0	527
Sample Units	**115**	**3**	**0**	**8**	**11**	**0**	**137**

Table 3.3: Number of Units Selected in Dimapur District

Dimapur	Manufacturing Enterprises			Services Enterprises			Total
	Micro	Small	Medium	Micro	Small	Medium	
Total Number	1337	44	3	219	16	0	1619
Sample Units	**320**	**44**	**3**	**53**	**16**	**0**	**436**

Table 3.4: Number of Units Selected in Phek District

Phek	Manufacturing Enterprises			Services Enterprises			Total
	Micro	Small	Medium	Micro	Small	medium	
Total Number	106	1	0	5	0	0	112
Sample Units	**25**	**1**	**0**	**1**	**0**	**0**	**27**

3.10 Statistical Tool

In analyzing the data, simple statistical techniques such as percentage, mean, t-test and ANOVA were used to find out the association amongst the variables. SPSS version 16 was the software package used to carry out the analysis.

3.11 Variables under Consideration

To study the problems faced by MSMEs in Nagaland, it was categorised into four groups: finance, production, marketing and labour problems. Based on literature review and pilot survey, the following variables are identified and listed below in Table 3.5.

Table 3.5: Variables Indicating Problems of MSMEs

Finance	Difficulty in raising capital, Banks reluctant to sanction loans, Bank interest charges too high, Delay in payment of loans by banks, Shortage of working capital, Delay in payment from customers, Non-existence of sound financial planning, Lack of capital for acquiring plant & machinery/equipment, Lack of professionalism in maintaining books of account, Taxation from insurgent groups, Interferences from govt. officials for various clearances, lack of security. (Jha & Agrawal 2010; Kanitkar 1994; Reddy 2007; Reddy 2012)
Production	Inadequate Supply of raw materials, Delay in supply of raw materials, Variation of raw material prices at different places,

	Primitive machinery/ equipment, Power shortage, Unwillingness to upgrade the technology, High cost of inputs, Non-availability of suitable machinery. (Jain & Madan 2012;Coad & Tamvada 2012)
Labour	Number of employees, Lack of skilled labour, Lack of unskilled labour, Inability to retain labours, Absenteeism, Health problems, (Reddy 2012; Jha & Agrawal 2010)
Marketing	Lack in product quality, Lack of demand, Competition from sister concerns, Lack of proper marketing channels. (Reddy 2012; Kanitkar 1994)
Others	Reason for starting the venture, Awareness and importance of EDPs and subsidy schemes, Participation in EDPs.
Socio-economic factors	Age, Gender, Marital status, Experience, Educational qualification (Aworemi et al 2010; Omotoso 2005; Sinha 1996)

Chapter Summary

This chapter contains details of the objectives, preliminary survey conducted, research instrument used and the research design of the study. The sampling design, statistical techniques and tool used as well as the variables considered to achieve the objectives of the study were also explained.