SECTION II
CHAPTER - IV

SOCIO-ECONOMIC FACTORS GOVERNING
RURAL-URBAN INTERACTION

In United Khasi and Jaintia Hills - agriculture is the main occupation and economy and has complete influence over it. More than 80% of the people of the region depend on agriculture - which only suggest that it is the life blood of the people of the region. On the other hand agriculture itself is in the gloomy shape because of problems such as shifting cultivation and customary tribal laws, which govern the land tenure system over wide areas are prominent amongst them.\(^1\) As per the customary laws, the land belongs to the community. Individual cultivators do not have permanent right over it. The system of shifting cultivation\(^2\) has contributed to the problems of erosion of soil and loss of fertility. Valley lands are also generally narrow, surrounded by hills which prevent large scale adoption of mechanised cultivation or of irrigation projects. Road communication are scarce. All these factors have stood in the way of rapid agricultural development of the study region - inspite of its immense potentiality. The problems are more acute in the areas bordering Bangladesh for want of suitable marketing facilities which is again due to lack of communication. Earlier, they had free trade with East Bengal (Now Bangladesh)\(^3\).
In order to analyse the socio-economic factors governing Rural-Urban interaction, the following indicators have been considered. These are -

(a) Levels of Urbanisation

(b) Distribution of Working population.

(c) State of Agriculture

(d) Industrial Development

(e) Road Development

(f) Power Development

(a) Levels of Urbanisation:

Urbanisation is a world-wide phenomenon. An urban place performs functions which are different from those of rural areas. It has also been defined as a large number of people living together, exhibiting high density, in compact areas. The definition of Urban and its limitations, have already been discussed earlier in this thesis.

The levels of urban development can be determined partially by the following attributes, viz., Percentage of urban population to total population and density of population in urban centres. In the case of United Khasi and Jaintia Hills - which has been divided into three districts viz. East Khasi Hills District, West Khasi Hills District and Jaintai Hills District. The study region shows an uneven growth of its urban centres. Out of total of
10 urban centres in the study region - eight are in the East Khasi Hills District and one each in remaining two districts i.e., Nongstoin in West Khasi Hills and Jowai in Jaintia Hills.

### Table 4

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<tbody>
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<td>Jaintia Hills</td>
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<td>East Khasi Hills</td>
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<td>West Khasi Hills</td>
<td>1,60,660</td>
<td>3,876</td>
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**Source:** Provisional Census-1981, Government of Meghalaya.

Out of the total population of the study region of 8,23,340 - 23.79% are urban. The percentage of urban population is very high in East Khasi Hills District, Low in Jaintia Hills District and negligible in West Khasi Hills District. In the study region there was only one town in 1951. This increased to four after addition of three new towns in 1961. In 1981 census four more towns appeared (Table 5). If we consider the growth rate of towns than we find an over all growth rate of 62.74% between 1961-71 and 1971-81 - which shows that rapid urbanisation is taking place in the area (Fig.8). But this growth rate has been achieved
### Table 5
Population and growth rate of cities, urban agglomeration and Towns for Khasi & Jaintia Hills (Study region only)

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<tbody>
<tr>
<td></td>
<td></td>
<td>Persons</td>
<td>Male</td>
<td>Female</td>
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<tr>
<td>1. All Classes</td>
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<td>1,25,885</td>
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<td>90,978</td>
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<td>Pynthorumkhrah</td>
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<td>5,748</td>
<td>4,987</td>
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<td>3,158</td>
<td>3,002</td>
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<td>3. Class II &amp; III</td>
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<td>-</td>
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<td>3,071</td>
<td>3,033</td>
<td>-</td>
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<td>6. Class VI</td>
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<td>1,716</td>
<td>-</td>
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<tr>
<td>Nongstoin</td>
<td>3,876</td>
<td>2,160</td>
<td>1,716</td>
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**Notes** - Towns treated as such for the first time in 1981 are shown with **Bold** letters.
Table 1
Rural and urban composition of population
United Khasi and Jaintia Hills of Meghalaya

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<td>Total</td>
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<td>Urban</td>
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<td>1,60,660</td>
<td>1,56,784</td>
<td>3,876</td>
<td>-</td>
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(1) Due to increase in number of towns from 6 in 1971 to 12 in 1981.
(2) Madan Rting, Pynthor Umkhrah and Cherrapunjee towns were added.

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<tr>
<td>East Khasi Hills</td>
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<tr>
<td>P</td>
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<td>32.13</td>
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<td>55.60</td>
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<td>44.30</td>
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<td>1.40</td>
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<td>0.28</td>
<td>0.79</td>
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<tr>
<td>Jaintia Hills</td>
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<tr>
<td>P</td>
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<td>1.18</td>
<td>0.75</td>
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<tr>
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<td>69.48</td>
<td>18.58</td>
<td>14.58</td>
<td>1.43</td>
<td>0.78</td>
<td>10.38</td>
<td>15.16</td>
</tr>
</tbody>
</table>

**Source:** Provisional population totals

because of high urbanisation in East Khasi Hills and more particularly in and around Shillong.

(b) Distribution of Working Population:

Of the total working force in the study region, highest percentage of cultivators i.e. 91.45% was found in West Khasi Hills followed by Jaintia Hills (66.21%) and East Khasi Hills (46.29%). This shows a higher level of urbanisation in the East Khasi Hills district. Among cultivators - the female participation was greater than male in the entire study area (Table 6). This was due to the existing social custom and tradition and comparatively more active role of females in the society with regards to economic obligations and activities. The census figures of 1981 do not provide the exact picture of cultivators - as many important crops like 'Potato' etc. has been excluded from the purview of the word 'Cultivation'. The concept of 'Cultivation' has been restricted to growth of:

i) Cereal and Millet crops like Paddy, Wheat, Jowar, Bajra, Maize, Ragi, Barley, Hram, etc.

ii) Pulses like arhar, Moong, Masur, Urd, Khesari etc.

iii) Fibre crops like Raw cotton, Jute, Mesta syn hemp etc.

iv) Sugar cane.

The proportion of agricultural labourers to total working force registered a sharp decline in 1981 compared
UNITED KHASI & JAINTIA HILLS
CLASSIFICATION OF WORKERS
1981

INDEX
I CULTIVATORS
II AGRICULTURAL LABOURERS
III HOUSEHOLD INDUSTRY, MANUFACTURING, PROCESSING, SERVICING & REPAIRS
IV OTHER WORKERS

100 80 60 40 20 0 0 20 40 60 80 100

WEST KHASI HILLS
EAST KHASI HILLS
JANTA HILLS

BANGLADESH

FIG. 10
to 1971 census, mainly because of the definational changes. In the rural areas of the Jaintia Hills and East Khasi Hills District almost 12% of the work force consist of agricultural labourers. In the study region, we find more female agricultural labourers than male as is evident from the fact that two out of three districts has more female agricultural labourers. (Fig. 10 & 11)

The number of persons engaged in household industry is insignificant and there is no appreciable increase during the decade.

The persons classed as "Other Workers" include:

a) Livestock, Forestry, Fishing, Hunting, Plantations
b) Manufacturing and processing, Servicing and repairs carried out other than as Household industries;
c) Mining and Quarring
d) Construction
e) Trade and Commerce
f) Transport, Storage and Communications, and
g) Other services.

It is seen that there is appreciable increase in the number of persons "Classed" as other workers in all districts in general and in East Khasi Hills District in particular. In East Khasi Hills more than 50% of the total working force has been classed as "Other Workers". Expansion of administrative services; setting up of central University; Defence Headquarters; I.C.A.R. Research Complex etc. - all
have attracted a sizeable population which might have contributed to the increase in 'Other Workers' category. Coal mining in the Bapung-Khliehriat areas of Jaintia Hills may also partly contributed to the extra-ordinary increase from 6% in 1971 to 20.61% in 1981 in that district.

(c) State of Agriculture:

Land utilisation statistics shows that the entire region of United Khasi and Jaintia Hills has 15,06,900 hectares of geographical area, where the reported area of land utilisation was 14,44,093 hectares. Out of total reported area - area not available for cultivation is 2,60,971 hectares (or 18%) and cultivable waste land being 3,24,259 hectares (or 22.45%) i.e. Cultivable waste and areas not available for cultivation together forms more than 40% of the reporting area of cultivation. Furthermore, out of the available area for cultivation 42% of the area is under Jhum cultivation. Jhum Cultivation - otherwise also known as Slash and Burn Cultivation is a primitive tribal method of cultivation, which results in soil erosion and deforestation in the area. This type of cultivation is undertaken in the hilly and undulating land mostly covered with bamboos and trees and other secondary growth. There is no permanent field for cultivation. A plot of land is cleared and cropped once or twice (hardly thrice) and then
abandoned under forest follow. Land is selected by the entire village on the basis of rotation of fields. Forests on the selected patch are cut jointly or severally and left to dry and then burned. The ash is then spread over the fields and fields get ready for sowing. The entire area is divided among the households. In order to understand the true state of the agriculture, it is necessary to study the size of land holdings, irrigation facilities available in the area and pattern of consumption of fertilizer. If we make an analysis of the table 6 showing the number and size of land holdings in the study region then it is at once evident that size of land holdings in the entire study region is very small. Maximum size of land holding is less than two hectares in all community development block. It is only in Mawsynrem community development block in East Khasi Hills district that we find 13% land holdings are greater than 10 hectares of land. It is a difficult question to ascertain what size of the farm should be considered as an efficient size. There can be no direct answer to this type of question. Apart from the physical size of the farm, efficiency, uncertainty, asset position of the farmer, his skill and knowledge, prices, and other dynamic considerations need to be taken into account. However, accepting these things to be given, we may consider a range of size to be efficient. Again this range differ from soil to soil, from region to region, and from crop to crop.
Thus there can be a general conclusion about the size of land holdings in terms of physical acreage. Ashok Basu has considered farms below five acres and above twenty acres to be inefficient or uneconomic. But for our study region this generalisation can not be acceptable. It is also not necessary that small farmers cannot progress and adopt new technology. Various studies including those conducted at the instance of the Planning Commission shows that small farmers are not less progressive than large farmers in their willingness to adopt modern inputs and cultural practices. Taking the case of our study region we find that majority of land holdings are small, that is, less than or equal to four hectares. As pointed out earlier the agricultural methods of cultivation in the study region are primitive and new methods of cultivations are making roads slowly in the region. As such the use of labour is intensive.

Based on the experience of field study - we have divided the entire holdings into three distinct segments. The first segment shows the holdings less than 1 hectare, we may call it uneconomical. The second component comprises of holdings containing 1 to 4 hectares and termed as economical. The third component contains 4 to 10 hectares and which may be used for commercial purposes. It can be seen from Table 7, size of land holdings in West Khasi Hills is mainly economical. In Jaintia Hills the maximum number
of holdings is uneconomical whereas in East Khasi Hills the sizes are economical and uneconomical as well (Fig. ). For commercial purposes the number of holdings in East and West Khasi Hills are equal and few whereas not a single holdings in Jaintia Hills is suitable for commercial purposes. In order to show the variation in the distribution of land holdings, we have calculated co-efficient of variation for all the three districts, as shown in Table 7. It shows that the variation in the distribution of land holdings is the highest in East Khasi Hills. In West Khasi Hills and Jaintai Hills the variations are less and West Khasi Hills has the lowest variation. This explains that when variation is more -

(i) land holdings are unevenly distributed.

(ii) land holdings may be economical or uneconomical or commercial.

(iii) so, geographers and planners need greater in depth study for proper understanding of the problem for better agricultural production and land utilization.

An analysis of irrigation facilities and consumption of fertiliser reveals a different picture where both these developments are not correlated. This indicates that some efforts are necessary for more useful planning. It is generally assumed that a better irrigation facility with more fertilizer consumption would yield more surplus product. Here in our study region this is not so. We have taken
percentage of irrigated area to net area sown and average consumption of fertilizer per hectares of Gross cropped area (Fig. 12 & 13). Percentage of irrigated area to net area sown, is very low in East Khasi Hills compare to West Khasi Hills and some parts of Jaintia Hills. Whereas, if we look at figure 13 showing average consumption of fertilizer per hectares of gross cropped area than it is high and very high in the entire East Khasi Hills, whereas very low in Jaintia and West Khasi Hills. This explains why the potato cultivation in the entire East Khasi Hills is maximum compared to other parts of the study region. This also explains that fertilizer facilities in the West Khasi Hills and Jaintia Hills are either not available or sufficient facilities are not available for farmers to get fertilizers. It also explains that available irrigation facility/facilities are not yielding desired fruits in the West Khasi Hills and Jaintia Hills of the study region. More fertilizer supply through proper channels at low cost can increase the per capita production of agricultural products in the region. On the other hand the irrigation facility of East Khasi Hills district is not sufficient and more efforts are needed for developing irrigation facilities and irrigation projects. This explains that the existing irrigation facility/facilities are only utilised in the East Khasi Hills and with the better fertilizer distribution network, the area has a high percentage of agricultural surplus.
(d) Industrial Development:

The economy of Meghalaya is basically agrarian in character and labour engaged in Industry accounts for a very small percentage. But on the other hand we find that the state and the study region is endowed with rich natural resources, such as forest, mineral wealth and horticultural crops - which can be exploited for the economic prosperity of the state with the help of proper planning and initiatives. It is estimated that there are lime stone deposits of cement and chemical grade to the extent of 3,000 million tonnes, Coal-550 million tonnes, Sillimanite of the best quality and largest single deposit known in the world - to the extent of 2 million tonnes, 100 million tonnes of clay suitable for refractory fire bricks, 2 million tonnes of Silica sand suitable for manufacturing high grade Glass. Besides a very large area of about 8.5 lakh hectares of forests exists with abundant potentialities.

With such an abundant natural resources, one might have thought that significant amount of work would have been done by now, to utilise the potential wealth. But even after creation of Meghalaya in April 1970 and its emergence as a state in 1972 - the rays of industrialisation has not reached in this region. At the time of creation of Meghalaya in April'70 - there were only a cement factory at Cherrapunjee; a bone meal unit at Barnihat; two tiny fruit processing units and a very few other insignificant small industrial
units including small and Cottage industries. Therefore, as a first step in the field of industrial promotion, the state Government commissioned in 1971 'The Meghalaya Industrial Development Corporation' (MIDC) to prepare a blue print of the state's resources and a list of industrial projects that could be set up in the states. The MIDC recommended 50 such units both need based and resource based. These projects ideas were further enlarged by identification of other areas by the Regional Research Laboratory - Jorhat and a study team of the Ministry of Industrial Development, Government of India. The policy of the state Government in the field of industrial development was to actively pursue ideas for establishment of such industries which would ensure employment of the local people and utilize local (existing) raw materials.

It has also been recognised that industrialisation does not consist of and end with the setting up of large and medium-scale ventures, though their forward and backward linkages provide scope for many feeder and auxilliary activities to come up. Small industries with their high capital output ratio relatively unsophisticated technology and short gestation periods have a major place in our priorities as they tend to achieve better distributive (regional) justice. The state government is making special efforts to foster the growth of small-scale units in the state.
**Mineral Development**

As noted earlier in this chapter, the region is richly endowed with mineral resources, but because of rugged mountainous terrain and poor communications, geological investigations for minerals confined to only accessible areas (Fig.14). As a result, a large portion of the region is still to be covered by necessary geological surveys for minerals. Even some of the known mineral deposits which have been surveyed in a preliminary manner, will require further detailed investigation for the purpose of assessing the reserves, quality and suitability to specific industrial projects. During last four-five years a frame-work has been established but much is yet to be done. It is with a rational policy that a few mineral based industries may be established in the region to meet the consumption demand of the North Eastern Region. Cement may be one under consideration.

(e) **Road Development:**

Road are the only means of communication in the entire study region as there is no railways and waterways facilities available in the entire study region. The proposal to extend the broadgauge railway line from Gauhati to Burnihat in the East Khasi Hills of the district is reported to have been shelved for an indefinite period, but now has been revived.
In United Khasi and Jaintia Hills - lack of good roads and accessibility has led to the slow movement of forest resources agricultural produce and mineral products of the state. There are no direct all weather roads that internally link the state capital and the study region with the western districts of Meghalaya. An analysis of Table-7 shows that only a few villages are connected by 'Pucca' road barely 10.1% of the total number of inhabited villages. In the whole study region, the percentage of villages connected by kucha road to the total number of inhabited villages is also very small, consisting of 33.3%. This implied that more than 56.7% of the villages are isolated village and are not connected with any type of road. Let us take the three districts of our study region viz. East Khasi Hills, West Khasi Hills and Jaintia Hills district separately. (Fig. 18)

East Khasi Hills:

As stated above - road are the only means of communication in the district. Guwahati - which is bordering the Nongpoh Community Development Block is the nearest rail-head for the district and is about 101 km from Shillong. The railways, however, have an out-agency at Shillong from where both luggage booking and passenger reservation are done. The air-strip at Umroi in the Bhoi area Block, about 26 km from Shillong is being utilised by the third level
airline 'VAYUDOOT' which is operating a passenger service. Recently a helicopter service has been opened up that connects Shillong north Tura and Guwahati.

The district has two national Highways running through its territory. National Highway 44 from Guwahati through Shillong and Jowai connects Cachar district of Assam, Mizoram and Tripura with the rest of the country. The other highway of strategic importance is the National Highway 40 (Jorhat Shillong-Pynursla Tamabil Road) with total length of 168 Km. In the district important road are -

(1) Shillong-Mawphlang - Mawsynram-Balat-Kakli Bazar Road.
(2) Shillong-Mairang - Nongstoin-Sonapahar Road
(3) Shillong-Sohra (Cherrapunjee) - Shella Road.

Total length as per 1983 records of P.W.D. is as follows:-

(1) Total length of metallic roads - 608.50 Km
(2) Total length of non-metallic road 910.00 Km
(3) Total length of Kutcha road - 895.60 Km

Total: 2414.10 Km

From the above figures the road density in the district works out to 46.46 Km/100 sq.km which is little higher than the national road density of 34 Km. But when we see the block-wise distribution of road density we get a different picture as seen in figure . The road density is low in the Bhoi-area, Mawphlang, Shella-Bholaganj and Mawkynrew and very high in Mylliem Block. This is so as the Mylliem
Block in the most urbanised block of the entire district/study region.

**West Khasi Hills District:**

Road transportation is the only mode of the communication in the district. It is noted that roads are not well developed and maintenance of majority of them is far from satisfactory. There is no possibility of rail and air communication. No National Highway touches any part of the district. Roads connecting to places outside the districts are as follows:-

1. Sonapahar - Nongstoin - Mairang - Shillong, and
2. Sonapahar-Hahim-Boko (in Assam).

**Jaintia Hills District:**

The district is not connected by air-ways, railways and river transport services. Roads are the only form of communication in the district. It has yet to be developed with good communication roads. Many remote areas of the South Eastern parts of the district still remains away from the main road and as such lag behind in overall economic development. National Highway No.44 passes through the district connecting Shillong with Jowai and proceeds towards Cachar. Thadlaskein Block is well ahead of other three blocks in the matter of road development. All major state routes both black top and kutcha pass through and start
from Jowai. While the block headquarters of Thadlasktein, Laskein and Khliehriat are well connected by metalled roads, that of Amlarem is connected by fair weather gravelled road.

(f) Power Development:

To-day 'Power' has become a most important element not only for industrialisation but also for all walks of life. The sources of power may be either replaceable (such as water power, wood, fuel and solar power) or irreplaceable (such as coal and petroleum). In the study region both type of powers are available. Coal which is an irreplaceable resource is found throughout the State. It has significant reserves at Cherrapunjee and Laitryngew of Khasi Hills. Bapung, Muturoi of Jaintia Hills. Bapung is the biggest Coal reserve of the region. Coal is mined by private traders and sold on basis of truck and not by weight. The total reserve estimated in the entire region (4,70,000+19,00,000+1,29,000) tonnes. It produces about 60,000 tonnes per year of which a large part goes away from the State through private traders. Most of which goes via Shillong to Guwahati. Guwahati acts as a distribution centre. This is exported to various parts of the country.

The replaceable power potential also exist sufficiently in the State. The enormous hydro power potential of the State promises bright future not only for itself but for the
whole of adjoining region. The first venture in this direction was the Umtru-Hydro Electric Project taken in 1954. The project was commissioned in 1957 with an installed capacity of 8.4 MW. The project is located near Burnihat in the North Khasi Hills. The Umiam Hydro Electric Project with an installed capacity of 36 MW in the first stage was started in 1960 and commissioned in the year 1965. The stage of this project with total installed capacity of 180 MW was started in the Fourth Five Year Plan and have since been completed. Stages IV, V and VI of the Umiam Project are under various stages of investigation and development. Another important 60 MW project is coming up last at Kyrdem-kulai, which is expected to be completed by the end of the Fifth Plan.

In spite of such much power development in the State, the per capita consumption of power is only 69 Kwh as against 154 Kwh in the country as a whole.

STRATEGY FOR FUTURE

Economic Development:

The above analysis reflects that the United Khasi and Jaintia Hills has a poor economic development which is characterised by low per capital income, low agricultural productivity, pre-dominance of subsistence and primitive methods of cultivation; poor transport and communication
low consumption of power, absence of industries and near absence of institutions of technical education, medicine etc. Potential wise area available for cultivation is not large but the region is endowed by nature with bountiful mineral resources which remained to a large extent un-exploited. The region is also rich in forest resources and is very suitable for quality horticulture products and offers good scope for setting up of forest based industries. But during the last few years trees are being cut and sold to various parts of the country. If this process of cutting trees would continue then a day will come that its complete forest will escape and would responsible for each ecological disorder. In view of this, a proper approach would be to create such facilities and generate such impulses in the economy as will stop cutting of forests illegally increase the productivity and income from various economic activities which will on the one hand enable the exploitation of un-tapped resources and on the other hand would continue to feed the forest, so that resources are not exhausted.

Thus in the light of above discussions, the strategy that emerges for future development of the study region would have the following five main elements:

1. Opening up the interior of the region with an efficient system of roads and transport services.
2. Change the cropping pattern of cultivation in favour of cash-crops and fruit cultivation, gradually and to the extent possible.
3. To develop infrastructure of marketing the local products.
4. To promote industries based on local products.
5. To create skills relating to development programs.

Transport and Communication:

Cheap and extensive communication is the greatest blessing which any country can have from the economic point of view. An efficient system of roads transport services is a must for all activities of economic development. The entire region is hilly area and many villages are not linked by any road. Practically also it is not possible to link every village with road transport. But it will be useful if a cluster of villages with a growth point such as marketing centre (also called 'Bazar') is connected with a road. It will accelerate the flow of surplus agricultural commodity to urban areas and would provide incentives to rural people to grow more. It is so, because many villages which are not connected with any type of roads - usually cultivate for self consumption. As even if they have surplus, it is good for nothing, without accessible roads.

Cropping Pattern:

Location is an important factor in determining the suitable cropping pattern, more so in a hill areas with poor transportation facilities. In the United Khasi and
Jaintia Hills the emphasis has long been on achieving self-sufficiency in foodgrain production despite the fact that the region offers geographical conditions for growth of high-value crops. The crops of the region has demand in the entire North Eastern part of the region. It will be economically advantageous to change slowly and gradually cropping pattern in favour of cash crops. While doing so it should be kept in mind that only accessible areas are brought under Cash Crops.

**Marketing Facilities**

Marketing is the performance of business activities that direct the flow of goods and services from producer to consumer or user\(^9\). Thus underdeveloped or undeveloped marketing is a sign of underdeveloped or undeveloped economies\(^\)\(^{10}\). As such for an economy particularly agricultural economy must have an orderly system of marketing. But in our study region an orderly system of marketing is not found as a result the producers and consumer suffer a lot. Existing markets are by and large weekly markets that cater to the marketing needs of rural population in study region. Most of these rural markets are not well communicated, have no storage facilities, no system of classification and grading of produce and no market information. Even though there are a few marketing co-operatives Societies in the district, due to weak structure, their activities
are below satisfactory. Of late though the Meghalaya co-operative Marketing and Consumer Federation, an organisation in the State Co-operative Sector, entered the market to facilitate undertaking of integrated Services of procurement of agricultural and forest produce, and distribution of seeds and fertilizers at approved rates, but this organisation has a very limited influence mainly because of fewer in number.

To increase the productivity - the farmer must get remunerative prices for their products. If remunerative prices are not given then there will be little or no incentive, for a farmer to grow more. It is in this context that the development of marketing facilities are essential. Thus for this purpose government should set up collection and trading centres (Annexure I) at different places to buy the commodities from villages. It will help even small farmers to get better price for their products. The existing position, as far as the number of markets present in the study can be stated as:

<table>
<thead>
<tr>
<th></th>
<th>East and West Khasi hills</th>
<th>Jaintia Hills</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Primary market</td>
<td>33</td>
<td>15</td>
</tr>
<tr>
<td>b) Co-operative Markets</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>c) Service Co-operative Societies</td>
<td>83</td>
<td>21</td>
</tr>
</tbody>
</table>
Promotion of Industries:

Needless to say the region is industrially backward. The existing infrastructure are to be strengthened considerably. Identification of industries based on local products/raw materials have to be set up, credit facilities for setting up the industries are to make available and technical know-how. This can be achieved by proper research and joint collaboration with other States and agencies in the country. All categories of industries as stated earlier should be integrated into rural economic development scheme. This should be encouraged as it will remove the economic stagnation and idleness among the working population.

Skill Generation:

Skill will have to be developed in number of fields including agriculture and allied and Engineering Sectors. Development of skills generates not only more income but also more employment.
Table 7
Calculation of co-efficient of Variation

<table>
<thead>
<tr>
<th>Land in Hectares</th>
<th>FW</th>
<th>FE</th>
<th>FJ</th>
<th>X</th>
<th>FEX</th>
<th>FEX²</th>
<th>FWX</th>
<th>FWX²</th>
<th>FJX</th>
<th>FJX²</th>
<th>East Khasi Hills</th>
<th>West Khasi Hills</th>
<th>Jaintia Hills</th>
<th>Segments</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1</td>
<td>3</td>
<td>44</td>
<td>63</td>
<td>.5</td>
<td>22</td>
<td>11</td>
<td>1.5</td>
<td>.75</td>
<td>31.5</td>
<td>15.75</td>
<td>44</td>
<td>3</td>
<td>63</td>
<td>Uneconomical</td>
</tr>
<tr>
<td>1 - 2</td>
<td>44</td>
<td>34</td>
<td>35</td>
<td>1.5</td>
<td>51</td>
<td>76.5</td>
<td>66.0</td>
<td>99.00</td>
<td>52.5</td>
<td>78.75</td>
<td>51</td>
<td>93</td>
<td>37</td>
<td>Economica</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(34+17)</td>
<td>(44+49)</td>
<td>(35+2)</td>
<td></td>
</tr>
<tr>
<td>2 - 4</td>
<td>49</td>
<td>17</td>
<td>2</td>
<td>3.00</td>
<td>51</td>
<td>153</td>
<td>147.0</td>
<td>441.00</td>
<td>6.0</td>
<td>18.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 - 10</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>7.00</td>
<td>35</td>
<td>245</td>
<td>28.0</td>
<td>196.00</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>4</td>
<td>0</td>
<td>Commercial</td>
</tr>
</tbody>
</table>

Here:

FW = Frequency of West Khasi Hills
FE = Frequency of East Khasi Hills
FJ = Frequency of Jaintia Hills
X = Mid point of the classes of land Holdings.

For East Khasi Hills:
Mean = \( X_1 = \frac{\text{FEX}}{100} = \frac{159}{100} = 1.59 \)

Standard deviation = \( \sigma_1 = \sqrt{\frac{\sum X^2}{n} - \bar{X}^2} = \sqrt{2.3269} = 1.53 \)

Coefficient of variation = \( \frac{\sigma_1}{\bar{X}_1} \times 100 = \frac{1.53}{1.59} \times 100 = 96.2\% \)

For West Khasi Hills:
\( X_2 = \frac{242.5}{100} = 2.425 \)

\( \sigma_2 = \sqrt{7.3675 - 5.8806} = 1.219 \)

C.V. = \( \frac{1.219}{2.425} \times 100 = 50.3\% \)

For Jaintia Hills
\( X_3 = \frac{90}{100} = 0.9\% \)

\( \sigma_3 = \sqrt{1.1250 - .81} = .56 \)

C.V. = \( \frac{.56}{.9} \times 100 = 62.2\% \)

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3. P. Passan - "Business Trading by the Meghalayans", (Unpublished) Department

4. Rubber, Coffee, Tobacco, Pepper, Cardamom, Cashewnut, Bananas, Grapes,
   Orange, Cinenona and Medicinal Plants, Betel nuts, Potato, Tapioca,
   Sweet Potato, Chillies and Spices, Vegetables, Turmeric, which are also
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   1978, p.42.