CHAPTER - VIII
MOTHER-TONGUE DIVERSITY AND REGIONAL DEVELOPMENT

In the earlier chapters, the various dimensions of linguistic diversity have been described. Having known the ethnolinguial situation as shaped by this diversity, it is intended, in this chapter, to determine and analyse or examine, one, whether there exists any relationship between mother-tongue diversity and socio-economic indicators - i.e. the possible interrelationship between regional development and linguistic diversity, and two, compare and contrast areas of linguistic homogeneity with heterogeneous areas. The main focus is therefore on mother-tongue and region’s economic development, and illustrate the importance of ethnolinguial parameters in the regional developmental aspects.

VIII.1. STATEMENT OF THE PROBLEM:

The likely relationship between linguistic diversity and socio-economic development is examined taking cues from Fishman (1966), Pool (1969/1972), and Lieberson and Hansen (1974). Besides, a comparative analysis of areas is also attempted taking cue from the works of Banks and Textor (1963/1965), and Fishman (1966). Pool and Lieberson and Hansen examined this problem and highlighted the evidence that (a) those ‘linguistically diverse areas or nations tend to be less developed and those that are more uniform are more developed’, (b) ‘national development seemed to be associated with low linguistic diversity’, or (c) it indeed is the case that diversity is inversely related to development’. However, these scholars are cautious whether the relationship is causal. Most of the studies linked nation’s level of linguistic diversity with such facets of development.

1. Those studies mentioned here are considered to be the pioneering works on such problems or issues. Their analysis concentrate on nations, taking few indicators and for a very long period, as done by Lieberson and Hansen. They applied the correlation technique.
2. Fishman and Banks & Textor made a comparative study of nations with high linguistic diversity and low diversity. Both the studies also concluded that linguistic diversity and development are somehow related.
as gross national product (GNP), urbanization, energy consumption, literacy, industrialization, etc. As Lieberson and Hansen put it, "Based on various cross-sectional data obtained for a relatively large number of nations, all of the above consistently indicate an inverse association between mother-tongue diversity and one or more indicators of a nation’s economic and social development..... the issue appears to be more a question of causal direction, namely whether these correlations mean that national development lowers language diversity or whether it means that linguistic homogeneity is a necessary prerequisite for development (Pool: 1969)." 4

From the findings of the above-mentioned studies, it is therefore attempted here with limited decadal data to illustrate how such relationship (between mother-tongue diversity and development) patterns itself in a small but multilingual area like Manipur. It is anticipated that such analysis will throw light on the actual situation or characteristics of ethnolinguistic communities in a multispeech area.

VIII.2. METHODOLOGICAL ISSUES:

One of the drawbacks encountered in this analysis is the non-availability of data for longitudinal examination. Hence, the computation is done for 1971 and 1981 only. Data for the 25 subdivisions were available for these two years. Lack of required data and size of observations also restrict analysis at the state and district levels. Calculation is also not possible at the village level. Data for the seventies could not be collected due to changes in the status of Manipur, from Union territory to statehood in 1972. This led to massive rearrangement of administrative boundaries.

In this study, in line with Lieberson and Hansen, the determination of the two variables is computed with the help of correlation technique rather than regression, as done by Pool (1969). Therefore in this analysis correlation method is applied to examine whether there exists any relationship between linguistic

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diversity and socio-economic indicators. However, to measure the intensity of linguistic diversity Greenberg’s (1956) Method A is used. This formula measures linguistic diversity and is the source for the computation of diversity and development. On the other hand, Pool (1972) simplified the analysis by drawing inferences directly from the regression method which was shown by scatter-plot (scatter diagram) of the two variables. Instead of using Greenberg’s diversity method he measured language diversity by taking ‘the size of the largest native-language community in a country as a proportion of the population’. Hence their differences of approach to the problem and the technique. Of all the methods or techniques applied in the study of problem the one adopted by Lieberson and Hansen is usually preferred which appears to be somewhat more sophisticated.

VIII.3. NOTES ON SOCIO-ECONOMIC INDICATORS:

Following the earlier scholars, certain indicators of development are selected. The selected socio-economic indicators the two decades are listed below.

**SELECTED INDICATORS: 1971 and 1981**

<table>
<thead>
<tr>
<th>Indicators/Variables (1971)</th>
<th>Indicators (1981)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total Workers (%)</td>
<td>1. Percentage of Total Workers</td>
</tr>
<tr>
<td>2. Percent Cultivators</td>
<td>2. Percentage of Total Cultivators.</td>
</tr>
<tr>
<td>3. Percentage of Industrial workers.</td>
<td>3. Percentage of Industrial workers.</td>
</tr>
<tr>
<td>4. Percentage of Literates</td>
<td>4. Percentage of Literates</td>
</tr>
<tr>
<td>5. Percentage of Scheduled Tribes</td>
<td>5. Percentage of Scheduled Tribes</td>
</tr>
<tr>
<td>6. No. of villages Per 100 Sq.km.</td>
<td>6. Percentage of Urban Population</td>
</tr>
</tbody>
</table>


7. Percentage of Christians
8. Density of Population
9. Percentage of villages with primary schools
10. Hospital per 10,000 population
11. Percentage of village with medical facilities.
12. Percentage of Urban Population

Table No. VIII.A. Besides the above listed variables, no other important indicators could be collected due to their non-availability at the sub-divisional level for both the decades-1971 and 1981. Hence, computation is done taking the above mentioned indicators.

The selected variables for this analysis differ from those adopted by Pool, and Lieberson and Hansen, in size and number. Pool's computation was mainly confined to one indicator-namely gross domestic product (GDP) per capita. The data covered 133 countries and related to the early sixties (Pool; 1972, pp.219-222). On the other hand, Lieberson and Hansen used 7 independent variables. Their variables are urbanization, gross national product, newspaper circulation, energy consumption, domestic mail, areal size, and illiteracy. The base years were 1930 and 1960. However, for longitudinal analysis limited to about 23 European countries, they obtained data on linguistic diversity and the two highest correlated measures or indicators of development (urbanization and illiteracy) between 1930 and 1960. For some nations data collected extend from 1810 to 1975, depending on their availability. Such vast coverage of data and areas made their analysis the most detailed and in-depth study on linguistic diversity and development.

7. Lieberson and Hansen (1974); op. cit. p. 524. Data on GNP, newspaper circulation, energy, consumption, and domestic Mail are in per capital, for many nations. For some data the number exceeds 100.
VIII.4. OVERVIEW OF TECHNIQUES USED AND LITERATURE:

The present study is confined to a smaller but multispeech area. Here, the analysis is based on Greenberg’s formula (method A) and correlation technique (Pearson’s product-moment). Thus, different indexes of diversity are obtained by using Greenberg’s method. This method or index, as Lieberson puts it “operationalizes mother tongue diversity by giving the probability that randomly paired residents in a nation will have a different mother tongue. Thus, A ranges from zero (when all members of a nation have a common tongue) to 1.0 (the impossible situation when each member of a nation has a unique mother tongue)”. Though in Greenberg’s formula the random interaction is hardly a realistic expectation, the hypothetical condition generates an excellent way of describing mother-tongue diversity (Lieberson and Hansen: 1974, 524-525). Based on this method it is observed that out of the 6 districts in Manipur 4 (four) have ‘very high’ diversity indexes (above 0.80).

Linguistic diversity is stated to cause the retardation of development both politically and socio-economically. The contrasts between them also include the effects of social variables on language problems (Pool: 1969/1972, 214). Besides being inversely related to development, Pool has also listed numbers of other works done on language diversity and its relation with other socio-economic and political aspects in a nation. Linguistic diversity in a nation appears to aggravate political sectionalism (Fishman: 1968, 63-64; Sutherlin: 1962, 66), hinders inter-group cooperation (Kloss: 1966, 75), national unity (Haugen: 1966, 928, Emerson: 1962, 133-34; Hertzier: 1966, 179-81; Deutsch: 1966, 129-30; Richter: 1968, 10 etc.), regional multinational co-operation (Harries: 1968, 428), impedes political enculturation (Fishman: 1968, 63-64; Verba: 1965, 532), and participation (Steward: 1962, 40; Sutherlin: 1962, 65-6, Valdman: 1968, 314). Likewise other studies have concluded that diversity also slowed economic development by braking occupational mobility (Das Gupta and Gumperz: 1968, 154-6), decreased efficiency (Fishman: 1968, 61; Sadler: 1962, 3-4), and
prevented diffusion of innovative techniques (Gumperz: 1962, 88; Kelman: 1969, 185-212). Besides, there are others who asserted that political or economic underdevelopment, instead of being a result of diversity, is one of its cause (Hertzler: 1966, 178-79; Fishman: 1968, 7).

Mention may also be made of some other works dealing with similar themes on underdevelopment and linguistic diversity. Those important studies are Tauli (1968), Steward (1962), Wurm (1968), and Prator (1968). Most of them stressed that ‘a society not undergoing much development is largely without spread of high-status languages that spread and reduces the level of language diversity’. There are other scholars who maintain that ‘underdevelopment perpetuated diversity by isolating members of different language groups from communicating, and diverse groups tend to learn a common language only when engaged in economic activities in cities and work places’. Proponents of this thesis are Diebold (1962), Tocqueville (1954), Steward (1962), Togan (1942-47), etc. All the studies cited are empirical as well as theoretical expositions from different parts of the world, and most of their findings remain more or less the same. They all illustrate certain evidences of relationships between linguistic diversity and economic development, either inversely related or one affecting the other. Hence, based on such conclusion or “decided impression” (that “linguistically homogeneous polities are economically more developed, educationally advanced, politically modernized and ideologically or politically more tranquil and stable”. Fishman: 1968), it is attempted here, also, to see and illustrate whether such relationship really exists in the small but multi-speech area of Manipur.

VIII.5. RESEARCH GUESSES OF THE PROBLEM:

With the intention that this study will highlight the significance of mother-tongue diversity in regional development certain hypotheses are put forth. It is also believed that such analysis will better equip planners—especially the language planners—in their understanding of multilingualism and multi-speech
areas dominated or densely populated by socio-economically backward people, the tribals.

In the following are given the various research guesses formulated to evaluate and guide this exploratory study on the likely relationship between linguistic diversity and regional development:

(a) Linguistic diversity is inversely related to indicators of development.

(b) If an area is linguistically heterogeneous it is usually more underdeveloped socio-economically and politically unstable than the one with considerable linguistic uniformity.

(c) Any tribal area in Manipur will be linguistically highly diverse and socio-economically less developed than non-tribal areas.

(d) Linguistic homogeneity is therefore a necessary prerequisite for overall regional development.

(e) Language or mother-tongue intensifies ethnicity and significantly determines or affects development.

At this stage it will be pertinent to point out that the intended study mere attempts to investigate the possible role of language in development processes. It is therefore not intended here to establish or suggest causal relationship between linguistic diversity and development. Hence, whether one of them cause the other or not is not the concern in this study. Indepth research, to establish causal relationship, cannot be undertaken due to constraints imposed by non-availability of required data for longitudinal or spatio-temporal analysis. However to depict the existence of likely relationship between the two variables, two forms of interpretations of the problems are adopted. First, based on the recent data, comparision of linguistically homogeneous areas and heterogeneous areas is attempted. Second, correlation technique is used to examine the relationship between linguistic diversity and development, during the period 1970 and 1980.
VIII.6. COMPARISON BETWEEN LINGUISTICALLY HOMOGENEOUS AND DIVERSE AREAS:

In order to depict cogently the intense contrast between linguistically diverse and homogeneous areas, some prominent features (of socio-cultural, political, and economic) are described taking the most recent available data. Such comparisons between areas based on linguistic and economic variables will greatly help in understanding the ethnolinguial situation, the general levels of development, and interethnic communication in the state.

VIII.6.A. Introductory Statement:

For this comparative examination of areas, Manipur has been segmented into (a) linguistically homogeneous areas, and (b) linguistically diverse areas. The former group includes mainly the district and sub-divisions of Central district, while the latter group consists of all the other districts in the state. Demarcation of the two areas is based on the values of index of diversity as formulated by Greenberg (1956). Therefore, linguistically homogeneous areas are those districts or sub-divisions which have index of diversity value below 0.20 (i.e., within 'very low' range). On the other hand, linguistically diverse areas have diversity value above 0.80 (within the 'very high' category). The division of areas based on index of linguistic diversity also implies division of areas into (a) non-tribal regions and (b) tribal inhabited areas, with the exception of East district (vide footnote no. 8 given below).

The purpose of this exploratory investigation is fourfold:

(1) to highlight the significance of language or ethnolinguial parameters in regional development, socio-cultural spheres, etc.; (2) to illustrate what variables actually differentiate areas of linguistic diversity from the uniform ones; (3) to determine whether linguistic diversity and economic development are related even in a small multilingual area; and (d) to examine whether there are other

8. East district illustrates a peculiar ethnolinguial mosaic with regards to nature or pattern of linguistic diversity. Diversity value has been very low throughout. Such homogeneity is obtained because the entire population claimed Tangkhul dialect (the lingua franca) as their own mother tongue use at home.
parameters, besides the language/mother tongues, responsible or involved in regional underdevelopment.

VIII.6.B. Comparing Areas of Linguistic Homogeneity and Diversity on Socio-Economic Variables:

Taking cue from the earlier works of Banks and Dextor (1963), Fishman (1966), etc., a similar study or is attempted here to illustrate the differences between linguistically homogeneous and heterogeneous areas in this multilingual state of Manipur. Such examination is being done with the 'decided impression' that 'linguistic homogeneity is currently related to many more of the “good” and “desirable” characteristics of polities than is linguistic heterogeneity. Linguistically homogeneous polities are usually economically more developed, educationally more advanced, politically more modernized and ideologically-politically more tranquil and stable, (Fishman: 1966, (reprinted 1968) p.60). It is also intended in this study to illustrate the significance of ethnolinguistic parameters in socio-cultural system and its impact on the regional development. Such impacts of ethnolinguistic parameters appeared to be either ignored or ‘though insignificant’ by the planners.

(1) Demographic Variables:

In Manipur linguistically homogeneous areas appear to have a very large population of the most dominant community. In most of the areas Meitei constitutes more than 90%. Though there are many other ethnic groups they are neither significant nor with a cognizable share in the population.

Homogeneous areas tend to be smaller in geographical area (2230 sq. km, about 15-20% of the total area), and have a very high density of population (414/km²). While in diverse areas the average area is about 3929.25 sq. km and population density of about 26 persons/sq.km. Also the homogeneous areas are usually highly urbanized, about 35% of its population reside in towns or cities. Besides, the number of urban centre is also more.
with 24 out of the total 32 in the state. It also has more inhabited villages (about 537) and are much larger. Even the sex ratio is about 990 against 940 in heterogeneous areas. Therefore the opposite seems to be true in diverse areas. For instance, the numbers of urban centers lesser, (1.6 on average), percent of most predominant group about 32 only, urban population about 11%, and lesser no. of inhabited villages (330 on average), etc.

(2) Educational Variables:

Literacy percentage tends to be higher (43.63) in the linguistically homogenous areas. Unlike in the diverse areas, the literates constitute about 35%. Besides, homogeneous areas tend to have: (a) more number of schools (totalling about 1780, from primary till higher secondary), of which 1337 are primary schools; (b) higher female literacy (about 31% against 27 in the diverse areas); (c) more colleges and professional institutes amounting to 52; (d) larger enrolment in all types of schools - e.g. out of the total students enrolled in primary schools in 1986-87, about 64% are from this homogeneous areas.; (e) have less students belonging to the scheduled castes and tribes (out of the total tribal students from class I to XII, only 6.40% are enrolled in this area); (f) it also has more teachers, about 63% till class XII.

On the other hand, linguistically heterogeneous areas tend to be in the opposite direction with respect to the above mentioned educational indicators. In most cases the diverse areas have either 'low' or 'very low' number of schools, colleges and institutes, total students enrolled and overall poorer facilities.

(3) Religious Variables:

There appears to be a strong relationship between linguistic homogeneity and the predominance of one religion (Hindu), in the state.
On the other hand, diversity seems to be associated with Christianity and other religious practices or pursuits. Therefore, the uniform areas have less of christian population (about 2.5%) and more Hindus. In the diverse areas Christian constitute about 80-90 percent of the population.

(4) Economic and Other Infrastructure:

Linguistically homogeneous areas also tend to be better facilitated and more developed than the diverse areas. For instance, it has bigger number of registered factories (216), and about 729 small scale industries. The heterogeneous areas have only 5 factories and 100 small scale industries on average. The number of co-operative societies is also more in homogeneous areas (about 807). Besides, it also has large power installed capacity of 18494 kilowatt (against 843.25 kilowatt in heterogeneous areas); more electrified towns and villages numbering to 244 (against only 24 another areas); more telephones in use of 1850 and 14 telegraph offices; and longer total road length of 1546.2 km. Also, it has lesser member engaged in cultivation, and more in the industrial sections.

Contrarily, the heterogeneous areas tend to have lesser and poorer infrastructures and other economic facilities. As pointed out earlier, the average no. of registered factories is only 5 and about 100 small scale industries. It also lesser no. of co-operative societies, telegraph office (about 2 each only); about 60 telephones in use; less electrified towns and villages (about 24 on average); power installed capacity of about 843 kw.; police stations of about 5 each; and shorter total road length. Such diverse areas also have more of its population engaged in cultivation and in the working population.

(5) Other Socio-Economic and Cultural Variables:

Contrasting evidences of the two areas can also be seen when taking medical/health facilities, political aspects, social systems, etc. these existing differences appear to greatly affect the interethnic interaction
and to a large extent distance each population.

It also appears that linguistically homogeneous areas have lesser tribal population (only about 3%), while in diverse areas they constitute about 75-80 percent.

On the medical/health facilities, the homogeneous areas greatly-supercade the diverse areas. Linguistically homogeneous areas tend to have more hospital (17 including primary health centres); more dispensaries (totalling 66, while the diverse areas have on average about 25 only); greater no. of doctors (about 200 on average, against about only 18 each in diverse areas); and far superior facilities and equipments.

Even on the political matters distinct differentiations are discerned. Linguistically homogeneous areas tend to have larger electorates, constituencies, and representatives. Other political features observed are: (a) lesser regional or communal based political parties; (b) political campaigns or battles more on party ideologies and national issues, while in diverse areas the concern are more on ethnic or local issues; (c) less no. of independent candidates motivated by communal strength than in heterogeneous areas; (d) more political awareness or consciousness and participation in homogeneous areas; (e) also representatives are much more educated than their counter-parts in heterogeneous areas, etc.

Moreover, linguistically homogeneous areas have more fertile lands, and better other agricultural infrastructure. Though it has smaller geographical extent more areas are available for cultivation. On the other hand, heterogeneous areas have lesser cultivable lands and the main occupation is in shifting cultivation.

On the socio-cultural aspects as discernible in the state, linguistically homogeneous areas have a social structure based on ‘joint family’ system and caste based. In the diverse areas the system is a simple communitarian social set-up and nuclear type of family system. The villages are governed
by 'chiefs' who are either hereditary or elected. In this case the entire land belong to the chief's property or jointly owned by all the inhabitants. Besides, the homogeneous areas are advanced in literature having written literature with their own formulated/borrowed script. The population in the diverse areas usually possess no script and literary history. They use the Roman script.

These are some of the distinct socio-cultural and economic parameters that differentiate linguistically homogeneous and heterogeneous areas in Manipur. Definitely there exist distinct constrasting features.

VIII.7. CORRELATES OF LINGUISTIC DIVERSITY AND DEVELOPMENT:

Unlike in the preceding section (6), an attempt is made here to examine the likely relationship between linguistic diversity and socio-economic indicators. For this analysis correlation method is used. As illustrated in section VIII.6, there appears to be a kind of contrast in many fields between linguistic diversity and development indicators. Therefore in this exercise, it is intended to see if the 'decided impression' on their relationship can be quantified, by correlating values of diversity and standardised development indicators.

For this purpose different sets of socio-economic indicator are selected for the years 1971 and 1981. The selected indicators are described in section VIII.3. As pointed out, both the years could not have identical indicators due to non-availability of data, thereby restricting longitudinal analysis of the intended study. This exploratory analysis is based on the work of Pool (1969/1972), and Lieberson and Hansen (1974), but more on the method adopted by the latter. Both the studies concluded that national development seem to be inversely related to low linguistic diversity. However, as Fasold had stated "...just because there is an association between linguistic uniformity and national development that can be observed at the present time, it does not follow that one of these factors caused the other. To demonstrate causation, it would be necessary to use longitudinal data to show that reductions in diversity are accompanied by
increases in development*. Bearing in mind this cautious remark, it is attempted to examine whether such association or relationship prevails in a small multilingual area by using statistic data. Longitudinal analysis can not be attempted due to limitations set by non-availability of necessary data.

VIII.7.1. Interpretation of Correlation Analysis:

For the correlation analysis between linguistic diversity and development indicators, certain indicators are selected. The selected socio-economic indicators can be generalised as agricultural, educational, demographic, medical/health, etc., numbering 12 and 6 for 1971 and 1981 respectively. Although, some of the selected variables may not have any relation with linguistic diversity, they are however included in the quantitative analysis to see whether they affect other indicators or the diversity itself. Given below is the results of the correlational analysis of the two variables. Also, in the table the critical 't' values (significance test) are shown to check whether the relationship is significant or not.

**CORRELATION (r) VALUES - 1971:**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>'r' Value</th>
<th>'t' Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Percentage of total workers</td>
<td>0.47</td>
<td>2.55</td>
</tr>
<tr>
<td>2. Percentage of Cultivators</td>
<td>0.58</td>
<td>3.41</td>
</tr>
<tr>
<td>3. Percent. Industrial workers</td>
<td>0.26</td>
<td>1.29</td>
</tr>
<tr>
<td>4. Percentage of Literacy</td>
<td>0.39</td>
<td>2.03</td>
</tr>
<tr>
<td>5. No. of village/100 km(sq.)</td>
<td>0.18</td>
<td>0.87</td>
</tr>
<tr>
<td>6. Percentage of Tribals</td>
<td>0.56</td>
<td>3.24</td>
</tr>
<tr>
<td>7. Percentage of Christians</td>
<td>0.56</td>
<td>3.24</td>
</tr>
<tr>
<td>8. Density of population</td>
<td>-0.22</td>
<td>-1.08</td>
</tr>
<tr>
<td>9. Percent. village with primary school</td>
<td>0.20</td>
<td>0.98</td>
</tr>
<tr>
<td>10. Hospital per 10,000 popn.</td>
<td>0.28</td>
<td>1.40</td>
</tr>
<tr>
<td>11. Percentage of village with</td>
<td>-0.08</td>
<td>-0.38</td>
</tr>
<tr>
<td>medical facilities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 12. Percentage of urban Popn. | -0.08 | -0.38 |

**'r' VALUES IN 1981:**

| 1. Percentage of total workers | 0.52 | 3.33 |
| 2. Percentage of cultivators   | 0.59 | 3.50 |
| 3. Percentage of Industrial wkrs. | 0.27 | 1.34 |
| 4. Percentage of literacy     | 0.37 | 1.91 |
| 5. Percentage of Schd. tribes  | 0.56 | 3.24 |
| 6. Percent of urban population | -0.05 | -0.24 |

**CRITICAL VALUES OF 't' TEST:**

(significance levels)

d.f. 0.05 0.01 0.001

23 2.07 2.81 3.77

Table VIII.B. It shows the correlation values of socio-economic variables and linguistic diversity for 1971-81. The negative values indicates their inverse relationship.

Correlated values merely give suggest whether the relationship, positive or negative. It does not tell whether the correlation coefficient of the bivariate normal population will be zero or not. Therefore, the test of significance of 'r' (using students 't' test) is computed to know if the two variables are related significantly or not, and at what leveling - at 99.99%, 99%, or 90%. As one scholar stated, "It is evident from this test the significance of the correlation coefficient is directly proportional to not only r , but also to (n-2)². And from the computation it is known that"...if the computed value of 't' is less than the corresponding tabulated value the correlation coefficient is said to be insignificant, meaning thereby that over a large number of similar observation the two variables will be independent, as the hypothesis that the population correlation coefficient is zero is accepted... on the other hand, if the computed value of 'r' is greater than
the tabulated ‘t’ the correlation coefficient is said to be significant and the population correlation coefficient between the two variables in this case is not considered to be zero”. Hence, if the computed ‘r’ values are significance, say, at 0.001 or 0.05 levels, it means the two variables will be significantly related or such relationship true in all the 99 or 95 chances respectively. In a way this technique establishes actual relationship of the variables, in which the least significant level is most reliable.

VIII.8. CONCLUDING STATEMENT:

The correlation values and their ‘t’ values, it reflect whether a particular indicator has significant relationship with linguistic diversity or not. Hence, depending on their tabulated ‘critical’ values at the selected levels (usually 0.001 or 0.05) actual relationship of the variables is deduced, and enables us to discard those redundant or insignificant variables.

(a). In both the years (1971 and 1981) correlation coefficients of ‘percentage of total workers’ and linguistic diversity are positive. The computed values are much higher than the given ‘t’ and ‘r’ values. It is significant at 0.5 levels of significance in 1971. Hence, in 1981 it is significant at 0.1 levels. This indicates that their relationship hold true in most cases, even at 99 percent/cases. In 1981 the computed ‘t’ value was 3.33, against the tabulated value of 2.81 at 0.01 levels of significance (the second highest in 1981).

(b). Interestingly, correlation between linguistic diversity and ‘percent of total cultivators’ indicates the highest relationship in both the years. The ‘r’ values in 1971 and 1981 are 0.58 and 0.59 respectively. The computed ‘t’ values are 3.41 and 3.50 respectively. Hence, in both the years their relationship is quite significant at 0.01 levels of significance. Such high value

shows that among the variables their relationship is the most significant and will hold true in 99 percent of the cases in Manipur.

(c). Another significant relationship is between 'percentage of tribals' and linguistic diversity. The same holds true for percentage of Christian population. Both these variables have high correlation with diversity, 'r' values remaining the same for both the years. Their computed 't' value was 3.24 which is significant at 0.01 levels of significance. The result appears to reflect the real situation where the tribal areas tend to have more mother-tongues of equal population. Besides, about 95 percent of the tribals are Christians in Manipur.

(d). Those indicators of development which have negative and insignificant relationship with linguistic diversity are; (i) density of population, (ii) urban population, and (iii) percentage of villages with medical facilities. Interestingly, the 'r' value of urbanization gradually declined, while urban population and centres gradually increased. The 'r' values are -0.08 and -0.05 in 1971 and 1981 respectively.

These negative values indicate the inverse relationship between the development indicators and linguistic diversity.

(e). Among the various indicators selected there are quite a few which are insignificant. Some of them showed positive but insignificant relationship. These indicators are (a) industrial workers in percentage, (b) percentage of literacy, which is significant only at 10% levels, (c) number of villages/100 km, (d) percentage of villages with primary schools, (e) hospital per 10,000 population, etc.

From this quantitative analysis which examined the likely relationship between linguistic diversity and certain development indicators, it can be ascertained that diversity and some economic variables have significant relationships. Though the relationship may not be causal their impact on the regional development, individually or collectively, have been illustrated by this
statistical analysis. Hence, although their causal relationship could not be established, certain explicit contrast can be observed between linguistically homogeneous and heterogeneous areas. This exercise and study reaffirms the importance of ethnolinguial parameters in the societal mosaic and levels of social economic development an area. Interestingly, the correlational exercises suggest that there is a negative and inverse relationship between linguistic diversity and development indicators, as shown by the different 'r' and 't' values for both the years. Correlation is highly positive with those variables redundant to development (like percentages of total workers, scheduled tribes, christians, cultivators, etc.)