INDUSTRIAL DEVELOPMENT IN MIZORAM:
A CASE STUDY OF SMALL AND COTTAGE INDUSTRIES

ABSTRACT

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THESIS SUBMITTED FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY IN GEOGRAPHY

DEPARTMENT OF GEOGRAPHY

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JUNE 1995

Statement of the Problem :

The level of industrial development is an important yardstick for measuring the level of economic development and standard of living in the present day. With regards to industrial development, Mizoram is at its chrysalis. In fact, all the three districts of the state are included within the status of "No Industry District" at the National level indicating that the whole state is a 'No Industry Area'. Accordingly, the present study area (i.e., Mizoram) still has to create its place in the industrial map of the country.

Till date, there is no large Scale Industry of any sort in the entire state. However, some Medium Scale industries which are Government of Mizoram undertaking, have come up recently. These industrial establishments are functioning under the Mizoram Food & Allied Industries Corporation (MIFCO. Ltd.). They are :

1) Food/ Fruit Preservation Factory at Vairengte,
2) Ginger Oil & Oleoresin Plant, Sairang,
3) Ginger Dehydration Plant, Sairang, and
4) Maize Milling Plant, Khawzawl.

Among the existing Small Scale and Cottage Industries, Handloom, Handicratts, Furniture and Carpentry works, Blacksmithy, Tailoring, Knitting, Bakery, Repairing and Servicing units are dominant. It means, besides the Service-based industries, the traditional industries still dominate the existing set up and the units are always very small with average employment being 5 persons per unit.

Mizoram, the present study area, is located in the North-Eastern corner of India. Its global location is between 21° 56' to 24° 31'N Latitudes and 92° 16' to 93° 26'E Longitudes. It is a micro-areal unit having width of only 121 Kms. from western most point to eastern most point and its length from southern tip to northern most point is 277 km and the total geographical area is 21,081 sq. km. The whole state is composed of mountainous terrain whereas the mountain ranges are almost in parallel series in north to south direction. These ranges are separated by narrow deep river valleys with small patches of flat lands. Due to these geographical features, development and construction of roads and communication lines became very difficult which in turn retarded industrial development directly and indirectly. But, on the other hand, this poor topographic feature influences directly to the resource availability of the area.

Till date, the economy of Mizoram is an agrarian economy whereas agriculture itself has already became too short to support the growing needs of the growing population in the state. Actually as per the 1991 census, as much as 65.77 percent of the total workforce of the state was engaged in primary sector whereas only 2.82 percent was engaged in the secondary sector of the economy.

Mizoram state Government propounded its Industrial Policy by April 1989. Till then, either the Union Territory Government or the state Government followed the central policy whether

applicable to the state or not. Therefore, Small Scale and Cottage Industries in the state remained unorganised whereas the traditional Cottage and Village Industries dominated the entire industrial set up.

Even today, within the existing conditions, most of the industrial entrepreneurs are not having proper education and industrial orientation. Since agriculture is no more reliable for livelihood due to low productivity, the human resources engaged in the primary sector tend to migrate either to secondary or tertiary sectors. But the less educated or uneducated people do not get chance in the tertiary sector and then happen to start one's own industrial venture. Accordingly, as much as 83.6 percent of the industrial entrepreneurs in the state are without proper education. Therefore, the human resource within the sector itself is actively acting as hindrance to industrial development and, consequently, the productivity of labour in the secondary sector in very very low.

Further, due to remote location and poor transport and communication facilities, transport charges became very high for both carrying of raw materials and finished products. Besides, since agriculture is not productive, there is no enough surplus products resulting into scarcity of raw materials even for local agro-base industries. At the same time, the local industrial units are facing heavy competition with the cheaper and better urban made similar commodities. As

a result, the SSI and Cottage Industries always become sick and unprofitable.

Significance :

Due to the above reasons, an empirical work like the present study became necessary to identify the problems and prospects of industrial development in the area. Industries suited to the area as well as not suited to the area have to be identified. Resource availability and the problems lying with existing industrial set up have to be traced out. Accordingly, the present study has been carried out with primary level data to test the validity of the facts about the productivity, elasticity, and the problems and prospects of the SSI and Cottage Industries in the area. Thus, this piece of work would surely be highly significant for the planners as well as decision makers towards industrial development of the state. So, to make this study more significant, the following objectives and research questions have been placed :

Objectives :

(a) To evaluate the nature of locally available resources of the area.

(b) To study the distributional patterns and growth trends of the existing Small Scale and Cottage Industries in the area.

(c) To study the locational set up of SSI and Cottage Industries in its geographical setting.

(d) To analyse the existing industrial structure and its Change our time.

(e) To evaluate the existing programme of Industries Department and the problems for proper implementation, and

(f) To suggest appropriate measures for self-sustained growth and well-balance development of the industrial sector of the study area.

Research Questions :

(a) How far the poor infrastructural facilities are responsible for the industrial backwardness of the study area ?

(b) How can household industries be transformed into Small Scale and Cottage Industries in relation to infra-structural facilities available in the area ?

(c) How can production processes be accelerated in the less productive units of the region ?

(d) Among the various categories or individual trade, what type of such Small Scale and Cottage Industries are suited to the area and prospects of such categories ?

DATA BASE AND METHODOLOGY

For giving the answers to the research questions, the following research methodology is adopted. So far as the methods adopted in the present study for interpreting the structural components of Small Scale and Cottage Industries and their spatial distributions are concerned, the normative viewpoint is put forward for the same. Therefore, the methods which are used here can be interpreted in the following.

(a) Cartographic Methods :

Cartography is the tool for geographers and planners. Through cartographic representations, a planner can infer many and varied results of the organism which he wants to study.

Therefore, the distributive nature of the existing Small Scale Industrial characteristics have been shown by suitable maps and diagrams. To show appropriate results and also to provide the logical reasoning of the facts, suitable cartographic representations like wheel diagrams, Pie diagrams, Bar graphs, Line graphs, etc. are used. In fact, these tools are not sharp enough for inferring the accurate results and to the validity of the research questions posed for the present study. Therefore, these cartographic representations have been used only for the general inference of the interrelated phenomena. But for logical study of the industrial (SSI) set up of Mizoram, statistical methods have been used.

(b) Statistical Methods :

As the collection of the detail statistics of industrial phenomena for the entire Mizoram is very voluminous, the inference of the results directly from the raw data is impossible. Therefore, processing of the raw data through statistical techniques are essential. But, the appropriate use of such techniques is a crucial importance because the wrong application of the techniques is sure to give insignificant and misleading results. However, some simple and appropriate statistical techniques have been used here for interpreting the results and accelerating the decision-making processes. The following statistical methods are, therefore, appropriately used for the present work :

(1) For showing the variation and variability results of the distributional patterns, the coefficient of variation which is the ratio of Standard Deviation (SD) with Mean has been adopted.

(2) Though the relationship among the attributes of industrial characteristics are also shown graphically by scatter diagrams, the Coefficients of Correlations are also measured by the Karl Fearson method of 'product moment'. Even the causal relationship of industrial characteristics have also been shown by preparing the correlation matrices.

(3) The index of industrial diversification (Dc) which shows the diverse nature of industrial composition of the industrial centres is prepared by generating two attributes of the industrial characteristics : (i) the mean of various industrial units on a particular location ($\bar{X}$), and (ii) the mean difference among the industries (Md) which refers to the differences among all the possible pairs of various industries. The following formula may be derived for the purpose :

$$Dc = [1 - (Md/2\bar{X})].$$

(4) The study of the marginal productivity and elasticity of various industries with respect to their input structure is very much important for accelerating the decision making process for the self-sustained growth and well-balanced development of the industrial structure in the state. For the same, the 'production function approach' is adopted and marginal productivity and elasticity coefficients for various

industrial categories are calculated by adopting multiple regression model. In fact, marginal productivity refers to the absolute change in industrial output with respect to change in its input intensities while elasticity indicates the proportionate change of output with respect to proportionate change in input. The following linear form of production function is used for assessing the marginal products of various industries of the study area :

$$Y = a + b1X1 + b2X2,$$

where Y is the industrial output, X1 and X2 are the capital and labour inputs, b1 and b2 refer to the coefficients and a refers to constant in the model. Cobb-Douglas production function is used for the detail study of the production characteristics which follows the form as :

$$Y = a\, X1^{b1}\, X2^{b2}.$$

(c) Methods for Selection of Sample Locations :

Though the total areal universe of the study area (i.e. Mizoram) is small, the industrial units are dispersed unevenly throughout the entire area. Thus, for the detail study, there is need of selection of some sites/centres and industrial units so as to achieve detail and informative results of the industrial activities. In fact, the total 2,205 industrial units (as on March 1990) are dispersed on 143 locations of the state. Out of these 143 locations, some are towns, sub-towns and villages. Therefore, out of these locations, only 29 main centres of industrial concentration have been selected for

spatial interaction and indepth study of the existing industrial phenomena. These 28 centres truly incorporate as much as 1,965 SSI units (i.e. 89.12 % of the entire state).

It has been identified that maximum units in all categories are confined within the 28 selected locations. Therefore, for further detail study, certain number of units from various trades of the different categories are chosen on the basis of :

(1) Stratified purposive sampling where 250 industrial units, out of the 1965 units of the sample locations, have been chosen. Thus, the size of the sample industrial units from the 28 selected locations is 12.72 percent of the total strength of the state.

(2) The sample units are selected from each and every trade of all the industrial categories so that we can infer the results for all the categories. As per the Industry Directory (1990) which is published by the Directorate of Industries, Government of Mizoram for registered industries for individual trades, 56 different trades have been identified (Appendix B). Accordingly, the samples are chosen in such a way, so that they should represent to each and every trade of the state excluding the miscellaneous group.

COLLECTION OF DATA

Any empirical work of this kind without relevant data either at the secondary level or the primary level would not be possible to be carried out. Accordingly, the present work is carried out with the help of secondary data and completed with the primary level statistics. Therefore, the statistics have been collected by secondary as well as primary sources for the present study.

(1) Primary Data Collection :

For the purpose of collecting primary data, scheduled and questionnaire have been prepared. Thus, with the help of questionnaire, the researcher visited to all the 28 selected centres and individually to all the 250 sample households during October 1992 March 1993. The form of the questionnaire is given in the Appendix A.

(2) Secondary Data Collection :

For the collection of secondary data, the concerned institutions and government departments are approached. Some relevant data are obtained from Economic and Statistics Department, District Industries Centres, Census Office, Financial Institutions and other relevant sources. However, for the collection of data related to Loans and Grant-in-Aid, Subsidised and Industrial Training, the concerned Institutions and Government Departments are approached with a separate scheduled for a specific period of time (i.e. 1988-89 -192-93).

Thus, with the help of these secondary data, the performances, achievements and role of such agencies towards the industries (SSI) are tested. The main sources of secondary data are given in the following Table.

Table : Sources of Secondary Data.

Sl. No.	Nature of Secondary Data Collected	Source	Year
1.	Industry Registered (SSI) Units, Production, Investment in Plant & Machinery, Equipment	Directorate of Industries, Govt. of Mizoram	1990
2.	Census Figures	Office of the Registrar General Census of India, State Census Office NIC, Aizawl	1961 to 1991
3.	Basic Statistics Related to Resources Population etc.	Various Publications of North Eastern Council, Shillong	1981 to 1991
4.	Statistical Handbooks	Directorate of Eco. & Statistics Aizawl	1986 1989 1990 1992
5.	Industrial Trainees	Office of MKVIB, III, DIC, DRDA, etc., Aizawl	1988-89 1992-93
6.	Industrial Loans/No. of SSI Units Assisted	MKVIB, ZIDCO, DIC Banks, Aizawl	1988-89 1992-93

MAJOR FINDINGS

1. The study area is blessed with rich forest resources whereas these resources are not properly utilised for industrial purposes. This fact is rewarded by the number of SSI

& CI units, capital investment and the industrial labour employment among the Wood and Wooden products or the Forest-based industries. In spite of the rich Bamboo resources, there is not even a single big industrial unit of Bamboo-processing in the state while raw bamboos are being transported to the other neighbouring states. Similarly, the no Lumbering unit in the entire state whereas valuable varieties of tree are abundantly grown in the forests. The only Forest-based industries, worth mentioning are Furniture and Carpentry works, Saw Mill, Cane and Bamboo works which are functioning at the local need-based.

2. The relationship between industrial development and urbanisation, which is discussed in the Chapter III reveals that the processes of urbanisation in Mizoram are directly influenced by road density and network of power supply, whereby development of SSI & CI establishments have been facilitated. In other words, the development of road network leads to urbanisation and urbanisation leads to increase industrial establishments in the study area. In fact, the relationship between the horizontal distribution of the size of urban centres and the growth of SSI & CI units in the state is highly significant (r = 0.990).

3. The Small Scale and Cottage Industries in Mizoram are functioning at the local need-based in most of the cases and thus there is a remarkable tendency of industrial diversification in all the 20 selected centres. On the other

hand, since the units are functioning merely at the local need-based, the number of units of a particular trade and the number of different trades that can exist in a particular centre are highly determined by the population size of the centres. Accordingly, it is found that the pattern of industrial diversification in the state is very much reflected by the sizes of the centres.

4. So far as the distributional pattern of industrial locations is concerned, there is a specific pattern evolving in the distribution, i.e., Primacy. It means only one centre having the maximum share of all the SSI & CI establishments in the area and the others are having very less strength proportionately though the lower level centres have uniform distribution of the industrial units. As a result, the nature of curve of rank-size regularity is more concave than the theoretical (Fig. 7.1).

5. Though there are a good number of industrial development strategies initiated by both the Central and Mizoram state Governments being implemented in the state, these strategies seem to fail to make positive results in the study area till date. One of the basic reasons behind it is the poor allocation of money in this sector by the state government in the Five Year Plans. In fact, the shars of Mining and Industry Department in the plan allocation in various Five Year Plans never exceed 6 percent of the total plan allocations (Table 6.1). Accordingly, these good developmental strategies without

strong financial support from the Government fail to accelerate industrial development to the mark in Mizoram.

6. Surprisingly, it is found that while the MKVIB loan repayment to the KVIC Bombay is 100 percent, the loan repayment to the MKVIB by its loan beneficiaries is only 38.36 percent. Moreover, the rate of loan recovery and the percentage share of yearly loan recovery regularly goes on decreasing year by year (Table 6.7). Thus, it is found that if the Board does not take preventive measures to check this regular fall of loan recovery rate from its loanees, it will collapse in near future.

7. With regards to the results of Marginal Productivity and Elasticity of labour and capital inputs based on the primary data, it is generalised that the production function in most of the SSI & CI industrial activities are operated on the diminishing law of return. But the aggregated coefficient value of elasticity of both the inputs is greater than unity in the cases of Food Products and Allied Industries, Non-Metallic and Material Products, Leather Goods and Repairing, Wood and Wooden Products and Service-Based industries (Table 5.6). In these industrial trades, the law of increasing return is operating though the values of marginal products are lesser than one. It means, these industries have good scope and prospects in the study area for future growth and development.

8. Industrially, Mizoram state is still at its cradle stage. So far the sector remained unorganised due to lack of

competency and appropriate authority to take care of the overall functioning of these SSI and Cottage Industrial units in the state. Each unit had to fight for its own survival amidst severe competitions with better and cheaper similar urban made commodities. In spite of the efforts and the assistances from government and financial agencies, even after the 20 years of Union Territory Government, the SSI and Cottage Industrial units are still characterised by low capital investment with low scale of production. Ultimately, the SSI units in the state still remained below standard and incompetitive.

CHAPTER SCHEME

Chapter I : Brief Introduction of the Subject, Statement of the Problem, Objectives, Research Questions and Geographical Personalities of the Area.

Chapter II : The Concepts, Definitions, Data base and Methodologies, Review of Literature.

Chapter III : The Resource Availability, both Human and Natural Resources with their Distributional Patterns.

Chapter IV : The Types of Small Scale and Cottage Industries within the existing setup and their growth with factors of growth are dealt based on Secondary Informations.

Chapter V : The Detail Discussion of the existing structure of SSI and Cottage Industries based on Primary Informations.

Chapter VI : Discussions on the Role and Achievements of Administrative and Financial Agencies towards SSI and Cottage Industries.

Chapter VII : Main Findings, Suggestions and Conclusion.