CHAPTER XVI

10. Summary, Suggestions and Conclusions

10.1 Summary of major findings

Unemployment problem in Assam took a serious turn particularly from the 1960s when the open unemployment (Employment Exchange registration) shot up from 31,473 in 1961 to 7,62 lakh persons by September, 1966. This apart 'crowded out' the ever increasing rural unemployed to be mingled with the under-employed in the stagnated agricultural sector.

10.1.1 Rural unemployment, however, has its deep roots in the colonial exploitation. The orthodox hypothesis of labour shortage and land abundance in the state prior to Independence does not seem to be true. Scrutiny of available data for mid-1950s reveal that the average land-man ratio (in terms of cultivated area to population ratio) was very low, lower than one hectare.

There are also evidences of landless labourers. The hypothesis seems to be due to failure on the part of the proponents to distinguish between potential capacity, maximum availability and actual availability of land under given technology and culture. Failure to distinguish 'short-term' from 'long-term' along with
ideological bias and ethnocentric character has contributed to the hypothesis. Similarly, the hypothesis of backward bending labour supply curve of the rural households in the State appears ' prima facie' to be false due primarily to failure on the part of proponents to distinguish social and private concepts of cost and benefits. The supply curve of labour is responsive at a higher rate of return. This has prevented the rural households to migrate out and indirectly encouraged immigration and emigration from the rest.

Historically, the pressure of population on land emerged from the exhaustion of virgin land suitable for paddy, particularly from the beginning of the twentieth century. With immigration in an environ of subsistence agriculture under traditional technology, rural underemployment became more acute. When agriculture got saturated at a low level of technology, rural underemployment tend to emerge and unemployment ensued. This is evident from the fact that during the period 1901–51 the annual increase in the plain cultivated land of Assam was 0.31 percent, falling far short of the increase in population of 1.78 percent.
Rural unemployment emerged as a sequel to rural over employment on land at a low level of technology, followed by underemployment at the first instance and unemployment consequently. On the other hand, employment in the secondary sector, particularly tea plantation and processing could not keep pace with the growth of the tea labour force or area, not to speak of absorbing rural surplus. During 1901-51, tea garden labour population increased annually at 0.92 percent against lesser increase of 0.43 percent in employment or 0.26 percent in tea area. It is observed that immigration of tea labourers was more than employment opportunities available. A pool of surplus labour, it appears, was helpful to planters.

10.1.3: During the planning era open unemployment has gradually aggravated and the rural unemployment accentuated. The growth of the economy is lagging far behind the population or labour force growth. During 1950s annual (compound) growth rate in real net State Domestic Product (SDP) was only 2.49 percent falling short of population growth rate of 3.05 percent, implying negative growth rate in the real per capita income. The growth trend in the sixties was 3.62 percent in
SOP and that in per capita income was 1.13 percent. But, the population maintained its trend. During the Seventies, the trend growth rate in SOP was 3.36 percent, that in per capita income slid down to 0.90 percent. It appears that only from the first half of the Eighties the economy is moving along a higher growth path. During 1980-85, the real SOP has been growing at an annual compound growth rate of 6.18 percent while the per capita income at 2.8 percent. The growth rates in SOP during the plan period is found to be negatively related to the growth rate of unemployed, correlation coefficient being (-)0.986.

The phenomenon of 'growth cycle' and 'employment cycle' has also been observed.

The economy has not diversified, it is heavily dependent on agriculture. Still about two-thirds of the workers are dependent on the primary sector. Analysis of data for the period 1971-85 reveal that the correlation coefficient between the growth rate of net State Domestic Product and agricultural production is as high as 0.72 with elasticity 0.29. On the other hand, the coefficient is found to be negative between SOP and industrial production. During the period, the index of
agricultural production increased annually at a compound growth rate of 2.5 percent while that of industrial production by 3.6 percent, compared to 3.8 percent in the NDP.

From our micro study, it is found that the average on-farm employment is about 87 days per hectare, which has a tendency to decline with increase in farm size. In terms of time criterion, the unemployment rate (under 273 days full employment norm) is estimated to be about 47 percent for marginal farmers and 36 percent for the small farmers under the existing (traditional) technology. However, with new technology if cropping intensity can be raised to 200 percent from existing 159 in marginal farmers' field then they can augment their employment by 41 percent from the present level of 92 days per hectare. Similarly, the small farmers can raise employment by 61 percent from the existing level of 96 days. On the other hand, employment per landless households was 219 mandays on others' farm, 98 and 130 respectively per marginal and small farmer households. A few small farmers were found to hire in labourers. However, some small farmer households suffer from surplus labour in slack season.
In Assam 82 percent of the holdings are below 2 hectares accounting for hardly 43 percent of the area. The marginal holdings are 60 percent of the total holdings, operating on 19 percent of the area. There is inequality in the distribution of land. The land concentration ratio lies between 0.56 to 0.64. The number of landless rural households stood at 1.7 lakh or 7.5 percent of the total rural households in 1982, when unemployment is serious. These suggest that there is some sign of proletarianization and polarization. Since the landless households have to depend on their daily earnings for livelihood so, the 273 days norm of full-employment as suggested in Bhagwati Committee report can not be applied to such categories. If real wage does not improve, then the entire 365 days in a year may have to be accounted for full employment for them.

It needs to be mentioned here that no method of measurement of unemployment can be fool proof, hence no estimate can be fool proof. The existing methods do not take account of the 'infrastructural unemployment'. However, ex-post exercises along the line of basic identity suggested by us which takes account of the relevant variables like land-labour, land-capital,labour-capital,output-labour,
output-labour, output-capital, workers' participation rate, dependency rate, etc, may give a more integrated picture than a solitary index.

10.1.6: A constellation of factors operating both on demand and supply sides in the labour-surplus, land-scarce economy of Assam has led to a low productivity, low income and low-employment syndromes. On the top of this, the low propensity of rural unemployed to out migrate and clandestine immigration across the international borders (the two are mutually exclusive in employment) aggravated the situation. Thus, the factors behind rural unemployment cut across demographic, socio-logical, institutional, economic and technological frontiers. Our investigation reveal a new paradigm viz. low rural unemployment in the tribal societies. Further, states with higher rates of population growth have lower rates of unemployment. Testing of hypothesis with State level data in respect of as many as fifteen major States of India has shown that rural unemployment is positively and significantly related with factors such as concentration of land holdings, incidence of agricultural labourers, casual labourers, marginal farmers, etc. Similarly, rural unemployment
is found to be negatively related with cultivators, per capita income, farm output, size of holdings, irrigated area, multiple cropping and technical progress. Measures to remove rural unemployment call for reduction in inequality in the distribution of land through agrarian reform, technological progress and through provision of modern inputs like irrigation, fertiliser, HYV seeds etc. It may be mentioned that the problem has increased inspite of a number of labour-intensive measures taken from time to time by the government like Rural Works Programme, Small Farmers Development Agencies (SFDA), Marginal Farmers Agricultural Labourers ("PAL") Agencies, National Rural Employment Programme (NREP), Integrated Rural Development Programme (IRDP), Rural Landless Employment Guarantee Programme (RLGP), etc. These programmes should not be treated as ad-hoc or relief measures by the policy makers as the problem of rural unemployment is not a transitory phenomenon. They should be implemented in such a way as to create year-round employment for the target groups. Rate of growth of employment through such programmes should be more than growth of unemployed.
10.2.1 Land Reform

In a labour-abundant, land-scarce and unequal economy the fundamental remedy for rural unemployment on the supply side lies on land reform. Delay in land reform or in its implementation has delayed the speed of rural development thereby aggravating rural unemployment. However, land reform, by itself is not sufficient. Employment creation without redistribution of productive assets (including land) would not lead to a substantial increase in the volume of employment in areas where landlessness is extensive. What is therefore required is a total agrarian reform, which includes not only land reform and redistribution, but also institutional reforms like revenue administration, rural credit and finance, marketing and distribution, provision of modern agricultural inputs, reforms in management of common property resources, etc. The success in rural employment in Korea is greatly attributed to its highly successful land reform.
10.2.2.1 Technological Reform

Raising land productivity is associated with increasing rural employment. The former is a matter of technological change i.e., application of modern inputs. It is now commonly agreed that the HIV technology, if properly used can increase output dramatically and cause no conflict between growth in output and employment. In the agriculturally developed regions of the country introduction of HIV has been accompanied by a significant increase in agricultural wages and an increase in labour demand. There, the new seeds, new crops, and mechanization at certain seasons have helped to even out the fluctuations of labour demand over the agricultural year, thereby increasing demand in the slack seasons and partially at least helping to eliminate some underemployment. Further, technological progress can raise the viability of a lower farm size thereby lowering the potential ceiling limit and hence more surplus land for redistribution.

10.2.3: Irrigation

Irrigation determines labour productivity in a more fundamental sense. Irrigated areas are more labour intensive. Irrigation can change the entire
cropping pattern through multiple cropping. As for instance, by 1966-67 almost the entire area under irrigated wheat in the country is under HYV. Irriga-
tion, therefore is very crucial to raise labour absorp-
tion capacity within agriculture. In Assam, if the irrigated area could be raised to 40 percent of the net area sown from the existing 20 percent it will be possible to increase crop intensity from the existing 125 percent to at least 150 percent. This will augment the de-and for labour and is likely to increase employ-
ment at least by 20 percent.

10.2.4 Multiple cropping

Increasing employment is associated with the frequency of cropping. Hence, an increase in area under double or multiple cropping leads to increase in farm employment. Crop intensification involves the substitu-
tion of labour for land through labour intensive produc-
tion practices like weeding, manuring, inter-
cropping, leading also to higher productivity per
hectare. Multiple cropping eliminates or minimises the seasonality in rural unemployment thereby reduces the incidence of underemployment among marginal and small farmers.
10.2.5: Labour Productivity

Japan has the highest number of farm workers per unit of land in the world, and yet it has one of the highest levels of labour productivity. Hence the two are not incompatible. There is tremendous scope for raising labour productivity in Japan contrary to the fallacy that it may lead to unemployment. Low labour productivity in farms is due to a host of factors like lack of training and extension, poor health, lack of irrigation, etc. Hence remedy lies partly in the provision of these facilities, which by itself can generate additional employment.

Labour Productivity cannot be thought of in isolation. Further, it should be viewed not merely in relation to those who are employed but also to those who could be employed, but are not. The more productive jobs we create, the greater would be the productivity of the labour force as a whole. Efforts to increase the productivity of the labour force as a whole would mean more employment.

10.2.6: Activities allied to agriculture

There is great potentiality for expansion of activities allied to farming, leading thereby to
more employment. Such activities are cultivation of horticultural crops, vegetables, condiments and spices, floriculture, aromatic and spices, rubber and coffee plantation, coconut, betelnut, etc. On the other hand, there is also potentiality, though limited, in the sideline activities like animal husbandry, dairy, goastry, poultry, dairying, piggy, beel rearing, pisciculture, aquaculture, epiculture, minor forestry, etc. These activities are basically rural based. Hence their intensification is bound to reduce rural unemployment. Further, tertiary activities related to these products like wholesale and retail trade distribution, storage, packaging and processing, marketing, etc. would promote rural employment through augmentation of labour demand.

10.2.7 Cooperatization

When there is landlessness among the farmers the strategy is to go for cooperativisation, which can do away with the technical difficulties of marginal holdings. It makes possible multiple cropping easier and hence maximise employment.

10.2.8 Non-Farm Rural Employment

There is also great potentiality to create employment in the rural areas through the expansion
of tertiary activities like rural electrification, gas, water supply, health and sanitation, markets, storage, warehouses, banking, insurance, transport, petty trading, etc. In Assam natural gas is almost a 'free commodity' as it has been flared up. There is a big demand for cooking gas in the rural areas emerging with the disappearance of forests and increasing density of population. Hence exploitation of gas for fuel purpose can open up a chain of employment.

Revival, expansion and modernisation of traditional cottage industries in the rural areas can offer wage employment to women as well as underemployed marginal and small farmers during the off-season. In this respect, sericulture, handloom-weaving, handicraft, khadi and village industries have tremendous potentiality. According to the Report of the National Commission on Agriculture (1976), the non-agricultural rural sector has the potentiality to provide employment to 30 percent of the total rural labour force in 2000 AD. The Government should reserve some modern sector industrial products in the items like agro-based, horticulture-based, livestock-based, etc. to be produced exclusively in the rural sector.
Historically, labour absorption in agriculture and village industry in the initial stages of development is well-documented, as in respect of Japan. However, development of secondary and tertiary sectors in the rural areas require development of infrastructure and skill, which again create employment.

10.2.9: **Final measures**

In the rural areas, with the penetration of the goods produced in the modern capitalist sector the traditional artisans and crafts are facing 'dehulling', thereby throwing the craftsmen out of gainful employment and also discouraging the potential entrants to the same. It is therefore necessary to subsidise the traditional crafts and artisan sector and also exempt from taxes. Side by side the rate of taxes on the machine-made modern goods competing or substituting the traditional items should be enhanced.

10.2.10: **Rural informal sector**

Demand for some informal sector services is ubiquitous in the rural areas. This is more so in Assam, where it can employ a sizeable proportion of unemployed, particularly underutilised. Such services are saloon, cobbler, carpentry, washermen, petty trading, tailoring,
blacksmithy, vegetable vendor, meat, milk, fish and egg vendor, etc.

Further, on 'a priori' ground it can be argued that the direct cost of creating a rural job is lower than the cost of creating an urban job. In efforts to create jobs with a view to alleviating rural unemployment, every thought should be given to the possibility of ensuring that the jobs are productive in the sense that they provide some quality goods and services for which there is need in the society. In this respect one important way to provide more jobs is to increase the demand for wage goods, labour-intensive products.

10.2.11: Flood protection

In Assam, one of the causes of unemployment is the flood problem, which we have argued as the problem of 'infructuous employment'. The problem however needs to be viewed at from the angle of water resource utilisation with multiple objectives viz., flood protection, irrigation and power generation. Looking at the problem this way and setting up of multi-purpose projects on the line can not only solve the problem of unemployment but also the entire problem of agricultural transformation.
10.2.12: Rehabilitation of displaced persons

In the rural areas, acquisition of land for construction of irrigation projects, dams, embankments, roads, big industries etc lead to displacement of farm households rendering them unemployed. In this respect, the victims are often the marginal and small farmers. It is suggested that alternative land employment and fair compensation should be given soon after acquisition. Otherwise, such households may swell the array of unemployed and landless persons.

10.2.13: Appropriate technology

The rural sector suffers from technological dualism. The modern technology in the large and medium farms coexist with the traditional technology in the small and marginal farms. In this context it is suggested that research should be undertaken to improve the traditional technology both in its productivity and work opportunity aspects. At the same time, the modern technology should be modified to increase employment opportunities without sacrificing labour productivity. In other words, there should be a synthesis.
10.2.14: More Investment to Agriculture

It is inevitable that agriculture will be the main employment generating sector in rural areas as well as in the entire economy. The sector will also require a large share of investment. The extent to which rural employment opportunities can be created will depend not only on the volume of investment, but also on the pattern of investment, its allocation, the choice of products and technology, institutional and organisational factors, and above all the specific objectives behind them.

10.2.15: Rural Development

It is artificial to isolate rural unemployment or underemployment as a problem different from the general problem of rural development. The essence of rural development programme is to make more productive use of labour. Hence, remedies for unemployment boil down to rural development in the ultimate analysis. In a labour surplus economy rural development activities should satisfy the four criteria viz. (i) lower capital-output ratio, (ii) minimum demand for highly trained personnel, (iii) activities to be generated should be highly labour intensive subject to some productivity norms and
(iv) high contribution of the activities to the local economy. If the rural areas could be turned to be production centres utilising local resources and selling the surplus to the urban consuming centres, then automatically there could be transfer of income from urban to rural areas thereby not only sustaining but also expanding the rural employment. A rural development strategy basically emphasises mobilisation of landless labourers for productive purpose. Rural development programmes lead to higher wage employment.

The Committee on Rural Roads set up in 1966 by the Ministry of Transport and Communication, Government of India recommended that every village in an agricultural area should be brought within 6.4 kilometres of metalled road and 2.4 Ks of any kind of road. Given that Assam is badly underserved by roads, there is a big scope for employment in road and bridge construction and maintenance.

Provision of services like electricity, water supply, etc, will create new employment opportunities both directly and indirectly. Rural housing is yet another area where there is vast direct employment opportunity with a coefficient of 1.6 times for
indirect employment according to the National Commission on Agriculture.

We now like to put a caveat here. The rural development activities has its own limitation in labour absorption. The National Commission on Agriculture (Part XIII, p.47) commented thus:

"Therefore, the rural sector with its employment opportunities cannot at present be expected to give full employment for more than 254 days per year, even assuming that various programmes like Employment Guarantee Scheme of Mahatma is organised in a large way throughout the country, by 2000 AD, we can expect that full employment in the rural sector can lead to employment for a period somewhat between 254 and 275 days. It would be reasonable to assume an optimum of 265 days for 2000 AD."

10.5 Employment Planning

Employment planning is important not only for the purpose of making provision of jobs to absorb every member of the labour force, so that the person derives
the satisfaction of contributing to the national output but also for ensuring a certain minimum income level for self and dependants.

In planning for employment, the sources of labour supply should be carefully taken into account viz., (i) net addition to labour force as a result of population growth, (ii) backlog of unemployment that already exists and (iii) possible overflow of those with low or zero marginal productivity. The duty of the planning authority is to balance the demand for labour with the increase in supply in such a way that the supply of labour forthcoming from all the three sources is consistent with the rate of absorption. In other words, given the technology, employment planning must take into account the following things viz., (i) sustenance of initial level of employment, (ii) creation of additional jobs for the backlog, (iii) employment for the new entrants and (iv) raising the level of labour productivity including that of underemployed.
Dynamically, if labour force grows at a constant percentage rate 'l', productivity at 'p' then, in order to fully employ the labour force, output or income must grow at a constant rate 'g' equal to the sum of ln and their cross product. Thus,
\[ g = l \cdot p \cdot lp. \]

10.4: Required Jobs by 2000 AD

It may be worthwhile to foresee the quantum of jobs required to be created by the end of this century for the rural labour force in Assam. Using the projected rates of growth of national labour force by the National Commission on Agriculture (1976) for 2001 AD under three different alternative growth rates, the rural labour force in Assam by 2001 AD is likely to be within 71.82 lakhs to 73.61 lakhs, as can be seen from projection below:

Table 10.1: Rural labour projection by 2001 AD for Assam.

<table>
<thead>
<tr>
<th>Year/Rate</th>
<th>Projection I</th>
<th>Projection II</th>
<th>Projection III</th>
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<tbody>
<tr>
<td>1971 (lakhs)</td>
<td>40.88</td>
<td>40.88</td>
<td>40.88</td>
</tr>
<tr>
<td>Growth rate (% p.a.)</td>
<td>1.98</td>
<td>1.896</td>
<td>1.903</td>
</tr>
<tr>
<td>2001 A.D. (lakhs)</td>
<td>73.61</td>
<td>71.82</td>
<td>71.97</td>
</tr>
<tr>
<td>Increase (lakhs)</td>
<td>32.73</td>
<td>30.94</td>
<td>31.09</td>
</tr>
</tbody>
</table>
It is seen that total increase in rural labour force in Assam will not be less than 30 lakh persons by the end of the current century. The figure may even exceed this if higher rate is applied, since Assam's population growth is one of the highest in the country. This accounts for 75 percent increase over the actual level of labour force in 1971. Provision of employment for this additional labour force is a gigantic task, let alone the urban work force. That is why, it can be suggested that some 'big push' projects based on downstream refinery products, gas utilisation, multipurpose dams etc, the raw-materials and demand for which are available within the state as well as the country can shake the problem.

10.3 Conclusion

It is found that incidence of rural unemployment is more among marginal and small farmers. Taking 273 mandays as the standard for employment, it is observed from our study that average unemployment per marginal farmer household is 175 mandays in a year, 93 days for small farmer household and 24 days for landless household. The average on-farm employment per hectare, on the other hand, is around 87 mandays. This is much less
than the employment mandated of 161 under paddy crop in Andhra Pradesh or 107 in Punjab. This shows the potentiality for raising employment through farming alone.

According to 38th round of NSO there are 44.9 lakh rural persons below the poverty line (or Rs.6400 p.a.) in Assam in 1983-84. Taking 40 percent of the population falling in the age group of 18-54 years, the adult population below the poverty line can be estimated at 17.96 lakhs. This indicates the magnitude of rural unemployment and underemployment for the State as a whole.1

Rural employment programmes introduced by the government (making government the single largest employer) are, no doubt, beneficial. But these are not adequate as long term solution. For, the persons who find employment under such programmes become 'out of employment' once the same are completed or discontinued. What is required is continuous, dependable and productive employment. Stability should be brought to the rural employment programmes by eliminating the 'ad-hoc' element.

1. The wage employment required for Assam varies between 359 to 573 lakh persondays.

to it. It is seen that Central allocations made to the States for employment programmes have hardly any relation to the incidence of unemployment. For even solution to the problem there should be sound relation between the two.

The existing measures by themselves are not sufficient though they may be necessary. To overcome the problem effective land reform and distribution, technological progress in paddy farming, expansion of irrigation facilities, multiple cropping, appropriate farm technology, raising land and labour productivity, cooperative farming by marginal and small farmer categories can be very useful to raise on-farm employment. This calls for more investment in agriculture. In addition, the following measures viz., expansion of non-farm and allied activities in the rural informal sector with fiscal incentives, flood protection measures (alternatively insurance provision for farm employment in flood-prone areas), etc can be helpful to promote employment. Further, control of influx across the international boundary, fertility control of the rural women can be useful demographic measures. Assam is abundant in water and gas resources. Utilisation of these two resources are bound to have multiplier and
linkage effects on rural employment. However, all these need careful long-term planning.

In the ultimate analysis, remedies for rural unemployment boil down to rural development. Rural employment generation is synonymous with rural development. Hence a well-designed rural development programme on a continuing basis is a sine qua non to overcome the problem of rural unemployment. The problem cannot be divorced from the problem of rural development. In view of this, the theory of rural employment has got reduced to the theory of rural development. Modernising agriculture and fulfilling the rural development gap are the two basic steps towards answering the problem. This alone can lift the economy from the 'vicuous circle' of "low productivity-low technology-low income-low employment" economic syndrome to the 'virtuous circle' of prosperity through "higher productivity-appropriate technology-higher income-full employment-self reliant" economy.

The package of measures for rural employment cannot be an isolated one. It would have to be a package having vertical, horizontal and diagonal linkage with the entire economy.