

Some Trends of Research in Economics in North Eastern India

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The primary objective of this survey is to present major trends of research on some aspects of Economics in North-East India. The efforts are made to cover a time period for about four decades and to put the research work in proper perspective, an inter connected account of the major issues that got attention of the various social scientists from time to time. In particular the attempt is focussed on the developments during last twenty years.

At the outset, it is to be confessed that this survey is neither complete, nor exhaustive and comprehensive, because efforts of an individual researcher, naturally set the limit. More detailed survey of the research work in the field of Economics for entire five decades, calls for vast resources and collective efforts, which are beyond the reach of singular research scholar. Individual efforts can, however, be significant, as in this survey, as an additional source of available information and meant to be an informative source about the state of research in the field of Economics in North-Eastern India.

It is worthwhile to mention that only the published research work in research journals, books and seminar papers published in edited volumes could be included in this paper. The research work undertaken by the various departments of the Universities,

research institutions and agencies, which is unpublished is not the part of this survey for obvious reasons.

Major Trends of Research in Economics

In order to capture the major trends in the various fields of Economics, more than one hundred titles are reviewed. Out of which seventy five studies are selected for the purpose of analysis, on the ground of well defined research problem, scientific methodology and relevant findings. It is assumed that seventy five number of titles form a significantly large sample size and could be considered as a representative sample of the available research work in the region in the field of Economics. On the basis of this assumption, this sample would reflect a bird's eye view of the major trends and status of research in Economics in North Eastern part of India.

Table 1 represents the decomposition of reviewed research work in North Eastern region. Out of total research titles reviewed, books reviewed are 43.6%, articles published in edited volumes constitute 35.9% and articles published in various research journals are 20.5%. It is important to note that a largest volume of research material is available in book form, followed by articles published in edited volumes. The titles are significantly distributed among all the categories. Research articles are mostly published in Economic and Political Weekly, Manpower, Social Action, Indian Journal of Agricultural Economics and other well reputed journals of national standard. These journals are widely circulated in India and abroad, if more research output is getting chance to publish in these and other journals, then more and more social scientists from rest of India would be aware of major economic issues and problems of north eastern part of India. This would lead to attract the due attention among the academicians at large.

The reviewed research literature is also arranged in temporal frequency distribution in decadel form, beginning from 1955-65, 1966-75, 1976-85 and 1995 onwards, according to the respective year of publication. Analysing this time series, it is found that while 8.3% literature is published during the decade 1955-65, in onwards decades this percentage is continuously increasing and reaching the peak during the period 1985-95,

Table 1. Decomposition of research work

Types	Research in Numbers	Titles in Percentage
Books	33	43.6
Edited volume	27	35.9
Articles	15	20.5
Total	75	100

where 46.6% research work is published (See Table 2). This accelerating growth in research publication is a very encouraging trend, which implies that recently more and more social scientists are paying attention towards the contemporary economic issues of the region. Emergence of new universities, departments and research institutions may certainly be a significant factor in explaining the temporal growth of research publications.

It is expected that this healthy trend will grow in future and provide a positive encouragement to young researchers in the field. Most of the research publication after 1995 must be in pipe line and various stages of publication, which is reflected by the fact that only 5% reviewed research work is available for this period of reference.

North Eastern part of India comprises of heterogeneous geographical regions and inhabitants with diverse culture, religion and of different socio-economic status. This region is sub-divided into seven states for the purpose of civil and political administration. The awareness towards higher education and research is spreading speedily in all the north eastern states. Therefore, the facilities and opportunities are also fast

Table 2. Temporal distribution of research work publication

Year	Research Work Publication	
	in numbers	in percentage
1955-65	6	8.3
1966-75	10	13.3
1976-85	20	26.7
1985-95	35	46.6
1995-	4	5.0
TOTAL	75	100

emerging in this region to meet the supply and demand of skilled and educated manpower. Consequently, it would be interesting to analyse the regional (state-wise) distribution of research output. Table 3 demonstrates the state-wise regional distribution which suggests that a large number of research titles are available in the field of economics, where entire north eastern region is studied as one unit and inter-state comparison are made for the purpose of analysis. On the other hand, some studies are of general nature and not for a region specific. Both of these two types of studies are kept in separate categories in Table 3. Among the seven states largest number of studies are available for the state of Assam (28.0%), followed by Meghalaya (12.0%) and Manipur (6.6%). Least number of reviewed literature available for Mizoram (3.0%) followed by Arunachal Pradesh (4.0%) and Tripura (5.3%). It is worthwhile to mention that availability of research of both has a strong association with the number of active research institutions and university departments in the state.

Table 3. Regional distribution of research work

Region	Research Work in number	in percentage
Meghalaya	9	12.0
Assam	21	28.0
Tripura	4	5.3
Arunachal Pradesh	3	4.0
Mizoram	2	3.0
Manipur	5	6.6
Nagaland	3	4.0
NE Area	21	28.0
General	7	9.3
Total	75	100.0

Economics as a discipline can also be divided into well-recognised fields of specializations. One may find it interesting to analyse that distribution of research work as field wise in economics (See Table 4). Largest proportion of research output is available (26.3%) in the field of economy and economic development in NE region, followed by rural development and regional planning (18.0%). 16.4 % studies are available from the field of agricultural economics. Relatively speaking,

Table 4. Distribution of research work in various fields of economies

Field	Research work in	
	Number	Percentage
Agricultural economies	12	16.4
Transport & trade economies	4	4.9
Economy & Development	20	26.3
Education/MPP	4	4.9
Land economies	10	13.1
Rural Dev.& regional planning	13	18.0
Public finance	1	1.61
Production technology	1	1.61
Industrial economics	4	4.9
Planning in NE	6	8.2
Total	75	100

lesser amount of studies representing the fields of public finance, taxation, production technology, industrial economics and trade/transport economics. This distribution is not surprising as NE economy is still characterised mainly, as agricultural and rural based economy, with less degree of industrialisation. But it is surprising that this region has vast mineral and forest resources, but the studies relating to resource economics are available only a few in number. This could be tackled as serious research gap, which has vast scope and potential for research in future. In the era of economic reforms and liberalisation at national level, the economies of North East, would also begin to modernize their economic sectors, through industrialisation, so new research fields would hopefully emerge and have relevance in future. For instance, research effects in the fields of infra-structural economics, inter-industrial economics, trade economics, would be helpful in appreciating the regional economic issues and aspirations, problem and perspectives in coming future.

Emerging Issues in the Field of Research in Economics

It would be in the fitness of things, to give a brief account of major issues in the field of research in economics in north eastern India. For this purpose, the abstract of research problems, methodologies and major findings of some of the research studies are discussed and included in this paper.

Land is one of the major factors of production, especially in the region, which is heavily dominated by primary sector and characteristically similar to an economically backward economy. In such case the distribution patterns of land has strong bearings on the socio-economic status of the people in a society. A number of economists have shown their keen interest in this field and issues related to land use pattern, land relations, land reforms and peasant movements are paid due attention in North Eastern India. In this region, in general land areas can broadly be divided into plain and hill areas. The hill areas predominantly dominated tribals inhabitant regions, where land system is governed by traditions and customs. In the plains and valleys, however, there are established laws, defining the relationship among landowners, tenants and governments properly and systematically.

A brief account of the origin of prevailing Land System in the region is available in Das (1986),¹ along with land reform legislations and progress of land reforms. The distributive pattern of land holding may be helpful in explaining the inequality in the land holding among the small medium and large scale farms. Neog and Bordoloi² found in his study that lesser inequality in small farms in the North East region excepting in Tripura and Manipur. It is also observed that the existence of inequality in semi medium and medium farms in Nagaland and Arunachal Pradesh. The Lorenz curve analysis demonstrates decrease in inequality in land distribution in Tripura and increase in Arunachal Pradesh and Meghalaya.

The process of land reform, has always been viewed as a strong instrument for socio-economic transformation of an agrarian society. Existing socio-political system and willingness to implement land reform legislations would, in fact, determine, that to what extent the objective to have more equitable rural society is achieved.

Goswami³ throws light on some of the possible reasons why land reforms in Assam bound to meet limited success. In an organised agricultural sector, once the prices of farm products become remunerative, industrial and mercantile capital is likely to flow in, in the form of capitalist farming, which would result in further set back to marginal and small farmers, which are at present earning their livelihood by practicing subsistence

farming. This problem could be tackled by more practical, fruitful and effective integrated rural development programmes for the targeted groups. But most of such programmes like IRDP and JRY etc. are so far failed to achieve their objective.

The slow progress in the front of land reforms is evident from the fact that farm productivity (of paddy) is continuously declining in Assam. Choudhary⁴ observed that unless the small plots of land are reorganised together on cooperative basis free from landlordism. The state of affair is not likely to improve significantly. Sharma⁵ discussed problems of land among the plain tribes of Assam. It is opined that insufficiency of agricultural land, share cropping, land alienation and rural indebtedness are the major problems in the economic upliftment of these people.

In a study, Saha⁶ appraise of structural changes in agricultural holdings in Tripura and found that land reform measures in the shape of land ceiling fixing and distribution of surplus land is not very effective in Tripura because, as such there is very little surplus land available for the purpose. The possible solution of this problem should be sought in intensive cultivation with adopting new and improved agricultural techniques and practices.

In most of the economies of rural areas of North Eastern India, the natural balance between agricultural production and consumption is seen disturbed due to increase in population and process of fast detribalisation. The age old land distribution patterns, which were so long suited to satisfy the local needs are no longer practical and effective to solve present day problems. Manipur could be cited as an example where in some areas, improved irrigation facilities, and adoption of new agricultural techniques/practices — selective agricultural cropping have succeeds to deal with the situation at least in short run, (Sharma).⁷

Due to fast monetisation of traditional societies the process of rapid transformation from traditional system of community ownership to the industrial ownership is emerging in Arunachal Pradesh. Accordingly Agarwal⁸ expresses his genuine fear that, with the opening up of the economy of this tribal state with rest of India, the influx of cash flow, a new class of moneyed tribals would emerge. In the absence of

alternative investment avenues they would like to purchase land, this would further increase the land holding inequalities in the state in future.

The rapid economic development depends on the rational use of technologies to produce optimum amount of goods and services. This process would in turn generate income, employment opportunities and improve standard of living of the people at large. But, quite often economic benefits of technologies are over-emphasized and its impact on society and long run effects on ecology are either underestimated or totally ignored. Keeping the seriousness of the issue in mind, technology assessment should be given due importance, which could suggest policies to minimise the adverse effects of proposed technology. For this type of assessment the needed statistical information and data have to be processed carefully before arriving at final conclusion. Mohan and Jain⁹ suggest that natural resource data management evolved by Department of Science and Technology, Government of India, supplies the required statistical information. In this study an attempt is made to describe the major mineral resources of North Eastern Hill States. Furthermore, some priority industries are identified, which would be economically viable and suitable for the region.

A comparative analysis of land use pattern and land based occupation is made available on decade basis from 1951-52 to 1977-78, by Ganguly.¹⁰ Study, also, presents future projections for the year 2001 AD on the basis of past trends. Certain measures are suggested for long term land use planning for North Eastern region. The need of active role of respective state governments, is emphasized for the purpose of overall economic development.

Age old prevailing institutions play significant role in determining the socio-economic status of the inhabitants in a region. In North-Eastern region, some of the tribal peoples subsist on a primitive mode of 'Slash and Burn' cultivation, more popularly known as shifting (Jhum) cultivation. Such methods of cultivation has been one of the significant factors responsible for soil erosion and destruction of valuable forest resources. State has been trying so wean them from the practice to settle in plains from hill tops and sloppy terrains to adopt permanent plough cultivation. The socio-economic changes of

these measures are of great interest and importance. Ganguly¹¹ presents a systematic enumeration of the economic problems of the 'Jhumias' (cultivators who practice Jhum) of Tripura. This work helps in understanding the 'modus operandi' of Jhuming, as an economic social organisation. Study also highlights the prevailing economic conditions and standard of living of Jhumias. It is opined that the process of conversion of the Jhumias into the settled cultivation should be gradual one, keeping in mind the receptivity, responsiveness and capability to absorb the new and alien system of cultivation from the point of view of Jhumias. State efforts are duly recognised in this regard.

A brief reference is appropriate to an inter-disciplinary study of shifting cultivation in North East India by Ramkrishnan.¹² It is observed that in this region agriculture is closely linked with other sub-systems of village eco-system function and with forestry. So, a holistic approach, which takes into account people's perception of ecology conservation at a human level should be encouraged. The relationship between poverty, deforestation and conservation could be reversed by rural development programmes.

Thus, issues of shifting cultivation is closely related to sustainable development and environment. Control of shifting cultivation is possible by suggesting economically viable and acceptable and practical rural development programmes and encouragement of agro-based activities for an alternative/additional source of livelihood.

It has been recognised for a long time that environmental disruption is a complex issue, which is interactive in nature and leads to environmental degradation. North Eastern part of India facing a problem of deforestation, Srivastav,¹³ estimates forest areas lost for various purposes during 1951-52 to 1975-76 in seven North Eastern States. Assam has highest area lost proportionately, followed by Tripura, Arunachal Pradesh and Nagaland. In Assam large amount of forest area lost due to housing and agricultural purposes to satisfy private and public needs. Need is felt to introduce social indicators, environment assessment programmes auditing in development planning system.

Economic planning is a systematic and coordinated effort on the part of political authority to improve the performance of the economy. A regional economic planning needs to set up targets for various sectors to be achieved in given time frame. The success of planning very much depends upon critical assessment, constant monitoring of the plan performance on the basis of feasibility consistency and optimality studies related to performance of planning in North East have generated in wide spread interest and concern. It is pertinent to consider first the efforts of Dutta,¹⁴ who felt that in the absence of effective local level planning machinery the successive implementation of planning is not possible in Assam. It was further, noticed that lack of commitment of the departmental executives and the un-availability of senior officers of planning departments at sub divisional level are added dimensions for the limited success of micro/local level planning.

To resolve some of these issues, it is necessary to identify the most backward regions in any region and priority may be given to such regions, while distributing the development grants. One such exemplary efforts are made by Deka,¹⁵ where thirty one community development blocks of Meghalaya were put to ranking orders, on the basis of predefined indicators for relative economic backwardness. Further, it is emphasized, that more effective planning is only possible through joint efforts of politicians, planners and executives.

Reference has already been made, to one of the common criticism, about the planning in North East India is lack of local level participation and decentralization. Local level government machinery are not normally involved. In this context Dasgupta,¹⁶ evaluates the role of gram-panchayats in planning in Tripura since 1971, where these panchayats (Gaon Sabha) are entrusted with a key role in rural development schemes implementation. Study concludes that rapid economic development needs a strong and effective planning machinery at all levels, special reference has been made to revitalise community development blocks. Dutta¹⁷ suggests that the planning commission should initiate action to set up a state development council to coordinate the different sub-division planning cells. All the secretaries of sub-divisional level cells should be the members of council. This council should: (i)

under take awful-scale survey of resources in various sub-divisions, (ii) take up a land survey with regard to its utilization capabilities, (iii) arrange marketing surplus product in the district level and remove transport bottlenecks, (iv) ensure support and utilisation of local intellectuals and various technical persons available locally, (v) building up entrepreneurship at the local level.

To build up such structure need was felt for a regional planning body for NE region to suggest reforms in techniques of planning, planning strategy best suited for the region. In order to serve this propose North-Eastern Council (NEC) was inaugurated on 7th November 1972. Das¹⁸ discusses the objectives and functioning of NEC. It was expected that it would emerge as a successful consultancy and integrating planning authority. Critical evaluation of the role of NEC may be assessed on the following grounds: (i) assessment of resource potentials, surveys and up to date data base (ii) development of infrastructure (ii) development of agriculture and allied activities (iv) manpower development (v) industrialisation. Agarwal¹⁹ accounts for various developmental activities of NEC and highlighted its limitations since its inception.

Importance of inter-sectoral and inter-regional linkages are highly appreciated in formulating the plan priorities. Input-output techniques are used quite extensively for this purpose at national and regional levels. Barua^{20,21} has made an attempt to apply an aggregated input-output coefficient matrix for Assam for the year 1977 (based on prices of 1969), and identify the key sectors for the economy of Assam. It was found that commercial crop sector has the largest single total linkages followed by agro-based industries. This suggests, that in the process of economic development, these sectors will deserve high priority. In this regard role of NEC becomes very prominent, which can play a role of co-ordinator in bringing out a common strategy of development for NEC (Barua).²²

We turn now to studies, which raise the issues of agriculture in NE region. This sector not only satisfy the basic need of food, but also a provider of livelihood for large size of population. Goswami and Sakia²³ takes issues related to paddy growers of Assam. Strong association is established between total crop output and marketed surplus. But the tribal inhabitant

areas face altogether a different type of problems of adoptability and responsiveness towards development activities undertaken by various agencies (Goswami and Saikia).²⁴ According to Goswami and Gogoi²⁵ the market prices of farm products are major determination of the cultivation and disposal of crops like paddy and Jute. This is revealed in a case study Nowgaon district of Assam.

Various policy measures are suggested by agriculture scientists and economists to improve the agricultural productivity, factor productivity so that agricultural sector could be transformed from stage of subsistence level to a profit making economic sector. One of such approach is intensive area development approach. A village level plan is prepared by Saikia.²⁶ The socio-economic organisations and systems which are prevailing for a long time in a society, affects the behavioural pattern of people. This behavior is reflected in the forms of habit, tradition, work culture, customs and other human interactions, such factors are known as institutional factors. Gohain²⁷ noticed that such factors are more intense and strong in a close society in tribal dominated areas. This study highlights and identifies those institutional factors which work as a deterrent for economic development.

In a subsistence economy, the agricultural sector, hardly produces any surplus, similarly, agricultural income is also determined by low productivity and almost elastic supply of labour. Phukan and Burgohain²⁸ determined the extent of surplus income in rural areas of Assam. Two different agricultural practices, prevailing in most of NE region are shifting cultivation, mainly on hill tops and terrace cultivation on hill slope and plains. Borah²⁹ asserts in evolving the crop patterns under these two types of cultivations in Garo Hills District of Meghalaya. Khound^{30,31,32} discusses the various aspects related to agricultural sector in developing economies. For example, what is the role of agriculture, what should be the strategy for the development of agricultural sector? How the income distribution pattern changes and what is their significance in a society which is in the process of transition? Can we quantify the magnitude and nature of underemployment in agricultural sector?

A comprehensive picture of NE economy is very much needed to understand its economic problems. Agarwal¹⁹ tries to fill this gap and provides a voluminous account of the economy of NE India. It covers natural and human resources and infrastructural development and growth patterns of state domestic products and employment. The role of North Eastern Council is also examined in the context of regional planning. Development aspects related to agriculture and industries are also highlighted. Accordingly, the major economic problems of the region are: inadequate infrastructure, indigenous entrepreneurship, public and private enterprises, dominated by traditional agriculture, non availability of skilled manpower, institutional finance, hostile attitudes of rebels, influx of migrants. Besides, these, difficult terrain, narrow link with the rest of the country further hamper the process of economic growth. The possible and practical remedial measures are also suggested.

In another study at state level about Nagaland, Saleh³³ narrated the major change in the state economy since 1964, structural changes are derived on the basis of inter sectoral changes. It is observed that significant changes are taking place in the economy, which was initially a traditional economy (at the time of statehood in 1963) has slowly moved into stage of nearing 'precondition for take-off'. Further, certain distinctive features are present in the economy of Nagaland like favourable land-men ratio, very low land less peasantry, people's strong faith in dignity of labour, social, spiritual values. These positive indicators may help to lead the economy of state to the path of rapid economic development.

State level study in case of Assam goes date back to 1962, when Goswami³⁴ included the various aspects of state economy in his work and threw light on the level, magnitude and direction of the economic development of Assam.

More recently, Barua³⁵ studies industries, infra-structure and state level planning efforts in Assam. It is found that drastic changes are taking place in household demands, thereby, leading to decline of traditional and handloom industries of Assam. Small scale industries find difficulty in marketing their products at sustainable profit rates. Industrial Development Bank of India (IDBI) and North Eastern Council

(NEC) are launching programmes of entrepreneur development but should also give emphasis on follow-up plans and post training situations. Besides this study recommends for thrust area for rapid economic development in fields of infrastructure, finance, marketing and industries.

Discussing the development strategy for the north eastern region, Pathak³⁶ is of the view that, strategy has to be based on efficient utilisation of its vast untapped natural resources and favoured symbiotic relation between manpower and nature.

To examine the role of industry in economic development of NE India Neog³⁷ estimated the interdependence of the regional and national economy. To accelerate the growth the resource based model of industrialisation is suggested. To tackle the problems of market constraint development of ancillaries and auxiliaries is strategically viable, provided break even point is within 50 percent. Baishya³⁸ presents a case study of small and cottage industries in Kamrup, Barpeta and Nalbari districts of Assam. A diagnostic study based on primary survey of the twenty six small and cottage industries in five sample villages, having high concentration of village industries, appraising critically, analysis highlights the problems of modernisation of village industries and suggests the remedial measures.

Markets are the centres of exchanges where buyers and sellers meet for economic transaction. The markets in rural areas, serves the purpose of selling agricultural produce and enable the farming population to make economic gains. In actual practice, most of the rural markets are dominated by the traders, 'middlemen', who siphoned-off much more from farm producers also, the general view of rural economics of North Eastern India.

There is an urgent need to realise the importance of agricultural market in NE region according to Dasgupta.³⁹ Much of the problems of rural market are due to communication gap and lack of information, which can be tackled by introducing market intelligence service. With the development of infrastructural facilities and mass media communications the most of the tribal economies are, already passing through a transition state. Nair⁴⁰ captured the relevant issues of the economy of the state of Meghalaya. In an inter-temporal

analysis, based on extensive field survey, an attempt is made to ascertain the major changes in land tenure system, pattern of its distribution and use. Efforts are made, Burbanroy,⁴¹ date back to 1961 to prepare the socio-economic and demographic profiles of hill areas of NE India on the basis of data provided by census of India. But, this analysis is at very introductory level and prepare the foundation for more detailed analysis. One such effort is available with Sri Prakash,⁴² where attempts are made to evaluate the level of economic development of the region on the basis of changes in state domestic products and per capita income. Major findings are: that growth of output has just sufficed to maintain the regional economy on its low income equilibrium levels. It implies, that the regional economies are still trapped in low income equilibrium vicious circle. The most of the developmental efforts are dissipated by increasing rate of growth of population and rise in prices. In a large number of economic sectors production functions are operating at diminishing returns to scale, which needed induction of new technology of production and diversification of product mix more favourable to prevailing local conditions.

Development of human resources, is considered one of the primary condition for rapid economic growth. For this purpose, it is required to have a detailed assessment of quality and quantity of human resources available and could be mobilise with the help of appropriate efforts. Singh,⁴³ on the basis of 1981 census developed a composite index of density and growth of population, percentage of non-tribal population, literacy, urbanisation, proportion of people living in large villages and non agricultural workers. Further, the grouping of the composite index in to quartiles bring-out four levels of human resources. It is found that plain districts have high to very high level of human resources, while hill districts have low & very low level of human resources. The reason as a whole has a low level of urbanisation. Similarly, analysing the composite index of amenities and human resources, it is observed that two-third of the population of Assam Valley, three-tenth of Cachar, one-fourth of Manipur, four-fifth of Meghalaya, two-third of Nagaland, three-fourth of Tripura, three-fifth of Arunachal Pradesh and four-fifth of Mizoram have low and very low of infrastructure and social amenities.

Rapid economic development needs a strong and effective planning machinery at all levels. Special reference has been made to revitalise community development blocks.

Lawma⁴⁴ made an attempt to explain the functioning of labour markets in general and the markets for the educational manpower, particularly in NE region. With the help of levels and types of education, occupation and various sectors of the economy, the patterns between inter and intra regional migrants are also established.

Transport sector is a major component of economic infrastructure. This has direct, indirect and induced effect over the economic development of a region. Medhi⁴⁵ analyses the emergence of railway sector and its impact on the economic development of Assam. It is found that the direct impact on the economy was through reduced cost of transportation, while indirect impact is in the form of forward and backward linkages. Expansion of market (for tea, oil, timber, jute etc.) and growth of some ancillary and auxiliary industries (such as saw mills, brick works, workshops and railway alignment activities) would generate employment and income generation opportunities, in short as well as in long run. Taking full advantage of railway net work, can increase Assam's production potential substantially.

Bhuyan⁴⁶ touches the major issues of fiscal economics of Assam. Besides the budgets of the state government, the analysis is also available for the growth of sectoral revenues and expenditures along with major trends and fluctuations. The changes in the pattern of shared taxes and central grants of first seven finance commission are the part of the study. On taxation in Assam, Dass⁴⁷ found that the state has high dependency on federal grants and low and declining share of tax devolution. Further, it has relatively small share of own tax and non-tax revenue. the inter-sectoral, inter-expenditure class and intra-sectoral equity of tax burden is also estimated. It is concluded that there is a considerable scope for raising tax revenue, if tax reform measures are implemented to the tax potential. Mishra & Roy⁴⁸ undertakes a sensitive issue of rural indebtedness in tribal society and revealed that small and medium size farmers are more in debt than big and marginal farmers. The per capita productive usage of loan and educational levels of

the farmers are the major factors to explain the rural indebtedness. As a policy measure, it is suggested that institutional provision of loan at easier term may help greatly in rescuing the rural people and peasantry from the clutches of local money lenders.

Various poverty alleviation programmes are running in North Eastern states, but most of the time governmental agencies depend upon the state level aggregated statistics and ignores the inter-district/interblock/intervillage deviations in poverty incidence levels. Srivastav⁴⁹ critically evaluates the operation of IRDP in state Meghalaya. Study is based on extensive field survey and throws light on post-implementation effects on rural beneficiaries of this scheme. Lalwani and Thomas⁵⁰ in an empirical study based upon the village levels estimate the incidence of poverty in Meghalaya. It is opined that disaggregated poverty estimates at block and village level would give a better understanding and could be used as an instrument for more effective implementation of poverty alleviation programmes.

With the implementation of rural development programme a systematic and regular monitoring and investigation by an independent agency would be helpful in evaluating the degree of success of such programmes according to Lalwani and Thomas.⁵¹ Study reveals that the blocks which have higher incidence of unemployment and poverty have received lesser coverage of JRY in Meghalaya. Under this scheme as an average worker got employment barely of three days in a month at the wage rate of Rs. 22 per day, which is much lower than prevailing market wage rate. Such findings pose serious debates on the implementation of such programmes.

National Rural Employment Programme is another scheme active to alleviate the poverty in the state of Meghalaya. Emphasis of this scheme is laid down to maximize short term and long term employment opportunities. Thomas and Lalwani⁵² found that the percentage coverages of villages in Meghalaya is lowest in country barring Arunachal Pradesh in year 1987-88. Inter-temporal and inter-state comparisons are available in Lalwani,⁵³ where land productivity is estimated on the basis of yield per hectare for cereals, crop-wise for NE states. Strong association is found in declining in rural per capita income and fall in net sown area. Further, the high proportion of

cultivators in states total work force could be explained by low economic growth in this region to some extent.

Further Research: Research is a continuous process, where by using of scientific techniques, disaggregated data, appropriate statistical techniques there is always a scope of improvement. Nevertheless, some of the areas may be suggested for proper attention in future:

- (i) Female participation and their role in economic development could be very relevant and crucial. Interstate and interdistrict differences in female participation rates according to tribe/caste status. Relationship between household income and female participation, may be ascertained.
- (ii) Problem of chronic unemployment among educated rural/urban youths, their status and interaction with other economic/non economic sectors.
- (iii) Determinants of agricultural performance and possible role of new technology in this sector.
- (iv) Identify and quantify; the tangible and intangible benefits of formal/non-formal education.
- (v) Impact of education on agricultural productivity; whether and in what manner education is one of the significant determinants in the adoption of improved technology and practice, is an important question.
- (vi) Studies emphasise on theoretical aspects and supporting empirical investigation of public policies like health, communication, transport and power.
- (vii) Regional differences of pricing of essential commodities at rural and urban area, the price determination mechanism and its adjustment in the context of prevailing local conditions.

REFERENCES

1. Das, J.N., 1996. Land, land relations and land reforms in the plain and valleys of NE India, in *Land reforms and peasant movement: A study of NE India*, ed. Goswami, A., Omson Publication, Guwahati.
2. Neog, A.N. and Bordoloi, G., 1996 *Distributive pattern of land holding & planned agricultural development in NE region of India in Land reforms and peasant movement: A study of NE India*, ed. Goswami, A., Omson Publication, Guwahati.

3. Goswami, A., 1996. Land reforms in Assam : A critical review, in land reforms and peasant movement: A study of NE India, ed. Goswami, A., Omson Publication, Guwahati.
4. Choudhury R.K., 1996. Agrarian land reforms measures in Assam : How close are they to allocational and distributional optima in land reforms and peasant movement: A study of NE India, ed. Goswami, A., Omson Publication, Guwahati.
5. Sharma Thakur, G.C., 1996. Problems of land among the plain tribes of Assam in land reforms and peasant movement: A study of NE India, ed. Goswami, A., Omson Publication, Guwahati.
6. Saha, A., 1996. Structural changes in the agriculture in Tripura: some implications in land reforms and peasant movement: A study of NE India, ed. Goswami, A., Omson Publication, Guwahati, 1996.
7. Sharma, D.S., 1996. Land use pattern in Manipur: Intensification called for in land reforms and peasant movement: A study of NE India, ed. Goswami, A., Omson Publication, Guwahati.
8. Agarwal, A.K., 1996. Changing picture of agrarian relation in Arunachal Pradesh in land reforms and peasant movement: A study of NE India, ed. Goswami, A., Omson Publication, Guwahati.
9. Mohan, S. & Jain A., 1996. Technology for development: The case of the north eastern hill states, in land reforms and peasant movement : A study of NE India, ed. Goswami, A., Omson Publication, Guwahati.
10. Ganguly, J.B., Comparative analysis of land use and land based occupation, in Land reforms and peasant movement: A study of NE India, ed. Goswami, A., Omson Publication, Guwahati.
11. Ganguly, J.B., 1969. Economic problems of the Jhumias of Tripura: A socio-economic study of the system of shifting cultivation in transition, Book Land Pvt. Ltd., Calcutta.
12. Ramkrishnan, P.S., 1992. Shifting agriculture and sustainable development: An inter-disciplinary study from North East India, Man and Biosphere series, Vol. 10, The Parthenon Publishing group, UNESCO, Paris.
13. Srivastav, N., 1990. The Problems, causes of environmental disruption & its political economy, Rajasthan Economic Journal, Vol. 14, No. 1.
14. Dutta K.C., 1985. Need for local level planning for economic development: A case study of Sib-Sagar sub-division, in land reforms and peasant movement: A study of NE India, ed. Goswami, A., Omson Publication, Guwahati, 1996; in planning in North East India ed. K. Alam, Omson Publication, Gauhati.
15. Deka, P., 1996. Areas of need in Meghalaya: A spatial approach to micro level planning in land reforms and peasant movement: A study of NE India, ed. Goswami, A., Omson Publication, Guwahati.
16. Dasgupta, M., 1996. Panchayat Level Planning in Tripura in Land reforms and peasant movement: A study of NE India, ed. Goswami, A., Omson Publication, Guwahati,
17. Singh, J.P., 1982. Human Resources of North East India, Inter India Publications, New Delhi.
- 17(a). Dutta K.C., F.No. 14
18. Das, S.K. Regional Planning in NE India: The Role of North Eastern Council.

19. Agarwal, A.K., 1997. *Economic Problems and Planning in NE India*, Sterling Publishers, New Delhi.
20. Barua, S., 1997. Input output Co-efficient matrix for Assam: An approximation, *NE Economic Review*, Vol. 1 No. 3.
21. Barua, S., 1997. The identification of Key sectors in the economy of Assam, *NE Economic Review*, Vol. 1, No. 3.
22. Barua, S., Certain Observations on the Strategy of development of the NE Region.
23. Goswami, P.C., and Saikia, P.D., 1968. Disposal of Paddy by surplus Growers: A Study in Assam, *Economics and Political Weekly*, Vol. III., No. 24.
24. Goswami, P.C., and Saikia, P.D., 1970. Problems of Agricultural Development in Tribal areas: *Indian Journal of Agricultural Economics*, Vol. XXV, No. 3.
25. Goswami, P.C., and Saikia, P.D., and Gogoi, J., 1965. Effects of prices on cultivation and Disposal of Paddy and Jute: A case study in Nowgaon District of Assam, *Indian Journal of Agricultural Economics*, Vol. XXVI, No. 4.
26. Saikia, P.D., 1965. Intensive Areas Development Approach: A village level plan for agricultural development, *Indian Journal of Agricultural Economics*, Vol. XXI, No. 4, Oct-Dec.
27. Gohain, D., 1970. Institutional Factors as Deterrant for Economic Development in Tribal Areas, *Indian Journal of Agricultural Economics* Vol. XXV.
28. Phukan, U., and Borgohain, D.K., 1972. The study on surplus Income in Rural Areas: A Study in Assam, *Indian Journal of Agricultural Economics*, Vol. XVIII.
29. Borah, D., 1979. Pattern of Crop Production under shifting and terrace cultivation: A Case Study in Garo Hills, *Indian Journal of Agricultural Economics*, Vol. XXXIII, No. 4.
30. Khound H.P., 1967. Role of agriculture and strategy for agricultural development in over populated countries. *Indian Journal of agricultural economics*, Vol. XXIII.
31. Khound H.P., 1970. Changes in Income Distribution pattern and their significance in a society in transition, *Indian Journal of Agricultural economics* *Indian Journal of agricultural economics*.
32. Khound H.P., 1974. Towards Measuring Under Employment in agriculture. *Indian Journal of Agricultural Economics*.
33. Saleh, S.I., *Nagaland economy in transition since 1964* Omsons Publications, Guwahati.
34. Goswami, P.C., 1962. *The Economic Development of Assam*, Guwahati.
35. Barua, P.C., 1992. *Planning and Development of Assam*, Mittal Publications, New Delhi.
36. Pathak, C.R., *Development Strategy in NE Region: Some suggestions in Profile of a development strategy for India's north east* ed. Thakur, P., Span Publication Pvt. Ltd., Calcutta.
37. Neog, A.K., *Role of industry in economic development of NE India: Projections for 2000 A.D.* F. No. 36.
38. Baishya, P., 1989. *Small and Cottage industries: A Case Study in Assam*, Manas Publications, Delhi.

39. Dasgupta, 1984. Importance of agricultural market intelligence services in NE region, in marketing in NE India: Problems of Rural Market ed. Ganguly, J.B., Omsons Publications, Guwahati.
40. Nair, M.K.S., 1986. Tribal economy in transition : A study of Meghalaya, Inter India Publications, Delhi.
41. Burman Roy, B.K., 1961. Demographic and Socio-economic Profiles of Hill Areas of NE India, Census of India.
42. Sri Prakash, 1987. Development of the economy of NE India: Current status, in Emerging patterns of NE Economy, ed., Mahajan, V.S., Deep and Deep Publications, Delhi.
43. Singh, J.P., 1982. Human Resources of NE India, Inter India Publications, New Delhi.
44. Lawma, T., 1990. Market imperfections and Manpower Planning Commonwealth Publishers, New Delhi.
45. Medhi, S.B., 1978. Transport system and economic development in Assam, Publication Board, Assam.
46. Bhuyan, P.K., 1984. The regional fiscal economics of Assam, Chugh Publications, Allahabad.
47. Das, S.K., 1987. Dynamics of taxation in a Developing Economy.
48. Mishra, S.K. and Roy, D., 1985. Some observations on rural indebtedness: A Case study of four tribal villages of North Lakhimpur sub-division, Assam, Rajasthan Economic Journal, 9(2).
49. Srivastav, N., 1990. IRDP in rural Meghalaya: a critical evaluation, in Hill area developments, issues and perspective, ed. Rai, et-al. Ravat Publications, Jaipur.
50. Lalwani, M., and Thomas, E.D., 1997. Incidence of Poverty in Meghalaya villages, Man and Development.
51. Lalwani, M., and Thomas, E.D., (forthcoming) 1998. Incidence of Poverty among beneficiary house holds and employment generation under JRY: A Case Study of Meghalaya, Economic and Political Weekly.
52. Thomas, E.D., and Lalwani, M.L., April-June. 1997. Meghalaya's experience with NREP, Manpower.
53. Lalwani, M.L., April-June, 1992. Land Productivity in NE India, Social Action, Vol. 42, No. 2.