CHAPTER-8

CHAPTER - 8

TRANSPORT AND COMMUNICATION

As a matter of fact urban growth and development are greatly dependent upon the economic and socio - cultural development of the surrounding region. As the development is the result of modern transport and communication technology a lot has been contributed to Bogra's growth and development. In chapters 2 & 10 and Appendix II detailed discussion on the diffferent aspects of this function has been made where Bogra's position is clearly shown. In this chapter, the purpose is to highlight major aspects of this function with special reference to road transport which has a great impact on the overall development of the town.

The navigable river Karatoya, which once provided adequate facility of river transport, gradually lost importance due to siltation of river bed and its non-perennial nature. The introduction of railway in the later part of the 19th century started a new era of transportation, the importance of which continued upto 1960s, but the advent of automobile and rapid increase of road net work in recent times changed the whole scenario of transport function.

1. THE ROLE OF RIVER TRANSPORT

In the early days, the rivers in the district of Bogra had played major role in river transport. River Karatoya had served Bogra town and its hinterland to a considerable extent.

But because of siltation, the situation got changed. The role of the Karatoya river in transportation and it's decline may be traced from many historical records namely, the settlement Survey Report of Bogra (1920-29), Bograr Itihas writtern by Sen (1929), the District Gazetteer of Bogra (1979) and so on. It is understood from the reports that the Karatoya was of great value as a trade route when it formed the lower course of the river Tista. But the disastrous earthquakes in the 18th and 19th century coupled with the floods of 1787 considerably raised its bed and gradual siltation stopped the flow of water greatly. Now it is navigable only during rainy season.

Number of jute godowns and warehouses were constructed on the bank of the river, their existence even at present bears testimony to business functions supported by the river transport. However, depending on river borne transport , business enterpreneurship developed. Fishing activity also got importance involving particular class of people.

Bogra town was also indirectly linked with other business centres located on the bank of the perennial river Jamuna and ultimately linked with Calcutta also. Now, the almost dried river Karatoya is no more important in transportation.

2. ROLE OF RAILWAY TRANSPORT

The whole of Bogra district directly or indirectly was served by the railways which had a great impact on economic and social life of the people in the region. More over, Bogra town

was then connected with all other parts of the British East Bengal and Assam and more important concern was to establish connection with Calcutta. Upto 1947, the major thrust of traffic flow towards Calcutta and vice-versa, was worth mentioning. After Partition, Dhaka occupied the place of Calcutta.

The pattern of railway lines forming the shape of covers almost entire Bogra district i.e. the Santahar - Parbotipur broad gauge line (opened in 1878) in the West, and Santahar-Bogra-Bonarpara-Gaibandha metre gauge line (1901) in the East. So Bogra's growth was ensured after the opening up this Santahar - Brahmaputra branch line (Fig.14) enjoying moderate linkages with surrounding region.

The total length of the line is 129 Km. (80 miles). There has been no expansion of railways since its introduction. It may be due to heavy cost of establishments and some other factors. There are 8 major railway stations along broad gauge line and 10 stations along metre gauge line. All were and still now, are performing as rural service centres except few that are regionally and nationally important such as Bogra, Santahar and Joypurhat.

The importnace of railway was confined upto 1960s or maximum upto the initial years of 1970. With the rapid development of road network and use of motor vehicles the importance of railway or dependency on railway began to decline after 1970. Now it can not compete with road transport.

Some Other Aspects Of Railway Transport

From the British period upto 1970 the main items of export were jute and rice. Now main items are chilli, potato, molasses etc. Upto 1987 there were five up and down trains, and after 1987, one special train was added. Sometimes one shuttle train runs through Bogra.

It is evident from the Table 8.1, that at [illegible] rate, passenger movement has been declining at faster rate. At the sametime, it is true that number of travellers without tickets has been increasing. So it is difficult to get a real figure.

Information from station master was collected, which shows monthly, on an average, 30 to 35 thousand passengers travel from Bogra.

It is to be note that major traffic flow originates from the East Bogra (Plate 11-a). Most of the passengers come from East and West Bogra within maximum farthest point - Santahar and Bonarpara).

Table 8.1 Passenger and Cargo Movement from Bogra Railway Station, 1981-87,

Years	1981-82	1983-84	1986-87
Number of passengers	8,26,425	7,55,601	4,48,500
Cargo (in tons)	1,897	42,494	N.A.

Source : Zila statistics, Bogra Region, 1986 : 329; and Railway office, Bogra.

In case of cargo movement, abnormal figure is found for the year 1983-84 (Table 8.1). It may be due to special cases. There might be army movement with materiel for the newly extended cantonment or movement of industrial machineries.

Problem in railway transport :

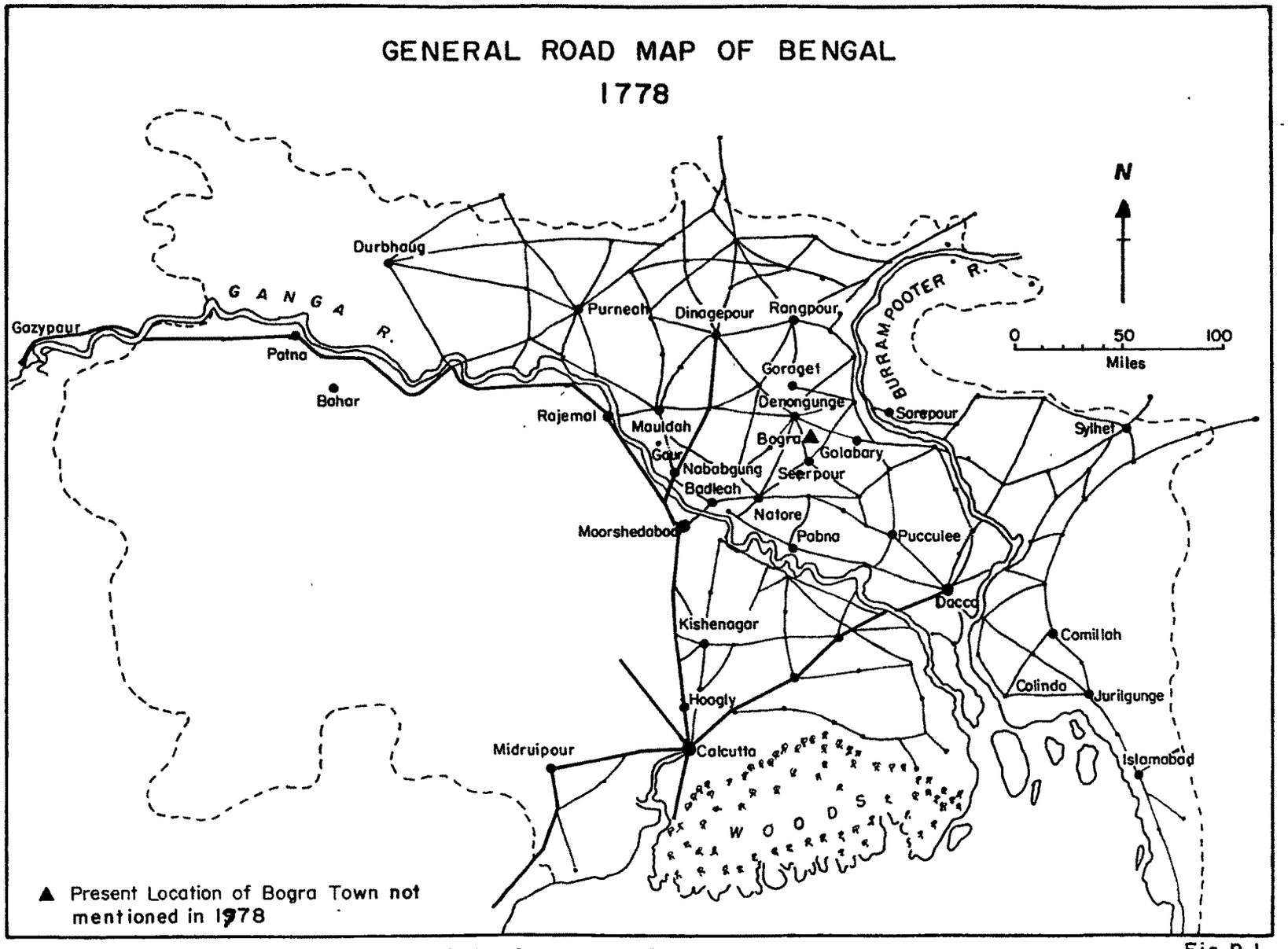
During investigation, the following problems were noted:

1. Broad gauge – metre gauge line create hindrance for continuous movement.
2. Santahar-Bonarpara line is very weak due to lack of stone carpetting.
3. Brahmaputra ferry service takes much time for transhipment. Moreover, another problem arises during loading and unloading of heavy materials.

However, if these problems are solved then some development in railway transport may take place.

3.ROAD TRANSPORT

There lies a great historical evidence of earthen road network in the district of Bogra. Some of the important roads are passing through Bogra town or radiate from the town. From the historical records (mentioned in the study of river transport) it is known that many of the important roads were constructed in or before 17th century. Some of these roads disappeared; or some were improved and few were constructed later on. Figure 8.1 shows



Source: Published under the authority of the Government of Bengal.

Fig. 8-1

the road net-work of Eastern Bengal during 1770 (Rennel's map), which gives the contemporary picture.

The physiographic control over road net-work is quite evident from all the important roads existing in West Bogra, which date back to historic times. The Western high land of Bogra formed the limit of North Bengal and other parts of India establishing road communication linking different centres. Some roads from East Bogra connect the present Dhaka - Rangpur road as secondary roads.

A considerable development in road net-work was brought about by the construction of National Highway (1960s). After Liberation all the major and medium grade roads have been made pucka. The locational importance of Bogra in terms of road net-work and position of Bogra district with respect to it have been mentioned in the chapters 2 & 10 respectively.

Measurement of Accessibility / Connectivity :

It is evident that the increasing development of transport and communication system forms a great node; Bogra town is in someway or the other connected with all the major and minor urban centres in the Northern Region. From this town, there are roads leading to different directions of Bangladesh. Due to the high accessibility, Bogra town has become the focal point in the region.

Table 8.2 depicts the Binary Matrix showing connectivity of net-work and Fig. 8.2 reveals topological map of

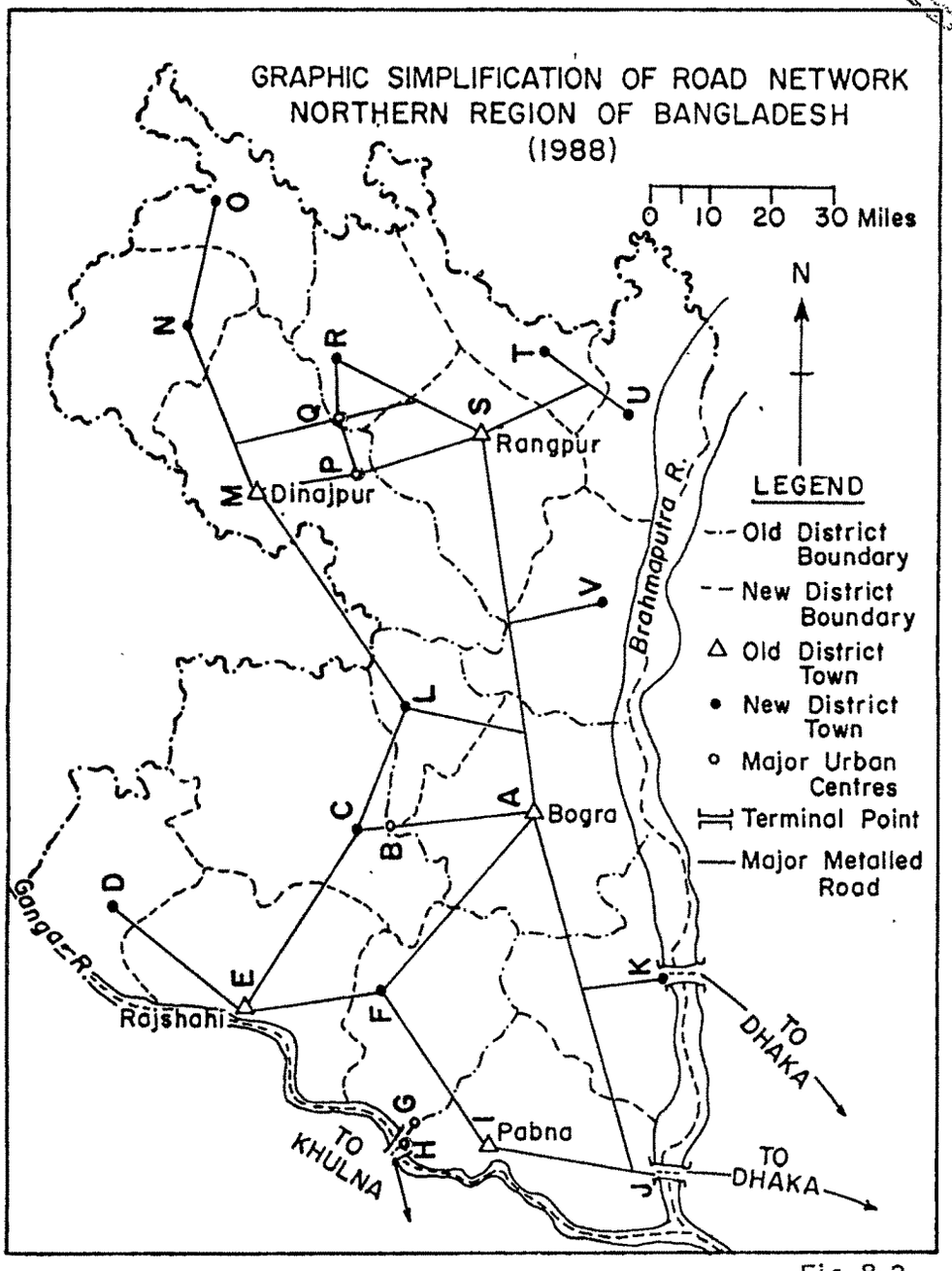


Fig. 8·2

8·2

Table- A Binary Matrix showing connectivity of Net work.

	To	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	
From	A	0	1	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0	0	1	0	0	1	= 8
	B	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	= 2
	C	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	= 3
	D	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	= 1
	E	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	= 3
	F	1	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	= 4
	G	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	= 3
	H	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	= 1
	I	1	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	= 5
	J	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	= 3
	K	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	= 3
	L	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1		= 5
	M	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0	= 4
	N	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	= 3
	O	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	= 1
	P	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	= 3
	Q	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	1	0	0	0	= 5
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	= 2
	S	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	1	1	1	= 7
	T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	= 2
	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	= 2
	V	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	= 3
		8	2	3	1	3	4	3	1	5	3	3	5	4	3	1	3	5	2	8	2	2	3	

road net-work in the Northern Region.

Binary Matrix has been compiled to exhibit the number of edges separating the different node (Fig 8.2). Accessibility is measured in terms of one node to all others without interruption. It indicates the number of edges connecting any node with other nodes in the net-work. The figure shows the extent of accessibility of each node by totalling the rows or the columns in the matrix. The nodes with the highest number of lines (value also) enjoy greatest degree of accessibility. It is observed that Bogra shows the highest connectivity which is followed by Rangpur.

It should be noted here that the major urban centres and termini's are considered as nodes, and the road connecting other road in a insignificant place but not directly in any urban centre is not considered as node. Thus, nodes have been selected with logistical support and each of the nodes was linked according to the existing transportation facilities and trend of movement.

Infact, for the sake of the study, an example, Joypurhat to Rangpur is considered as one edge, on the basis of its being a transport route joining the National Highway. Though in the matrix we find the difference between Bogra and Rangpur by one edge value, but in reality Bogra bears much weightage. Moreover, shortly another new road from Dinajpur connecting Bogra - Rangpur road at Gobindaganj is going to be opened for traffic. This road is mainly to connect Bogra and other places. So more

weightage is going to be added. In this study this road is not mentioned.

On the otherhand, Rangpur is enjoying more connectivity in the extreme north. Other moderate nodal centres are Natore and Pabna. Any urban centre in the periphery bears less connectivity. Due to geographical location in regional spatial context, these centres are of little importance as regards regional relationship. In this case terminus namely Nagarbari & Pakshy may not be considered. Only Ishwardi, in the periphery is an exceptional case which has an airport and a railway junction.

However, Bogra's importance is followed by splendid progress in trade and commerce followed by industrial activity which instantly draws people from near and far places. And this is the product of developed transport and high accessibility.

Bogra Town : Growth of Transport :

It is common in the urban centres of Bangladesh, to observe bi-cycles, পেডাল -rickshaws, rickshaw-vans, hand-carts, bullock carts which are the principal modes of transport. Of course in the big cities, automobiles or auto-rickshaws form important modes of conveyance. Auto-rickshaws, buses, trucks and railway serve the region. Since Bogra is a medium town, there is no intra town bus service. So non-powered vehicles (e.g. পেডাল rickshaw) are the principal modes of transport.

The Role Of Intermediate Transport :

Regional linkages and overall mobility are accelerated with the increase of rapid transport by bus, truck, auto-rickshaw etc.

The numbers of rickshaw and recently introduced rickshaw-vans have increased significantly. The cycle-rickshaw is complementary to motorised vehicles and rickshaw-van or hand-cart or even to bullock-cart which serve as substitute to trucks .

The introduction of rickshaw and their increasing rate of growth is the result of the colonial impact, and the development of Bogra has given rise to some of the new occupations for the unskilled and unemployed persons in the service sectors of which rickshaw driving is one. This occupation is of recent origin in Bangladesh.

The role played by the intermediate modes of transport e.g. rickshaw, rickshaw-van especially in these parts of the developing world is worth highlighting as they serve all classes of people and all types of traffic and in all parts of the town. In this context, the observation, based on India by Kumar, may be mentioned here.

Kumar (1989) has explained the role of intermediate transport with reference to the report of the National Transport Policy Committee (Planning Commission of India, 1980): intermediate transport has a vital role in all urban areas. Cycle-rickshaw may be regarded as a vehicle of the less affluent

groups in underdeveloped cities. They are the most efficient public transport system and cater only to those journeys where the time and the route are fixed. It cannot be particularly flexible. In many cases, high fuel prices make the motorised forms too expensive, and very often they are not suited to road conditions or to the layout of our towns and cities. There is thus a definite need for human-powered vehicles for urban transport system, and cycle-rickshaws are probably the largest sub-category among those.

Table : 8.3 Bogra Town : Growth Of Vehicles

Sr.No.	Types of Vehicle		1960/61	1969/70	1980/81	1987/88
1.	Bus	-	4	70	182	190
2.	Mini-bus	-	-	-	-	398
3.	Truck	-	-	15	278	400
4.	Auto-rickshaw	-	13	65	130	97
5.	Pedal-rickshaw	-	485	600	3574	5007
6.	Rickshaw-van	-	-	-	-	1008
7.	Tandem	-	26	26	7	-
8.	Bullock cart	-	57	57	110	72
9.	Hand cart	-	-	-	-	-

Source : Municipal office; BRTC office; Bus,Mini-bus and Truck Owner's Associations; Population census, Bogra (1961).

Bullock carts are engaged in carrying heavy load or bulky materials like - bricks, oil drums etc. But now a days it has declined with the introduction of more rickshaw-van and hand carts. It should be mentioned here that greater number of licensed rickshaw-vans carry passengers & goods to Bogra (Plate 12)from the surrounding regions (see chapter 10, & Fig.10.6).

On the otherhand, hundreds of unregisterd rickshaw-vans ply upto the outer limit of the town whereas inside the town they ply only in the early morning.

However, from the Table 8.3 it is observed that introduction of rickshaw is a recent phenomenon. The number of rickshaws have risen from 485 in 1961 to 3574 in 1981, and 5007 in 1987/88. The number could have been more but, for the curtailment of random issuance of new licences. At one time, tandem was an important mode of transport for rural people to come to the town but it has disappeared since early 1970s.

Employment Structure and Place of Residence of Employees.

As Bogra town is surrounded by densely populated villages, large number of people from rural areas find their employment in running intermediate transport. About 7000 persons in cycle-rickshaw, 1000 in rickshaw-van and 300 in other modes of transport were engaged in 1987. The information regarding place of residence of 4878 persons out of 8300 employees was obtained from municipal register. Bogra town contributes about 23% and Bogra Upazila (excluding town) about 48%. 15% come from other Upazilas (see Appendix I[397] and Fig 8.3%)

150 persons were interviewed regarding their place of residence (present and past). It was found that 20% of them living in the town and 52% of them in villages within Bogra Upazila were residing permanently. 18% people migrated from other areas and settled mostly in the periphery, thus, increasing the

PERSONS ENGAGED IN TRANSPORT SECTOR BY THEIR PLACE OF RESIDENCE

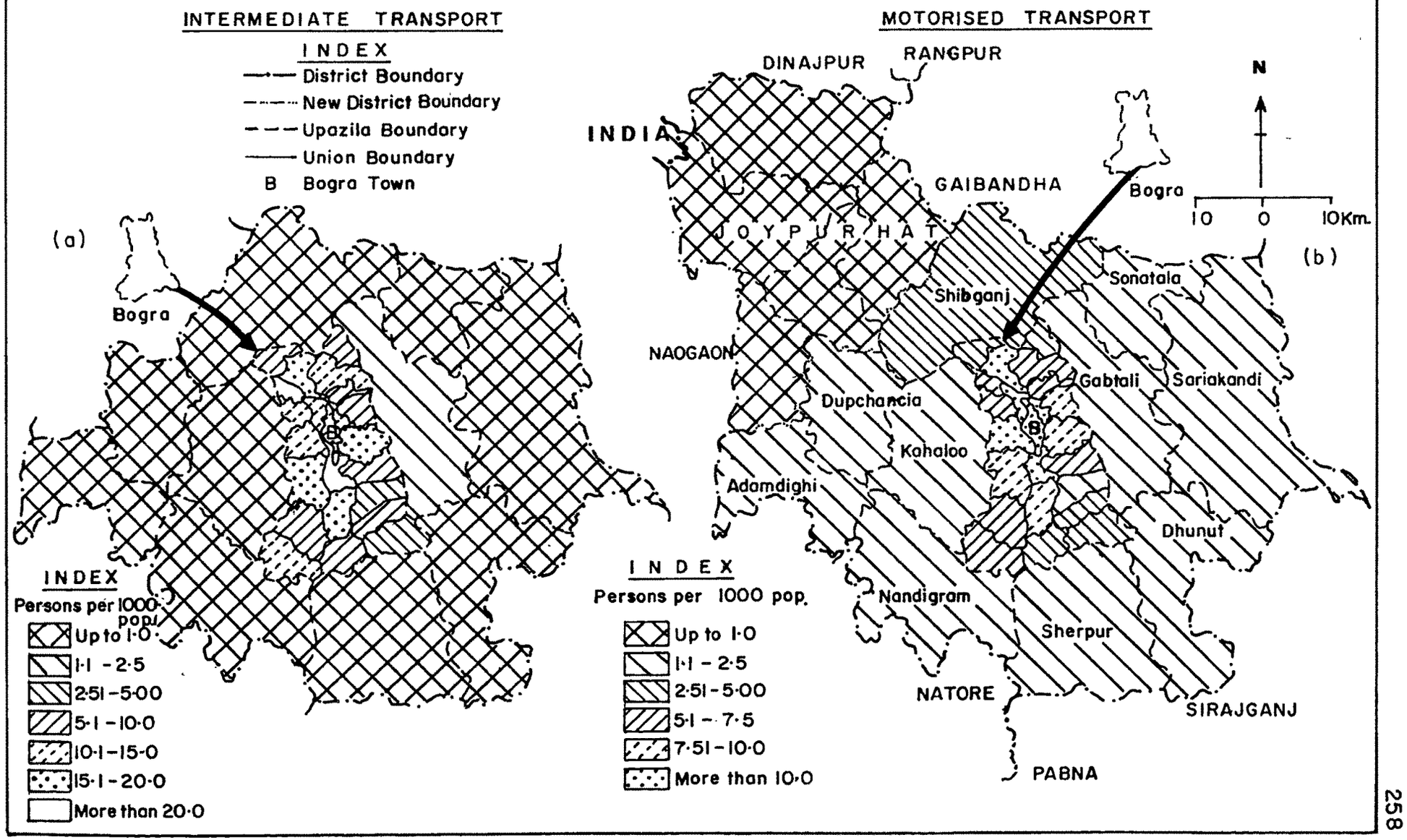


Fig. 8·3

respective figure to 24% in the town and 66% in the villages (within 12 km. radius from the town centre). The rest 10% come from outside Bogra Upazila.

As West Bogra is more developed in transport net-work, comparatively more people are engaged in this sector. It is observed that more employees in this field belong to those villages which are connected by pucka roads.

Role of Motorised Transport

This is the most important sector in the field of transport which brought about a revolutionary change. Greater interaction with the region, rate of migration, and finally development of Bogra town were largely contributed by this sector. Bus, mini-bus interconnect near and far areas while auto-rickshaws render services within 12 km. radius. Trucks ply all over the country carrying goods (see chapter 10).

In terms of the result of Table 8.3 and Appendix II: it is apparent that the automobile service developed after the construction of highways in the region. With more routes developing, more buses are added in the service. Bogra town has seen tremendous growth of motor vehicles. Due to the introduction of bus/mini-bus in all motorable roads, auto-rickshaw is losing importance.

Employment Structure and Place of Residence of Employees :

As many as 398 persons in bus and mini-bus, 497 in truck and in auto-rickshaw were engaged during 1987. Information regarding the

persons engaged in the motorised transport was collected from respective organisation. Analysis of 6407 employees (Appendix-I : 397) out of the total 7347 shows that greater propotion of the people, engaged in this transport sector are from East Bogra for many reasons (see chapter 2) Fig.8.3bshows place of residence of employees. In West Bogra, Shibganj contributes about 600 persons (about 2 per 1000 population) which is the highest figure. This area has the previlege of motorised transport since 1960s.

513 persons belonged to other districts within the Northern Region and 106 beyond the region. It was found that most of the people who were from out side Northern Region engaged in truck services were registered here.

200 people were interviewed regarding their orginal place of residence. It was found that 20% were residents of the town itself, 50% residents of the villages within Bogra Upazila of which 15% were migrants. The rest belonged to other areas.

4. INTERNAL ROAD NET-WORK :

Bogra town enjoys superb accessibility due to developed transport net-work in the region, which is also reflected in the town interior.

One must greatly appreciate the municipal authority for their utmost effort to develop road net-work. The roads in the town were made pucka many years ago when only few towns of Bangladesh could boast of good roads.

Development of Roadways:-

Table 8.4 depicts the quality of roads and growth of roadways in Bogra town. It should be mentioned here that most of the roads were constructed in the early days but during the Partition Period, there was hardly one kilometre of semi-pucka road. Considering the size of the town, the density of road net-work is always high.

However, from the table it is observed that soon after Partition, rapid development of road net-work took place. In 1948 out of the total length of 30.18 Km., pucka and semi-pucka was only 1.93 Km. and 14.59 Km. respectively which increased to 6.29 Km. and 25.76 Km. in 1969 out of total 43.65 km. Pucka road developed considerably between 1968 and 1980. Moreover, with the expansion of municipal limit, all kutcha roads in the extension area are gradually metalled.

Table 8.4 : Bogra Town : Development Of Road Ways

(figure in km.)

Year	Area (sq.Km.)	Pucka	Semi-pucka	Total	Katcha	Grand Total
1948	2.31	1.93	14.59	16.52	13.66	30.18
1963	3.55	6.29	25.76	32.06	11.61	43.65
1968	3.55	17.71	14.89	32.60	11.06	43.65
1980	5.10	22.54	15.00	37.53	6.13	43.65
1988	14.76	22.54	29.48	52.02	34.84	86.85

Source : Bogra Municipality.

To compare Bogra's position with other selected towns in the matter of road length, information was collected from District Statistics (1989). In 1981, Bogra, Rajshahi and Pabna towns had 37.50 km., 54.30 km. and 50.55 km. of pucka & semi-pucka roads respectively. After calculating the road length per square kilometre, it is found that Bogra is in an exceedingly high position showing 8.05 /sq.km. whereas the divisional headquarter Rajshahi has only 3.49/sq.km. followed by Pabna (3.29/sq.km.).

Pattern of Roads and Land Use

Road pattern forms an important part in the study of urban geography. Roads in urban area can be classified into different types. Now a days, the grid pattern of roads is considered favourable in a new town or new extention. The cities attain a well planned layout based on the grid of roads which are

the arteries of urban activities.

The road pattern of Bogra can be classified into two types.

(1) Radial pattern :- The net-work map of Bogra town reveals the radial pattern at a glance (Fig. 4.7).

2) Radial cum Rectangular/ Trapezium Pattern :- Secondary or tertiary roads connecting the radial roads make either rectangular or trapezium blocks of land use.

Mohsin draws (1988:108-109), some merits and demerits of these types of pattern which are stated below.

(a) Advantages :-

(i) The radial pattern focuses on the town centre giving prominence to either palace, or market place or Cental Business Area, historical monuments etc.

(ii) The impact of the radial pattern of roads is seen in heavy concentration of activities in the city centre and the consequence of centripetal force. With increasing distance from the centre, the land use changes and land value begins to fall.

(iii) With continuous spread of radial road, it is observed that radial and rectangular road ways are interconnected and form favourable junctions for urban activities to come up.

(b) Disadvantages :-

Trapezium shaped blocks are formed due to the pattern of road. cutting the other roads As a result, some land is wasted during

construction, thus these create problem for land use planning.

General Consideration of Road Net-work in Bogra Town :

Like other town in Bangladesh, Bogra is not a planned town. Therefore, its road pattern is not a product of conscious planning and not of recent origin. Existing roads date back to early time and were constructed according to the needs of the settlement at that time. Only few changes followed by some construction of roads, - - namely Carmaichael road, Coronation School road, tannery road etc.

It is clearly observed from the Fig.b.1 that 'Satmatha' (connecting point of 7 roads) is a junction of most of the major roads. This centre is directly and, in some cases, indirectly connected with all the intra urban and inter-regional roads. Population Census of Bogra (1961:1-23) gives a note to show the importance of 'Satmatha' as "it is the unique feature to the road system of Bogra town which is not ordinarily to be seen elsewhere in the province of East Pakistan." However a clear radial pattern of road developed centred around this point. As a result, this has become the highly accessible place for the people of the town and the region. Through historical process of development all the important business establishments, Railway Station, Bus & Truck Terminals, important schools, General Post Office, T & T Office; Police Station, Circuit House & Courts, Parks etc. have been setup one after another around the 'Satmatha'.

However, all the localities, in and around the municipal limit have dense road net-work which is highlighted in Fig.4.8a .

It should be mentioned here that, to reduce the excessive pressure of traffic flow through the congested and busy town, a By-pass (road) was constructed in the west (around 1980).

Classification of Roads in the Town.

In the study of morphology of Bogra town Ahmad (1978:32-38) classifies the roads on the basis of functions as : 1) Primary roads 2) Secondary roads 3) Tertiary roads.

Based on the importance and movement of traffic, the roads of Bogra may be classified into the following categories (Fig. 4·7 a)

(1) Principal Road / Regional Road :-

The principal roads or regional roads link the town with its umland or other districts in the Northern Region and also other parts of Bangladesh. Of them, the major trunk road is Rangpur-Bogra-Dhaka (other districts' roads connect this road also). Inside the town, it is named differently at different places as college road, Rangpur road, Thana road, Jhowtola road, Kazi Nazrul Islam road, etc. Other important roads connecting district towns are Park road or Gohail road (upto Natore and other districts), Baragola-Santahar road (upto Naogaon & other district), Station-WAPDA road up to By-pass, old Dinajpur road upto By-pass, Bogra-Sariakandi road and Bogra-Chandanbaisha road.

Some of the roads are, now, not used by heavy vehicles due to opening up of new routes or it is used, not in day time (8am. to 8pm.) to avoid traffic jam.

Generally for regional purpose, station-WAPDA road, Carmaichel road-Gohail road, are used for bus & truck services. Bogra-Chandanbaisha and Bogra-Sariakandi roads are open for traffic all the time. These two roads link East Bogra. There are two separate bus stands in chelopara from where buses ply to East Bogra, because buses cannot move through the congested town to reach central bus terminal.

All the regional roads in the west connect the By-pass. Rangpur By-pass Dhaka road is under construction as International Route (Bishwa Road). These principal or regional roads are expected to contribute more to development in the coming days.

(2) Secondary Roads / Minor Road

These are by far the most important roads linking the entire road system of the town, providing access to the residential, commercial and administration office areas and to other functional areas. In addition these provide access to surrounding villages which are in the immediate vicinity of, the town. These secondary roads also form radial pattern in most cases. They interconnect one locality with another and are important traffic belts. The roads are namely Chakjadu road, Court-Kalibari road, Malotinagar-Madla road, Coronation highschool road, Malgram road, inner Thanthania road, inner Fulbari road, inner Atapara and Brindabonpara road, Badortola-

Pulsha road, Malotinagar-Ansar office road etc.

Some roads may be classified as primary as well as secondry namely Shejgari road, Chak-Sutrapur road etc.

(3) Tertiary Roads / Sub-Rood

The remaining roads other than the above mentioned two classes are classified as tertiary road which serve respective inner localities like a 1st order stream in stream net work. Their width varies from 4' to 10'. Vehicular traffic flow is less. in these roads All these tertiary roads, connect ultimately secondary roads and sometimes principal roads or they connect each other making almost rectangular, square or trapezium blocks. So a fair road net-work develops. Due to this developed net work, each and every community gets utmost infrastructural facility and enjoys easy access to any place.

5. TELECOMMUNICATIONS

Bogra town has developed excellent telcommunication system of advanced technology with the growth of industrial-commercial activities, public and private enterprises, and other associated functions. Expansion of direct dialing facility has given considerable advantage to the people.

As a temporary measure, the Union Council Association Hall accommodated telephone exchange in its ground floor which continued upto mid 1960s. Then a massive structure (multi storied) for Telephone & Telegraph Department (T&T) came up near 'satmatha'.

Except the district, Bogra T & T Board controls Pabna, Sirajgunj and Joypurhat districts and some parts of Naogaon district. Here recently a telephone training institute was established to offer training to departmental staff of Bangladesh. There are also some other institutes in Bangledsh like this. Mention should be made here that no other district town in the Northern Region can be compared with Bogra interms of number of telephone sets per person. There were 1592 telephone sets in 1982 and 1692 in 1988. (except cantonment and other extension). There are 40 and 181 telephone sets under PBX Excnange in Bangladash Bank and cantonment respectivly. Now it has established 76 overseas connections widening its connection with other countries also.

Comparative Statement Regarding Telephone Set :

For the five district headquarters, Table 8.5 shows the telephone calls made and Telephone sets Per 1000 people.

Table 8.5 Outgoing Local Telephone calls and Number of Telephone sets, June 1987-88.

District Headquarters	No.of Population (1981)	No.Of T.P.Calls	T.P.Calls per person	No.of Telephone Sets	T.P.set Per 1000 pop.
Bogra	94496	1793521	19	1681	18
Pabna	101080	863301	09	972	10
Rajshahi	171600	2222029	13	2539	15
Rangpur	155964	2314254	15	1923	12
Dinajpur	96343	1083697	11	996	10

Data Computed
Source : T & T. Revenue Office, Dhaka.
* Population of 1982.

It is evident from the above table that Bogra having all sorts of urban activities has wide internal linkages. As far as the calls and possession of telephone sets are concerned, Bogra is in the leading position. The divisional headquarter Rajshahi holds the second higest position in the case of telephone sets per 1000 people and the third position in the number of telephone calls where as Rangpur is in the second position. Pabna and Dinajpur rank similar.

TELEGRAPH:

Bogra T & T Exchange occupies an important place in the region in sending messages both local and abroad. The following information was collected from T & T office, Maintenance and Operation, Dhaka. The information is of three Divisional Telegraph Offices (D.T.O.) for the Northern Region (Table 8.6). There are four new districts under Bogra D.T.O. It should be highlighted here that Bogra contributes a major share to the revenue earned by the government from the number of telegrams sent.

Table 8.6 : Number of Telegrams and Revenue Earned by D.T.O. (1987-88).

D.T.O.	No.of Telegram (National)	Revenue earned (in Tk.)	No.of Telegram (international)	Revenue earned (in Tk.)
Bogra	70885	831329	889	76027
Rajshahi	54309	693346	830	70112
Rangpur	24994	202043	349	N.A.

Source : T & T office, Maintenance and operation, Dhaka.

POST OFFICE

The role of postal service in sending information and articles is also worth mentioning.

In case of Bogra, it has been playing a major role in communication and sending articles within the country and abroad also.

However, the role of postal service and some what, the socio-economic and cultural development of the region even in early days, partially can be understood from the Table 8.7 a, in connection with Hunter's report (1876:301) as" there has been a great increase in the use of the post office within the last ten or fifteen years. Since 1861-62 the number of letters, newspapers, parcels, and books received at the Bogra post office has increased nearly 3-fold; the total having increased from 20,744 in 1861-62, to 57,591 in 1870-71. The number despatched was 26,190 in 1861-62, and 33,545 in 1865-66. The postal receipts increased from 223,13s 4d in 1861-62 to 538, 13s, 8d in 1870-71".

It is to note that the information on receipts or despatches collected from Bogra post office were not only for Bogra town but also for the region. The information of various items of postal services are in the following Table 8.74 for the year 1987. Here all the post offices of the town are included.

TABLE 8.7.a Postal Statistics of Bogra District (1861-1871).

Sl. No.	Items	1861 - 1862 Received (1)	Despatched (2)	1865-66 (1)	(2)	1870-71 (1)	(2)
1	Letters	20744	26190	33696	33545	57591	
2.	News paper	1939	159	4315	541	4524	
3.	Parcls	378	279	556	246	489	
4.	Books	791	20	695	72	828	
	Total	**23852**	**26648**	**39262**	**34404**	**63563**	
Sale of postage stamp		£ s d 110 - 7 0		£ s d 154 - 18 8		£ s d 234-11 0	
Cash Collection		113 - 6 2		133 - 14 7		304-2 7	
Total Receipts		223 - 13 3		288 -13 4		538-13 8	
Total Expenditure		339 - 2 01		250 -12 1		765-13 10	

Source : Hunter (1876:301).
Note : Received/despatched through Bogra Head Post office.

TABLE 8.7 b. : Bogra Town: Postal Services in 1987.

No.of Moneyorder	Taka	Insurance Letter	Registered Letter	Ins Parcel	V.P. Letter	V.P. Parcel	Reg. Parcel
21807	15484081	123	61858	1510	768	127	5351

Source : Bogra Head Post Office.

Accessibility of Post Office

Upto 1981, there were 7 post offices in the Bogra municipal area. After extension of the municipal limit (1982/83) the number has increased to 12. The Table 8.8 gives a comparative statement of post offices per 10,000 population and per square kilometre for five old district towns. After 1981, the statistics for other districts are not available.

However, from the Table 8.8, Bogra town has the highest accessibility as compared to others in terms of population

(1.03/10,000) and of area (1.50/sq km).

TABLE 8.8 : Post Office Accessibility in terms of Population and Area

District Head quarters	No.oF P.O.	P.O. Per 10,000 Population	P.O. Per Sq.km.
Bogra	7	1.03	1.50
Rajshahi	14	0.82	0.90
Rangpur	8	0.51	0.20
Dinajpur	9	0.90	0.43
Pabna	10	0.99	0.55

Data Computed

Source : District statistics,1983

From the above discussion, it is apparent that the transport and communication system makes direct contributions to the regional as well as Bogra's development. Different modes of transport have different roles on spatial relationships. The rapid development of metalled road net-work with incearse in road traffic made Bogra a vital node offering unique connectivity and accessibility to the entire Northern Region and other parts of Bangladesh.