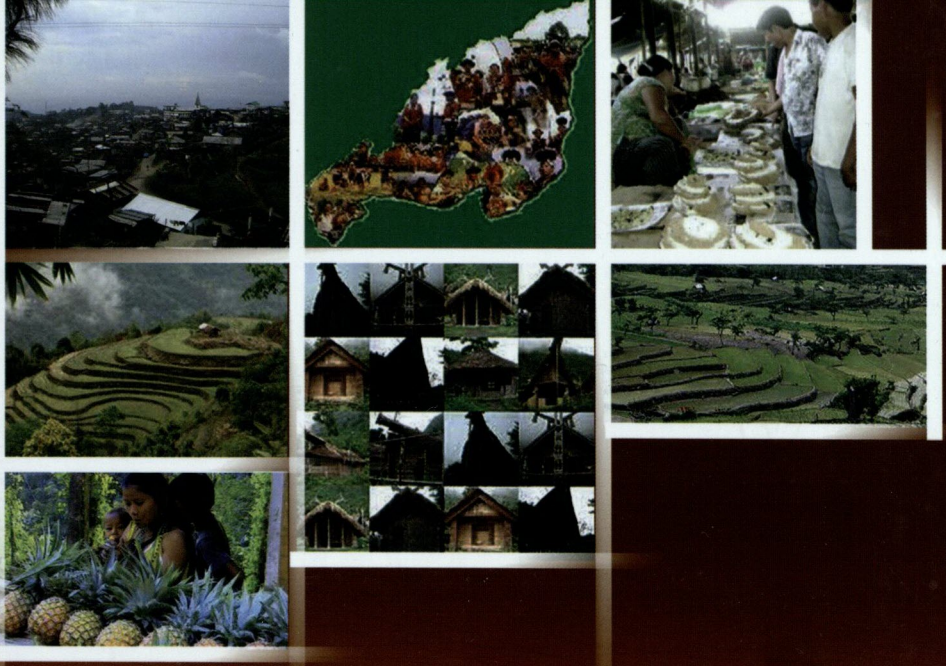

ECONOMY OF NAGALAND IN TRANSITION

A Case Study on Infrastructure Facilities

Dr. P. Baishya

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Global Publishing House (India)

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House No.4, Bye lane-7, New Sarania, Gandhi Basti
Guwahati-3, Assam, India

Door No. 13-1-1,Vigneshwara Enclave,
Anthony Nagar, Maharanipeta Vishakapatnam-2, AP (India)

ISBN -978-93-81563-01-4

Published by Global Publishing House (India)
Door No. 13-1-1,Vigneshwara Enclave,
Anthony Nagar, Maharanipeta Vishakapatnam-2, AP (India)

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Introduction

Infrastructure can be considered as capital of a society or social capital that is embodied in such forms which help direct productive activities. The forms in which this capital is found are as such, transport and communications, power, credit and financial institutions etc. Broadly, the nature of the infrastructure installation is that these do not produce commodities directly. These are in the nature of a facilitative structure that promotes general economic activities. As such it is also known as social overhead capital. These include public works like railways, roads, major irrigation works, tap water supply, telecommunications, power, sanitation and sewerages etc. although diverse in their services these activities share among themselves similar technical features such as economies of scale and economic features like spillover from users to non-users. These activities are of the nature of facilitating the work of an economy. It is for this reason that infrastructure is defined as capital of a society that is embodied

in such form as help direct productive activities. Broadly, the nature of infrastructural installations is that these do not directly produce things. These so to say promote activities of the economy. Some widen the term to include facilities pertaining to health, education, skill formation etc.

Infrastructure typically refers to the assets that support an economy, such as road, water supply, wastewater, power, flood management, recreational, and other assets. In the past these assets have typically been owned and managed by local or central government. The investment in these assets is made with the intention that dividends will accrue through increased productivity, improved living conditions and greater prosperity. These various elements may collectively be termed civil infrastructure, municipal infrastructure, or simply public works, although they may be developed and operated as private-sector or government enterprises. A more generic definition of infrastructure is the network of assets "where the system as a whole is intended to be maintained indefinitely at a specified standard of service by the continuing replacement and refurbishment of its components. In other applications, infrastructure may refer to information technology, informal and formal channels of communication, software development tools, political and social networks, or beliefs held by members of particular groups. Still underlying these more general uses is the concept that infrastructure provides organizing structure and support for the system or organization it serves, whether it is a city, a nation, or a corporation. Economically, infrastructure could be seen to be the structural elements of an economy which allow for production

[1]Choate and Walter, 1981

of goods and services without themselves being part of the production process, e.g. roads allow the transport of raw materials and finished products According to etymology online, the word infrastructure has been around since 1927 and meant the installations that form the basis for any operation or system. Originally in a military sense the word is a combination of "infra", meaning "below" and "structure". The term came to prominence in the United States in the 1980s following the publication of *America in Ruins*[1] , which initiated a public-policy discussion of the nation's "infrastructure crisis", purported to be caused by decades of inadequate investment and poor maintenance of public works. That public-policy discussion was hampered by lack of a precise definition for infrastructure. The U.S. National Research Council committee cited Senator Stafford, who commented at hearings before the Subcommittee on Water Resources, Transportation, and Infrastructure; Committee on Environment and Public Works; that "probably the word infrastructure means different things to different people." The NRC panel then sought to rectify the situation by adopting the term "public works infrastructure", referring to "...both specific functional modes - highways, streets, roads, and bridges; mass transit; airports and airways; water supply and water resources; wastewater management; solid-waste treatment and disposal; electric power generation and transmission; telecommunications; and hazardous waste management - and the combined system these modal elements comprise.

An economy's infrastructure is more conveniently divided into two parts *viz*: Physical Infrastructure and Social Infrastructure. *Physical Infrastructure* is concerned with the needs of facilities for production sectors like agriculture, industry, trade etc which

include such services as power, credit & financial institutions, transport & telecommunication etc. *Social Infrastructure* on the other hand, concerns with facilities that enhance human welfare, freedom from ignorance, diseases and fear are collectively termed as social infrastructure viz: education, health care, potable water supply, sanitation services. They are as critical as physical infrastructure for economic development.

Infrastructure is itself a component of the capital stock of a society. As such increase in it adds to the stock and thereby, promotes development. It needs inputs like cement, steel etc and thus stimulates production in these industries. But more importantly it promotes development outside it. It helps production by linking the production points with input supplies, including labour, through transport, communications etc. Trade also gets expanded, thereby raising the nations' output. If adequate, infrastructure allows the production structure to get diversified in accordance with changes in techniques and patterns of demand. In reducing the poverty by accelerating the growth, infrastructure can be of great help. China's success has been considerably achieved by uplifting rural activities through the provision of minimum package of transport, telecommunications and power at the village level. The infrastructure which is proper for rural economy such as roads, irrigation, extension services etc., where the poor reside, can do a lot for raising the farm productivity and non-farm productivity with regard to rural employment. The natural environment also improves if the infrastructure is advanced. The nature friendly and non polluting transport system, potable drinking water, proper drainage system also helps poor by

[2] Economic Survey of India 2006-07, p.234

increasing their physical stamina, improving working condition which contributes their earning capacity. There is considerable consensus that improvements in infrastructure have a strong impact on the GDP growth and poverty alleviation. The importance of infrastructure for sustained economic development is well recognised. High transaction costs arising from inadequate and inefficient infrastructure can prevent the economy from realizing its full growth potential regardless of the progress on other fronts. Physical infrastructure covering transport, power and through its backward and forward linkages facilities growth, social infrastructure including water supply, sanitation, sewage disposal, education and health, which are in the nature of primary services has a direct impact on the quality of life.

Development of efficient and unfailing social and economic infrastructure is essential for the sustenance of the growth of the economy. Under the present regime of strict budgetary discipline under FRBM, issues relating to the financing of the enormous requirements of infrastructural investment are widely discussed. India's low spending on power, construction, transportation, telecommunications and real estate, at $31 billion or 6% of GDP in 2002 had prevented India from sustaining higher growth rates. This had prompted the government to partially open up infrastructure to the private sector allowing foreign investment which has helped in a sustained growth rate of close to 9% for the past six quarters. India holds second position in the world in roadways' construction, more than twice that of China. As of 2005 the electricity production was at 661.6 billion kWh with oil production standing at 785000bbl/day. India's prime import partners are: China 8.7%, US 6%, Germany 4.6%, Singapore 4.6%, Australia 4% as of 2006 CIA Fact Book As of 15 January

2007, there were 2.10 million broadband lines in India. Low tele-density is the major hurdle for slow pickup in broadband services. Over 76% of the broadband lines were via DSL and the rest via cable modems. Overall index of six core industries – electricity, coal, steel, crude oil, petroleum refinery products and cement having a direct bearing on infrastructure registered a growth of 8.3 per cent in April-December, 2006 as compared to 5.5 per cent registered during corresponding period of last year. According to the Economic Survey 2006-07, crude petroleum, refinery products and electricity generation registered acceleration in their growth rates in the first nine months of 2006-2007. However, there was a decline in growth rates of coal, cement and finished steel during this period.[2]

In the Power sector, the growth of power generation in April-December 2006 was at 7.5 per cent as compared to 4.8 per cent in the corresponding period of last year. During April-December 2006, the Plant Load Factor (PLF) of the Central Sector Plants was higher than that of State Electricity Boards. Average PLF of private plants was higher than that of public sector. The Ministry of Power has launched an initiative for development of coal-based Ultra-Mega Power Projects (UMPPs) in the country each with a capacity of 4000 mega watts or above. Nine sites have been identified by the Central Electricity Authority (CEA) in nine States for the proposed UMPPs. The Survey recognizes the importance of formation of a strong National power grid for development of power system for cost-effective fulfillment of the objective of "Electricity to All" at affordable prices. It further states that a strong all-India grid would enable exploitation of unevenly distributed generation resources in the country to their optimum potential.

In Road sector, it is found that 6,776 km of national highways pertaining to the National Highways Development Project (NHDP) with the bulk of 5,475 km lying on the Golden Quadrilateral (GQ) was completed till 30th November, 2006. Listing out the constraints faced in the timely completion of NHDP projects, the Economic Survey'06 states that merely 93 per cent works on GQ have been completed by November 2006 and North-South and East-West corridors are expected to be completed by December 2009. It is also stated in the Survey that a substantial impact upon the economy is already visible with the completion of about 93 per cent of GQ. There is a need to focus attention on corridor management and road safety and the National Highway Authority of India (NHAI) has already put in place a Corridor Management Policy. With a view to encouraging participation of the private sector, the Department of Road Transport and Highways has laid down comprehensive policy guidelines in this regard. It has also been decided that all the sub-projects in NHDP Phase-III to Phase-VII would be taken on the basis of public private partnership on Build Operate and Transfer mode. The private sector participation envisaged in Phase-II of NHDP has also been increased.

This is worth mentioning that India's Telecom sector has been one of the biggest success stories of the market oriented reforms and the country is now amongst the fastest growing telecom markets in the World. As a result of various policy initiatives, telecom tariffs which were among the highest in the world less than 4 years ago have now dipped to be among the lowest. Tele-density also increased from 12.7 per cent in March 2006 to 16.8 per cent in December 2006. About 5 million subscribers are being added every month. With this growth, the number of telephones

is expected to reach 250 million by end of 2007. It is observed that there is a need to increase the broadband connectivity for knowledge-based society to grow quickly and for reaping the consequent economic opportunities. The total Foreign Direct Investment (FDI) approved and actual inflow up to July 2006 were Rs. 38,923.38 crore and Rs. 11,801.46 crore respectively. The Universal Service Obligation (USO) Fund is also proposed to be used for creating infrastructure for mobile and broadband services in rural areas. With a view to meeting the demand for telecom equipment in the country, a proposal for setting up Telecom Equipment and Services Export Promotion Council and Telecom Testing and Security Certification Centre is in the pipeline. With these initiatives, India is expected to become a manufacturing hub for telecom equipment. Planning Commission has estimated the total Gross Capital Formation in Infrastructure during the Eleventh Plan to be Rs. 20,01, 776 crore (at 2006-07 prices) or US$ 488 billion (at an exchange rate of Rs.41/$).

Table: 1.1 Gross Capital Formation in Infrastructure
(at current price)

Heads	1993-94	1997-98	2000-01	2001-02	2002-03
Gross Capital Formation	45940	62903	94226	91050	90890
Electricity, Gas and Water	23170	30756	36907	39180	42051
Transport, Storage and Communications	22770	32147	57319	51870	48839
Railways	5580	5069	5491	6981	9470
Transport by other means	11304	10460	25802	21019	19028
Storage	136	456	1362	1525	1442
Communications	5750	10162	24664	22345	18899
Gross Domestic Product	781345	1390148	1902998	1090957	2249493
GPF as % of GDP	5.88%	4.45%	4.95%	4.35%	4.03%

Source: Economic Survey of India 2005-06.

This amounts to an average of 7.44 per cent of GDP (at market prices) over the Plan period. To supplement the estimated aggregate capital formation in infrastructure described above, an alternative has been used taking into account actual sector-wise development patterns. Public and private investment in each sector during the Eleventh Plan has been projected based on a detailed review of sector trends, including historic evolution of Plan expenditures. This 'bottom-up' exercise yields total investment in infrastructure during the Eleventh Plan of Rs. 23, 84,905 crore or US$ 581.68 billion (at Rs. 41/US$). Assuming conservatively that 15 per cent of the investment projected on the basis of detailed Sectoral analysis will spill over to the Twelfth Plan, it is estimated that total investment in infrastructure during the Eleventh Plan period would amount to Rs. 20,27,169 crore (or US$ 494.43 billion).

The North East of India comprise of eight states namely, Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura are situated in the North Eastern part of India having foreign boundary with Bangladesh on the west, Myanmar in the East and the Tibet region of China in the North. The economy of Northeast India has got its definite identity due to its peculiar physical, economic and socio-cultural characteristics. The NER of India covers an area of 2, 62,500 sq. km. It accounts for 7.9% of total geographical area of the country. With a total population of 39 million (2001), it accounts for 3.8% of total population of India. NER as a whole is placed amongst the poorest regions in the country. The per capita income of NER at Rs. 12407/- is less than the national average of Rs.17978/- (2001-02). The region is still backward as compared to other parts of the country and could not develop much

economically as well as industrially despite having vast natural resources. This may be due to shortage of investments in infrastructure as well as in direct productive activities.

Table: 1.2 Economic Indicators: North East (Population)

State	Area (Sq Km)	Population		Decadal Growth rate (1991-2001)	Population Density(2001) Persons/Sq.Km.
		1991	2001		
Arunachal Pradesh	83743	864558	1097968	27.00	13
Assam	78438	22414322	26655528	18.92	340
Manipur	22327	1837149	2166788	24.86	97
Meghalaya	22429	1774778	2318822	30.65	103
Mizoram	22081	689756	888573	28.82	40
Nagaland	16579	1209546	1990036	64.53	120
Sikkim	7096	406457	540851	33.06	76
Tripura	10486	2757205	3199203	16.03	305
NER	263179	31953771	38857769	21.61	148
All India	3287263	846421	1028610328	21.54	313

Source: Basic Statistics of NER 2006.

The population growth in the NER is largely responsible for the low per capita income. CAG in NSDP shows that Manipur, Meghalaya, Mizoram and Tripura have been doing better than national growth rate. Interestingly, Assam the so-called most developed State in the Northeast has the lowest per capita income and lowest growth in NSDP.

Table: 1.3 State Income: Net State Domestic Product at Current Prices (93-94 Base) (Rs Crores)

States	1993-94	1999-00	2000-01	2001-02	2003-04	2006-07
1	2	5	6	7	9	10
Arunachal Pradesh	812	1457	1595	1729	2160	2246
Assam	13477	26273	28262	30674	35700	38624
Manipur	1141	2466	2517	2947	3323	3680
Meghalaya	1309	2908	3338	3699	4349	4754
Mizoram	618	1288	1635	1777	NA	NA

Nagaland	1251	2330	3427	3864	NA	NA
Sikkim	364	759	878	974	1242	1375
Tripura	1619	4193	4869	5559	6728	NA
NER	20591	41674	46521	51223	NA	NA
All-India NDP (93-94 base)	697992	1579479	1705104	1863795	2266148	2553334
All-India NDP (99-00 base)	-	1605643	1727452	1876285	2286826	2549139

Table: 1.4 Net State Domestic Product at Constant (1993-94) Prices (Rs. Crore)

States	1993-94	1999-00	2000-01	2001-02	2003-04	2006-07
1	2	5	6	7	9	10
Arunachal Pradesh	812	948	993	1036	1162	1179
Assam	13477	15078	15671	16441	18004	19041
Manipur	1141	1581	1559	1730	1823	1979
Meghalaya	1309	1999	2162	2317	2589	2740
Mizoram	NA	NA	NA	NA	NA	NA
Nagaland	1251	1614	2230	2385	NA	NA
Sikkim	364	508	538	575	677	720
Tripura	1619	2532	2999	3091	3680	NA
All-India NDP (93-94 base)	697992	1019296	1062492	1125480	1274074	1364259
All-India NDP (99-00 base)	-	1605643	1675632	1775951	2004703	2158718

Table: 1.5 Per Capita NSDP (State Income) at Current Prices (93-94 Base) (Rs.)

States	1993-94	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2006-07
1	2	4	5	6	7	8	9	10
Arunachal Pradesh	8733	12955	13669	14699	15690	16946	19063	19566
Assam	5715	8826	10080	10718	11423	12247	12821	13633
Manipur	5846	9742	11070	11066	12683	12878	13732	14901
Meghalaya	6893	11914	13088	14632	15813	16803	18135	19572
Mizoram	8319	13479	14909	18491	19704	22207	NA	NA
Nagaland	9129	12408	12594	17629	18911	20746	NA	NA
Sikkim	8402	14270	14761	16503	17644	20013	22062	24115
Tripura	5534	11012	13195	15253	17383	18550	20357	NA
All-India Per Capita NNP	7690	14396	15625	16555	17823	19040	20989	23241
All-India Per Capita NNP	(99-00 base) -	-	15886	16729	17883	18988	21142	23222

Source: Directorate of Economics & Statistics of respective State Governments.

The biggest constraint in the development of NER has been the poor state of infrastructure, in particular, roads, railways and power. Significant initiatives must be taken to improve connectivity. Inadequate development of basic infrastructure required for a sustainable scenario of growth and development is the root of all causes. A big upsurge of economic activities in the North East is being expected in the next five years, since huge investment is in pipeline for the infrastructure development in the region. This was stated by Planning Commission Deputy Chairman, Montek Sing Ahluwalia. A special strategy has been adopted in the 11th Five Year Plan for the development of infrastructure and connectivity in this region. "We have not done yet which we should have done," he equipped. Besides, North East is one of the few bio-diversity hotspots in the world. Its hydro-power resources can meet one third of India's needs. Gas and oil, though produced in small amount, are still unexplored. But, the North East has its own set of problems that can be argued as five I s- Initial Conditions, Infrastructure Laggings, Insurgency, Imperfection in factor and product market and Indifferent governance, which are responsible for low investment, low production and low welfare. Special focus had been laid on the economic development of the North Eastern Region and Sikkim during various Plan periods and strategies were adopted for removal of infrastructure bottlenecks, provision of basic minimum services, creating an environment for private investment etc. The continued efforts of the Government to remove impediments to lasting peace in the North East and to bring about an improved security scenario during recent past have raised hopes for faster economic development of the Region.

The State of Nagaland was formally inaugurated on December

1, 1963, as the 16th State of the Indian Union. It is bounded by Assam in the West, Myanmar (Burma) on the east, Arunachal Pradesh and part of Assam on the North and Manipur in the South. The State consists of seven Nagaland is bounded by Assam in the North and West , by Burma and Arunachal Pradesh in the east and Manipur in the south and runs more or less parallel to the left bank of the Brahmaputra . It has a land area of 16579 sq. km. and is a predominantly hilly state .Administrative Districts, inhabited by 16 major tribes along with other sub-tribes. Nagaland continues to be a deficit state despite enjoying special privileges. It is still heavily dependent on central grants for survival, and its economy still has long strides to take just to come at par with other states in India. The economy of Nagaland is predominantly an agricultural based economy with low productivity level with involvement of about 73% of the working population. Unfortunately, for a variety of reasons, the performance of the agriculture sector is disheartening in the state. The secondary sector consists of traditional village industries like handloom and handicrafts based on the local forest products. The contribution of this sector of this sector, particularly in Govt. sector is grossly inflated. The present state of infrastructure, such as transportation, communication, power, irrigation, etc. is inadequate, both in terms of quantity and quality. There is also a lack of easily available credit. The geographical isolation compounds the problem.

The population of Nagaland increased from 12.10 lakhs in 1991 to 19.90 lakh in 2001. It has experienced the highest decadal growth of population in the country during 1991-01 of 64.46 % as compared to the al India growth rate of 21.34 % during the same period. The population density of Nagaland has increased

from 73 persons per sq. km to 120 persons per sq. km. The sex ratio in terms of females per thousand males for Nagaland was 909 in 2001 as against 886 in 1991.Nagaland's gross state domestic product for 2004 is estimated at $1.4 billion in current prices.

Table: 1.6 Economic Classification of Population in 2001 Census (in Persons)

Total Population			Total Workers			Total Non-workers		
Persons	Male	Female	Persons	Male	Female	Persons	Male	Female
1988636	1041686	946950	849982	487767	362215	1138654	553919	584735
Main Workers			Marginal Workers			Other Workers		
Persons	Male	Female	Persons	Male	Female	Persons	Male	Female
708455	424236	284219	141527	63531	77996	253625	191489	62136
Cultivators			Agricultural Laboure			Workers in household Industries		
Persons	Male	Female	Persons	Male	Female	Persons	Male	Female
544433	271608	272825	33825	18141	15711	18072	6529	11543

Source: Statistical Hand Book of Nagaland 2006.

Table: 1.7 NSDP at Current price of Industry of origin from 1999-2000 to 2003-2004 (Rs in Lakh)

Sl. No.	Industry	1999-00	2000-01	2002-03	2003-04
1	2	3	4	6	7
1.	Agriculture	66126	94234	135468	143583
2.	Forestry & Logging	9004	9799	10605	11652
3.	Fishing	2070	2078	2337	1608
4.	Mining & Quarrying	39	91	259	305
	Primary Sector	77239	106202	148669	157148
5.	Manufacturing	3905	4164	5582	6140
5(a)	Registered	668	742	1338	1539
5(b)	Unregistered	3237	3422	4244	4601
6.	Construction	27114	33484	51760	53397
7.	Electricity, Gas & Water Supply	1027	2261	2904	2694
	Secondary Sector	32046	39909	60246	62231
8.	Transport, Storage and Communication	41662	56344	67258	72524
8(a)	Railways	104	122	190	205
8(b)	Transport by other means	40838	55590	65783	70639

8(c)	Storage	31	32	38	87
8(d)	Communication	689	600	1264	1593
9.	Trade Hostels & Restaurant	14279	18294	24168	24987
10.	Banking & Insurance	2900	4611	6022	7075
11.	Real Estate	29603	36723	44240	55692
12.	Public Administration	36212	42737	54897	56471
13.	Other Services	21677	23782	32689	33747
Tertiary Sector		146333	182491	229274	250496
Total		255618	328602	438189	469875
Per capita Income (Rs)		13819	16903	20407	20821

Source: Statistical Hand Book Nagaland 2007

Table: 1.8 NSDP at Constant (1999-00) price of Industry of origin from 1999-2000 to 2006-2007(Rs in Lakh)

Sl.No.	Industry	1999-00	2000-01	2001-02	2002-03	2006-07
1	2	3	4	5	6	7
1.	Agriculture	66126	94234	116158	135468	143583
2.	Forestry & Logging	9004	6799	10206	10605	11652
3.	Fishing	2070	2078	2237	2337	1608
4.	Mining & Quarrying	39	91	183	259	305
Primary Sector		77239	106202	128784	148669	157148
5.	Manufacturing	3905	4164	4824	5582	6140
5 (a)	Registered	668	742	1137	1338	1539
5 (b)	Unregistered	3237	3422	3687	4244	4601
6.	Construction	27114	33484	41770	51760	53397
7.	Electricity, Gas & Water Supply	1027	2261	2453	2904	2694
Secondary Sector		32046	39909	49047	60246	62231
8.	Transport, Storage and Communication	41662	56344	62033	67258	72524
8 (a)	Railways	104	122	143	190	205
8 (b)	Transport by other means	40838	55590	61049	65783	70639
8 (c)	Storage	31	32	31	38	87
8 (d)	Communication	689	600	810	1264	1593
9.	Trade Hostels & Restaurant	14270	18294	22086	24168	24987
10.	Banking & Insurance	2900	4611	5581	6022	7075
11.	Real Estate, Ownership of Dwellings & Business Service	29603	36723	40095	44240	55692
12.	Public Administration	36212	42737	48710	54897	56471
13.	Other Services	21677	23782	31094	32689	33747
Tertiary Sector		146333	182491	209599	229274	250496
Total		255618	328602	387430	438189	469875
Per capita Income (Rs)		13819	16903	18961	20407	20821

Source: Statistical Hand Book Nagaland 2008

The agriculture produce of the State is confined to consumption and not for commercial purpose. The soil and climatic conditions are suitable for producing various types of agricultural products. Farmers can be encouraged for bulk production provided market outlet is made available. The North-Eastern Region has been identified as a potential area for development of Food Processing Industries in view of its geo-climatic conditions. Further, the agriculture and allied sectors in Nagaland offer good inputs for development of a host of industries which could include: Floriculture; Horticulture; Rubber plantation and allied industries; Sericulture; Tea cultivation and processing; Bamboo shoot preservation; Mushroom cultivation and processing; Piggery; Poultry; etc. The geo-climatic condition of the State is congenial for rearing of silk worms such as Eri, Mulberry, Oak Tasar and Muga. The Government is promoting all these 4(four) varieties of silk worms in the State. Sericulture Demonstration Farms as well as Spinning units have been set up in the State. However, production of raw silk and reeling facilities can be further expanded with private investment in this sector.

India is the 2nd largest producer of fruits in the world, of the 388 million tonnes of fruit produced world wide, 8.5% are grown in Indian orchards. The paradox is that our share in the global export market is not even 0.1%. GOI has therefore, identified both fresh fruits and finished products as focus areas. National target is to capture at least 1% share of the global trade. Nagaland has immense potential for horticulture because of the varying soil and agro-climatic conditions. The present horticulture crops of various fruits cover an area of about 43 000 Hectares with an annual production of a little over 5, 00,000 tonnes. However,

with proper planning and investment, the cultivated area under horticultural crops and production can easily be quadrupled. The State has the endeavor to provide necessary infrastructure facilities for the growth of industry as a whole. The concept of Build-Operate-Transfer shall also be considered in identified areas of Power Generation, Road & Bridges, Warehousing and Industrial Infrastructure either in the private sector or Joint Venture with the State Government. Existing infrastructure shall be strengthened/ upgraded to suit the ever increasing demands of the industrial sector.

The industrial scenario is very much confusing in Nagaland. The process of industrialization in the state is in its infancy, but the need to have more industries has been well recognized. Nagaland doesn't come in the industrial map of India as a whole. Basically, the main reasons for underdevelopment of industries in Nagaland can be headed as inadequate infrastructure such as transport and communication, power etc, skilled labors, entrepreneurial initiative, lack of institutional financing, inadequate raw materials, proper marketing strategy, Govt. policy and above all friendly environment.

Here we make an attempt to see the structure of infrastructure facilities in the state chronologically.

TRANSPORT AND COMMUNICATION

The development of road has been playing a major role in meeting the transport needs of the state. However, the requirements are still greater, but the pace of development is not adequate. There is evidence that, the investment in transport sector has direct and strong multiplier effect on employment and income generation due to its strong forward and backward linkages with

other sectors, yet, the investment in transport sector in Nagaland has been inadequate. Some of the problems identified in respect of transport infrastructure development in the state are; Natural Constraints, Lack of all-weather Roads, Border State, Inadequate Rail Transport, Inadequate air Transport, Higher Cost of Transport, Problems of Rural & Urban Roads and Transport for Development Projects. The length of National Highway in the State is 471.17 Kms and the State Highway is over 1050 Kms. As on 31st March 2008 total road length in Nagaland is 21021Km, out of this 6451Km is surfaced. It shows that around two-thirds of the total roads in the state are unsurfaced which are considered as restricted during monsoon especially for both the use of mobility of people and essential commodities. All the major towns and villages are now connected by all weather roads. Efforts will be made to convert the roads leading to all industrial zones, industrial estates, Growth Centre, EPIP, etc. to sustain heavy vehicular traffic for transportation of raw materials and finished products. The railway network in the state is as minimal as nil. The length of broad gauge lines is 11.13 km, while that of the meter gauge lines is only 1.72 km. The length of National Highway roads is 365.38 km and state roads are 1094 km. The only airport of the state is in Dimapur.

The state has shown a steady growth in respect of postal service facilities. In 1987 there were only 255 post offices which have increased to 328 in 2008, out of which, rural area accounts for 92.68 percent. In terms of per capita availabilty, one post office serves 3788 population in the state against 5462 of all India average. As special distribution of post office in Nagaland is concerned, 51.24 sq. Km is served by one post office against 21.26 sq. Km of all India average in 2008. All the district

headquarters are now well connected with 63 telephone exchanges as on March 2009 and the Tele Communication Deptt. is in the process of expanding its network to cover all the recognized villages in the State (1059 villages already connected during 2007-08). The State Government is also planning to set up Community Information Centre in Block Headquarters and also open more new Telephone exchanges in backward area for training data base and application oriented end use. Internet facilities are available in Dimapur and Kohima; Laying of optic fibre cable to enable Video conferencing facility is available at Kohima and is expected to be commissioned soon at Dimapur.

POWER

Power is one of the most important components of infrastructure for rapid economic development of a region. Modernization of agricultural and industrial sectors depends upon the availability of power. Department of power, Nagaland is responsible for generation, transmission and distribution of power in the state. Out of total requirement of 52 MW of power in the state, Micro hydel stations and diesel stations in the state sector generate about 4.26 MW. In the central sector, NEEPCO has recently commissioned the 75 MW Doyang HEP. The allocation from NHPC and NEEPCO for Nagaland is only 25 MW and therefore the department has arranged with Meghalaya State Electricity Board and Assam State Electricity Board to meet the short fall. An important achievement of the department during 1996-97 is the completion and commissioning of the 132 KV and 66KV transmission lines from Kohima to Kiphire, Kiphire to Tuensang, Tuensang to Mokokchung and Mokokchung to Tuli with associated sub stations at Kiphire,

Tuensang, Mokokchung and Tuli, thereby completing grid network covering all the districts except Mon.

Therefore there is tremendous scope of investment opportunities in the Power sector. Nagaland has potential of more than 2000MW in hydel power generation. Despite the vast potential, the power generated within the state is quite insignificant. According to the Annual Administrative Report of the department of power, the total power generation was 3.21(MU) and the total purchase was 230 (MU) in 2000-01. Thus the state could generate only 1.39 % of the total power requirements. The state mainly purchases power from NEEPCO, NHPC and PGCI.

Below is given the table showing installed capacity of electricity:

Year	Unit	2001-02	31.03.04	31.12.2006
Installed Capacity	MW	28.5	28.5	102.7

The main power potential in Nagaland is hydro-power. The potential of thermal power in the form of coal and natural gases are yet to be explored. The per capita energy consumption is considered as an indicator of development of a region and it is extremely low of 120 kwh in Nagaland and 360 kwh of all India level.

CREDIT & FINANCIAL INSTITUTIONS

Money is the life blood of economic development and the degree of monetization of an economy is a direct indication of the level of development attained by it. Now a principal test of the degree of monetization of the economy of a country or a region is the structure and the efficiency of the financial & Credit institutions operating therein. At the National as well as state

level, there are large number of financial institutions provides a variety of financial services for the promotion of infrastructure facilities which contribute to develop large, medium and small scale industries.

The State has a reasonable banking network in place. All the major banks have branches in Dimapur and Kohima, while other districts are served by the SBI and other State level banks. As on March, 2008 there are 8 Regional Rural Banks and 21 Cooperative Banks with Credit Deposit Ratio of 41.6 and 27.6 respectively. In order to provide adequate credit linkage to the industrial sector, the Nagaland Industrial Development Corporation Ltd. (NIDC) which is also acting as SFC shall be strengthened to cater to the needs of the entrepreneurs in the services of IDBI, SIDBI, NEDFi, NMDFC, NSDFC and commercial banks for channeling credit for industrial development of the State. On March 31, 2008 the number of scheduled commercial bank branches in Nagaland is 93. The bank deposits were Rs 1223 crores and bank credit was Rs 206 crores. On March 31, 2008, as compared to the national average of 58.72 % the credit deposit ratio in Nagaland is 16.84 % and also lowest amongst the North Eastern states. The Financial institutions operating in Nagaland are NEDFi, IDBI, SIDBI and NABARD. Till March 31, 2005, NEDFi sanctioned a total of Rs. 1237 lakh to various projects located in Nagaland.

Table: 1.9
Banking Summary

Scheduled Commercial Banks	2000 (Rs.Lakh)	2001 (Rs.Lakh)	2002 (Rs.Lakh)	2004 (Rs.Lakh)	2008 (Rs.Crore)
Bank Branches	70	69	70	72	93
Bank Credit	118	124	132	950	5604
Bank Deposit	770	890	1052	5027	1376
Regional Rural Banks	**1998** (Rs. Lakhs)	**1999** (Rs.Lakhs)	**2004** (Rs.Crore)	**2005** (Rs.Crore)	**2007** (Rs.Crore)
Bank Branches	8	8	8	8	8
Bank Credit	489	516	26	56	56
Bank Deposit	1533	1441	50	51	51

Source: Statistical Hand Book of Nagaland 2008.

The above table reveals that the credit deposit ratio of Nagaland in 2008 stood at 16.84 cr. compared to this the credit deposit ratio of the north east as a whole stood at Rs 29.35 cr. Poor C: D ratio in the North East in general and particularly in Nagaland has been one of the major hurdles in the industrialization of the State. Having several branches of commercial banks in the state, the rates of credit deposit is very low, which is one of the reasons for poor industrial growth. Apart from these there are a number of functioning cooperative societies in the state.

HEALTH:

Despite challenges such as insurgency and conflict, the indicators for health in Nagaland are impressive. The life expectancy at birth has been calculated at 73.4 years, way above the national average of 62.3 years, and much closer to the figures in developed countries. Infant mortality rate (IMR) at 42.2 per 1000 is also much better than the national average of 68 per

1000 live births. Similarly, under-five mortality rate, per 1000 live births, is 63.8 as against the national figure of 96. In terms of maternal mortality rate (MMR), the State's figure of less than 1 per 1000 live births, against the national average of 5.4, is much closer to the figures in developed countries at 6–8 range. However, the total fertility rate (TFR) of Nagaland, at 3.77, is a cause for concern. The last decadal growth rate (1991–2001) at 64.4 percent, for instance, is the highest in the country, and 10–15 times higher than in developed countries. This poses a great demographic challenge for planners and policy makers in the State. As of March 31, 2000, over 60 percent of the villages in Nagaland are still to be covered by any kind of basic health care such as dispensaries, etc. Based on population norms, as per 2001 Census, the State requires 25 CHCs, 100 PHCs and 666 sub-centers. Nagaland also requires improvements in secondary and tertiary health care. Specialised services are very limited and available only in Kohima, Mokokchung and Dimapur. The State has eight STD clinics, two TB hospitals, one mental hospital and DTCs for a population of 20 lakh. Most existing facilities are also ill-equipped and without access to modern diagnostic and therapeutic aids. There is only one CT scan machine in the whole state, at a private hospital. High-end investigations and immunology, as well as complicated cases of neurology, cardiology, cancer, etc., are all referred outside the State. This results not only in much inconvenience to the people but also tremendous financial losses to the State. Strengthening and streamlining the areas of strength of the communities, while at the same time, carrying out awareness and education programmes and building infrastructure are required. Nagaland has a rich tradition of herbal and ethno medicines with many indigenous medicine practitioners (IMPs).

This is further bolstered by the presence of the State's rich biodiversity and availability of herbal plants. Official recognition and incentives could extend health care coverage to all.

EDUCATION

The educational journey of Nagaland, despite seemingly insurmountable problems, is an impressive experience. From a mere 17.91 percent in 961, out of a population of a few lakh, the state literacy figures have climbed to 67.11 percent, above the national average, when only a few decades earlier, almost the entire Naga population was illiterate! Even female literacy has reached 61.92 percent. Today, Nagaland has the courage and confidence to think about reaching the standards achieved by developed countries. Prolonged insurgency/nationalism has left Naga society deeply wounded and hurting. Insurgency also constituted the single biggest hurdle in the path of education. It affected administration, appointment and posting of teachers, infrastructure development, proper monitoring and supervision as movement became restricted, and affected classes as even school buildings were occupied by fighting forces. The social capital and natural resilience of Naga communities have withstood all these, and today, the State is poised to make a unique contribution to education everywhere through the concept of Communitisation.

However, Nagaland still faces many problems and infrastructural needs. Among these are easy accesses to educational institutions, quality of education in schools, formulation of an adequate education policy for the State, etc. While management and governance issues may be largely tackled through the Communitisation process, at least at lower levels of education,

educational policy for higher education must be in tune with the needs of society and the available resources and strengths of the communities. In other words, educational policy and higher planning and long-term development strategy of the State must go hand in hand. It is a sad commentary on the state of affairs that till date Nagaland has not been able to formulate an adequate education policy for the State. Education is vital to the process of sustainable development in Nagaland. The Communitisation initiative has created the policy framework for bringing about substantial improvement in the quality of education. The focus of Nagaland's endeavours should centre on providing education to all children. It must also ensure, through innovative ideas and experiments, which the educational experience not only remains a tool of learning but also contributes to growth and development of the students as individuals and prepares them to contribute towards prosperity of the State and society. Due to the agrarian nature of the state's economy, potential for developing agro-based industries should be exploited on priority basis. However, while selecting such projects, their comparative success prospects with respect to project viability and extent of benefits to local people would need to be examined carefully. The State should try earnestly to provide necessary infrastructure to facilitate the growth of industries and as a whole. The concept of Build-Operate-Transfer shall also be considered in identified areas of Power Generation, Road & Bridges, Warehousing and Industrial Infrastructure either in the private sector or Joint Venture with the State Government. Existing infrastructure shall be strengthened/ upgraded to suit the ever increasing demands of the industrial sector. The State Government will have to actively promote foreign direct investment in the projects that involve

and improve infrastructures like power, roads, social and health care facilities. Similarly, foreign direct investment shall be encouraged in manufacturing activities in thrust areas identified under this policy.

Nagaland has begun its first phase of economic planning since its statehood in 1963. Prior to that, it was a district under Assam state, where the administrative machinery was geared up mainly to combat insurgency, for which there were no significant development activities. A concise glance at the Nagaland economic scenario reveals that the Sectoral structure of the economy began to evolve since the beginning of planning era with building up of social overheads and infrastructure for economic development. The state has made some progress in areas like agriculture, transport, education, health, water supply, banking etc. However, it appears that the state has failed to leads its economy into the right direction; the various indicators of economic development prove that Nagaland could not achieve the expected level of development.

To facilitate rapid and sustained industrial development in the State through enhanced investment, an investor friendly environment, provision of infrastructure and institutional support, attractive incentive package and optimum utilization of existing resources in order to gainfully exploit emerging opportunities in the national and international markets and generate substantial income and employment avenues for the people of Nagaland. In Nagaland the process of economic development has decelerated because the momentum of development was not from within the economy and forces of development were not firmly rooted within the economy. To attain a sustained and cumulative economic development requires

not only physical capital but also development in human endowment, social attitude, political condition and historical accidents. Despite its vast natural resource endowments, Nagaland could not exploit and utilize these resources judiciously due to lack of capital, technology, knowledge and persons with right attitude for entrepreneurship. The ineffective administrative and political structure is also a big hindrance to the economic development. The tertiary sector is no exception. The development of road and transport is found to be unsatisfactory. Nagaland has to depend almost entirely on road transport due to rugged terrain area. There is an urgent need to develop all the identified potentials without further delay.

OVERVIEW OF LITERATURE:

During the British period officials made some studies which are now available in the form of official reports and articles. Mention may be made of the following: RB Pemberton's "The Eastern Frontier of India" (1835), TT Cooper's "The Mishmee Hills" (1873), GW Beresford's "Notes on the North East Frontier of India" (1881), a Mackenzie's "The North East Frontier of India" (1884), JF Needham's "Report of a trip into the Abor Hills" (1884), and "Report on the Bebejiya Mishimi Expedition (1899-1905), GW Dun's "Preliminary Notes on Daphalas"(1896), AC Banerjee's "The Eastern Frontier of British India" (1934) and "Report of the Administration of North East India" (1921-22) compiled by Mittal Publication.(1984).

RB Pemberton was the first to compile available information on the area and people of the eastern frontier of British India. Later on A Mackenzie up dated the account for official use with his writing of "Memorandum on the North East Frontier of

Bengal" (1869). Subsequently, he wrote the above stated books on the history of the relations of the governments with the hill tribes of the North East Frontier of India. Later on Robert Reid supplemented Mackenzie's work in his book "History of the Frontier Areas Bordering Assam from 1883-1941" (1942). The other important works in this area are Ursula Bower's "The Hidden Land" (1953), Verrier Elwin's "India's North East Frontier in the Nineteenth Century" (1955).

After independence some Indian scholars made use of the above source to present a mere coherent picture. Mention may be made of BC Chakraborty's "British relations with the Hill Tribes of Assam since 1838" (1964) covering the period of second half of the Nineteenth century (1858-1900), DP Choudhury's "The North East Frontier of India" (1978) and ML Bose's "British Policy in the North east Frontier Agency (1979) covering the period from (1926-1947), Parshottam Mehra's "The North East Frontier" (1980) Vol. I &II contains rivalry of India with Tibet and China. But these are all works in history.

The resurgence of ethnic identities and resultant conflicts led to new area of study in recent past. Directly or indirectly, Nagaland finds its place in the following works. DS Nag's "The Tribal Economy" (1958), HK Borpujari's "Problems of the Hill Tribes of North East Frontiers" (1970), LP Vidyarthi's "The Tribal Culture of India" (1977), VIK Sarin's " India's North East in Flames" (1980), KN Bhattacharjee's " North East India- Political and administrative History" (1983), Jayanth Pathy's "Tribal Peasantry: Dynamics of Development" (1984), HV Trivedi's "Economic Development of Tribes in India" (1985), SA Ansari's "Socio- Economic Development of Tribal Area of Manipur" (1986), Dr. ST Das's "Tribal life of North East India" (1986),

GC Rajora's "Social Structure and Tribal elites" (1987), AC Talukdar's "Political Transition in Grass-roots in Tribal India" (1987), Vinod Vyasulu's "Development of Backward Areas" (1987), PC Mahapatra's "Economic Development of Tribal India" (1987), MC Paul's "Dimensions of Tribal Movements in India" ((1989), A Singh's "Planning for Developing a Backward Economy" (1989) and M Haran's "North East India- A Profile" (1990).

Wide proliferation of edited volumes on North East India is taking place. Most of them are compiled seminar papers. Hence a working knowledge of the functioning of the Economy of the North East or any of its constituents is not possible from them. Mention may be made of the following:

SN Dubey (Ed) "North East India" (1978), Dr. B Dutta Roy (Ed) "Socio-Econonmic Profile of North East India" (1978), B Dutta & SP Agarwala's(Ed) "Reorganization of North East India since 1947" (1996), T Mathew, "Tribal Economy of North Eastern Region" (1980), J B Ganguly's "Marketing in North East India" (1984), B L Abbi's "North Eastern Region- Problems and Prospects of Development" (1984), A P Sinha's "Changing North East India" (1986), G Das's "Demographic Profil of North East India" (1994), P C Barua's Development Planning of North East India" (1990), P D Saikia's (Ed) "Rural Development in North East India" (1989), J B Bhattacharjee (Ed) "Sequences of Development in North East India (1989).

We found no other studies in the field of infrastructure, of course publications on Nagaland are not lacking in number, but they are mostly on anthropological and political aspects of the people of Nagaland. Some of these are mentioned here. In the field of anthropology, "Ao Nagas" by C W Clerk (Shillong-1983),

"The Nagas- East of the Namjpuk Kha" by D P Dwar (Rangoon-1927), "The Naked Nagas" (London-1939) and Return to the Naked Nagas" (Bombay-1976) by C V F Haimandrof, "Lotha Nagas" (London-1922), "ao Nagas" (London-1029) and "Rengma Nagas" (London -1937) by J P Mills are important. On political aspects of Nagaland, M A Arau's "Peace in Nagaland" (New Delhi-1974), V Elwin's "The Nagas in the 19th Century" (1969), Y D Gundevia's "War and eace in Nagaland" (Delhi-1974) etc are some important books.

Again some title on Nagaland can be specifically mentioned: "Decentralised Development: A study of village development boards in Nagaland" by B. P. Maithani, National Institute of Rural Development, "Rural development in Nagaland" by A. Lanunungsang Ao, Har-Anand Publications, "Emergence of Nagaland : Socio-economic and political transformation and the future" by Hokishe Sema, Vikas Pub. House, "National Security Problem In India: A Case Study of the Insurgency Problem" by Longjam Randeep Singh (Hardcover - June 1999), APH Publishing Corp, "Nagas: Problems and Politics" by Ashikho Daili Mao (Hardcover - December 1992), South Asia Books, "Conflict in Nagaland: A Study of Insurgency and Counter-Insurgency" by V.K. Anand, South Asia Books, "Nagaland File: A Question of Human Rights" by Luingam Luithui, Nandita Haksar, South Asia Books, "The Nagas of Nagaland : Desperadoes and Heroes of Peace" by Kanwar Randip Singh, Deep & Deep Publications, "Nagaland" by Verrier Elwin, United Publishers, "Tribals and their Culture in Manipur and Nagaland" by G.K. Ghosh, South Asia Books, "Tribes of Nagaland" by Sipra Sen, South Asia Books, "History of Nagaland" by B.B. Ghosh, Asia Book Corp of Amer, "Nagaland: Past and Present" edited by

Hargovind Joshi. New Delhi, Akansha Publishing, 2001, viii, 180 p., ISBN 81-87606-10-X, "Orchids of Nagaland" by T.M. Hynniewta, S.K. Kataki and B.M. Wadhwa/edited by P.K. Hajra and U. Chatterjee. Calcutta, Botanical Survey of India, 2000, 306 p., 88 line drawings, colour photographs, "Brief Historical Account of Nagaland" by M Alemchiba, Kohima, 1970, "British Annexation of Naga Country" by Tajenyuba Ao, Naga Literature Society, Mokokchung, 1993, "Naga Insurgency" by M Horam, Cosmo Publications, New Delhi, 1988, "Nagaland (India: Land and People series)" by Prakash Singh, National Book trust, New Delhi, 1995, "Nagaland: The Night of the Guerrillas" by Nirmal Nibedon, Lancers Publishers, New Delhi, 1978, "Peace in Nagaland: Eight Years Story 1964-72" by M Aram, Arnold-Heinemann, New Delhi, 1974, "World of Nagas" by Murkot Ramunny, Northern Book Centre, New Delhi, 1988 etc.

Many noted research scholar have carried out research on the economy of the state. Whereas the largest part of research results are related to the field of sectoral development and analysis like industries, commerce sector, transport and communication sector, taxes etc. Swabera Islam Saleh, a scholar in 1989 has presented a critical analysis on her thesis "Nagaland Economy in Transition" from primitive to a modern economy. Further this study presented the role, problems and prospects of social and tertiary sector of the state's economy through the analysis of plan performance.