

**EVALUATION OF AGRICULTURAL POLICIES
OF ASSAM : A POLITICO-GEOGRAPHICAL BASIS FOR
ECONOMIC LIBERALISATION**

KRISHNA SINHA



THESIS
**SUBMITTED IN FULFILLMENT OF REQUIREMENT FOR
THE DEGREE OF
DOCTOR OF PHILOSOPHY**

TO
THE DEPARTMENT OF GEOGRAPHY
SCHOOL OF HUMAN & ENVIRONMENTAL SCIENCES
NORTH EASTERN HILL UNIVERSITY
SHILLONG
2001

Chapter I

Introduction

SECTION I.

1.1. The concept of liberalisation

Global transformation marks the world economy and trade in the post liberalisation period. The regime of liberalisation and globalisation defined by the World Trade Organisation (WTO) compels member nations to open up national economy and integrate it to the larger global economy and trade. The WTO defines liberalisation as – the recognition of rights of free economic activities and economic exchanges. Inherent to the concept are relaxation of stringent forms of national regulation in production, trade, market as also participation, and develop structures facilitating the global process. It further reduces the direct role of the national governments in production activities.¹ It also includes creation of infrastructure and conducive environment to facilitate globalisation of the economy.

Inherent to the concept of liberalisation is the increased role of foreign exchange (position) in the allocation of resources, and removal of restrictions on the movement of goods and services across national boundaries, thereby seeking to ensure a “freer and fairer” trade.² Not only does liberalisation opens

¹ McMichael, P. and Myhre, D. (1991): ‘Global Regulation and Nation-State: Agro food Restructuring and the New Politics of Capital’ in *Capital and Classes*, pp.83-84.

² The concept of liberalization – globalization took shape in 1947, in the wake of Bretton Woods Conference when 3 international agencies were set up, of which GATT was one. GATT was to ensure “a freer and fairer trade” through reduction of tariff and removal of trade barriers. But for long it remained a loose framework of rules which were violated in practice by member countries- most often by U.S.A.

up national markets for extensive private sector participation but also opens up the possibilities for acquiring better technologies and global sourcing. The impact can be perceived ideologically. The exchange of commodities, diffusion of technology which follows, and the increase in domestic savings as a consequence – represents the ideology of “benign neglect” emphasising that more the openness, more the benefit. Transmitting such benefits to the weak and poor, the “benign intent.” On the other extreme is the ideology of “malign neglect”. It holds that in the presence of sharp imbalance in the international economic power equation, such processes will contribute to truncate all avenues of growth of the weaker ones and relegate them to a secondary and inferior position. The ideology of “malign intent” considers such processes as designs of suppressing the poor.³

To introduce liberalisation in the agricultural sector, four conditions were identified by WTO. These are –

- Reduction in domestic support,
- Market access,
- Trade related intellectual properties right (patent rights in agriculture)
- Sanitary and phyto-sanitary provisions.⁴

Gupta, K R (Ed.) (1994): *GATT Accord: Result of Uruguay Round of Multitrade Trade Negotiations*. Atlanta Publishers & Distributors, New Delhi, pp. 2-5.

³ Bhattacharya, B. (1994): “Structural Adjustment in Trade Policies-A Theoretical Perspective in the Changing International Scenario” in Das, D.K. (ed.) *Structural Adjustment in the Indian Economy*, N. Delhi, p.43.

⁴ Inclusion of agriculture within the preview of World Trade Organization (WTO) was as a result of trade policies of the past, which had led to economic distortions and rising agricultural prices. A consensus in the need for reforms in agricultural trade policies finally led to the Punta del Este Ministerial declaration of the long-term objectives of Accord on Agriculture, which was – “to establish a fair and market oriented agricultural trading system and that a reform process should be initiated.” Further, that “the objective is to provide substantial progressive reduction in agricultural support and protection sustained over an agreed period of time, resulting in correcting and preventing restrictions and distortions in the World agricultural markets”. See Gupta, K R (ed.), op cited., pp. 61-63.

Thus applied to agricultural sector, the concept of liberalisation signifies relaxation of national regulation in production, trade and marketing of agricultural products and opening up trade in this sector to international players. It also signifies privatisation - of government agricultural institutions involved in research and technology development and dissemination, in the development of agricultural infrastructure facilities, and of foreign participation in these activities.

The objectives are therefore to re-regulate agricultural trade within the dynamics of WTO by dismantling national forms of agricultural regulation and creating a "level playing field" in agricultural trade, guarantee universal trading rights.⁵

There are two dimensions of such regulation – formal and substantive. While the formal dimensions of agricultural regulation seeks to remove the trade barriers and reduction in subsidies in agricultural production and trade, the substantive dimensions of global regulation in agriculture compels member nations to adopt Structural Adjustment Program.⁶

1.2. Liberalisation in Indian context

In the Indian context, this liberalisation signifies firstly- reduction of the support that the public sector provides to agriculture. This includes – (a)

⁵ McMichal, P. (1993): "World Food System: Restructuring under a GATT Regime" in *Political Geography*, Vol. 12, No. 3, May 1993. Pp 210-11.

⁶ Ulfkes, Frances M. (1993): "The Globalization of Agriculture", *Political Geography*, Vol. 12, No. 3, May 1993, pp. 196-197.

reduction in price support which is product specific, (b) input subsidisation which is non-product specific. Till the last decade the country was a state-subsidising welfare state, whose agricultural policies has been essentially subsidy oriented. Policies were designed to improve food grains production and limit our dependency. It has also been the long cherished objective to alleviate poverty and unemployment through equitable distribution of resources. With this end in mind the centralised units of management functioned to provide inputs and other requisites of production including credit; central regulation and control over production, allocation and distribution was considered necessary in the interest of optimum utilisation of resources. Secondly, with liberalisation it has to privatise its research and technology institutions in agriculture, its seed farms, and allows foreign players to enter this sector. Thirdly, facilitate foreign participation in input supply and in agriculture infrastructure development. All these, it is feared, will erode the institutions of national economies and political cohesion as well as erosion of the Welfare State.

India's economy opened to global capital since 1980, and underwent two phases of globalisation. The first phase saw the minimisation of state intervention in certain sectors of the economy so that market forces began to play a greater role.⁷ The second phase which started in the 1991- essentially a structural adjustment program (SAP)- also greatly affected the agricultural sector. This will have far reaching consequences for the Indian peasantry.

⁷ In Indian agriculture, for eg. foreign seeds companies like Cargill Seeds India Private Ltd., Sandoz, Hoechst, etc. already made their entry quite early.

In compliance to WTO, the ground has been prepared for corporate sector to enter the agricultural production in a big way. Direct Foreign Investment (FDI) is being inticed into agro- processing, land ceiling is being relaxed in various states to facilitate the large farmers to reap the benefits. As a result of import liberalisation and the mandatory conditions of minimum market access, the country, despite self-sufficiency in foodgrains and maintaining a buffer stock now has to import a certain percentage (3%) of the domestic consumption. This is the paradox of the country's agricultural policy whose aim had been to attain and maintain self- sufficiency.

Implications of liberalisation: two lines of argument have been pursued. One line of argument is that of growth of agricultural sector and of agricultural exports as a consequence of liberalisation. It is based on the assumption that reduced tariff barriers and non - tariff barriers to trade of WTO regime offers opportunities to Southern/developing nations to increase their export potentials. Commercialisation of agriculture geared to agro-industrial product, value addition to the products and targeting new products for export are considered ways by which tropical nations like India can capitalise on the situation.

The other line of argument is that competition and reduction of government support will have grave consequences for the farmers. The argument against a strategy for industry-based agriculture is that the adoption of 'new agriculture' -conversion of food system into cash cropping systems mortgage the country's food security. Besides, the country finds difficulty to compete in the international market for two reasons- (a) the high level of subsidy in agriculture provided in the developed countries, (b) the sheer lack of organisation,

infrastructure and capital investment in agriculture.⁸ Protectionist barriers in developed countries have till date has been affecting India's export. It is inevitable that the barriers will become even subtler. The use of social clauses like child labour and human rights, sanitary and phyto-sanitary standards as restrictive trade barriers have affected Indian exports.

The question of subsidy reduction has grave consequences for the Indian peasants. They have sustained largely on the subsidy/ support program of the government. The objective of "reduction in agricultural support and protection ..." of the WTO necessitates reduction of total aggregate measurement of support (AMS).⁹ However if AMS is below 10% of the total value of production for developing countries such reduction is not required.

In India two types of subsidies are provided- product specific and non-product specific. The product specific subsidies are normally provided in the form of minimum support price (MSP) to specific crops and calculated with reference to international price for the commodity.¹⁰ The non-product specific subsidies are on fertilisers, irrigation, electricity, credit and seeds.

Though well within means, subsidies formed a substantial portion of the non-plan expenditure. The government has been under pressure to cut down or

⁸ Subsidies amounts to about 73% in Japan, nearly 400% in European countries and 26% in U.S.A. in 1994. *Mainstream*, Vol. xxxvii, No. 41, Oct. 2, 1999.

⁹ AMS is the sum of all domestic support in favour of agricultural products to the producers. It is to be calculated separately for each basic products taking into account all product specific support.

¹⁰ By such calculations Indian agriculture is taxed rather than subsidized as the market support for 17 out of the 20 crops for which MSP are fixed has been negative, i.e. only 12% of the total value of eligible annual production. Under WTO conditions 20% is permissible.

target them appropriately so as not to run down the resources meant for growth and development objectives. As part of the reforms agenda, food subsidies was cut down at 0.5% of GDP; central fertiliser subsidy which was zero till 1975-76 and had risen to 1% in 1989-90 has since then fallen to 0.6% by 1995-96.¹¹ Emerging out of the subsidy trap will expose the farmers to the uncertainty of market forces.

One of the most controversial issue, and a subject of much debate within and between countries is the Intellectual Property Right (IPR). It is feared that in future access to superior inputs like seeds will become difficult with the abolition of plant breeders' right and the right of farmers to retain patent seeds, every growing season patented seeds will have to be procured. Irrelevant will be the country's plant breeding programme to which much of the credit for attainment of self-sufficiency goes. Till date production and distribution of foundation & certified seeds in the country have been done mostly by government institutions and agencies and they were never patented. There is no system of protection of plant varieties in the country whereas the WTO text requires a sui generis system of protection of plant varieties. This damages the bargaining power of domestic firm and research & development laboratories.

The country, which is one of the 12 richest countries in the world in terms of bio-diversity having about 45000 plant varieties, is a potential goldmine for patent hunters. A system whereby the country can patent her entire bio-diversity like Australia has done will ensure the protection of the varieties as

The non-product specific subsidies for the country also works out to be lower than the WTO norms- the aggregate is below 6% of the value of our total agricultural product.

¹¹ Suryakumar, P.V.S. 'Subsidies: Some pertinent Issues' in *Yojana*, Vol. 41, No. 9, Sept. 1997.

also the breeders/farmers rights. A hindrance to this is the slow administrative-legislative machinery required to bring the required changes.

And so far as the distributive justice and social cost of structural adjustment process are concerned there is a general discontent that feasibility of the measures would adversely affect the great mass of cultivators who would be most severely affected. Free trade is not necessarily the best policy if domestic economy is characterised by imperfect market.

1.3. Liberalisation in the context of Assam

The process of globalisation is not altogether new to the state. 100- 150 years back the British had opened the state economy. The state economy opened to the processes of globalisation with the discovery of tea and commencement of plantation agriculture. Ever-expanding tea production and exports triggered a variety of investments with backward and forward linkages. The discovery of coal and oil in Upper Assam resulted in development of mining and forestry. Coal was utilised to fuel steam vessels plying on the Brahmaputra, and the railways. These brought heavy machinery needed in the tea industry, and in their return journey took back tea for export. Thus the development of each sector provided the stimulus to the other¹². Trading posts and markets were established. The region was a pioneer, an investment- leader, a moderniser. It attracted capital and entrepreneurs. The region was then a part of the main, an

¹² Verghese, B.G. (1996): "Development and Change" in *India's Northeast Resurgent: Ethnicity, Insurgency, Governance, Development*, New Delhi, p.336.

open economy well linked to markets at home and abroad by rivers and rail via Calcutta and Chittagong.

Independence and the division of the country on the basis of religion changed much of this. Transport and trade links were broken causing major setback to the economy. After independence, as an integral part of the state- subsidising welfare country, it adopted agricultural policies, which were essentially subsidy oriented. Agricultural policies till the mid 1990s were aimed, broadly speaking, towards land reforms, agricultural research and technology development, agricultural education and extension & input supply. These were formulated and implemented by phases. Policies were designed to improve food grains production. With this end in mind state units of management functioned to provide inputs and other requisites of production including credit. What was characteristic was the monopoly of the public sector in agricultural research and technology development, in agricultural extension, input supply, etc. Government assistance, control and regulation of production and distribution was characteristic of the development strategies in agriculture. From the 1990s, or rather more accurately, from mid nineties the policies aimed at reducing the monopoly of the public sector. Thus steps to privatise public sector facilities have already been initiated.

The anticipated impact of globalising to the present economy of the state is rather contradictory. While it is felt that the integration of the state economy to the economy at large will generate growth impulses within the state economy, apprehensions are expressed too that the removal of protection will result in greater disparity and poverty than the existing levels.

Reduction of government support has grave consequences for the peasants who have sustained largely on the government subsidy/support program. Subsidies - product specific and non-product specific were an integral part of the government's planned support programs. Product specific subsidies, which include support price to specified crops, had, within the state, been limited to support price for jute and tea only. There has been no support price for any other crop within the state. On the other hand, non-product specific subsidies provided are to a considerable extent. These subsidies are on fertilisers, irrigation, electricity, credit and seeds and form a substantial portion of the non- plan expenditure. Subsidy rates had ranged variously over the different years and plan periods, being around 50% in case of fertilisers (particularly to Scheduled Caste, Scheduled Tribes and small and marginal farmers) to even 100% for electricity consumption in agriculture. Subsidy on seeds had fluctuated from year to year, while 100% subsidy was provided to the farmers affected by floods. Subsidies have been provided on pesticides, and on hire/purchase of farm machines. It is a different matter altogether that such incentives failed to motivate the farmers of Assam to adopt better inputs or agronomic practices due to problems and constraints faced. The government, both union and state, are now under pressure to cut down or target these subsidies appropriately so as not to run down the resources meant for growth and development objectives. However, emerging out of the subsidy trap will expose the farmers to the uncertainty of market forces.

Further marg

On the export front, the reduction of tariff barriers and non- -- tariff barriers have significance for the state commercial agricultural sector. The high demand for agro- industrial and high value food substitute originating from tropical countries have significance for the state which has a varied agro-

climatic conditions suitable for cultivation and a variety of tropical horticultural products. Much of horticultural products form bulk of North's (developed countries) agricultural imports. Therefor commercialisation of agriculture geared to agro-industrial product, value addition to the products and targeting new products for export are considered ways by which the state can capitalise on the situation. Advantageous too is its position in terms of biodiversity given the Patent provision. But the argument against such a strategy for agriculture is that the adoption of 'new agriculture' -conversion of food system into cash cropping systems will mortgage food security for one very obvious reason- the sheer lack of organisation, infrastructure and capital investment in agriculture within the state. Thus the state is in a very weak position to cash in on the business opportunities offered by the free market regime.

The argument that farmers can benefit by adopting cash crop cultivation also does not find much support due to the fact that much of the agricultural landholdings are tiny, and are therefor economically non-viable and non-sustaining. For the large peasantry, foodgrains cultivation is the only choice. Further, it is feared that with relaxation of ceiling on land holding to facilitate corporate farming these marginal farmers will lose their farmlands accentuating the disparity. Consequent of such displacement will inevitably be social and political disintegration. Widespread apprehension is expressed too of further marginalisation of these farmers with the reduction of state assistance in input availability, credit, infrastructure, etc. However, the other side of argument is that state assistance package for the small farmers did not really reach all the intended beneficiaries in the past and that the benefits of such

packages in any case was appropriated by large farmers, middlemen and government officials.

Intellectual Property Right (IPR) carry grave implications for the cultivators. It is feared that in future access to superior inputs like seeds will become difficult with the abolition of plant breeders' right and the right of farmers to retain patent seeds. Every growing season patented seeds will have to be procured. Irrelevant will be the state's (just as that of the country's) plant breeding program. Till date production and mostly government did distribution of foundation & certified seeds in the state institutions and agencies and they were never patented. There is no system of protection of plant varieties in the state or for that matter, within the country whereas the WTO text requires a sui generis system of protection of plant varieties. Within the state the slow administrative-legislative machinery required to bring the changes has and will always be a hindrance to the state patenting her entire bio-diversity. This would have ensured the protection of the varieties as also the breeders/farmers rights. Besides, the state is a potential goldmine for patent hunters. The other side of the coin is that with appropriate measures taken at the right time to patent the indigenous species, the state will gain considerably. Because the state, along with the rest of the North Eastern states, has been found to be one of the richest reservoir for genetic variability of large number of crops.

Prospects of privatisation of Agriculture Research and Development institutes- the Assam Agriculture University and the Regional Research stations linked to it evoke similar responses. On the one hand is the apprehension that with privatisation quality planting materials will cost more and hence be rendered out of reach of the small farmers. On the other hand is the conviction that

private breeders/seed farms, in an effort for maximising benefit will ensure timely supply of quality seeds, in required quantities, unlike is the case with the supply of planting materials by the government agencies. So far these government agencies had enjoyed monopoly in this area. These government agencies have in the past failed to supply adequate and quality planting materials in time to the farmers. Also the quality of research in these government laboratories have suffered due to frequent transfers of officials and hence lack of qualified and experienced personals. Privatisation, it is hoped, would bring efficiency in the functioning of these government/government-aided institutions

discontin

Internal liberalisation, reforms and restructuring of the sectors of the state economy, in a conducive environment to development could bring benefits of economic globalisation. This has possibility of reversing the trend to regain back the economic position of 100-150 Revival of the links under the liberalisation regime will definitely bring back some semblance of the early economy, provided a stable economic environment is created.

Significa

However, free trade is not necessarily the best policy if domestic economy is characterised by imperfect market, and internal instability. These are not conducive to development. Within the state, imperfect market conditions for agricultural products are due to

advocates

- middlemen, who appropriate much of the benefits of trade,
- farmers indebted to these middlemen are compelled to sale the bulk or the whole of their produce to them.

consider

openness

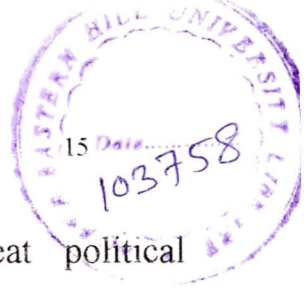
developm

- inadequacy or non-existence of storage facilities for the products which leaves the farmer with no alternative but to sale the products immediately instead of waiting for a remunerative price.

Thus under such imperfect market conditions, the mechanism of free market is hardly expected to work. Therefore, social and political implications of cannot be overlooked. Given the socio-economic situation, social fallout of increased hardships due to competition, possible loss of farmlands, etc. and altogether increasing gap between the small and large farmers is inevitable. And so far as the distributive justice and social cost of adjustment process is concerned, discontentment that SAP programs would adversely affect the masses who are severely affected by increases in unemployment and reduction in food subsidies, and real wages.

1.4. The Politico- geographical Basis

Significance of politico-geographical factors in developmental policies cannot be overemphasised. From the locational point of view, its location at the tri-junction of South, South Eastern and East Asian region has politico-geographical significance. Considered as a frontier by the mainstream (and hence under potential threat of annexation by China), development policies advocated in the past were governed to a large extent by this geopolitical consideration. In the present context (of a friendlier atmosphere and of openness of national economies) this locational advantage calls for appropriate development policies. ✓



Evidently government policies of development are of great political significance, and likewise, the political factors have immense bearing on the policies of development. The difference in economic development of the Brahmaputra valley, the Barak valley and the hills/tribal dominated areas were due to this interplay of a combination of politico-geographical factors and development policies. Politico-geographical factors within each stem from the incompatible socio-cultural structures, beliefs, and value patterns of a plural and vastly complicated human mosaic and their co-existence. Further, their distribution over particular geographical space lends complexity to the mosaic. This further complicates development efforts by the state.

Nationalist/separatist

Consolidation, change and commercialisation of activities shaped the political and economic position of the state in the past. But these processes were confined to the Brahmaputra valley, and to a lesser extent in the Barak valley. Hence the Brahmaputra valley emerged as the political and economic power within the region. In comparison, there was relative isolation of the other population elements existing in the periphery of the main. This isolation was reinforced firstly with the strengthening of the political and economic positions of the valley. Secondly, isolation was on account of not only their divergent traditions and backgrounds, but more so due to change in their perception, priorities and interests as a result of exposure to missionaries, and later due to policies of the state administrators. This situation of complicated priorities, interests and perception of a heterogeneous and fragmented society, presents dilemma to policy makers. Particularly as they occupy strategic geographical locations with regard to resources and transit routes to and from the region. Perception of change and development differ amongst these different societies. What is acceptable as development or the process to development is not

acceptable to the other. The emerging pressure politics are evidence of such conflicting interests and perceptions. Demands of the pressure groups range from demand for more favourable economic/employment opportunities, political self-determination and economic decentralisation (by the minorities within the state), safeguarding indigenous resources, elimination of outside competition against the indigenous population, to demand for increased funds from the union government for developmental purposes, etc. Therefore the different perspectives of development further complicate the process of policy decisions and of development.

Nationalist/separatist movement can be seen as manifestations of such conflicting interests, priorities and of economic, social and political deprivation (discussed in the subsequent sections). The state is also, using Myrdal's terminology, a 'soft state', incapable of insulating economic management from the political processes of distributive demands, rent-seeking and patronage disbursement. This situation arising out of the plurality of contending interests presents a very weak basis for economic reforms required for the liberalisation process.

The present study is an attempt to analyse the past policies of development in agriculture as the basis for future development policies against the prevailing situation in the state.

Objectives of the study

The objective of this study is to:

1. Examine the state policies towards agriculture- farm sector as well as plantation sector.
2. Examine the pattern of agriculture in respect of crop coverage and productivity
3. Examine the potential in agriculture (and its land use) in the form of extension in area of commercially viable crops, adoption of new/ better techniques etc.
4. Examine the impact of socio- political issues on the policies of agriculture.
5. Examine the regional pattern of liberalisation and its impact.

Hypotheses

1. Geographical factors can have profound influence on policy decision. Likewise, operation of policies can impact considerable changes to geography of a region.
2. Small farmers in the state form majority of the farming population. They have gained little from government assistance packages. Thus agricultural restructuring could have small impact on the overall situation of the farmers.

3. Intra-state differences in agricultural performance reflect the spatial and temporal differences in utilisation of agricultural infrastructure facilities. This also reflects the differences and irregularity in implementation of policies or strategies.

4. Given the condition whereby the struggle for survival eclipses all other concerns for the peasants, adoption of 'new agriculture'- geared to agro-industries and high value foods will not be able to replace traditional agriculture in a big way.

5. Market economy tends to intensifies economic disparity amongst small/marginal farmers and large farmers. This could result in intensification of social and political tensions within the state.

6. Discontentment and internal conflict –the result of imbalance in development between ethnic population groups, is in turn the result of development strategy in disregard of geo-cultural characteristics. Issues and pressures for redress of the demands, could affect policy decisions and their operation.

Database and Methodology

The present study is primarily based on secondary data. In the collection of data the following variables were the prime consideration-

- agricultural land use,

- irrigated area,

- con - land use and land holding pattern,
- tech - area, production and yield,
- ben - use of agricultural inputs,
- Sta - population density per cultivated area.

Books, journals and periodicals formed the preliminary source of data, which helped to build theoretical background of the study. Numerous reports published by Government of India, and by Government of Assam formed the main source of data. Census reports of Assam, statistical handbooks of Assam, Economic Survey Reports were consulted/used to get a general picture of the economic, socio-economic and demographic situation of the state. Various reports and publications of the Directorate of agriculture, of the various departments of Krishi Bhavan, Guwahati, and of Planning and Development, Assam, were drawn upon extensively and intensively to examine state agricultural situation. Draft five year plans, and assessment reports of the plan periods were consulted in the analyses of the state agricultural plans. Data on districtwise area, production and yield of different crops were obtained from the Directorate of Statistics and Economics, Guwahati. Land use/Land Cover Maps of Assam (districwise) was obtained from the Assam Remote Sensing Application Centre, Guwahati. Report of The Assam Land Reform Commissions, 1981 was obtained from the office Land Revenue, Government of Assam, Assam Secretariat. Annual Reports of Regional Agricultural Research Station, Titabar, Diphu, Shillongani, and Scientific Reports of Toklai Tea Research Station, were consulted for the studying the Research and technology developments in specific crops. Annual Reports of Directorate of Extension Education, AAU, Jorhat were consulted to understand the processes of technology dissemination within the state. Reports of the Agro-Economic Research Centre gave a picture of the extent of dissemination and the

constraints faced. To systematically analyse the extent of gains of research and technology development, or lack of it across the state, performance reports of beneficiary and non-beneficiary farmers as published by the Regional Research Stations have been utilised.

Relevant data on tea have been obtained from Tea board, Guwahati, and the Assam Branch of Indian Tea Association (ABITA). Besides data have also been obtained from Assam Industrial Development Corporation-AIDC, on jute development aspects.

Methodology- The nature of the study being analytical then empirical, there is fewer application of statistical methods. However in the process of analyses of patterns and processes, some quantitative methods have been applied. In the analyses of the agricultural patterns quantitative comparison of districtwise/agro-climatic sub zone wise in terms of

- area under different crops,
- area under high yielding varieties (HYV),
- area under irrigation,
- cropping intensity,
- extent of fertiliser consumption, have been carried out to get a picture of the intra-regional disparity within the state.

Similarly to examine the extent of change or lack of it in these aspects of agriculture,

- districtwise percentage change in fertiliser application,
- districtwise increase in area under HYV paddy,
- districtwise creation and utilization of irrigation facilities,

-districtwise change in cropping intensity, has been carried out. The result of such comparisons and analyses are cartographically represented with the help of maps and graphs.

To understand the comparative position of agriculture in relation to other sectors of the economy the priority given to it during the different plan periods, comparative study of planwise fund allocation to different sectors of the state economy is attempted. Wherever data has been available, a comparative study of the pattern of priorities with that of the nation has been done. This gives an understanding of the unequal development of the different sectors.

With the Base year as 1989-90, Index number of area, production and yield of major crops- rice, jute and oilseeds, for the years 1995-96 and 1998-99-districtwise, have been obtained. This gives us a picture of the performance of agriculture in the districts over time with regard to these crops.

To understand the extent of change in land holding and land tenure system consequent of Land Reforms of the 1970s, percentage changes in land holding by categories-General, Schedule Tribe, and Schedule Caste is examined during 1980-81 to 1990-91. Similarly, districtwise extent of tenancy by tenancy status have been examined. In regard to production policy within the state, appraisal of the performance of agriculture in terms of crop production has been undertaken, This has been done by comparing the production achievement of major crops against target for production for different points of time. This has brought into focus the increasing gap between the two. In considering agricultural credit, an important prerequisite for agricultural advancement, available data on credit advancement by commercial banks and Regional Rural

Banks have been processed. Analyses of the extent of loan advancement and rate of recovery by different categories in the form of crop loans as well as term loans has been carried out.

The salient observations made in the chapters III to VI are considered in the search for policy alternatives to agricultural development in new economic environments suggested in chapter VII.

Organisation of Chapters

The contents of the present study are organised into eight chapters. The contents of the present study are organised into eight chapters.

In chapter I, Economic liberalisation as a concept has been introduced. Its need and applicability in Assam's context have been stressed. Besides, objectives of the study, hypothesis to be tested, database and methodology have also been stated. A review of relevant and available literature has been carried out.

In Chapter II, geographical attributes of the state with reference to its resources are discussed. It analyses physiographic, socio-economic and demographic aspects. The nature of economy as developed during the colonial and postcolonial period has been stated in relation to the theme of the thesis. These are reinforced by direct reference to the impact of locational compulsions on the economy. The chapter also gives an account of the resource potential of the state development and utilization of which will result in income generation and economic advancement within a liberalised environment.

In Chapter III, evaluation of the agricultural policies of Assam from 1947 upto 1990-91 has been carried out. This is done separately for the unorganised farm sector and the plantation sector. Two broad phases of policy initiatives marked this period. Policies concerning food grains and policies concerning non-food grains production. Besides policies in the development of infrastructure particularly irrigation, input supply system, its policy on agricultural research and technology dissemination constitute part of the chapter. Policies towards protection of the tea sector against foreign companies and the consequences of such policies have been analysed. Drawbacks, inadequacies and constraints have been examined. The extent of government role has been examined.

In chapter IV, Agricultural patterns of Assam as the result of these policies are discussed. The resultant land-utilization pattern, production and productivity patterns, input consumption-type and patterns, are examined. This has also brought to light the extent of inefficiency in resource utilization both by the farmers and the government agencies. The chapter deals separately with the farm sector and the plantation sector.

In chapter V, policies since 1990-91 are evaluated. Economic reforms and the structural adjustment programs undertaken in the country and in Assam, with emphasis on tea, jute, oilseeds and horticultural crops, from mid 1990s are discussed. The likely implications of such reforms in both the sectors-farm and plantation analysed.

In chapter VI, the socio-economic and socio-political issues, which have for long actively influenced the pattern of resource allocation and all development activities, are discussed.

In chapter VII, the geographical basis for policy reforms and accordingly, restructuring of the state agrarian economy is discussed.

The concluding chapter major findings and observations are stated, and on these basis recommendations are made. The concluding chapter also tests the hypothesis on the basis of the analyses and observations made.

Summary and Conclusion

The present study is an attempt in understanding the agricultural situation within the state from a geographical perspective and the prospect of change in this situation in a liberalised economic environment. The focus is mainly on the past policies in agricultural – farm and plantation sector, which shaped the agricultural economy. The significance of analyses of the past policies lies in revealing the loopholes and lacunae in the same. This provides suggestions for future policy options. The work has been much affected by non-availability and even non-existence of data in certain relevant aspects. The select aspects of policy analyses include analyses of production policies-in foodgrains, cash crops-jute and oilseeds in the farm sector, and of tea in the plantation sector. The study also analysed policies in agricultural infrastructure, more particularly irrigation, agricultural pricing and marketing, and credit. Policies on input-their production and distribution, policies on research and technology development, and technology dissemination are other important aspects of the present policy analyses.

The study begins with an introduction to the very concept of free market economy and its implications for the country's and the state's agricultural economy. In the following chapter geographical characteristics and resource base of the state have been examined. This serves as the bases for understanding the type and pattern of economic activities pursued and the level of development.

The two major river basins of Brahmaputra and Barak and their respective watershed areas form important physical divisions. Contained within each of the basins are rich fertile floodplains. This has favoured the cultivation of traditional crops-paddy, jute, and mustard as well as a range of other crops. The older alluvium of the higher grounds with gentle slopes on both banks of the rivers has supported tea cultivation for more than a century. The depressions-bills along the flood plains are favourable for fisheries. Thus the two river basins represent areas highly favourable for agriculture, as well a host of allied activities.

The Karbi Anglong, Hamren and Cachar Hills form a separate physiographic unit. This unit has favourable agro-climatic conditions for the cultivation of a range of horticultural crops, besides livestock rearing which is an integral part of the economic activities of the tribes inhabiting these areas.

While the two rivers have provided rich fertile agricultural land that supports a very high density of population, they have also been the cause of a number of problems. The heavy water discharge from these two rivers during the monsoons have been the cause of extensive damage to the agriculture-about 12.49% of net sown area are flood prone. The annual flood prone area is identified as 5.46%.

The climate in most parts is humid (average relative humidity 85 %) with high temperature, ranging between 30 degrees to 35 degrees centigrade, and rainfall between 1100 mm. to 3000 mm annually. This coupled with the soil types which in the flood plains are recent alluvium rich in organic content and

moderate Nitrogen and Potash content, and old alluvium on the higher ground rich in Nitrogen, have provided a range of agro-climatic conditions favourable for biodiversity. The biodiversity of the state in terms of rice cultivars, citrus and tropical fruits, fibre crops, spices etc. offers the state, the country and the world a rich genetic bank. Biotechnological pursuits by public sector institutes to capitalise on this resource led to the development of crop varieties. Location and season specific rice varieties with high yield capabilities are developed and applied on the ground. Other HYV species developed are in jute, oilseeds and tea.

The colonialists virtually transformed the tea growing areas through development of transport linkages-roads, railways and waterways. Transformation also was caused by large import of tea labourers from outside the region. Their policies also brought large migrants to the sparsely populated parts of the valley where jute cultivation was started. The result of all such policies was a change in the cropping pattern, in the demographic composition, and in socio-economic situation.

The third chapter evaluates the state agricultural policy prior to 1991 against this understanding of the geographical attributes and the resource base of the state. The evaluation reveals the fact that during this period there has been no clear-cut agricultural policy within the state. Also it brings forth the fact that lacunae exist in the agricultural development strategies adopted within the state. The first phase of agricultural policies began within the state after independence with Land Reforms policy. Numerous land acts were expected to bring more equitable distribution of agricultural land and improve the tenurial

system. Vested interest of the large landowners, adihars, and the political nexus defeated the purpose. There was very small improvement in the tenurial system, while land holding pattern remained inegalitarian.

Over the years, production strategies for foodgrains has been in favour of increasing production of rice, the traditional crop, with the objective of attaining self-sufficiency in foodgrains. However the loopholes in the policy is evident from the shortfall in the target of production at every terminal year of the five-year plans. The productivity levels of paddy increased very insignificantly. Similarly, efforts to popularise other foodgrain crops-wheat and pulses amongst the farmers were not successful. Only few districts of Central Brahmaputra valley, and Sibsagar in Upper Assam achieved some small measure of success in this respect. In the other districts paddy cultivation still predominate-having largest percentage of area coverage. Here too, winter rice-kharif crop, received maximum attention. Other foodgrains-wheat and pulses did not receive the desired attention. However these crops registered increased yield rate. Amongst the cash crops, jute, traditionally an important crop has lost much of area under it, and yield rate too did not increase significantly. Area under oilseeds increased only marginally. Reason behind the continued gap between target and actual physical achievement was seen in the inadequate and inefficient support system to back the production strategies. Behind all these failures lies one major drawback of the development efforts. That was the monopoly of the public sector. This brought inefficiency and inadequacy in the agricultural services and agricultural extension.

A comprehensive policy on agricultural infrastructure was lacking till 1990-91. Agricultural infrastructure which includes irrigation, credit facilities, agricultural marketing and pricing, etc. did not receive adequate attention. Irrigation did not receive the priority it deserved. Not only was the facilities created by the public sector inadequate, it was also marked by unequal development across districts, and less than optimal utilisation of the facilities created. Similarly, policy on credit availability to farmers was not appropriately implemented and lacunae existed in the operation of the credit schemes. Loans in the form of crop loans, term loans etc which were generally granted via the Gram Panchayats revealed loopholes in the system of credit dispensement. In the absence of data on application/grant of individual loans this important aspect of agricultural credit availability could not be studied. The strategy to mobilise credit through co-operative societies via. The Gram Panchayats also did not succeed much. Loans advanced by commercial banks have generally gone to the plantation sector, since recovery from farm sector have been poor.

Non existence of a comprehensive policy on inputs – seeds, chemical fertilisers, pesticides etc. greatly affected the productivity levels. Non availability or delay in supply of improved seeds/planting materials affected timely sowing and consequently the yield rates. Similarly non-availability or inadequate supply of fertilisers, lack of irrigation support and wrong mix of fertiliser were reasons for poor performance of agriculture. Districtwise disparities in application of such inputs were glaring. Districts- Nogaon, Sonitpur, Darrang and to a certain extent Kamrup and Sibsagar emerged as more progressive.

No sound marketing and pricing policy existed within the state. The only crop-jute for which marketing and pricing existed was fraught with loopholes. The result was emergence of imperfect market and operation of middlemen. Consequently farmers received unremunerative prices. This was one of the reasons for decline in jute acreage.

Policies in the plantation sector caused much fluctuation in production, productivity and trade of tea. Prior to independence, under colonial capital, organisation and patronage, large areas in upper Assam and parts of Barak valley were brought under tea plantation. Colonial policies were such as to encourage extension of tea areas. After independence, the Union government enacted numerous Laws and Regulations. Biggest impact was on productivity of tea, which declined in the period immediately following the enactment. The policies of the government of India were not conducive to the continuation of the foreign companies. The policies were restrictive, and regulatory, formulated and implemented with a view to providing protection to the domestic companies. Consequent was the withdrawal of a number of foreign companies. This also resulted in the fall of yield rates due to poor production techniques and inefficient management by the new domestic owners. Declining yield rates and decline in export have also been due to the militant activities, which target the industry the most.

The fourth chapter brings out the subsistence nature of the farm sector. The subsistence nature is in terms of land holdings pattern, cropping pattern, and input utilisation, farming practices and post harvest management. Very

smallholdings (less than one hectare), preponderance of traditional crops-paddy, low intensity of cropping (less than 120%) is characterise the subsistence nature of agriculture. Crops like jute oilseeds, pulses and even horticultural crops have a very small presence. It is also characterised by low levels of input utilisation such as fertilisers (less than 20 kg. /hectare), and inadequate irrigation (most districts have less than 10% of the gross cropped under irrigation). Evidently yield rates are very low. The plantation sector is characterised by small growers as well as large planters, and indigenous as well as foreign companies (British). Types of ownership range from smallholdings between 1 to 100 acres, to large estates of over 100 acres. Small growers either only cultivate, or also manufacture. Large estates are owned by private or public companies and controlled by Board of Directors – Indian, Non-Indian or mixed. Number of small growers is increasing but yield rate of these growers is much below those achieved by the South Indian growers. The reasons are same as those encountered in the farm sector- inadequate extension and advisory services, low utilisation of improved inputs, and existence of middlemen.

The fifth chapter analyses and evaluates the policies since 1990-91 (post liberalisation period). It is seen that the situation in agriculture observed prior to 1990 continued to persist even during the 1990s. The policy thrust in the first half of the decade remained more or less the same. Monopoly of the public sector in agricultural research, extension services and infrastructure development continued. However, policy changes occurred since mid 1990s. Privatisation of the public sector facilities were initiated in a small way, and policies was spelt for tapering down or removal of subsidies in agriculture as well as closure of uneconomic public facilities. These were essential conditions

for World Bank funded projects on rural infrastructure and agricultural services. Components of the project include irrigation, rural roads connecting villages to markets. Agro-climatic Regional Planning Approach as a major shift in the development strategy attempts at involving NGOs-Farm Management Committees or the pathar parisar samitis. The NGOs comprises representatives from related departments of agriculture and the farmers themselves. By transferring decision making to the grass-root people, the approach is an attempt at economic viability and cost effectiveness of the development strategies. This is to be achieved through identification of comparative advantages of each agro-climatic subzone.

In the post liberalisation period, removal of the restrictive policies in the plantation sector, and a more open environment in the industry have placed the Indian tea industry in competition against tea growing countries like Sri Lanka and Kenya even in the domestic market. Thus future policies for the tea industry have to be towards improving productivity, quality, and marketing strategy.

Chapter VI examines the role of socio-economic and socio-political conditions and factors affecting development (policies). It has become apparent that policies for development were influenced tremendously by the socio-economic conditions of the people, and by the socio-political conditions within the state. Disparity in economic condition of a plural society, which includes numerous plains, and hill tribes and their different perspectives of development, sense of alienation, and aspirations led to emergence of numerous pressure groups

pressurising the government to redress their grievances. Militancy directed towards the government and towards 'outsiders' hindered progress and development. This and the desire by the indigenous people for protection and safeguard of their interests have significance for any policy reforms in favour of inviting outside competition. Policy reforms has to strike a balance between development strategies safeguarding indigenous interests and those which will invite outside participation in any developmental activities.

In chapter VII, it has become possible to suggest alternative policies for development of the agricultural sector. Based on the analyses and evaluation of the past policies and the lacuna and errors, alternative policies considered includes restructuring of agriculture to focus on market-orientation. This essentially means focussed attention on cash crops, processing and trade-particularly with neighbouring countries, in these crops. Improving infrastructure is imperative to achieve this. And to do so, increased involvement of private sector (companies) is considered essential.

Major findings

So far Assam have been very slow to respond to the changing economic order. In the agricultural sector, the situation remains more or less the same due the lack of a clear-cut policy of development tuned to the changing world economy and trade. The only noticeable policy changes towards the end of this decade have been the steps towards privatisation of few public undertakings such as the seed farms, scaling down of subsidies. Evaluation of the policies has

revealed the loopholes and lacunae in the past policies. The major findings of the study are-

1. The situation in Assam after five decades of planned economic development is that about 36.09% or 9.45 lakh persons are still below the poverty line (Planning Commission, 1999-2000). Large proportion of landless and marginal cultivators constitute much of this population below the poverty line. They did not gain from the land redistributive legislation of the state. In the liberalisation process, land legislation lost their relevance. This is because the liberalisation process has to facilitate large farmers and corporate to acquire land for adoption of market based agriculture in order to promote agro-industries.
2. In India the objective of achieving food self-sufficiency was attained with technology development in agriculture and large-scale agricultural extension services. In Assam agricultural technologies could not bring similar achievement in crop production. This was partly because large-scale agricultural extension services were inadequate. Inadequacies also existed in input support systems, which limited dissemination of technology. Liberalisation process tends to facilitate entry of private enterprise in these sectors. Also privatisation of the public enterprise will enhance efficiency. However law and order situation inhibits this.
3. Assam continued to be foodgrains deficit. It was also characterised by slow agricultural growth. This deficit persisted as gap between target and actual production did not narrow down over the years. The result is annual

procurement of foodgrains. This points to the failure of the production policy. Rapid growth of population (2.17% annual exponential growth rate of population) put increasing pressure on the foodgrains situation. This rapid growth of population also increased pressure on agricultural land reducing farm efficiency. High agricultural density is observed in Assam.

4. The vast rainfed agricultural system of Assam was neglected with regard to a comprehensive policy on water management. A suitable strategy for utilisation of the huge water resource was not evolved. Nor was the agro-ecological characteristics (of alternate growing periods of excessive rains and dry conditions) considered for a policy of water management. Therefore stability in production was not achieved.
5. While agricultural infrastructure development depended solely on state action, production functions did not depend on state assistance. Production was undertaken with use of farm-saved seeds/planting materials, minimal or no use of chemical fertilisers or irrigation. Government assistance programs (such as subsidy programs) were mostly out of reach of the peasants. Structural adjustment in these sections of agriculture (of input subsidisation) therefor will have little impact on the peasant class.
6. Restrictive policies in tea production, extension, marketing and export resulted in change in ownership, and management of the industry. This was true particularly after independence. This resulted in stagnation in this sector. Exports have dwindled (from around 30% in 1980 to less than 10% in 1998-99). Removal of licensing system and relaxation of the restrictive

policies following liberalisation is expected to reverse the trend leading to growth. This process is also expected to revive the sick tea gardens (with inflow of capital and increased foreign participation).

7. Imperfect market mechanism, inefficient functioning of government procurement agencies have caused decline in growth of cash crops such as jute. This sector suffered serious setback in the last three and half decades. The policy neglect in the area of credit support, price support and government procurement led to the operation of a chain of intermediaries and moneylenders. The resulted has been an imperfect market mechanism.
8. Considerable changes occurred in geographical patterns in terms of changes in cropping pattern, more intense use of land, introduction of new crops, utilisation of wastelands, etc. But the extent of these changes was not attributed to the operation of the policies alone. Tremendous increase in population was more responsible for this. However it was found that geographical and socio-economic conditions affected the policy operations. The resultant geographical patterns that emerged were skewed.
9. Patterns, which emerged, reflects intra- state differences – spatial and temporal, in implementation of the policies. The significant differences were in patterns of technology adoption, in agricultural performance, and in infrastructure development and in utilisation. Different patterns emerged in upper Assam, central, and lower Assam, and in the hills.

10. Environmental problems have not been adequately addressed. Adequate attention to sanitary and phyto-sanitary conditions (particularly of tea) was not paid. High pesticide residue levels are found in Assam tea. These levels exceed the international norms. This will not only restrict export, but also result in increased market access of other countries to the domestic markets. This will happen as domestic consumers' places demand for quality products. Domestic markets have been the greatest strength of Indian tea. To be globally competitive, use of agro-chemicals will have to conform to international standards.
11. Missing strategy in development of marketing structures, modern storage facilities, and post harvest technologies were characteristic. This resulted in considerable wastage of products (given the high temperature and humidity conditions, wastage rates are between 30-40%). This also resulted in underselling of the products to intermediaries, in the absence of an efficient and effective government procurement system.
12. Growth of small tea growers segment occurred with increase in number of small tea growers. This was the result of "small tea growers' movement" (started with the assistance of Tea Board and ABITA). However they had restricted access to new technologies and assistance because many were not registered with the board. Limited extension services and follow-up programs kept the productivity and production at low levels. Entry of private enterprise in the agricultural extension and services can remove the monopoly of these public enterprises and enhance efficiency.

13. Slow economic development and differences in development led to conditions of internal (political) tension and conflicts with the government. Extractive and exploitative policies were responsible for the imbalances in economic development. The internal instability affected government management functions and slowed down economic growth. Funds are diverted away from developmental purposes to maintaining law and order, in rehabilitation programs of surrendered insurgents, etc. These are conditions that create an environment not conducive to globalisation. These conditions restrict outside participation in economic and developmental activities.
14. Socio-cultural barriers in the form of local protection from outside competition have been restrictive. Safeguarding local interests have been translated to keeping out non-indigenous enterprises from participation in economic activities. Protection from competition will result in increasing economic gap.
15. Special tax incentives and subsidies declared for setting up industries (particularly in EIPs) failed to generate enthusiasm. Reason has been absence of specialised factors like skilled labour and enterprises, and absence of a cultural movement in favour of competition rather than protection.
16. Export strategy in agriculture has not gained momentum due to numerous existing techno-economic constraints.

Observations and Recommendations.

It has been observed that one of the reasons for slow growth has been the result of vital missing link between the policies in production and in infrastructure development. Infrastructure development is also vital to facilitate a competitive environment and establishment of related industries. Therefor essential is not just increased role of the public sector, but inviting increased private participation in the same. This will also reduce monopoly of the public sector in implementation of many development packages. Non implementation of the policies, has been the most important reason for the slow growth of the economy. It was seen that monopoly of the public sector in input supply system had resulted in inefficiency of the system. Private sector participation is therefore desirable for greater efficiency.

Poverty alleviation through growth in the agricultural sector was seen from the narrow perspective of providing a series of subsidies to the weaker sections. Also these were inefficiently administered. This narrow perspective has to widen to include a multi-disciplinary technologies program. –including irrigation, controlled use of fertilisers, pesticides and post harvest technologies. Creating awareness is vital to this.

Major recommendations.

Law and order situation has to improve to facilitate private participation in the development process. Maximum environmental support to trade and industries has to be ensured through maintaining law and order (this problem had caused

withdrawal of big business houses from the state, or shifting area of operation). Thus a stable environment conducive to competition has to be created first.

Once a stable environment is created, Assam's agricultural sector can be made competitive by focussing on-

1. Restructuring agriculture for market orientation. This can be effected through cash crop cultivation. Here the prospects lies in the range of commercial crops which can be cultivated in the favourable agro-climatic conditions. Increasing area and production under -

- horticultural crops- tropical fruits, and spices, in the favourable conditions of the hills, and foothills.
- small tea gardens.
- plantation of medicinal and aromatic plants (RRL, Jorhat has started with experimental cultivation of these plants. The institute has identified so far 18 major medicinal plants of the Northeast that can be commercially exploited. Certain plants have been identified to have curative properties for cancer, AIDS, malaria, etc.)

2. Development of an efficient and adequate field advisory services system, which will enable better access of improved technologies to the small growers and horticulturists. This will also require development of post harvest technologies to minimise wastage.

3. A policy of integrating the three functions – research and technology development, effective extension service supported by an equally effective input supply system. The need to link up to processing plants suggest for a

Farmer-research-industry policy interface, adding value to many farm products besides jute and oilseeds.

4. Development of agro-industrial activities. This means processing and value addition of the cash crops. This also calls for-

- establishing linkages between the farms and industries- linkages to backward linked industries to provide capital, equipment, etc, and to forward linked industries for packaging, branding, and marketing.
- reduce the role of the intermediaries between financial agencies and users, and between farmers and market.
- develop links between the markets, and the producing areas.
- focus in the tea sector in research in processing technologies, product chemistry (to test pesticide residue levels), and consumer taste and preferences. The last is important to survive in a competitive market (even domestic market). Therefor close interaction between research, to know the consumer profile and scientific research has to be established.
- this should also ensure maintaining international quality norms (in packaging etc)

So far, technologies developed by the public sector agencies were not commercialised. Commercialisation of the technologies developed is desirable. This will also require upgrading and maintaining a gene bank of the indigenous plant species.

5. Crucial to all this is maintaining rural connectivity, and access to information technology for market trends, and of international standards.

Therefore a vital area of policy reforms should be in the area of development of agricultural infrastructure.

6. Promote the above development strategies through joint ventures. This strategy has been mooted as one of the strategies to managing the tribal/ethnic issues. By promoting development joint ventures between corporate, family/village/tribal ownership, with state government as a third partner. The involvement of the corporate sector will take care of the capital and technology aspect, while involvement of local/tribal owners ensures their participation. Also local/tribal (indigenous) knowledge will be harnessed. Thus on the one hand this will stem instability by addressing the needs of these communities, on the other hand gains of development will be shared.

By ensuring continuity in development as well as ensuring inflow of technologies and investment, the state and its people will have development as a social commitment to maintain individual freedom.