Chapter 3

INDUSTRIAL DEVELOPMENT OF ASSAM
THE ORGANISED SECTOR

"In each region the nature of the problem and the impediments to rapid development in particular fields should be carefully studied and appropriate measures devised for accelerated development."

Balanced Regional Development.

Third Five Year Plan, Summary

1. Introduction : The State and its People

The present state of Assam, after several political dissections, consists of 78,523 Sq.Kms in area forming about 2.4 p.e. of the 3.29 million Sq.Kms. of the Indian Union. It is bound on the north by Bhutan and Arunachal Pradesh, on the east by Arunachal, on the south by Nagaland, Manipur, Meghalaya, Mizoram and Tripura and on the west by Tripura, Bangladesh and West Bengal. A sovereign country till the first quarter of the 19th century, Assam was administered, after its annexation to the British Indian Empire in 1826, by the Lieutenant Governor of Bengal as a part of the province of Bengal. In 1874 it was made a Chief Commissioner's province and the newly annexed territories of Coober (1852), Khasi and Jaintia Hills (1833 and 1855; Garo Hills formed a part of Goalpara district since 1862 and was separated in 1869), the North East Frontier Tracts of Balipara and Sadia
(1842), Naga Hills (1878) and Lushai Hills (1892) were all amalgamated in 1898. After the Partition of Bengal in 1905, Assam was joined up with East Bengal under a Lieutenant Governor of East Bengal and Assam. However, after the annulment of Bengal Partition in 1911, Assam along with the district of Sylhet (which later went to East Pakistan barring 1836 Sq.Kms. with a population of 2.9 lakhs remaining in Assam) was again made a Chief Commissionership in 1912 till 1921 when it became a Governor's Province till Independence. Subsequently, however, in accordance with the policy of reorganisation of Indian states, Nagaland was separated from Assam in 1960, while the state of Meghalaya with Khasi, Jaintia and Garo Hills was carved out and the Union Territories of Arunachal Pradesh (former North East Frontier Agency) and Mizoram (former Lushai Hills) were created out of Assam under the North Eastern (Reorganisation) Act of 1971. Till June 1983, Assam consisted of 10 districts, viz., Goalpara, Kamrup, Darrang, Nowgong, Sibsagar, Dibrugarh and Lakhimpur from the West to the East in the Brahmaputra Valley, two hill districts of Karbi Anglong and North Cachar Hills and the Cachar district in the Surma Valley.

However, after July 1983 and up to August 1985, 8 more districts were created by reorganising the old ones. The reorganised districts now are (1) Dhubri, (2) Kokrajhar, (3) Goalpara (formerly Goalpara), (4) Barpeta, (5) Nalbari, (6) Kamrup (formerly Kamrup), (7) Pragjyotishpur (carved out of some areas of Kamrup east of Guwahati-Dispur and some
western adjacent parts of the Nowgong district for locating the permanent capital of the state - Pragjyotishpur),

(8) Darrang, (9) Simitpur (formerly Darrang), (10) Jorhat,

(11) Sibsagar (formerly Sibsagar), (12) Cachar, (13) Karimganj
(formerly Cachar), (14) Nowgong, (15) Dibrugarh, (16) Lakhimpur,

(17) Karbi Anglong and (18) North Cachar. The state lies
between latitudes 23° and 25°75' North and longitudes 80°42'
and 96° East.

The population of the state in 1981 was 19,296,643
with a density of 254 per Sq.Km, according to population
projection by the Census Commissioner¹ as against 14,625,152
in 1971 with a density of 186 per Sq.Km. The decadal growth
rate of population in the state had shot up from 16.99 p.c.
in 1911 and 19.93 p.c. in 1951 to 34.98 p.c. in 1961, 34.95
p.c. in 1971 and 36.04 p.c. in 1981. "Assam has registered a
344.58% increase of population, the highest among all states
in 70 years (1901-1971) as against 129.67% for all India...
..."² During the last six decades from 1921 to 1981 too
the growth rate in the state was the highest, i.e., 389.2
p.c. as against the All India average of 172.1 p.c.³ The
tremendous population growth rate in Assam is due not to
natural growth rate, but to large scale immigration." ... the history of Assam is a history of migration to Assam by

¹. The 1981 Census could not be conducted in Assam due to the
anti-foreigners movement launched since 1979. However, the
Census Commissioner has projected the population. Ref,
Padmanabha, P., Census Commissioner of India, Population
of India, Some Dimensions, Article in Yojana, Republic
Day Special, 1983, p. 4


³. V.K.R.V. Meo, Inter-State Variations in Population Growth,
article in Yojana, Republic Day Special, 1983, p.26, Table 1
races and peoples from different regions across its borders." The decadal percentages of immigration to the total population of the state were 13 in 1901, 12.5 in 1911, 16.1 in 1921, 15.2 in 1931, 15.0 in 1951 while in 1961 and 1971 immigrants constituted 11.11 p.c. and 10.27 p.c. respectively.\(^4\) The percentage of immigrants to the total population of the state in 1981 works out roughly at about 15 with a natural growth rate of 2\% as against actual growth rate of 36.04 p.c.\(^6\)

Migration of labour and capital are generally reckoned as media favourable for economic growth for the region into which they move.\(^7\) In case of Assam there was in-migration of both capital and labour since the second half of the nineteenth century when wide-scale tea plantation was undertaken by the British capitalists. The plantation economy had also generated secondary effects of building up of roads and bridges, plying of steamer and railway services and as a result traders and bankers and white collar job seekers from other Indian provinces flocked into the State. The process of what is called 'indentured' labour immigration continued

\(^4\) Census of India, 1971, ibid., pp. 9-10, 20


\(^6\) Average birth rate in Assam during 1971-77 was 34.3 as against average death rate of 15.3 per thousand. Ref. Basic Statistics for N.E. Region, N.E.C., Shillong, 1980, pp. 7, 8

\(^7\) Myrdal, Gunner, Economic Theory and Under-developed Regions, Vora and Co., Bombay, 1958, p. 39
till 1931 and then it slowed down or rather ceased, for, by
"this time the total number of already settled labourers both
in gardens and outside was considerable." The other important
aspect of this tea-garden immigrant labours was that ex-tea
garden labours or whose fathers or forefathers were tea-garden
labours, constituted a "good portion of the agricultural
population in Upper Assam."8

Besides, the virgin soil of Assam had also attracted
a large number of immigrants from erstwhile East Bengal and
the Census Report of 1911 mentioned for the first time the
commencement of this voluntary stream of settlers. The number
of immigrants from East Bengal (afterwards East Pakistan and
since 1971 Bangladesh) reached such proportion that R. B.
Vagheiwalla in his 1951 Census Report called it "probably the
most important single event" in the history of this state
during the last 50 years.9

The third component of the immigrants, mostly cattle
farmers came from Nepal and settled along with the retired
soldiers of the Gurkha Regiment. The stream of immigrants
both legal and illegal from Bangladesh and Nepal is
continuing till this day.* With the growth of the secondary

8. Goswami, P.C., The Economic Development of Assam, Asia
9. Census of India, 1951, vol. XII, Assam, Manipur and Tripura,
Part 1-A, p. 72

*As per the 'Assam Accord' signed by the Central Government and
the Anti-foreigners Movement leaders on 13th August 1985, the
post March 25, 1971 illegal immigrants are to be 'expelled'
and the post Jan. 1, 1966 to March 24, 1971 infiltrators
disenfranchised for ten years and future infiltration is to
be checked.
and tertiary sectors like industry, construction, trade and commerce and services immigration from other Indian states as the forth component is also continuing and in 1971 they constituted 35 p.c. of the total 15 lakh immigrants out of whom 9.8 lakhs came from East Pakistan and Nepal. 10

Large scale immigration has also added to the ethnic, linguistic and cultural diversity of the state's population. Like several other Indian states, Assam is also a polyglot with as many as 76 mother tongues and dialects and six major languages which include Assamese (60.89%), Bengalee (19.71%), Hindi (3.42%), Bodo (3.65%), Nepali (2.39%) and Mikir (1.31%), Assamese being the State language 11 (other groups constitute 6.63 p.c.).

The assimilation of these diverse communities, - a process which started long time back is likely to take a much longer course than can be visualised, for chauvinism and conservatism encouraged by divisive forces seem to have struck deep into the values and attitudes of different communities.

Population immigration ought to have brought in technical and business management skill to the region. But

10. Processed from Migration Tables, Table D-1 Census of India, 1971, Assam, Series 3, Part II-D
in case of Assam the immigrants had little technical skill and were not psychologically adapted to industrial discipline. The indentured tea-garden labourers, ignorant and illiterate, were taught industrial discipline by the rod and locals had hardly anything to learn from them. Like them other immigrants, mostly porters, seasonal earth workers, rickshaw pullers could also have a spread effect on skill formation of the locals. Only the immigrant peasants from East Bengal, inspite of exerting pressure on and competition for land, could have some favourable influence; they had helped improving the health of the countryside by clearing jungles and converting the wilderness into prosperous villages. They had also introduced cash crops like jute and spices, which the indigenous cultivators had imbibed at the early stages.12

As regards capital investment, the tea industry introduced in 1855 started attracting British capital into the region. Investment in this industry during 1881 to 1901-02 has been estimated at Rs. 110.9 million. Investment in railway, coal, petroleum and saw mills amounted respectively to Rs. 62.4, Rs. 3.4, Rs. 4.6 and Rs. 1 millions approximately during the period. Besides, investments were also made in telegraph and tele-communication system and pebbled roads built by the Government. 

12. Census of India, 1951, op.cit., p. 77
1881-1901", according to Dr. Amlendu Guha, "appears to have been around Rs. 200 million, even at a conservative estimate." This was undoubtedly a very big push. This big push although "presumably equal in size to some 15-20 per cent of the region's then national income, did not, however, lead to any commensurate growth in the indigenous sector of the economy, either simultaneously or in the following decades." 13

2. Occupational Pattern

The population of the state is mainly rural. 91.18 p.c. of her population lives in 21,995 inhabited villages while only 8.82 p.c. as against All India 19.91 p.c. lives in 69 urban areas as per 1971 Census.

Needless to emphasise that the rural population predominately agricultural, enjoys, as noted by Dr. S. Chandrasekhar in 1951 "a high social and cultural stability arising out of cultural and ethnic continuity and homogeneity. All the traditional modes of culture are strongly preserved in a rural society promoting conservatism which offers the most resistance to reform and innovation." 14 While resistance to


reform and innovation still persists, the villages in Assam are also caught up in the mainstream of changes; the self-sufficiency of village life no more exists, the former barter system has mostly been replaced by money economy. There has also occurred great changes in the habits, tastes and fashions of the village people, particularly among the young generation. A case study of a village Chota Haiber near Newong town done by the Agro-economic Research Centre for North East India, Jorhat, under the guidance of Dr. P. C. Goswami, the then Director of the Centre shows that "many villagers consider the standard of living of the town people as an ideal one and are striving hard to reach that level. Many of them are found to imitate the urban way of life. The recent changes in their food habit, clothing, acquisition of durable goods etc. all conform this trend."

The study has also thrown light on some other aspects of village life. The village is inhabited by three groups of people, viz., indigenous Assamese, immigrant Hindus and immigrant Muslims. It is reported that the original inhabitants, agriculturist by occupation, exposed to exogenous forces seemed to have found it difficult to adjust themselves to the changing situation. While the Muslim settlers are ideal cultivators in their own way, the Assamese have learnt

a lot from them through demonstration effect particularly in cultivating cash crops like jute and spices. While the Muslim immigrants depend equally on agricultural and non-agricultural occupations, the Hindu immigrants depend primarily on non-agricultural occupations like trade and commerce, professions and services and small and village industries like weaving, repair shop etc. 16

The following quotation from the Assam Government memorandum gives a picture of the occupational pattern of the population of Assam during the 3rd decade of the present century. "Assam is not an industrial province. It is an agricultural province with no large towns or industrial centres. Its largest and most important industry, tea cultivation, is mainly agricultural. Apart from the tea industry, the only large labour concerns are the coal mines and oil fields and a match factory. There are a few scattered saw mills, rice mills, oil mills, engineering workshops and printing presses, but they are small and of little importance in this province. Secondly, as an agricultural province ... Assam has practically no indigenous industrial classes. There is of course, some indigenous casual labours both skilled and unskilled in the small towns and villages to meet the ordinary needs of the people, vis., agricultural labours, porters, carpenters, black-smiths etc. but for the industries

16. Ibid., pp. 11, 115
of importance labour has to be imported from other parts of India ... ... .

The picture of the economy of Assam as depicted by the above cited memorandum seems to hold good, with some broad modifications, even today, after the lapse of half a century. Out of the total working force of 4,088,493 (27.96% of the total population) in 1971, 3,135,260 persons or 76.69% were engaged in the primary sector while 223,233 or only 5.46% remained engaged in the secondary sector and 730,000 or 17.85% were employed in the tertiary sector. 18

Comparison of previous census records is difficult because of variation in the area of the state from census to census as well as changes in the conceptions like working force and industrial occupation. Yet the following table processed from the 1951 and 1961 census records along with the 1971 data gives an idea about the broad occupational pattern of population of Assam.


Table 3.1

Occupational Pattern

<table>
<thead>
<tr>
<th></th>
<th>1951</th>
<th>1961</th>
<th>1971</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working force</td>
<td>3,752,794</td>
<td>5,137,421</td>
<td>4,088,493</td>
</tr>
<tr>
<td></td>
<td>(45%)</td>
<td>(43.3%)</td>
<td>(27.96%)</td>
</tr>
<tr>
<td>Primary Sector</td>
<td>2,852,286</td>
<td>4,029,216</td>
<td>3,135,260</td>
</tr>
<tr>
<td></td>
<td>(73.33%)</td>
<td>(78.42%)</td>
<td>(76.69%)</td>
</tr>
<tr>
<td>Secondary Sector</td>
<td>570,846</td>
<td>423,825</td>
<td>223,233</td>
</tr>
<tr>
<td></td>
<td>(14.67%)</td>
<td>(8.82%)</td>
<td>(3.46%)</td>
</tr>
<tr>
<td>Tertiary Sector</td>
<td>465,760</td>
<td>684,670</td>
<td>730,000</td>
</tr>
<tr>
<td></td>
<td>(12.00%)</td>
<td>(12.76%)</td>
<td>(17.85%)</td>
</tr>
</tbody>
</table>


The total figures given in the table above do not give a true picture of the occupational pattern of the population, for the number of total workers in 1971 was quite small due to small percentage of work participation rate, i.e., 27.96 p.c. which was higher both in 1951 and 1961, i.e., 43 p.c. But the percentages of the workers engaged in the primary, secondary and tertiary sectors give a clue to the livelihood pattern. While 73.33 p.c. of the working force was engaged in the primary sector in 1951, the percentage of dependence on this sector had gone up to 78.42 in 1961 with a slight fall of about 2 p.c. points in 1971 indicating the fact that growth of population in the state during the succeeding decades could not be absorbed by the other sectors of the economy, rather the percentage of the working force engaged in the secondary sector had decreased from 14.67 in 1951 to 8.82 and 3.46 in
1961 and 1971 respectively. However, there was an improvement in the labour absorbing capacity of the tertiary sector both in absolute number as well as in terms of percentage of the working population; the total number of population in this sector increased from 465,760 in 1951 to 730,000 in 1971 with a rise by 5.35 percentage points.

3. Industries in Ancient Assam

Assam had come to the industrial map of India in the second half of the nineteenth century with the starting of an experimental tea garden by the British Government at Joipur in the Lakhimpur district in 1833, extraction of coal from the Makum coal field in 1881, opening of the Dibru-Sadiya Railways in 1882 and drilling of mineral oil during 1866-68 near Margherita and starting of some 14 saw mills in 1901 for producing tea packing boxes and scantlings which entailed as well as were facilitated by infrastructures like railways, steamer ports, roads, telegraph and tele-communication network and a few banks.19

However, like India, Assam also had a glorious past in traditional manufacturing like textiles, processing and production of metals like iron, gold, copper, brass and bell-metal, earth works like pottery, bricks and tiles, handicrafts

19. Goswami, P.C., op.cit., pp. 142, 158, 160; also Guha, A., Panter Raj to Swaraj, Indian Council of Historical Research, Delhi, 1979, p. 55
like bamboo and cane works, ivory and horn works. Kautilya in his Arthasastra had mentioned that several manufactured articles like Agaru (Agallochurn), Bhadrakshya (camphor), Tailaparnika (oil like fragrant substance or perfume) and such other commodities were available, among others, in Suvarnakudya, Antarvatya, Paralauhitya and Parasamudra which according to commentaries by Bhattaswami were principalities or localities in the country of Kamrup, the ancient name of Assam. Various fabrics like Karpasike (cotton), Dukula (Muga silk or another assamoe), Khauma (Eri/Endi or attacus ricini) and Patronma (Pat or mulberry silk) were also produced in Kamrup and among the Patronma "that which is produced in the country of Suvarnakudya is the best" - "Magadhika Paumdraka Suvarnakudisaka Cha Patronma ... Tasang Suvarnakudisaka Shrestha."  

Smelting of iron from ore which is said to be a megalithic culture of the neolithic age of human civilisation was practised by the Baisus since prehistoric times. William Robinson maintained that the people in the vicinity of the mountain ranges along the southern extremity of the valley "at one time engaged extensively in its manufacture" although

20. Provincial Gazetteer of Assam, pp. 60-63


the products were "unable to contend with the iron of the
Khasia hills." 23

Smelting of iron needs coal and the Imperial
Gazetteer of India mentions 'coal measures in Upper Assam
under native rules' which shows that coal mining was also an
industry of importance in ancient Assam. 24

Production of gold and manufacture of jewellery were
other important industries. Gold was washed out of the sands
of several rivers in the Assam Valley and Assam gold was sent
to the market places near the Ganges delta. 25 Gold coins
minted and circulated by the Koch and Ahom kings indicated
the extensive availability of gold in Assam. 26

Circulation of silver coins too indicates that silver
was produced in plenty. As a matter of fact platinum was
found in the sands of the Dihing river, lead and silver were
found in the Khasi hills and corundum occurred in the Khasi
hills till the beginning of the present century. 27

Other metal works include copper, brass and bell-
metal wares of various size, shape and design used as

23. Robinson, William, A Descriptive Account of Assam, British
Library, Calcutta, 1841, p. 226
24. The Imperial Gazetteer of India, Clarendon Press, Oxford,
1903, vol. VI, p. 71
25. Barua, B.K., Cultural History of Assam, LBS, Gauhati, 1969,
p. 105
pp. 214, 243; also Robinson, W., op.cit., pp. 248-49
27. The Imperial Gazetteer of India, p. 72
containers in the temples as well as for domestic and decorative purpose. The brazier of Assam made “no less than fifty various articles of brass, copper and mixed metal, some of which, however, are of coarse and clumsy manufacture.”

Shihabuddin Talis, a Mughal writer, had however observed in 1662 that the rooms of the king’s palace “were adorned both within and outside with mirrors of brass, polished so finely that when the Sun beams fell on them, the eye is dazzled by the flashing back of light.”

Turners worked in buffaloes’ horns and ivory. Gajamukuta or ivory pearls were one of the important products of Assam. But by the time the Imperial Gazetteer was written (1905), the art of curving in ivory or wood were almost extinct, though some were found in Jorhat, Barpeta and Sylhet.

Brick and tile making was also an industry of importance in which artisans were engaged by the kings or local chiefs. The extensive remains of temples and buildings give ample evidence of this industry. However, local masons might be lacking in the skill for constructing bridges etc., for workmen from Bengal were said to have been imported for


29. An extensive quotation on an Account of Assam written by Shihabuddin Talis has been made available by Edward Gait, op.cit., pp. 140-51.

30. Imperial Gazetteer, p. 75
constructing bridges over some rivers. As regards adhesives for bricks, tiles and stones, no record is found although lime-burning was a profession (of the Mukhi caste) and beds of lime-stone were extensive and from lime-burning it may be guessed that some sort of cementing materials were also produced.

Besides bricks and tiles, other clay works like pottery carried on by the Kumars (use the potter's wheel) and Hiras (do not use the wheel) were widely prevalent. The discovery of 5th and 6th century artistic and decorative designs in Tezpur and Sadiya are said to be the best specimens of pottery of early times.

Handicrafts of minor importance but carried extensively as domestic and household occupations were the bamboo, reed and cane works like mats, plain and coloured Sital Patl (cool mats), cane stools, baskets, rain hats (Japi) made of bamboo and palm leaves etc. Main carpentry works were boats, canoes, boxes, chests, trays, bedsteads, implements of agriculture, posts, beams, and doors and windows of houses. The palace of the king "was decorated by such arts and rare inventions of wood works" which, wrote Shishabuddin Talis,

31. Hamilton, Francis, An Account of Assam (1807-14), Historical and Antiquarian Studies, Gauhati, 1965, p. 63
32. Imperial Gazetteer, p. 72 and Robinson, W., op.cit., p. 226
"my pen fails to describe in detail." 34

Another ancient industry which deserves mention was the production of salt. Robinson recorded that brine springs were frequent about the low ranges of the Muga Hills and some of these were worked and salt was produced, but Bengal salt, being superior and cheaper, had driven out the native salt. Dr. P. C. Chaudhury holds that the manufacture of salt, like iron, was in the hands of the tribes, mainly the Nagas and Manipuris. Shihabuddin Talis had, however, maintained that salt was very dear and difficult to procure; people, therefore, had prepared some liquid substance from ashes of plantain pieces dried and burnt as substitute for salt 35 (it is used even today by the rural folk in combination with salt and is called Khar - a sort of carbonated potash).

Among the agricultural product processing industries mention may be made, besides cotton and Eri spinning, Muga and Pat reeling, oil oil pressing in the Ghani and paddy husking in the traditional mortar called Dhenki or Urel. For pressing oil from mustard seeds, the seed is parched and powdered in the traditional mortar, then oil is pressed by two boards which are acted upon by a long liver. Paddy husking was a domestic business of the womenfolk in every peasant household.

Preparation of jaggery out of sugarcane was also a domestic industry. 36

4. Factors Retarding Economic Development in Early Periods

The question may now be posed why a country, afterwards a province of British India, so rich in natural resources and its people so expert in working in metals, particularly a people that could smelt iron which is said to be the foundation of modern civilisation and could spin and weave, besides cotton, all kinds of silk, remained backward both in agriculture and industry till this day? The explanations given in section I of the 2nd chapter are applicable in the case of Assam too, of course, with some broad modifications.

Firstly, the political background. Assam or old Pragjyotishya or Kamrup with its territories extending up to several districts of present West Bengal and Bangla Desh* was never a single administrative or political unit in the past till it was annexed to the British Indian Empire in 1826. Although the ancient history of Assam unfolded itself with Aryan settlements in the region since the days of the


* According to Dr. Suniti Kumar Chatterji, North Bengal is an extension of the Bodo land of Assam and Pragjyotishya included, besides Assam, some parts of Bengal. Ref. Bani Kanta Mahatii Memorial Lectures, 1954, G.U., 1970, pp. 13, 67-68, 71-72
Mahabharat, history also provides evidences of the existence of a number of petty states or principalities ruled by chiefs or feudal lords - a characteristic of ancient and medieval society all over the world. As a matter of fact Assam is said to "an anthropological museum" of varied races, religions and cultures. Territories occupied by the immigrant Mon-Khmer races like the Khesis and Jaintias, Tibeto-Burman races like the Koch, Kachari, Nrising, Leolung, Dimacha, Gare, Ambha, Tipra, Chutiya and Morens had their own political units. Even after the immigrant Tai-Ahoms of the Shan or Mongolian race had established their kingdom since the historically recorded date of 1228 and had reigned for long six hundred years till 1826, the old districts of Goalpara, Kamrup and Darrang were under the Koch kings up to the third quarter of the 17th century when the Ahoms had occupied this part by repulsing the Mughals in 1682.

During this secular period of the chequered history of the region, particularly since 1198 when the Koch kingdom was first attacked by the Muslims from the west, both the Koch and Ahom kings had to fight many a pitched battle not only against foreign invaders but also against rebel local chiefs and lords. The Ahom kings after consolidating their power by defeating the great Mughal army, also had engaged themselves

38. Barua, B.K., op.cit., pp. 7-8
in fratricidal intrigues and palace coups besides fighting a protracted civil war since 1769 against a rebellion by the Mysamrias who were defeated in 1795 with the help of a British army. Then, after a short interval of peace, came the most notorious and barbarous Burmese invasions of 1817 and 1819, the last war being fought out in 1826 with the help of the British army at the stake of Assam's Independence! **

Thus much of the time, energy and wealth of the chiefs and kings had to be wasted either in preserving the territorial integrity from internal dissensions or defending their sovereignty from external aggressions till the Sun of Assam's Independence had set in 1826. It may be recalled that the three hundred years preceding the present century were remarkable in the history of human civilisation for the scientific inventions and technologies and their application in the fields of production in Europe and in the Asian countries of Japan and China. In France although the Government had directly owned and managed only a few industries, it channelled the economic activities since 1660 till the revolution of 1789, by way of conferring "privilege" to individual manufacturers in the form of direct grants from the treasury, interest free loans, tax concession etc. Even

* Dr. S. K. Bhuyan in his Anglo-Assamese Relations (1771-1826) has given minute details about this 'Civil War'. Ref. Chapter VI,

** Edward Gait has given a vivid description about the horrified oppressions perpetrated by the Burmese on the people of Assam. Ref. op.cit., pp. 215-17
direction for the production of specified commodities and the use of specified techniques were issued by the Government through an elaborate system of administrators and inspectors. In China the Government had, as early as the Ming period (1368-1644), operated through its Ministry of Works weapon and textile factories, metal workshops, leather workshops, etc. Large operations like mining were also under the strict control of the Government. In Japan the Shogun (title of the Chief or King) had taken, during the seventeenth century, the aid of foreign technical experts," sent Japanese managers and students to other countries for technical study, urged the purchase of foreign machinery and began the construction of dockyards, iron works and other industrial establishments which were based upon 'western models'.

Assam, in spite of the external aggressions and internal revolts, was a free country up to the first quarter of the 19th century. But here in Assam, we do not find any instance of initiative taken by the Royal dynasties to develop industry or agriculture except a few cases of gold washing and armory manufactures. The kings and nobles and local chiefs seemed to have remained busy, like their Mugal counterparts in India, in squandering their wealth in "noisy pomp and tawdry splendour" by imitating "Mughal works of art, their dress, music, food and delicacies". They had also spent another portion of their

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accumulated wealth in maintaining a defence force, constructing a few forts and ramparts, and building magnificent palaces to live in and monuments to commemorate themselves or their dear ones, besides constructing and repairing temples, and the third part of their wealth was petrified in hoards of precious metals like gold and silver which begot nothing. The nobility, status conscious, were satisfied with the status quo and had little incentive to seek new opportunities or improve the technique of production.

Improvements in tools and implements and their application in production so crucial for raising productivity of labour were done in European countries by independent artisans and handicraftsmen due to "all empiricism and tentative endeavour" called forth by "economic ends and spontaneous efforts." For instance, John Kay (b. 1704) inventor of the fly shuttle was a clothier and a reed maker, John Wyatt (b. 1700) inventor of the spinning machine was a carpenter, James Hargreaves who invented the spinning Jenny in 1762 was a dealer in cloth and a carpenter and Richard Arkwright (b. 1732), the "hero of political economy" for his invention of the patented water frame in 1768 was a wig maker and a dyer. 41 Examples can be multiplied. In Assam or for that, in India, artisans were not free, they were either servants of the village community 42 or slaves of the feudal

42. Gadgil, D.R., The Industrial Evolution of India in ... Oxford University Press, 1950, pp. 57-63
chiefs, nobles and kings. Patronisation of art and craft by the courts and courtiers, was no doubt, there in Assam, but the craftsmen were not free from bondage.

There prevailed in Assam several forms of bondage. The tillers of the soil had to render free service to the kings, nobles and other aristocrats at different layers of the society under what was known as a Paik system in lieu of a few patches of land for subsistence. This contingent of Paiks or servitors had also to furnish the households of their masters with other necessaries. Bonded labour enthralled by mortgaging their lives for a few rupees "continued in bondage for life". Besides these two, there was open slavery under which system all persons of a respectable position had one or more of slave both male and female who were "bought and sold and even mortgaged like any other article of property." What is more, social distinctions between the aristocracy and the common people were so rigid that "none but the highest nobles had the right to wear shoes, or carry an umbrella or to travel in a palanquin". Persons of humble birth willing to wear the Chadar or Shawl were obliged to fold it over the left shoulder and "not ever the right as the upper class did. The people were not permitted to build houses of masonry or with rounded ends."  

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44. Robinson, W., op.cit., p. 279
45. Sait, E., op.cit., pp. 241-42
It follows that the economy of Assam was based on covert or overt serfdom and slavery* until 1843 when the system was abolished46 by Act V promulgated for the purpose by the English. The local chiefs, nobles and the kings while leading a parasitic life in 'noisy pomp and tawdry splendour' on others' labour cared little to improve the technique of production either in agriculture or industry, rather the system of slavery had a bearing, all over the world, as observed by J.B. Cairnes in his work "The Slave Power", on the instrumentum mutum or implements of production. It is found that light instruments did not last long at the hands of the instrumentum vocale or a slave labour and therefore they were supplied with heavier and crude instruments and stronger instrumentum semi-vocale or animals such as mule in place of horse.47 Thus the social system itself was a brake on the improvement in the techniques of production in Assam. As observed by Romesh Chandra Dutt, "manufactures do not flourish when manufacturers are held under any sort of thraldom."48 Robinson had observed on several occasions the "crudeeness and rudeness of the highest degree" of the implements of agriculture

* Major Jenkins reported that the aristocracy had made serf of all the productive classes who being weighted down by accumulated burden of exaction were rendered idle, dissolute and timid and had taken to the habitual use of opium. Made available by Barpujari, H.K., A.D. IN THE DAYS OF COMM., 1824-1858, pp. 150, 191.

46, Barpujari, H.K., op.cit., pp. 152, 256


and irrigation, of the spinning tools and weaving looms in Assam and Hamilton had also noted that the artisans in Assam had "no capital except a few measurable tools". Sustained economic growth of an economy depends on both extensive and intensive use of capital which in turn is dependent on what Rostow calls "propensity to accept innovations". In Assan all these were completely lacking and could not be expected from suppressed labours and the parasitic aristocracy whose requirements were provided "through the services of the Pykes" and "comforts and dignities were maintained by the slaves."

Jatua System: The socio-economic system of production and distribution of wares of the village artisans was also responsible for the stagnation of technological development. In Assam there was also prevailing what was called a Jatua system, the local variant of the Indian Jajmani system. The researcher comes to know about it from field study in a village Randia near Hajo. Here the blacksmiths, oilmen and potters were reported to had been paid annually in kind of paddy etc. by the cultivators for the supply of wares or

49. Barpujari, H. K., op. cit., p. 151


** We have referred to the system in the last part of section 2 of the Introductory chapter.
pressing of oil and the system prevailed till the second world war. The exorbitant price rise of agricultural goods had acted as an agent in withering away the system when the cultivators refused to pay half a Mound or one Mound (one Mound is equal to about 40 Kg.) of paddy to his oilmen, blacksmith or potter etc. This Jatowa system had acted as a brake on innovation by the artisans, for their markets being assured and at the same time limited within the village or some neighbouring villages, the artisans cared little to improve their technique of production. What is more, incentive of the artisans was, probably, paralysed by the utter want of means of conveying and exchanging their products, i.e., lack of transport and communications as well as non-monetisation of the economy were drags on production.

Another determinant of economic growth, according to Rostow, is the 'Propensity to consume'. The higher is the propensity to consume, the higher is the encouragement for production as well as to bring in innovations. In Assam the social distinction between the aristocracy and the common men had fitted a brake on the propensity to consume; when people were not allowed to construct "houses of masonry" or restrictions were imposed on the use of shoes, shawls or umbrella all incentive to produce, innovate and consume must, under compulsion, saturate.

More important, the propensities to develop "fundamental science" and to "apply science to economic ends"
as Rostow puts them\(^{50}\) which are of crucial importance for economic development were completely lacking. Western education which according to Romesh Chandra Dutt was "perhaps the greatest of the blessings India had gained under British rule"\(^{51}\) found its way into Assam in 1835 with the establishment of an English school in Guwahati; while the Universities of Calcutta, Madras and Bombay were founded in 1857, the only college in the then province - Cotton College was established in 1901. Thus educationally and culturally, from the angle of contact with scientific ideas of the West, the people of Assam remained more than a century backward as compared with those of other Indian provinces. No doubt, Satras, Tols and Pathasals or educational institutions were not lacking in ancient Assam; but they provided only stereotyped lessons of pious and religious life and according to Dr. H. K. Barpujari, a distinguished Assamese historian, this type of education could not serve "so much for any useful purpose or widening the mental horizons",\(^{52}\) rather had narrowed down the way of living and level of thinking of the so-called educated sections, leave aside the illiterate populace. Even after the percolation of western influences including those of the province of Bengal in later years into the newly developed 'middle classes' 'prejudices die hard' says Dr. Barpujari, 'not only amongst the

51. Dutt, R.C., op.cit., vol. II, p. 143
52. Barpujari, H. K., op.cit., p. 275
unsophisticated masses, but even among the enlightened
section of the urban areas, for orthodoxy was the prevailing
order of the day and therefore the neo-elite, except a few in later periods, could not embark on new ventures or vocations.

Culturally the people were also not "achievement motivated" as sociologists call it. In Assam fusion of different cultures, particularly tribal and Aryan cultures had been a continuous process since the days of the epics. While the Aryan culture with its "world negating philosophy" stood and still stands as an impediment to economic growth, the tribal culture with its inherent superstitious traditions and prejudices still predominating, was not conducive at all to economic growth. No doubt, the Maori tribal social culture in New Zealand had changed due to its exposure to and blending with European culture in the early decades of the last century. In Assam, rather in our country as a whole Aryanisation of non-Aryans brought the people nearer, with their old superstitions and irrational beliefs, to the world negating philosophy and fatalism rather than to the humanistic

53. Ibid., p. 873

* Reference has been made in another context in the following section.

** According to Dr. Smiti Kumar Chaterji, Assam's contribution was remarkable in the "synthesis of cultures and fusion of races that took place in India, a synthesis which had started in prehistoric times" Banjanta Mohati Memorial Lectures, 1974, Gauhati University, 1970, p. 11

approach, for applying scientific methods to nature and human life and using technology judiciously to have control over the environment, conquer poverty, reduce diseases, increase the life span and alter the course of human civilisation. Thus the people of Assam were opiated in two ways, vis., (1) in the Hindu religion which lays more stress on man's bliss in the other world than making the earth in which he lives, moves and has his being were conducive for human habitation and (2) by eating and smoking real opium extracted from the poppy plant which was then widely cultivated. The impact of religion and opium on the people was perhaps best typified in the person of Gaurinath Singha (1780-1795), the Ahom king, who in the face of the Mowarrie revolt was found "always either washing or praying and when seen, intoxicated with opium." Consumption of opium was so widespread that "men, woman and children alike, constituting three-fourths of the population used the drag which destroys the constitution, enfeebles the mind and paralyses industry."

As regards the Mohammedans. They came mostly from the West accompanying the invading armies; some were taken war prisoners, they settled and married here. This section of the

55. Narasimhaiah, H., This Won't Do, Let us go Humanistic, article in Yojana, August 15, 1985, Special Number on Scientific Temper or Bondage of Traditions, This issue contains several thought provoking articles by scholars like H.P.M. Bhargava, P.N. Haksar, Prof. Yashpal, Prof. M.G.K. Menon, Prof. D.P. Chattapadhyaya and others.

56. Galt, E., op.cit., p. 215, Captain Welsh quoted and Robinson p. 331
populace along with the Hindu converts to Islam, according to the Mughal writer Shibabaddin Talish, acted "exactly in the same manner of the Assamese." However, according to other source, they formed a useful community of tailors, brassiers, silk weavers and other artisans. But they too did not fair better in scientific temper than the Hindu and other Aryanised people of the State.

Last but not the least, was the hand of nature which also acted as a drag on the state's economic development. The soil of the Brahmaputra Valley being fertile and at the same time the climate being "damp and relaxing" "any race that had been long resident there" observed Edward Gait who had first hand knowledge of the situation, "would gradually become soft and luxurious" and might "decay in the 'sleepy hallow' of the Brahmaputra Valley". Moreover, Assam being situated in a seismic belt, it was and still is subject to ravages by frequent earthquakes. There occurred as many as 5 historically recorded devastating earthquakes in the 18th and 19th centuries. The one that occurred in 1897 had overthrown all the masonry buildings within a few minutes or seconds, silted up the river beds, altered the levels of the topography of the state as a result of which extensive tracts of land subsided and became uncultivable, and roads and railway embankments were utterly destroyed. Thus nature, while

58. Gait, E., op.cit., pp. 8, 351
making the people ease loving and lazy, often had destroyed
the fruits of labour by earthquakes and recurring floods,
besides widespread epidemics and pestilences with high tolls
of human lives, till this day and acted as an unknown agent
in dragging the state's economy to stagnation.

5. Growth of Modern Industries

After the annexation, however, some other objective
changes in the life of the people and economy of the province
became visible. It may be recalled that history does not
provide evidence of European merchants either having commercial
interest or oppressing the people of Assam, as elsewhere in
India, during the role of the Abous who had pursued a policy
of isolation and forbidden people either to enter or leave
their territories.59 No doubt, some Jesuit Missionaries had
come up to Haje (about 35 Kms. west of Gauhati) in 1626 and
1742 some agent of the Ostend India Company had come to Assam
for salt trade; some French or other European merchants had
also erected a factory at Jogighopa in Goalpara during the
second half of the 18th century.60 But even after the
establishment of formal trade relations by the East India
Company with Assam in 1771, free trade was impeded by
detentions for search, forfeitures, penalties and unauthorised
exactions of merchants by the Duaria Barums (officers-in-charge)

59. Provincial Gazetteer of Assam, p. 63
60. Bhuyan, S.K., Anglo-Assamese Relations (1771-1826), LBS,
Gauhati, 1974, pp. 57-82
at the cheek posts (particularly at Hadira Chokoy in Goalpara).

However, after the introduction of free trade since 1835 remarkable changes came over in trade and manufactures. The traders and moneylenders, mostly Keyas or Marwaris who held monopoly of external trade of the province and had served as bankers, speculators as well as revenue collectors for the British Government had flushed out, in collaboration with the indigenous Mudeis (traders), the local producers by advancing money against commodities to the cultivators at usurious rates of interest and throw away price and through barter terms of trade. The system continued down to the last days of the British rule under which the people had groaned in debt burden. According to the Provincial Banking Enquiry Committee, 81.5 p.c. of the agricultural families in Darrang and 78 p.c. in Nowgong were indebted to the extent of Rs. 289 and Rs. 235 respectively in 1929-30. At the same time, after introduction of free trade, Assam instead of exporting brass, copper or iron wares, became an importer of foreign goods like broad cloth, sugar and other luxury articles in exchange of raw materials; and what was most deplorable, smelting of iron

61. Barpujari, H.K., op.cit., pp. 241, 245-46, 263. (Money was advanced for example, at the rate of Rs. 2 per seer (about a kg) of opium when its market price was about Rs. 10/12. The barter terms of trade was one seer of salt for 15 seers of mustard seeds when the price of one Maund (about 40 kg) of salt was Rs. 3.75, i.e., about .10 paisa per kg, in other words price of 15 kg. mustard seed was .10 paisa.

62. Made available by Goswami, P.C., op.cit., p. 61. (The system of advance by traders against standing crops is continuing even today.)
along the Doyang river which supplied all the requirements of
the Ahom kings was gradually abandoned due to importation of
superior and cheaper varieties from outside. Thus Assam
became an importer of manufactured goods and an exporter of
agricultural raw materials.

The English, however, entered Assam at a time when
the British manufacturers stood against the East India
Company's trade monopoly (monopoly was abolished in 1833) and
favoured investment in plantations like coffee, tea and indigo
and processing of raw materials like cotton for their domestic
manufacturing industries. Therefore, the policy of the British
administration under the guidance of David Scott (1825-32) and
Francis Jenkins (1834-66) were directed towards making the
economy of Assam a producer of commercial—cum—industrial crops
like opium, sericulture, sugar, indigo and cotton. With this
end in view David Scott had recommended to the Government the
cultivation of standard opium through a system of Government
advance and purchase and farming of Muga and mulberry silk by
establishing some demonstration farms in modern lines. But
his recommendations being turned down by the Government, Scott
himself had started in 1831 a sericulture farm in the Darrang
district with some imported artisans from Bengal which however,
was closed down after his premature death in 1932.

In this respect, we may go a bit deeper into the
question. The natives of Assam had a long tradition in raising

Muga and mulberry silks and as such some native farmer should have some forward for cultivation and rearing of Muga and mulberry silk in modern lines; for the East India Company had done some mulberry plantation and established during the 1820's some eleven or twelve filature factories in Bengal. We may also recall that one John Lombe had gone in 1716 all the way from England to Italy to learn about modern silk throwing machine, had made secretly drawing of a machine, sent the same to England hidden in silk cloth, himself came back in 1717 and had set up near Derby his own silk throwing plant employing three hundred workmen. It was Lombe's pioneering enterprise that made the English silk competitive or rather superior to Indian silk. But in Assam, nay, in India as a whole a Lombe was not born to innovate or even to imitate the modern methods of rearing and reeling silk. The reasons for this lack of contrive for enterprise were the same social conditions of slavery, mental attitudes of closed and traditional ideas and lack of capital on the part of the artisans and initiative on the part of the parasitic aristocracy.

However, during the tenure of Jenkins tea cultivation was undertaken, coal beds and oil springs were explored, regular steamer service in the Brahmaputra was introduced. What is more, through a policy of land settlement and land

64. Dutt, R.C., op.cit., vol. I, p. 189
65. Mantoux, Paul, op.cit., pp. 198-99
revenue which however, initially had run counter to the interest of the Ryots, he wanted to have an admixture of people, particularly of European descent, to produce a varieties of cash crops like sugarcane, indigo, tea, cotton and such other staples with a view to remove the "apathy and inaction" of the "most wandering and least industrious of the people." 66

Needless to repeat, as we have already noted on an earlier occasion, that total investment in tea, railways, road, steamer, coal, petroleum, saw-mill and telecommunication during 1881-1901 was about Rs. 200 million or Rs. 10 million per year which amounted to some 15 to 20 p.c. of the province's income. But the most deplorable aspect of this huge investment was that such a big push could not lift the economy of the province to the take-off stage.

The reasons for the failure of such massive investment to create further momentum for self-sustained growth are not far to seek. Take-off into self-sustained growth requires, besides the rate of investment, two other factors, viz., (1) development of a manufacturing sector and (2) emergence of a political, social and institutional framework to exploit the impulse to expansion. 67 In Assam the manufacturing sector remained confined within the processing of tea and some forest products alone while the extractive

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66. Barpujari, H.K., op.cit., p. 214

fields remained limited in oil and coal. But even in the case of tea cultivation itself, the growing demand for stores were met by imports from England. "It was the Company's normal policy to purchase the bulk of the gardens' requirements of stores in the United Kingdom and ship them to India. This heading of stores covered not only cultivation tools, factory maintenance materials such as belting, paint, oil, grease etc. but chests, steel works for buildings, machinery spares and replacements and tea making machine itself."68 Had some of the tea companies, private entrepreneurs or the Government taken initiative to establish some Machine tools industry for the production of tea cultivation implements like spades and hoes, machinery and spares for tea factories and some Hardware industries to produce goods like knobs, bolts and nails, door handles, hooks and services necessary for tea factory buildings and quarters in the gardens and cooleries, a modern manufacturing sector would have emerged long ago and this might have served as catalyst for the development and growth of other manufacturing industries. But such a political or institutional set up could not emerge from an alien power to the detriment of their home manufacturers and from the callous neo-elite.

And more important to note, the inflow of investment into the state was counter balanced by massive outflow of

income. According to Dr. Guha, 'the gap between the income stream accrued and the income disbursed within the province increasingly widened.' The surplus that accrued from investments in tea, coal, oil and others was remitted to the U.K. in the forms of fabulously high 'dividends' and individual savings from 'inflated pay-packets'. Besides, remittance of wage-bills by the employees in the private establishments and Government offices as well as casual and seasonal labours constituted a sizable amount every year and in 1904-05 outflow through this channel amounted to Rs. 4.8 million by way of money orders alone. Moreover a 'good part' of the remaining income was spent on imported goods and services from outside, i.e., interregional trade also had its backwash effects on the state. And it may be recorded that this triad of corporate dividend outflow, wage bill remittance and import-bill is working even till this day as a drag on the state's capital formation.

The Draft Outline of the Fifth Five Year Plan, Assam, was emphatic on this point. The economic drain through this triad 'amounted to about Rs. 150 crores annually'. The expansion and growth of banking activities in recent years has also added the forth channel for outflow of income from the state. According the Draft Fifth Plan the excess of bank deposit over bank credit was over Rs. 26 crores annually.

69. Guha, Amalendu, Planter-Raj to Swaraj, p. 40
during 1969 and 1970. Besides, net small savings collected in the State amounted to Rs. 8.3 crores in 1971-72. As against the above, capital flowing into Assam through central Government budgetary transfers (including loans and grants) was of the order of Rs. 70 crores and other investment flows may be placed at around Rs. 30 crores per year. It follows that the outflows exceed the inflows by Rs. 63 crores or 9 per cent of the State income.  

As regards the social framework, the society in Assam as a whole, as pointed out earlier, was tradition bound with medieval ideas and attitudes. However it must be added that some 'social deviants' as sociologists call them had appeared in Assam. Maniram Dewan (1806-58) the martyr of the 1857 mutiny in Assam, Rasheeswar Barua, Dinanath Bambahah, Munshi Rahmat Ali and some others in the nineteenth century had taken to tea plantation, saw milling and timber business. But even this elite remained content with tea plantation for

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* Deposits in the scheduled commercial banks was Rs. 35089 lakhs as against an advance of Rs. 18567 lakhs, i.e., outflow was Rs. 165.62 crores in 1980 through 491 bank offices. Ref. Statistical Handbook, 1972, Tables 21-29.


71. Haselitz, F., Sociological Aspects of Economic Growth, Vakils, Peffer and Simon, Bombay, 1960, pp. 22-23. Prof. Haselitz defines a social deviant as one whose behaviour departs from traditional customs and practices and institutions.

** Dr. Amalendu Guha has appended in his Planter-Raj to Swaraj a list of what he calls Assamese middle class, pp. 341-43
which there existed a secured market and trade and commerce which yielded quick returns at the least risk. Inspite of the fervent appeal by Amarendra Dhekiyal Phukan\(^72\) (1859-1890) the pioneer of the Renaissance in Assam that "no nation can secure to itself the blessings and comforts of civilised life until it has manufactures of its own, no country can rise to wealth and importance that is deficient or imperfectly nursed in manufactures", this new middle class did not risk their capital in other forms of manufacturing industry.\(^*\) An attempt by one Lakheswar Barthakur after his training in Japan (1905-9) to start a Sugar factory along with a Sugar estate of 1500 acres under a joint-stock company proposed to be formed by Raja Prabhat Chandra of Goalpara\(^73\) was, however, discouraged by the colonialists on various grounds and the proposal did not materialise. This shows that the imperialists with their hypocrisy for improving the conditions of the economy had discouraged the emergence of an industrial class.

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* Dr. Smiti Kumar Chatterji had rightly observed that while the last 100 years' contact with the British had produced most successful businessmen and industrialists in Gujrat and Rajasthan, in Assam and Bengal the creation was mainly in the fields of creative literature and scholarship rather than in business or industry. Therefore the economic opportunities in Bengal and Assam were exploited by the Merovarais from Rajasthan. Ref. Bani Kantab Kakti Memorial Lectures, p. 50

Even during the early twentieth century, particularly during the two world wars which gave stimulus to several industries else where in India, Assam remained in the backwood although this region was used as a base against Japanese invasion during the world war-II. During the second world war textile, Jute and tannery industries in particular had expanded and developed to a great extent. Assam had potentialities for the development of these raw material based industries. But neither the state nor the private enterprises came forward into these fields, rather the raw materials, viz., Cotton, Jute and hides and skins were exported for processing in Gujarat and Bengal and the imported manufactured goods had gradually ousted the products of the cottage industries.

The Swadeshi movement also had little impact on the development of domestic industries in Assam. During this movement only some trading shops like the Assam Valley Trading Company and the Central Weaving Aid Society which dealt respectively in Swadeshi goods and cloth at cheap price were established and a few small and cottage units for manufacture of handloom fabrics, ink, nibs, matches etc. came up in the Surma Valley.74

It should, however, be noted that towards the close of the world war-I, the Assam Saw Mill and Timber Company was floated in 1918 and the Assam Railways and Trading Company had

opened a factory at Margherita in 1924 for producing plywood and railway sleepers. In 1925 the Swedish Match Company had floated the Assam Match Company and started its factory at Dhubri. Besides these, two medium size railway workshops at Bengaigaon and Dibrugarh, an engineering workshop at Tinsukia a few motor repairing workshops at Dibrugarh, Shillong, Guwahati and Jorhat, a small leather tanning factory at Guwahati, a distillery near Dibrugarh, a Government owned Shellac factory at Chaparmukh, a cotton ginning mill in Gare hills and two aluminium factories, one each at Bengaigaon and Karimganj, besides some rice mills, oil mills, saw mills and some soap factories and printing presses came up before Independence. According to the 1st Census of Manufactures, Assam had only 58 factories in the calendar year 1946 as against 5000 for the country as a whole, i.e., Assam had only 1.1 p.c. of the total Indian factories as against 24 p.c. in West Bengal, 25 p.c. in Madras and 19 p.c. in Bombay. These factories in Assam had provided employment to 4814 persons of which 4221 were workers and had a capital investment of Rs. 84,48,553 consisting of Rs. 27,62,902 in land and building, Rs. 50,07,296 in plant and machinery and Rs. 658,556 in other assets. The number of industries had, however, increased to 75 in 1948 and they provided employment to 4784 workers and 937 other persons. But these industries could have little

75. Goswami, P.C., op. cit., pp. 162, 164, 165
76. First Census of Manufactures, India 1946, Ministry of Industry and Supply, Government of India 1949, pp. 1, 7, 11 and Third Census of Manufactures, 1948, p. 9
spread or diffusion effect. Setting up of manufacturing or extractive industries which may induce the growth of other enterprises, subsidiaries and ancillaries are only important from the angle of industrialisation of a backward region. Here the process is not the historical one, from ant to elephant, i.e., from cottage to small, from small to medium or from medium to large scale industry, rather the opposite is the case,77 from large to medium, small to cottage industries through systems of sub-contacting, assembling or putting out. Unfortunately such industry did not come up in Assam. No doubt, coal was extracted from coal mines for fuelling railway engines and tea factories, but chemical industries for converting coal did not come up; nor even the extraction and smelting of iron which would have led to establishment of a small steel plant was undertaken. Mineral oil was extracted and refined on a small scale, but downstream industries for processing the waste into carbon, wax etc. did not come up due to lack of initiative and enterprise of outside or foreign entrepreneurs and absence of contrive and technical knowledge of the locals.

6. Registered Factories

Thus on the eve of the First Five Year Plan, i.e., 1951, Assam had a very slender industrial base with only manufacturing industries having a fixed capital of Rs. 136 lakhs providing

77. Rosenstein-Rodan P.M., How to Industrialise an Under-developed Area, article in Economic and Political Weekly, Annual Number, January 1960, p. 188
employment to 2,940 persons consisting of 1908 workers and 1032 others according to Census of Manufacturing Industries. However, the total number of registered factories was 911 and they employed 65,193 workers on a daily average in 1951; in other words, Assam which then included Nagaland, Meghalaya, Mizoram and some areas of present Arunachal Pradesh had the following establishments with employment noted against them according to the Chief Inspector of Factories.

Table 3.2
Number of Registered Factories and Employment, 1951

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<tr>
<th>Name</th>
<th>No. of Factories</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cotton gins and presses</td>
<td>4</td>
<td>445</td>
</tr>
<tr>
<td>2. Rice Mills</td>
<td>146</td>
<td>1645</td>
</tr>
<tr>
<td>3. Gur Factory</td>
<td>3</td>
<td>42</td>
</tr>
<tr>
<td>4. Edible oil Mills</td>
<td>28</td>
<td>521</td>
</tr>
<tr>
<td>5. Tea Factories</td>
<td>390</td>
<td>32021</td>
</tr>
<tr>
<td>6. Distillery</td>
<td>1</td>
<td>162</td>
</tr>
<tr>
<td>7. Sew Mills</td>
<td>42</td>
<td>1817</td>
</tr>
<tr>
<td>8. Printing Press</td>
<td>16</td>
<td>650</td>
</tr>
<tr>
<td>9. Match Factories</td>
<td>2</td>
<td>1311</td>
</tr>
<tr>
<td>10. Bakery</td>
<td>5</td>
<td>36</td>
</tr>
<tr>
<td>11. Cotton Textile</td>
<td>4</td>
<td>66</td>
</tr>
<tr>
<td>12. Petroleum and Petroleum Pumping etc.</td>
<td>2</td>
<td>1695</td>
</tr>
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</table>

78. Directorate of Economics & Statistics, Assam, Statistical Hand Book of Assam, 1962, Table 11.4, p. 73
Table 5.2 (Contd)

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<th>1</th>
<th>2</th>
<th>3</th>
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<tr>
<td>13. Pottery and cement</td>
<td>1</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>14. Bricks and Tiles</td>
<td>1</td>
<td>119</td>
<td></td>
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<td>15. Steel and Trunk</td>
<td>6</td>
<td>177</td>
<td></td>
</tr>
<tr>
<td>16. General and jobbing Engineering</td>
<td>24</td>
<td>1495</td>
<td></td>
</tr>
<tr>
<td>17. Uly. workshop</td>
<td>4</td>
<td>2112</td>
<td></td>
</tr>
<tr>
<td>18. Motor vehicle Repairing</td>
<td>20</td>
<td>557</td>
<td></td>
</tr>
<tr>
<td>19. Ice Manufacture</td>
<td>1</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>20. Other non-classified Manufacturing</td>
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<td></td>
</tr>
<tr>
<td>21. Electric, gas and steam</td>
<td>9</td>
<td>207</td>
<td></td>
</tr>
<tr>
<td>22. Water Supply</td>
<td>1</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>911</strong></td>
<td><strong>65193</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Processed from Statistical Handbook, Assam, 1962, Tables 11.3 & 12.1

The factories listed above show that tea factories alone constituted 64.7 p.c. of the total units while rice and saw mills formed respectively 16 p.c. and 4.7 p.c. of the total establishments. In terms of employment, tea factories provided employment to 79.7 p.c. and rice and saw mills employed 2.5 p.c. and 2.8 p.c. of the total factory workers. In other words agricultural product processing and forest based industries together constituted 65.4 p.c. of the total factories with 85.0 p.c. employment of the factory workers.
The number of registered factories had, however, gone up to 1897 in 1980 with an employment provision for 85,455 workers in 1979 (1980 data are not available). Apparently this is a great stride, the number of factories have more than doubled or increased by more than 108 p.e. while the number of workers has increased by about 51 p.e. over a 30 year period from 1951 to 1980 keeping pace with the growth of joint-stock companies in the state the number of which had increased from 369 in 1956-57 to 755 in 1980-81, i.e., by more than 104 p.e.

Table 3.3
Number of Registered Factories and Employment

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of factories</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>911</td>
<td>65,193</td>
</tr>
<tr>
<td>1961</td>
<td>1247</td>
<td>80,215</td>
</tr>
<tr>
<td>1970</td>
<td>1618</td>
<td>78,681</td>
</tr>
<tr>
<td>1980</td>
<td>1897</td>
<td>85,455 (1979)</td>
</tr>
</tbody>
</table>

Source: Processed from
(2) 1970, Statistical Handbook 1971, Tables 10.4 & 17.1

But considered from the point of diversification of industries by types, there was no marked improvement. For example, rice, flour, Dal and Oil mills or food processing industries had increased from 193 in 1955 to 570 in 1970
while the number of saw mills had increased from 59 to 222 during the same period. The only new entrants into the field were 5 basic chemical fertilizer units, 10 small textile units and 66 units of manufacture and repairing of machinery which employed respectively 128, 1358 and 1540 workers in 1970 (break-up figures for other years are not available). It may also be noted that flour, Dal and oil mills almost non-existent during the forties came into the picture and expanded during the later years. Another feature worth noted is that tea factories had lost their predominance, they accounted for 30 p.c. of the total factories in 1980 as against 64.7 in 1951. At the same time the percentage of saw mills and plywood factories and rice/flour/oil mills had risen to 24 and 22 respectively. However, these three groups of factories constituted 76 p.c. of the total in 1980 as against 85.4 p.c. in 1951. It is worth noted that the number of capital goods industries like manufacture of machinery, machine tools, equipments and parts was only 93 in 1980 or they constituted only 4.6 p.c. of the industries. If basic metal and alloys industries (51 in number) are taken into account, the percentage position improves to 7.6. This shows that other industries, except 27 non-metallic mineral product units, are mostly consumer goods industries constituting over 90 p.c. of the industries in the state. This product composition of the industries indicate the poor level of the state's  

industrial development as compared with other states like West Bengal, Bihar and Maharashtra where capital goods industries predominate the industrial field. In Maharashtra, for example, while consumer goods industries accounted for 52 p.e. of the value added in the 1960's, in the recent past capital and intermediate goods industries have gained prominence with nearly 65 p.e. of the value added by all industries.  

It should be noted that the role of the central and state Governments in the industrial development of the State remained quite negligible inspite of investments of Rs. 9.64, Rs. 457.59, Rs. 790.0, Rs. 1612.51 and Rs. 1551.0 lakhs in the industrial sector respectively during the 1st, 2nd, 3rd, 4th and 5th Five Year Plans. The number of what is called 'Government and local fund factories' which include even technical schools and repair workshops was 13 in 1951 and increased to 115 in 1970. While the total factories had increased to about 1600 during the period, i.e., Government establishment constituted only 7 p.e. of the total. The minor role of the central and State Governments in the industrial field becomes clear in case of manufacturing industries. The number of public sector manufacturing establishments in Assam was only 53 in 1980. Out of these only 7 were Central Government undertakings. It may also be noted that there

were only 64 'large and medium industries' in Assam in 1982, 14 in the public sector, 2 in the Co-operative sector and 48 in the private sector. The small number of large and medium industries is also indicative of the poor state of industrial development of the State.

The industrial backwardness of Assam becomes clear when the number of registered factories are compared with the number of such factories in some other states. The following table gives the number of registered factories and employment in some of the selected states as per Annual Survey of Industries by the Central Statistical Organisation.

**Table 3.4**

Registered Factories in Selected States 1978-79

<table>
<thead>
<tr>
<th>States</th>
<th>No. of factories</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Assam</td>
<td>1364</td>
<td>1,26,802</td>
</tr>
<tr>
<td>2. Andhra Pradesh</td>
<td>9948</td>
<td>6,44,495</td>
</tr>
<tr>
<td>3. Bihar</td>
<td>4251</td>
<td>2,71,280</td>
</tr>
<tr>
<td>4. Gujarat</td>
<td>9978</td>
<td>6,62,632</td>
</tr>
<tr>
<td>5. Madhya Pradesh</td>
<td>3173</td>
<td>2,99,519</td>
</tr>
<tr>
<td>6. Maharashtra</td>
<td>14268</td>
<td>12,80,302</td>
</tr>
<tr>
<td>7. Punjab</td>
<td>5039</td>
<td>2,34,908</td>
</tr>
<tr>
<td>8. Tamil Nadu</td>
<td>9237</td>
<td>7,25,244</td>
</tr>
<tr>
<td>9. Uttar Pradesh</td>
<td>7112</td>
<td>6,80,219</td>
</tr>
<tr>
<td>10. West Bengal</td>
<td>5909</td>
<td>9,32,780</td>
</tr>
<tr>
<td><strong>All India</strong></td>
<td><strong>88077</strong></td>
<td><strong>72,48,109</strong></td>
</tr>
</tbody>
</table>

Source: C&I, Annual Survey of Industries, 1978-79, Summary Results for Factory Sector, Table 4

Sixth Plan allotment on Industry and Minerals was Rs. 5755 lakhs, Statistical Handbook, 1982, p. 382

62. Directorate of Industries, Assam, Directory of Large and Medium Industries of Assam, 1981-82, p. 382
The data above shows that while Maharashtra had about 16.1 p.c., Andhra Pradesh, Gujarat and Tamil Nadu each possessed about 11 p.c. and Uttar Pradesh and West Bengal possessed respectively 7.9 p.c. and 6.7 p.c. of the total 88077 factories in India, Assam’s 1564 factories constituted only 1.7 p.c. of these factories in 1978-79. In terms of factory employment, Assam’s 126800 workers constituted only 1.7 p.c. of 7248100 workers of the Indian factories. These factory workers of Assam form less than one-fifth of those of Andhra Pradesh and Gujarat, nearly one-sixth of Tamil Nadu and Uttar Pradesh, nearly one-eighth of West Bengal and less than one-tenth of Maharashtra.

As regards the share of central Government factories of 1177, Assam had only 7, that is, only 0.6 p.c. in 1978-79. This shows the neglected position of Assam vis-a-vis central sector industrial investment. In this connection the Draft Outline of Assam’s Fifth Five Year Plan had noted that “in the past central sector outlays as well as private sector investments have been very low compared to Assam’s population size. No conscious attempt was made to have investments comparable with the requirements for reducing the regional

Handbook, 1981, Table 16.02

* Out of 5418 Public sector industrial units in India, the Central Government had owned 1177 State governments 3846 and central/state/local authorities jointly owned 395 units. Ref. CSO, Annual Survey of Industries, 1978-79, Summary Results, Table 2.7, p. 9; also Ref. Table 2.2 in our Chapter 2.
imbalance of Assam's economy or for correcting the structural imbalance existing therein. 83

7. **Structural Population Movement**

In the foregoing analysis we have tried to measure Assam's industrial development in terms of number industries and registered factories as well as their composition and employment. Economic growth as well as industrial development, however, is measured in terms of labour productivity and structural changes like population movement from agricultural to non-agricultural activities as well as from the countryside to the urban areas over a time horizon. 84 Analysis of labour productivity is difficult, for data in this respect are not available for any of the sectors.

As regards population movement from agricultural to non-agricultural sectors, we have already shown in Table 3.1 that the size of population dependent on the primary sector as percentage of the total has gone up from 73.33 of the working force of 3,738,794 (43 p.c. of the total population) in 1951 to 76.69 of the working force of 4,088,593 (87.96 p.c. of the total population) in 1971. 85 This implies that the percentage of the working force dependent on the primary

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83. Planning and Development Department, op. cit., Vol. I, p. 26
85. *Absolute number of sectoral population is not comparable for changes in the conceptions of 'workers' in the Censuses.*
sector, instead of decreasing after 30 years of planning, has increased indicating greater pressure on land on the one side and small's pace progress of the non-agricultural sectors on the other. A comparison of the sectoral occupational pattern in 1901 and 1971 shows that after 70 years of transition, the proportion dependent on the primary sector has gone down only by about 7 percentage points or by 0.01 p.c. point per annum while the percentage of dependents on the secondary sector has rather decreased from 7.8 in 1901 to 5.46 in 1971, but, that of the tertiary sector has increased from 7.7 in 1901 to 17.85 in 1971. The absolute increase in the number of dependents on the primary sector is no doubt, attributable to the abnormal population growth rate of about 35 p.c. per decade after 1951, but a planned economy with stress on manpower planning should be capable of shifting at least the decadal additional population to the secondary and tertiary sectors. Contrary to expectation, the primary sector had to absorb almost all the additional population decade after decade indicating an almost stagnating growth of the secondary and tertiary sectors which justifies the prevailing Assamese proverb that Assam is a land of Lahe Lahe (slow progress).

* The percentages of dependents on 'agriculture and pastures', 'preparation and supply of material substance' and other vocations were respectively 84.5, 7.8 and 7.7 in 1901 out of 604,442 workers. Ref. Imperial Gazetteer of India, vol. VI, Clarendon Press, Oxford, 1908, p. 50
Table 3.5

Sectoral State Income in Assam
(In crores of Rs, at current prices)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Primary Sector (Agri, animal husbandry</td>
<td>168.8</td>
<td>198.8</td>
<td>430.9</td>
<td>1407.9</td>
</tr>
<tr>
<td>forestry, fishing etc.)</td>
<td>(66.4%)</td>
<td>(54.7%)</td>
<td>(57.4%)</td>
<td>(58.6%)</td>
</tr>
<tr>
<td>2. Secondary Sector (mining, manufacturing</td>
<td>43.5</td>
<td>71.3</td>
<td>158.7</td>
<td>450.3</td>
</tr>
<tr>
<td>and construction)</td>
<td>(17.1%)</td>
<td>(19.6%)</td>
<td>(18.5%)</td>
<td>(18.7%)</td>
</tr>
<tr>
<td>3. Tertiary Sector (Trade, commerce,</td>
<td>42.1</td>
<td>93.4</td>
<td>181.6</td>
<td>547.8</td>
</tr>
<tr>
<td>Transport communication and other services)</td>
<td>(16.5%)</td>
<td>(25.7%)</td>
<td>(24.1%)</td>
<td>(22.7%)</td>
</tr>
<tr>
<td>Total State Income</td>
<td>254.4</td>
<td>363.5</td>
<td>751.2</td>
<td>2406.0</td>
</tr>
<tr>
<td></td>
<td>(100%)</td>
<td>(100%)</td>
<td>(100%)</td>
<td>(100%)</td>
</tr>
</tbody>
</table>

Sources: 1950-51 & 1960-61: Estimates of State Income, July 1967, Tables 2.0 and 2.1
1970-71: Estimates of State Income, March 1972, Tables 2.0 and 2.1

(Figures in brackets are percentage of the total income of the year)

The sectoral income approach, i.e., income accruing from the primary, secondary and tertiary sectors of the economy (Table 3.5) also shows the preponderance of the primary sector. This sector's contribution to the State's income has declined very slowly from 66.4 p.c. in 1950-51 to 58.6 p.c. in 1980-81 or by only 7.8 percentage points over a 30 year period as against the All India share declining from 58.9 p.c. in 1950-51 to 41.6 p.c. in 1978-79. The role of the secondary sector in generating income is rather
discouraging, its growth in terms of contribution to the state's income over a 30 year period has been only 1.6 percentage points (from 17.1 p.c. to 18.7 p.c.) as against 7.6 p.c. points for the country (from 14.9 p.c. to 22.5 p.c.). The share of the tertiary sector has, however, increased from 16.5 p.c. to 22.7 p.c. during the 1950-51 to 1980-81 period as against All India growth from 26.2 P.C. to 35.9 p.c. during the 1950-51 and 1978-79 period. Thus the sectoral growth of the economy of Assam has failed to keep pace with the All India pattern.

As regards urbanisation, Assam is one of the least urbanised of the states in India and she occupies the 3rd position from the bottom with only 8.82 p.c. as against All India 19.91 p.c. of the population living in 69 urban areas of 433 Sq.Kms. forming only 0.33 p.c. of the total area of the State as per 1971 Census.

It may be recalled that urban population in Maharashtra constitute 31.17 p.c. followed by Tamil Nadu (30.26 p.c.), Gujarat (28.08 p.c.) and West Bengal and Karnataka (about 25 p.c.). The least urbanised states from the bottom and below the level of Assam are Himachal (6.99 p.c.) and Orissa (8.41 p.c.). The standard mark of an urban area is the non-agricultural occupation of its population; the Indian

85. All India income data have been taken from the Sixth Five Year Plan 1980-85, Annexure 1.3, p. 13
is that 75 p.c. of the male working population should remain engaged in non-agricultural occupation and the area should have a minimum population of 5000. No doubt the occupational pattern of the urban population of Assam conforms to the All India criteria. But most of the towns in Assam are the out-growth of villages and as such are only trading and/or administrative centres and are not industrial agglomerations. The only industrial town in Assam except Gauhati is Tinsukia in the Dibrugarh District. The occupational pattern of the urban population shows that out of 391,375 working population, only 79,995 persons or about 20.5 p.c. are engaged in the secondary sector while 275,948 or about 70 p.c. are engaged in the tertiary sector, the remaining 30,313 or about 9.5 p.c. are dependent on the primary sector.

Population movement from rural to urban area is quite negligible. Urban population has increased only by 1.12 percentage points over the past decade from 7.7 p.c. in 1961 to 8.82 in 1971. Even in Gauhati, the premier city, the rate of population increase was 47.08 p.c. over 1961, while in the industrial town of Tinsukia it was 92.89 p.c. The increase in urban population in the State is due not mainly to migration from rural to urban areas but to the extension of boundaries of the existing towns and classification of new localities as urban areas. The number of urban areas has

86. Census of India, 1971, Assam, op.cit., pp. 13, 14, 17, 42, 111. All data given in this para have been taken from this work.
increased from 24 in 1951 and 33 in 1961 to 69 in 1971 and this accounts for the growth of urban population. Thus the level of urbanisation of the state has been retarded by the slow growth of industries and the industrial growth that has been taking place is within the existing urban areas with little dispersal of industries to new areas. In recent times growth of only a few towns like Numur and Balashahri-Mirza are attributable to the location of industries.

8. Conclusions

It follows from the foregoing analysis that in all respects, viz., number of registered factories and their productwise composition, large and medium industries, industries in the central and state sectors as well as employment in all these establishments, population movement from agricultural to non-agricultural sectors, particularly to the manufacturing sector and from rural to urban areas, as well as from the sectoral income approach, Assam has remained industrially backward as compared with all India industrial growth rate or that of some other Indian states. She contains only 1.7 p.c. of the registered factories of India which provide employment to only 1.7 p.c. of the industrial workers of the country. She has only one registered factory per 41.3 Sq.Km, and only one industrial worker per Sq.Km.

It may be recalled that the National Council of Applied Economic Research had, in its Techno-Economic Survey Report (1959-60), inter alia, recommended the setting up of
37 large scale plants (27 resource based and 10 non-resource based*) during the 3rd plan period. But Dr. P.S. Lokanathen, Director General, NCAER, while writing the Preface to the Industrial Programme for the Fourth Plan for Assam in 1966 was 'disappointed' to observe\(^7\) that the progress during the 3rd plan, especially with reference to the 'candidate industries' was very much less than what was envisaged. The Draft Fourth Five Year Plan had also recorded that none of the proposals for establishing industries during the 3rd and Annual Plans had 'materialised' and lamented that in the sphere of industrial development Assam is "lagging behind other states" inspite of abundance of mineral resources and raw materials.\(^8\)

The Draft of the 5th Plan had also observed that apart from the utilisation of natural resources in the shape of tea and oil which are necessary from the national economic point of view "no significant utilisation of natural resources has come about since Independence" except the setting up of a fertiliser factory and a refinery.\(^9\)

The Economic Survey (1980-81), Assam, had also admitted that the level of industrial development in Assam even after three decades of planning is "none-too-encouraging".

\(^*\) 5 agro-based, 7 forest-based, 15 mineral-based and 8 metallic engineering industries. Ref. NCAER, Techno-Economic Survey of Assam, 1962, pp. 258-59

\(^7\) NCAER, Industrial Programme for the Fourth Plan for Assam, 1966, p. v

\(^8\) Planning and Development Department, Assam, Fourth Five Year Plan of Assam, A Draft Outline, 1968, pp. 10-11

It further said that inspite of being endowed with abundant natural resources "the state has not been able to occupy its rightful place in the industrial map of the country." There are hundred and one reasons, as we have already referred to some of them, for the industrial backwardness of the state; and the principal factors, among others, are said to be the lack of basic infrastructural facilities and dearth of local entrepreneurship.\(^9\)

However, confessions of and lamentations for the failures by the authorities like the Planning and Development wing or the Government of the state are no doubt good signs, but these are not substitutes for concrete action programmes needed for industrial development of the economy. When the authorities are aware of the drawbacks standing in the way to industrialisation, they should come forward to remove them, particularly it is the responsibility of the government to build up the infrastructural facilities. As regards local entrepreneurship, earnest efforts should be made, as we shall have occasion to devote some space to it and other related aspects in the concluding chapter, to train up local entrepreneurs through a system of social industrial education and at the same time outside investors may be persuaded through different incentives to establish branches or subsidiaries of their industries elsewhere or to start new

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ventures. And more important, the state government should take to itself the responsibility of undertaking industrial projects in the public as well as in the joint sectors.