Chapter IV

NATURE OF URBAN-RURAL INTERACTION IN THE LIGHT OF URBAN SERVICES TO RURAL AREAS: A FACT-FINDING APPROACH

Urban-rural continuum is promoted and developed to a considerable extent by a systematic functional interaction between an urban centre and its rural hinterland and thereby a kind of mutual dependence originates between these two characteristically dichotomous subsets of settlements. Complementarities in this regard are manifest in the inflow of rural agrarian products, raw materials and human resources to serve urban consumers and industries and outflow of urban non-agricultural goods, services and technology rendered to vast rural populace. This course of rural-urban interrelation is interpreted by Gibbs as "the city-dwellers are dependent on the agriculturists for sustenance, the latter looks to the former for innovations"[1] (Gibbs, 1961, p.544). Thus the specialised functions performed by either set of the settlements act as the main unifying bond between their inhabitants.

The functions performed by an urban centre, represented primarily by the availability of urban infrastructure, act as the services for its own population as well as for the population of its rural neighbours. The limit of extension of these services indicates the efficiency of the urban centres on one hand and the intensity of urban-rural coordination on the other. As the urban-rural interaction is primarily dependent on the nature and types of services offered by the urban to the rural areas it becomes imperative to make a detailed study of them which helps in making an assessment of the effects of these services on rural life in general. For this purpose it was felt convenient to present the major findings in two separate chapters, the first (chapter IV) dealing with the services available for the rural people which is followed by the next chapter (V) focusing on the overall impact of these services and the benefits derived by the rural people besides obtaining a clear idea about the intensity of interaction working as the base for developing and sustaining this relationship between these two disparate areas. Thus chapter IV deals with the nature of interaction of the villagers with their nearest town arising out of their access to urban services.

4.2 Methodology

The analysis has been carried out in two parts here. First, a distance-wise distributional picture of the indicators mentioned hereafter has been illustrated. For this purpose, the distance is classified into five zones of 0-5 km, 5-10 km, 10-15 km, 15-20 km, 20-25 km. Attempt has been made to bring out the commonalities and variations in the interaction processes within the villages of different distance zones of a particular town and of different towns.

Secondly, to examine the nature and the extent of interrelation between distance and the proportion of rural households availing of urban services, correlation analysis has been carried out between distance and some of the selected variables, specified hereafter.

The *indicators* selected for measuring

(A) direct extension of urban services is the---

1. frequency of buses plying to the selected villages from their nearest town;

(B) the access to urban services through movement of the villagers to town are---

1. Percentage of Rural households availing themselves of medical treatment and advice from their nearest town (a) on regular basis and (b) in case of emergency,

2. Percentage of Rural households depending on the nearest town for (a) regular educational service, (b) only private education and (c) both regular and private education,

3. Percentage of Rural households using the nearest urban areas as their market places; in this case households have further been classified as—

(a) those purchasing daily items from town, (b) those purchasing items only for special purposes and (c) those purchasing both daily and special items from town,

4. Percentage of Rural households selling off their agricultural products to the markets of the relevant nearest town or towns,

5. Percentage of Rural households depending on different administrative and legal services offered by the nearest town,

6. Percentage of Rural households depending on the banking services offered by the nearest town,

7. Percentage of Rural households depending on the postal services offered by the nearest town indicating the provision of urban communication services.

(C) To have an overview of the *urban service zones or zones of urban influence,* the *medical hinterland* and *educational hinterland* have been demarcated for the two district capitals--Koch Bihar and Jalpaiguri, for which the following *indicators* have been considered—

1. Number of indoor patients from places outside the town admitted per week/per month to the town hospital

2. Number of students from places outside the town coming to the colleges of the towns.

(D) Similarly, to measure the *areal extent of rural services to urban centres*, the *supply zones of agricultural products to the urban markets* have been demarcated for the towns of Koch Bihar and Jalpaiguri. In respect of this particular rural service, quantification cannot be made from the available data (unlike the other afore-mentioned indicators).

The demarcated hinterland and zones have been superimposed by the hinterland drawn on the basis of Reilly's law of retail trade to understand the deviation of the actual hinterland from the ideal.

Here we should clarify that as the two district capitals--Koch Bihar and Jalpaiguri--are equipped with more urban benefits than the remaining three subdivision towns (Dinhata, Tufanganj and Alipurduar) it is quite natural to envisage the possibility that these two towns would serve larger catchments, even engulfing the service areas of the three aforementioned smaller order urban centres in some cases. For this reason, the towns of Dinhata, Tufanganj and Alipurduar have been omitted from the exercise of hinterland identification using the official records. For demarcation of medical and educational hinterlands, and urban markets, information have been collected respectively from the colleges, hospitals and markets of Koch Bihar and Jalpaiguri towns.

Since the smallest unit of the present study is the village household, data relating to the pattern of interaction have been obtained by analysing the percentage of households sending members to their nearest town to avail of different types of services. Of course, interviewing each member of a rural household to bring out the actual necessities of the commuting persons would have given us a better understanding of the commuting situation from the point of view of complete enumeration. But such a course is practically beyond the limit of the present study due to time constraints. Hence, for the present purpose, the surveyed households have been categorised according to the purposes of commuting. Answers of the head of the households have been considered as the representative view of all the members of the households. For instance, when a head aged 40 or more than that reacts positively to the question of commuting to town for education, it implies that his son(s) or daughter(s) or other relative(s) goes to the town to have access to urban education.

Altogether the cases of five towns spread over the two districts of Koch Bihar and Jalpaiguri have been studied for this purpose, profiles of which have already been given in chapter II, section 2.3.

4. 3 Urban Services extended to rural hinterlands

Rendering services to rural areas with its own amenities is an inherent attribute of an urban centre. An analysis has been made here to evaluate the provision of the following urban services to the rural surroundings.

4.3.i Transport Services

It is a fact that communication is the basic and efficient medium of transmitting urban-rural interaction as it conveys the message of urban centres to their rural peripheries providing the natural link between the two sectors. In the words of Garnier and Chabot, "The relations of a town with its surrounding region are to a large extent a function of the means of transport available. The town's influence will extend as far as communications permit ease of movement, and all progress in transportation brings town and country closer together"[2] (Garnier and Chabot, 1967). Bus transport is the cheapest and easiest mode of communication for the rural population commuting to

urban centres on the one hand and for the transaction of products of urban and rural functions on the other. Therefore, to review the extension of urban services to the rural hinterland, the frequency of buses plying between the urban centres (selected) and their rural peripheries has been regarded as the first and foremost indicator. Implicit in the factor of bus-frequency are the components of travel time and the fare on transport which are the major deciding factors for movement of rural people to towns and also for the spread of urbanism to rural communities. For this purpose, transport offices of all these five towns have been enquired to get the information about the frequencies of bus services (both government-owned and private), travel time, transport fare etc. to these villages and such information has been expressed through cartographic and statistical analysis.

Hence, the present section figures out a comprehensive view of transport services or transport linkage considering the frequencies of buses plying between the urban centres and their selected rural peripheries, the travel time and the transport fare between them. Table 4.1 depicts a distance-wise trend of these three aspects along with the increasing distance of the selected villages from their respective core towns and figure 4.1 illustrates the frequency of buses originating from the selected towns of Koch Bihar district (Koch Bihar, Dinhata, and Tufanganj) to the selected hinterland villages.

The table clearly states the frequencies of buses from towns in relation to the distance of the respective villages from their nearest towns (considered as core towns here). As some of these villages are not located on the transport arteries, bus services from the respective towns are not available to the villages and thereby these villages are not connected by bus or any other vehicle. In these cases, the bus-frequencies have become zero.

But, probing into the details for these particular set of villages, the information on the distance up to which bus services are available has been acquired along with their frequencies. Table 4.1 also narrates that, four villages around Dinhata town (viz. Raja Khora, Rueir Khuthi, Pet Bhata Seora Guri, Atialdanga) and one village in the hinterland of Alipurduar town (viz. Naottoartari) are situated quite at some distances

Table 4.1 **Information relating to Transport services between the selected Urban centres and their selected Rural Hinterlands: A Distance-wise distribution**

CORE TOWNS (A)	Villages with J.L.No (B)	Distance Zone (km) (C)	Distance (km) from Core Town (D)	Frequency of Buses from the Core Town (E)	Distance (km) up to which bus connectivity available from towns (F)	Frequency of Buses up to the point of available bus services (G)	Travel time (minutes) (H)	Transport Fare (Rs) (I)
Koch Bihar	Takagach (134)	0-5	4	108	4	108	5	4.00
	Ghughumari (131)	0-5	5	276	5	276	10	4.00
	Chakchaka (107)	5--10	10	35	10	35	15	5.50
	Nageswarguri (41)	5--10	10	8	10	8	30	13.00
	Talliguri (116)	5--10	10	127	10	127	15	6.00
	Baneswar (33)	10--15	11	86	11	86	20	7.00
	Kaljani (30)	10--15	12	35	12	35	40	7.00
	Nawabganj Balasi (251)	10--15	15	50	15	50	60	10.00
	Dhumpur Balasi (257)	15--20	17	24	17	24	70	9.00
	Sajherpar Ghoramara (3)	15--20	19	31	19	31	45	13.00
	Barapak (258)	15--20	20	24	20	24	60	10.00
	Daharerpar (261)	20--25	21	24	21	24	90	12.00
	Chatra Chekapdara (262)	20--25	21	24	21	24	70	12.00
	Chhat Singimari (6)	20---25	25	117	25	117	40	12.00
Dinhata	Bhangni Dwitiyo Khanda	0---5	1	80	1	80	5	5.00
	Chhota Sakdal (103)	5---10	7	24	7	24	20	5.00
	Gokunda (126)	5---10	8	10	8	10	15	5.00
	Raja Khora (29)	5---10	8	0	3.5	50	45	15.00
	Ruier Khuthi (72)	10--15	12	0	7	30	65	15.00
	Khalisa Gosanimari (6)	10---15	15	50	15	50	35	7.00

	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
	Pet Bhata Seora Guri (81)	15----20	18	0	14.5	24	60	18.00
	Salmara(92)	20---25	22	24	22	24	60	10.00
	Atialdanga (220)	20--25	24	0	19	80	80	20.00
Tufanganj	Chamta (92)	0—5	1	212	1	212	5	4.00
	Deocharai (89)	5—10	8	18	8	18	30	7.00
	Bhanukumari (65)	10—15	12	36	12	36	40	8.00
	Takoamari (25)	15—20	20	12	20	12	60	12.00
	Chhat Barochowki (1)	20—25	21	6	21	6	75	15.00
Jalpaiguri	Kharia (7)	0---5	4	60	4	60	5	4.00
	Paharpur (6)	5---10	9	100	9	100	15	4.00
	Berubari Nagar (19)	10--15	15	20	15	20	35	10.00
	Nandanpur (26)	10--15	15	10	15	10	60	12.00
	Sakati (20)	15--20	20	9	20	9	60	15.00
	Gujrimari (8)	15--20	20	12	20	12	30	12.00
	Boalmari (29)	20---25	22	50	22	50	75	12.00
	Kismat Sukhani(10)	20---25	22	10	22	10	5	4.00
Alipurduar	Birpara (45)	0---5	1	201	1	201	15	5.00
	Dakshin Majher Dabri(55)	0---5	3	66	3	66	30	6.00
	Chapatali(43)	5---10	10	56	10	56	90	7.00
	Naottoartari (35)	10--15	13	0	8	42	40	10.00
	Dakshin Sonapur (27)	15--20	16	62	16	62	60	12.00
	Silbari Hat (19)	20---25	21	62	21	62	5	4.00

Source: Transport Offices, Koch Bihar, Dinhata, Tufanganj, Jalpaiguri, Alipurduar

from the bus route connecting the respective towns and thus the calculated bus frequencies of these villages have happened to be zero which means no bus or any other vehicle ply between the towns and these villages. From the villages of Raja Khora, Rueir Khuthi, Pet Bhata Seora Guri, Atialdanga, Naottoartari the bus roads are respectively at 4.5km, 5km, 3.5km, 5km, 5km which the villagers cross by walking or by cycle or van beyond which the buses are available for moving to the towns. The last column of the table shows the frequencies of buses till the point where bus roads are aligned.

In case of the other three towns, i.e., Koch Bihar, Tufanganj and Jalpaiguri, all the surveyed villages are lying along the bus road.

Table 4.1 makes it clear that the near-by villages have in general higher bus frequencies than the far-off villages. The inverse correlation between distance from town and the frequency of buses, as shown in table 4.2 hereafter, is statistically significant. But the value(-.5) for all 42 villages taking together, proves that these two parameters are not strongly correlated and that deduction may be supported from table 4.1 as a number of distant villages have greater access to bus communication with the core towns than the relatively nearer villages. Chhat Singimari in Koch Bihar's hinterland is the best example of being the farthest one with a fairly good (117) frequency which is greater than that of eleven villages in the same hinterland. This is because of the fact that this particular village is connected with Koch Bihar town by the National Highway 31, on which a good number of buses ply everyday in various directions. In comparison, the villages having lesser bus frequencies are placed on lesser important roads. Again, Talliguri is another village that is connected to the concerned core town (Koch Bihar) by NH 31 and so it has got a high frequency value. In contrast, being at the same distance as that of Talliguri, Nageswarguri is located on a pocket route bifurcating from the Koch Bihar-Alipurduar road and on that pocket route a very small number of buses ply everyday connecting the village with Koch Bihar (ref. Figure 4.1). Examples may also be cited from other zones, such as Boalmari, located at 22 km from Jalpaiguri has higher frequencies than Berubari Nagar, Nandanpur, Sakati and Gujrimari which are respectively at distances of 15 and 20 km from Jalpaiguri. Further, Paharpur is lying on the State Highway 12 that connects important places like Siliguri, Jalpaiguri, Koch Bihar, Dhupguri, Maynaguri etc. and naturally a larger

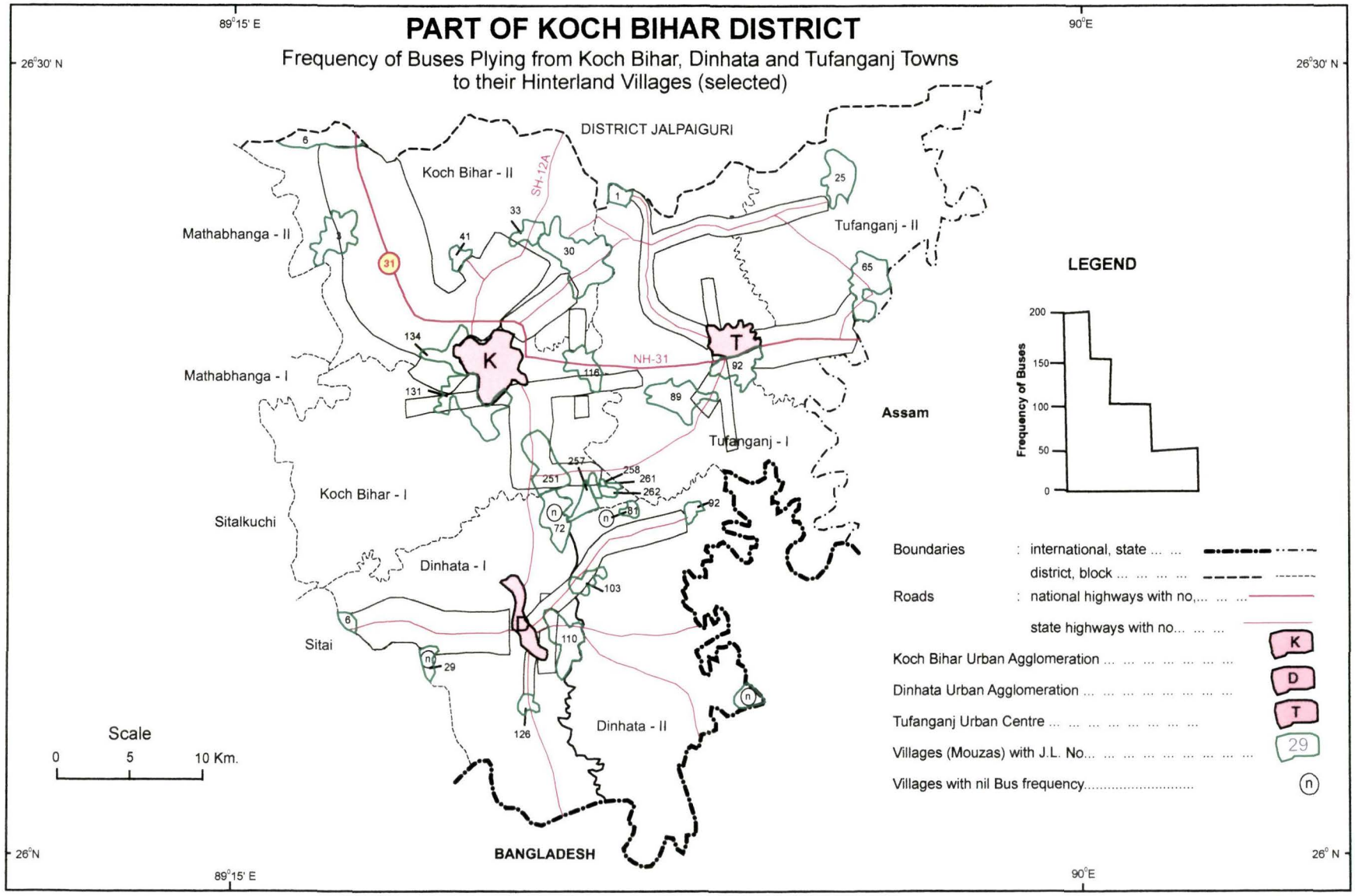

PART OF KOCH BIHAR DISTRICT
Frequency of Buses Plying from Koch Bihar, Dinhata and Tufanganj Towns
to their Hinterland Villages (selected)
89°15' E
90°E
26°30' N
26°N
DISTRICT JALPAIGURI
Koch Bihar - II
Mathabhanga - II
Mathabhanga - I
Koch Bihar - I
Sitalkuchi
Dinhata - I
Sitai
Dinhata - II
Tufanganj - II
Tufanganj - I
Assam
BANGLADESH
SH-12A
NH-31
K
T
D
LEGEND
Frequency of Buses
200
150
100
50
0
Boundaries : international, state ... ...
district, block ... ...
Roads : national highways with no,... ... ...
state highways with no... ... ...
Koch Bihar Urban Agglomeration ... ...
Dinhata Urban Agglomeration ... ...
Tufanganj Urban Centre ... ...
Villages (Mouzas) with J.L. No... ... ...
Villages with nil Bus frequency.....
Scale
0 5 10 Km.

Fig. 4.1

number of buses ply on this road for which the village Paharpur has a higher frequency than Kharia--the contiguous village connected with the town by a district road (Figure 4.2). (The other instances may be examined from table 4.1 and figures 4.1, 4.2 and 4.3). Figure 4.3 shows that the village Naottoartari is 13 km from the town Alipurduar but does not have any buses moving between the village and the town as there is no metalled road between them and the people of the village has to go 5km walking or by cycle or van after which they can avail themselves of buses to reach the town. On the contrary, Dakshin Sonapur and Silbari Hat are lying on the State Highway and thus have got good frequencies, in spite of their greater distances from Alipurduar than that of Naottoartari.

Thus, the importance of roads on which the villages are located and connected with their respective core towns determine the frequencies of buses moving between them to a large extent and sometimes to a larger extent than the distances of the villages from the towns. In general, the travel time and fare increase along with the increasing distance from the nearest towns, which is a quite expected phenomenon.

The concept of travel time, in the present context, indicates the total time to reach the concerned nearest town from the respective village and vice versa, even if a particular village is not directly connected with the town by buses. In such cases of zero bus frequencies, that is to say where buses for moving to towns are available to the villagers after covering a certain distance on foot etc., such as in Dinhata's hinterland it is 4.5km and 5km respectively for people residing in Raja Khora and Ruier Khuthi, in Alipurduar's surroundings it is 5 km for villagers living in Naottoartari etc. (ref. Table 4.1), the travel time includes the time taken to move beyond the time for bus travel, which certainly includes the time taken by walk, or by cycle or by van/rickshaw. In all those cases, the time exceeds that of the remoter areas having direct bus connection. Thus, the factor of less distance of Raja Khora and Ruier Khuthi than Khalisa Gosanimari from the town of Dinhata and also of Naottoartari than Dakshin Sonapur, Silbari Hat from Alipurduar town does not become effective in regard to the commuting of the villagers, as much greater time is taken by people living there to reach the respective towns. Again, the nature and importance of the transport arteries

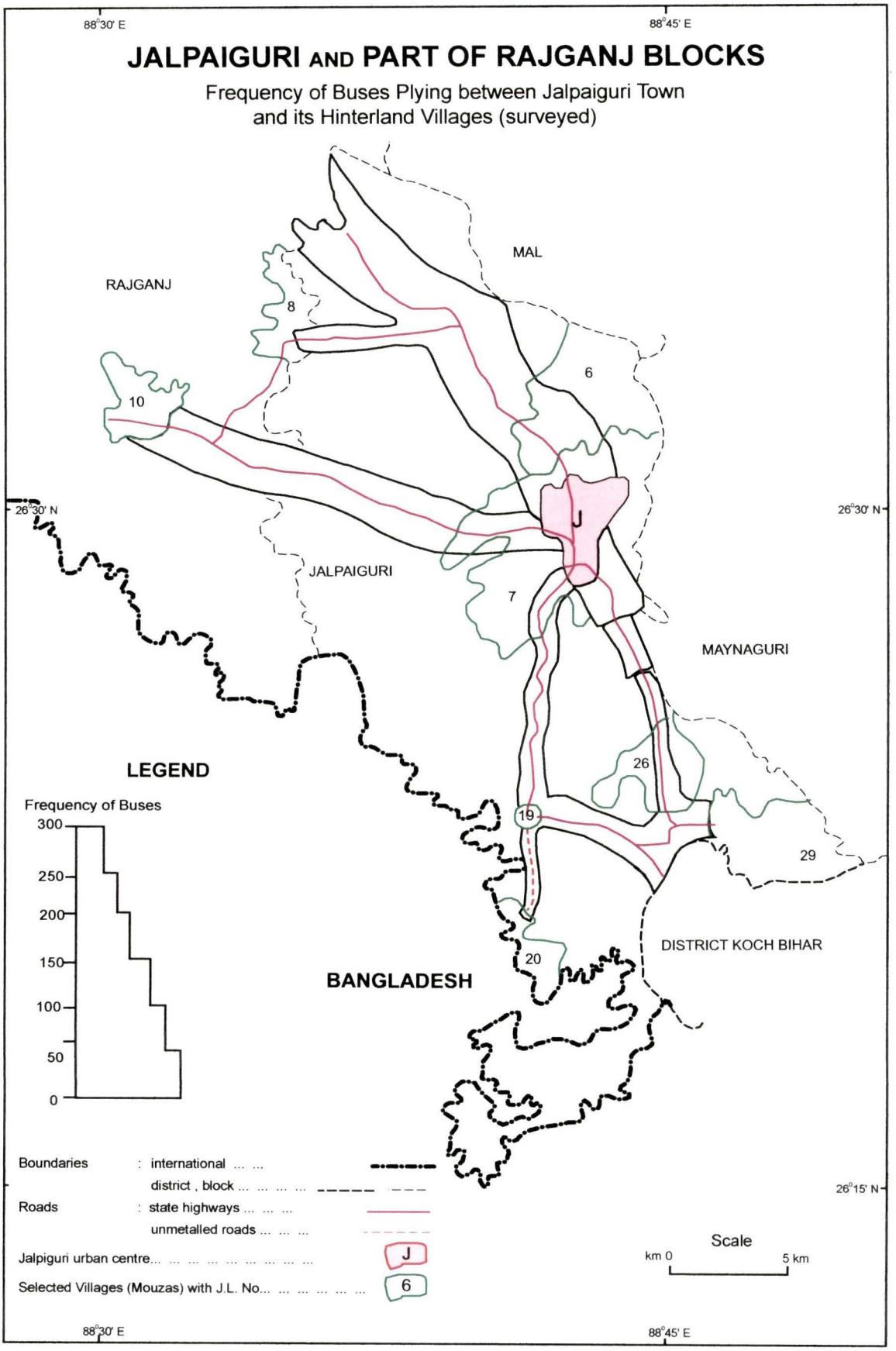

88°30' E
88°45' E
JALPAIGURI AND PART OF RAJGANJ BLOCKS
Frequency of Buses Plying between Jalpaiguri Town
and its Hinterland Villages (surveyed)
MAL
RAJGANJ
8
6
10
J
26°30' N
26°30' N
JALPAIGURI
7
MAYNAGURI
26
19
29
DISTRICT KOCH BIHAR
20
BANGLADESH
LEGEND
Frequency of Buses
300
250
200
150
100
50
0
Boundaries : international ... ...
district , block ... ...
Roads : state highways ... ...
unmetalled roads ... ...
Jalpiguri urban centre... ... ...
J
Selected Villages (Mouzas) with J.L. No... ... ...
6
26°15' N
Scale
km 0
5 km
88°30' E
88°45' E

Fig. 4.2

connecting the villages with their core towns also are important determinants for the travel time between them. For instance, the alignment of NH 31 along Chhat Singimari—the outlying rural hinterland of Koch Bihar town---has a bus frequency higher than that of the eleven villages of the entire urban field and a travel time less than that of the six villages. Similar examples may be cited from the hinterland of Jalpaiguri by pointing to the differences of Boalmari and Nandanpur etc. The spatial pattern of travel time has got a uniform increasing trend only in the influence zone of Tufanganj town.

Table 4.2 shows the correlation of distance with bus frequency, travel time and transport fare. There is an inverse relation between distance and the frequency of buses which supports our foregoing discussion. Of course, the low to moderate correlation between them indicates that bus-frequency has not always decreased with increasing distances.

Travel time between the core towns and their hinterlands has got highly positive significant correlation with the distance between them in all the hinterlands except in the hinterland of Alipurduar for which the relationship is insignificant.

Table: 4.2 **Results of Correlation Analysis between Distance of the Villages from the Core (Nearest) town and Bus-Frequency, Travel Time and Transport fare to the Core Town**

Hinterland Villages of Core towns of	Correlation coefficients ('r') for distance and		
	Bus Frequency	Travel time	Transport Fare
Koch Bihar	-.473	.793**	.797**
Dinhata	-.470	.854**	.635
Tufanganj	-.807	.987**	.969**
Jalpaiguri	-.639	.741*	.864**
Alipurduar	-.593	.721	.956**
Koch Bihar District (Combined)	-.457*	.835**	.693**
Jalpaiguri District (Combined)	-.650*	.678**	.898**
Koch Bihar and Jalpaiguri Districts (Combined)	-.509**	.781**	.745**

Note: ** Significant at .01 level of significance

* Significant at .05 level of significance

Computed by the author

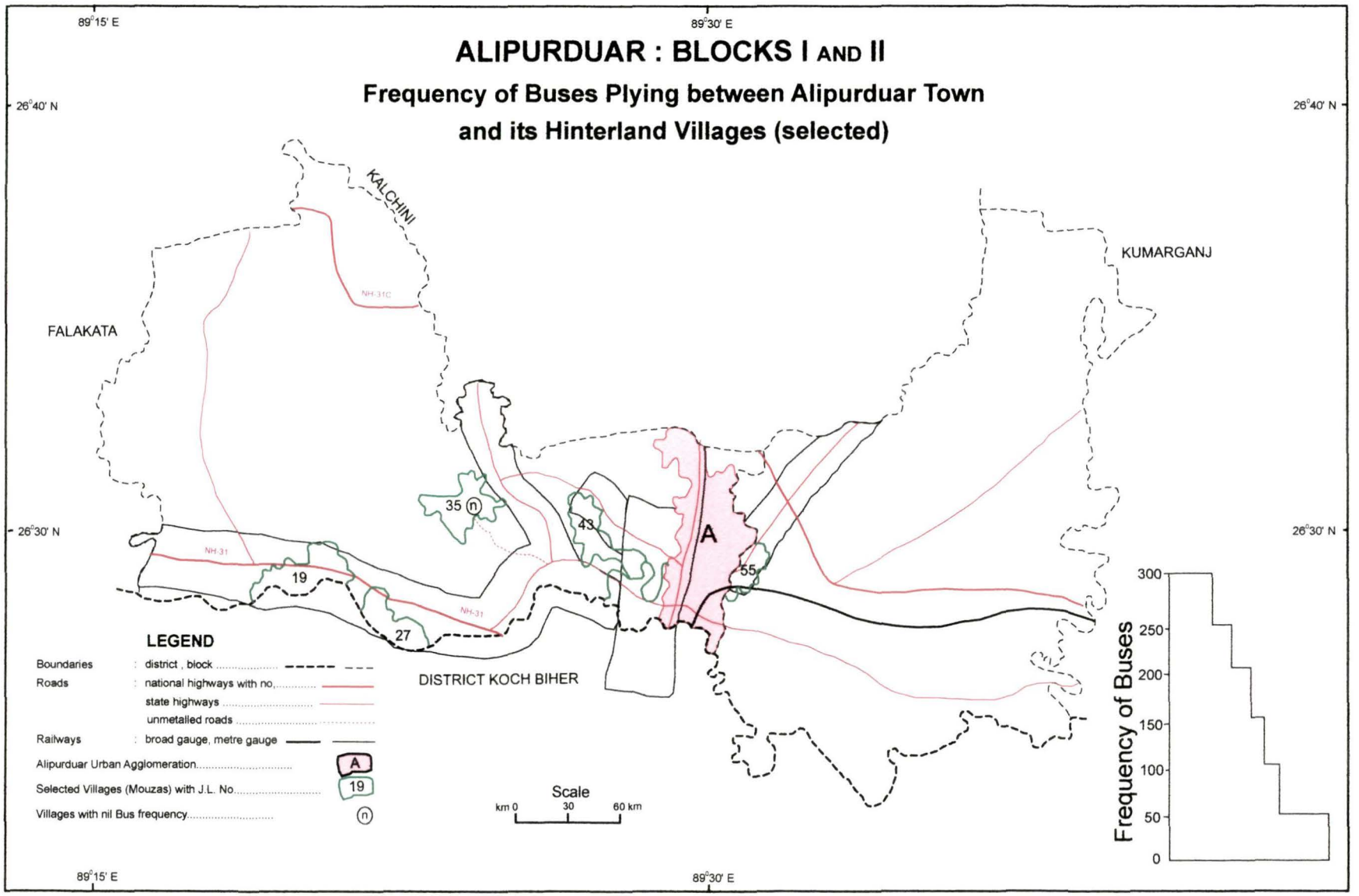

ALIPURDUAR : BLOCKS I AND II
Frequency of Buses Plying between Alipurduar Town
and its Hinterland Villages (selected)
89°15' E
89°30' E
26°40' N
26°30' N
KALCHINI
KUMARGANJ
FALAKATA
DISTRICT KOCH BIHER
NH-31C
NH-31
A
35
43
19
27
55
LEGEND
Boundaries : district , block
Roads : national highways with no,
state highways
unmetalled roads
Railways : broad gauge, metre gauge
Alipurduar Urban Agglomeration
Selected Villages (Mouzas) with J.L. No
Villages with nil Bus frequency
Scale
km 0 30 60 km
Frequency of Buses
300
250
200
150
100
50
0

Fig. 4.3

The transport fare implies the cost incurred for travel to towns and vice versa. Similar to that of travel time, it includes the total cost including the bus fare, the fare of auto or van or rickshaw etc. for the villages where bus services are not available till the location point of the village; that is why, the fares for the villages with zero bus frequencies are generally higher than the other villages. For example, the maximum fare has been found for Atialdanga—the remotest neighbour of Dinhata; otherwise the fare as such keeps parity with the distance from the towns. In the rural neighbourhood of Tufanganj and Alipurduar, the fare has increased uniformly with increase in distance from the towns. Similar to travel time, bus fare has got high positive correlation with distances for all the regions apart from that of Dinhata.

4.3.ii Urban centres representing as the Medical Service Centres for the rural people

The most recognisable role of an urban centre in the life and activities of rural people is in its role as a 'Medical Service Centre'.

Among the various services offered by an urban area, medical services are very crucial to the people of rural hinterland, especially in the developing countries. This is because of the fact that the rural areas in these countries are usually equipped with a very poor level of health infrastructure; and, sometimes they even suffer from the absence of any medical facility. Hence, the dependence of rural people on their nearest town or on other towns for their treatment is a regular feature, which facilitates the spatial movement of the rural mass towards urban centres. Indian countryside also typifies this picture.

An overview of the region, wherefrom the hospitals of the towns draw patients, has been obtained for the two district towns of Koch Bihar and Jalpaiguri, by identifying medical hinterlands of these two towns, based on the hospital records of the two towns. (The reason for omitting the other three towns has been given in section 4.2).This is an indirect way of measuring the extent of urban medical services to the rural hinterland.

The medical hinterland of Koch Bihar within the district, as shown in figure 4.4, extends beyond Takoamari in the C.D. Block of Tufanganj II in the north-east corner, in the west up to Mathabhanga and Sitalkuchi blocks; and in the south it covers the major part of Dinhata Blocks. The closest hinterland is characterised by more than 50 indoor patients treated in a week. Three of our surveyed villages fall under this zone. The village of Talliguri is included in the subsequent zone that is bounded by the isoline of 35 patients. This zone is protruding in its north-western and eastern parts following the alignment of NH 31 and thereby drawing larger number of patients along this road. The third zone covers Baneswar, Kaljani, Nageswarguri, Nawabganj Balasi, Dhumpur Balasi, Barapak, Chatra Chekapdara and Daharerpar among our surveyed villages, and it also bulges towards the north-west and the north-east. Interestingly, the towns of Tufanganj and Dinhata fall under the jurisdiction of this territory, which implies that because of the inadequate medical infrastructure there, people of these two towns try to get access to better medical services available in Koch Bihar town in many times. The complementary zone, demarcated on the basis of Reilly's model, is smaller than the third sub-zone of the medical hinterland in all parts except in the western side, where it outstretches the third sub-zone of the medical hinterland.

Similarly, within the district, the medical hinterland of Jalpaiguri town, (ref. figure 4.8) covers the C.D. Blocks of Jalpaiguri, Rajganj, Mal, Maynaguri, Dhupguri, Mitiali and parts of Falakata and Madarihat. The northward and eastward extensions of the closer hinterland indicate a greater dependence of the people living there on the medical services available in the town than people living on its southern and western sides. This zone is characterised by 200 indoor patients in a month and the outer periphery with 40 patients a month. The outer boundary of the medical hinterland extends far beyond the hinterland drawn on the basis of Reilly's model; the intermediate zone, characterised by a number of 120 patients, does not conform to that model in the eastern and northern parts. Even, the innermost hinterland outstretches the complementary zone in the eastern part. Thus, the more eastward extension of the medical hinterland than its westward extension indicates a greater medical dependence of population on the town from its eastern part than from its western side. Two reasons may be attributed to this:

a) on the south-western side the presence of Bangladesh close to the district boundary exercises an indirect influence on limiting the medical boundary;

DISTRICT KOCH BIHAR

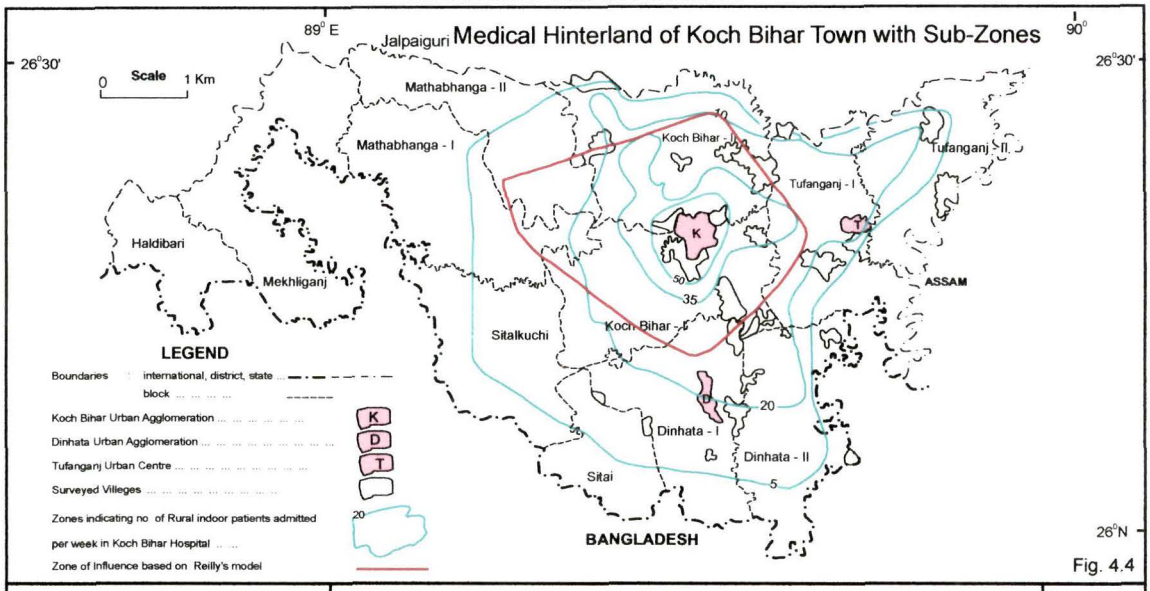


Fig. 4.4

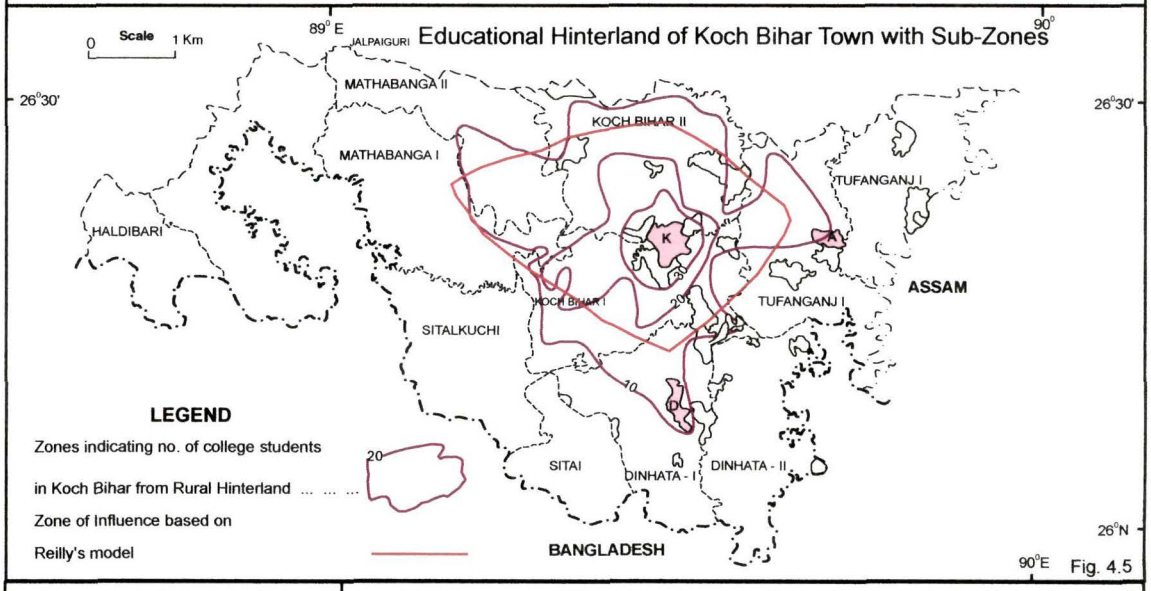


Fig. 4.5

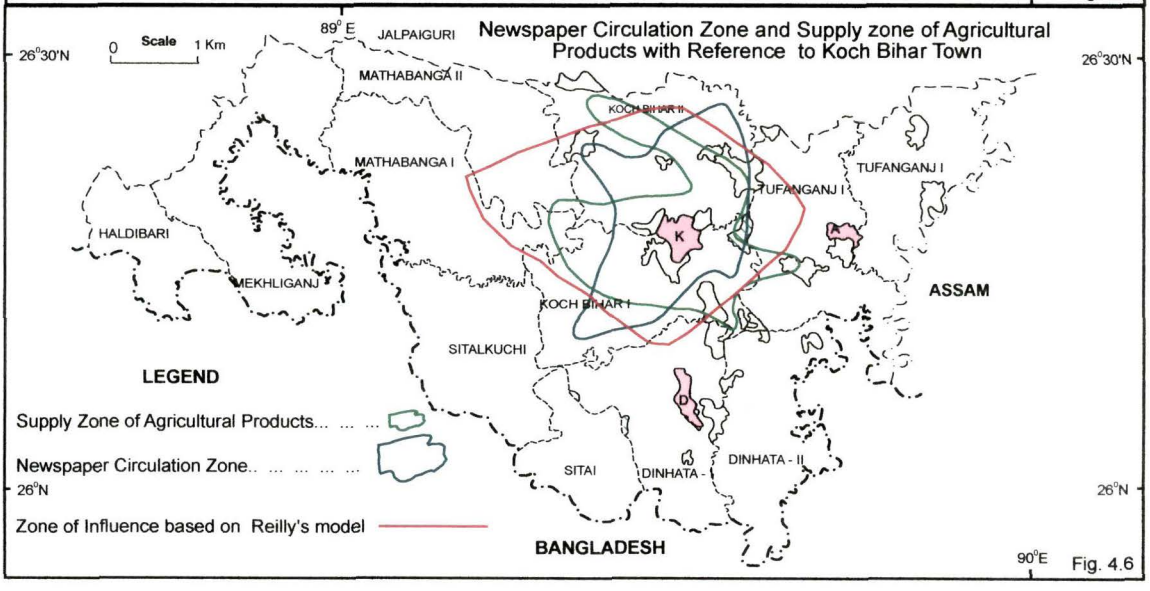


Fig. 4.6

b) the city of Siliguri (Darjiling district) is situated on the northwest of Jalpaiguri town, and thus people of this part of Jalpaiguri town are more dependent on Siliguri for medical purpose, than on Jalpaiguri because of the availability of better medical facilities. On the contrary, the eastern side of the town of Jalpaiguri is devoid of any higher order urban settlements, for which people living in the eastern part of the town are under obligation to avail of medical facilities in the town itself in the absence of any higher grade town further east. Unlike the hinterland of Koch Bihar town that engulfs the towns of Dinhata and Tufanganj in Koch Bihar district, the medical hinterland of Jalpaiguri does not include the town of Alipurduar and its surroundings since the latter one is more distant form Jalpaiguri than Dinhata and Tufanganj from Koch Bihar.

It is to be noted that though the discussion on the medical hinterlands of these two towns has been restricted to the district, in reality the hinterlands extend beyond the district boundary particularly to the adjacent districts. But that is beyond the purview of our study.

The present study has sought to understand the rural-urban interaction from the point of view of the commuting of the villagers to the selected towns to avail of medical services (1) on regular basis and (2) in emergencies. There are, in fact, other villagers who do not avail of urban medical facilities. Table 4.3 portrays the distance-wise classification of rural households (surveyed) whose members obtain medical services from the selected towns---Koch Bihar, Dinhata, Tufanganj, Jalpaiguri, and Alipurduar.

It appears from table 4.3 that distance from the nearest town determines the medical dependence of the villagers to some extent as 100% people from the majority of fringe villages placed within the closest circuit (0-5 km) of the core towns commute to have access to medical services in respective towns on regular basis either from the town hospitals or from private doctors. These people do not rely on the medical facilities of their own villages. In this regard, their medical dependence on towns has been favoured by the proximity of their villages to the towns and has not been hindered by their economic incapability to avail of town services. Here the necessity for treatment has overridden all other considerations, and becomes a contingent factor. Of course, the exceptions to this trend have been observed in the case of the village

DISTRICT JALPAIGURI

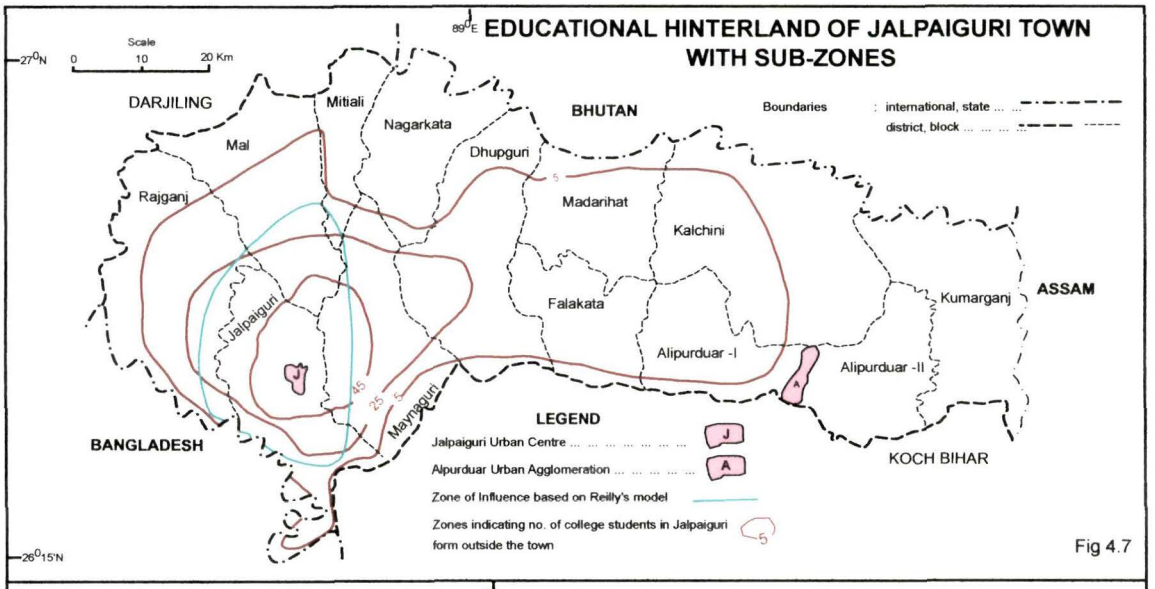


Fig 4.7

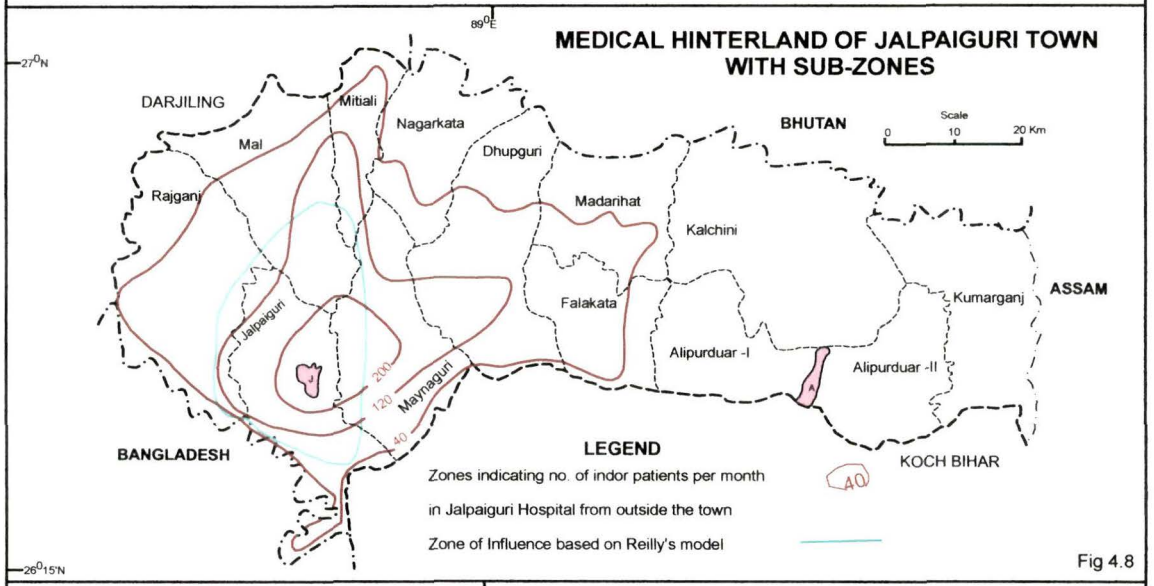


Fig 4.8

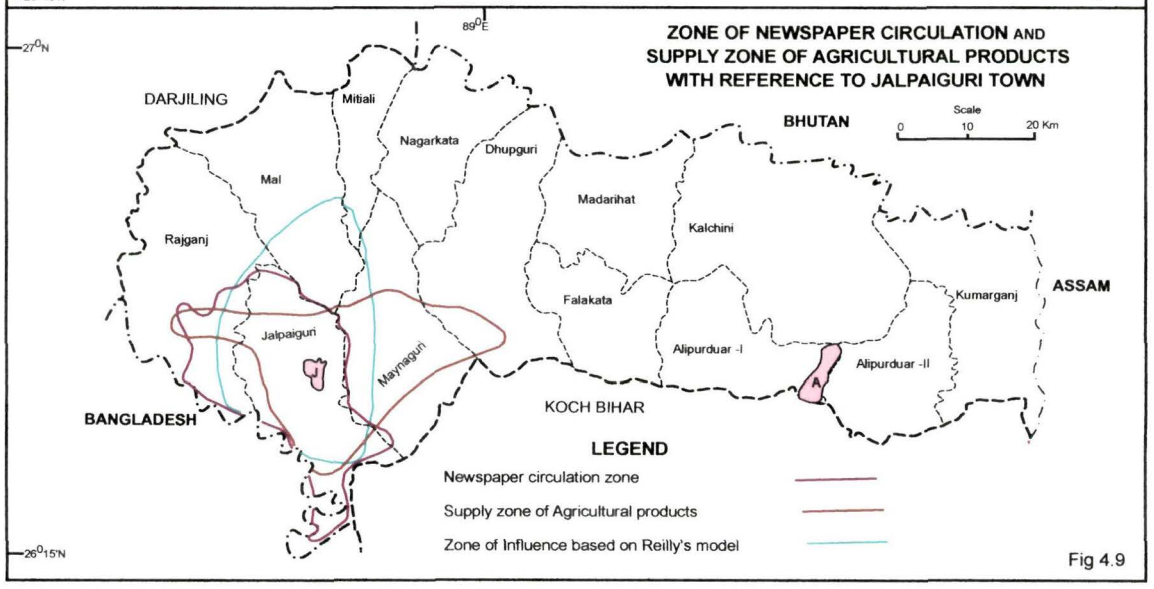


Fig 4.9

Table: 4.3 **Distance-wise categorisation of Rural households with members commuting for availing of Medical Services at respective Core (Nearest) Town**

Core Towns (A)	Villages (B)	Distance (km) From Core Town (C)	Distance Zone (km) (D)	Households(%) with members commuting to core town to avail of Medical Services		Households (%) not availing of Medical Services from Core Town (G)
				Regularly (E)	In Emergencies (F)	
Koch Bihar	Takagach	4	0-5	100	0	0
	Ghughumari	5	0-5	65	33	2
	Chakchaka	10	5--10	76.8	23.2	0
	Nageswarguri	10	5--10	54.5	36.4	9.1
	Talliguri	10	5--10	96	0	4
	Baneswar	11	10--15	95	5	0
	Kaljani	12	10--15	76.9	21.8	1.3
	Nawabganj Balasi	15	10--15	62	36	2
	Dhumpur Balasi	17	15--20	83.3	8.3	8.3
	Sajherpar Ghoramara	19	15--20	49	44	7
	Barapak	20	15--20	9	82	9
	Daharerpar	21	20--25	16.7	83.3	0
	Chatra Chekapdara	21	20--25	20	80	0
	Chhat Singimari	25	20--25	47.8	34.8	17.4
Dinhata	Bhangni Dwitiyo Khanda	1	0--5	100.00	0.00	0.00
	Chhota Sakdal	7	5--10	61.54	38.46	0.00
	Gokunda	8	5---10	50.00	50.00	0.00
	Raja Khora	8	5---10	50.00	50.00	0.00
	Ruier Khuthi	12	10--15	78.00	22.00	0.00
	Khalisa Gosanimari	15	10---15	43.48	47.83	8.70

	(B)	(C)	(D)	(E)	(F)	(G)
	Pet Bhata Seora Guri	18	15-20	20.00	80.00	00
	Salmara	22	20-25	38.10	38.10	23.80
	Atialdanga	24	20-25	6.67	93.33	0.00
Tufanganj	Chamta	1	0—5	100	0	0
	Deocharai	8	5—10	63.3	33.3	3.3
	Bhanukumari	12	10—15	74.5	12.7	12.7
	Takoamari	20	15—20	58.8	29.4	11.8
	Chhat Barochowki	21	20—25	43.5	27.5	29
Jalpaiguri	Kharia	4	0---5	98.00	0	2.00
	Paharpur	9	5---10	79.1	18.6	2.3
	Berubari Nagar	15	10--15	87.5	12.5	0
	Nandanpur	15	10--15	80	20	0
	Sakati	20	15--20	50	40	10
	Gujrimari	20	15--20	77.3	22.7	0
	Boalmari	22	20---25	42.9	42.9	14.3
	Kismat Sukhani	22	20---25	52.9	41.2	5.9
Alipurduar	Birpara	1	0---5	100	0	0
	Dakshin MajherDabri	1	0---5	93	7	0
	Chapatali	10	5---10	96	4	0
	Naottoartari	13	10--15	30.8	46.2	23.1
	Dakshin Sonapur	16	15--20	13.3	20	66.7
	Silbari Hat	21	20---25	53.8	15.4	30.8

Source: Field Survey

Ghughumari at 5km from Koch Bihar town and to a little extent in village Kharia at 1 km from Jalpaiguri town. Our interview reveals that in case of the former village, the economic incapability of the villagers to move to the respective towns has reduced their tendency to depend on regular medical services in the towns as compared to the other nearby villages. In the latter case, the presence of dependable village medical infrastructure (e.g. Health centre, Dispensary, T.B. Clinic, Community Health Worker) is the reason for 2% surveyed households to be entirely independent of the town health services. Thus, in this particular village (Kharia) the effect of trickling down of medical services is prominently noticed. But in the other neighbouring villages the question of trickling down of urban medical facilities does not arise.

So long, we have discussed the question of the availability of urban medical facilities to the people in the peripheral villages of the towns. We shall now consider the situation of the remote villages with regard to the urban medical services.

As it appears, the distance has not restricted the villagers to avail of urban health services even on regular basis as members of a substantial percentage of households from remote villages come to their core towns to get medical facilities. For example, 48% households of Chhat Singimari at 25km, 38% households of Salmara at 22 km, 43.5% households of Chhat Barochowki at 21km, 53% households of Kismat Sukhani at 22 km and 53.8% households of Silbari Hat at 21 km move to Koch Bihar, Dinhata, Tufanganj, Jalpaiguri and Alipurduar respectively (ref. table 4.3) commute for obtaining their regular course of treatment. One of the reasons behind this is that these people from all the villages come to the respective towns for their livelihood. So it is quite natural for them to avail of urban medical facilities. Obviously, the proportions of commuting households receiving regular urban medical services are much above the proportions working in the respective towns (ref. tables 5.1 and 4.3) which also points out the greater medical necessities of the rural populace. Secondly, excluding Chhat Barochowki of Tufanganj, all the villages mentioned are connected with their towns by metalled road which facilitates movement to town for health services even if they are not engaged in the urban job markets. On the contrary, in spite of the fact that the village Chhat Barochowki is connected by unmetalled road with Tufanganj and has poor communication facilities as such, the absence of any sort of village health infrastructure pushes a sizeable section of its population to the town for the purpose of getting facilities for their treatment.

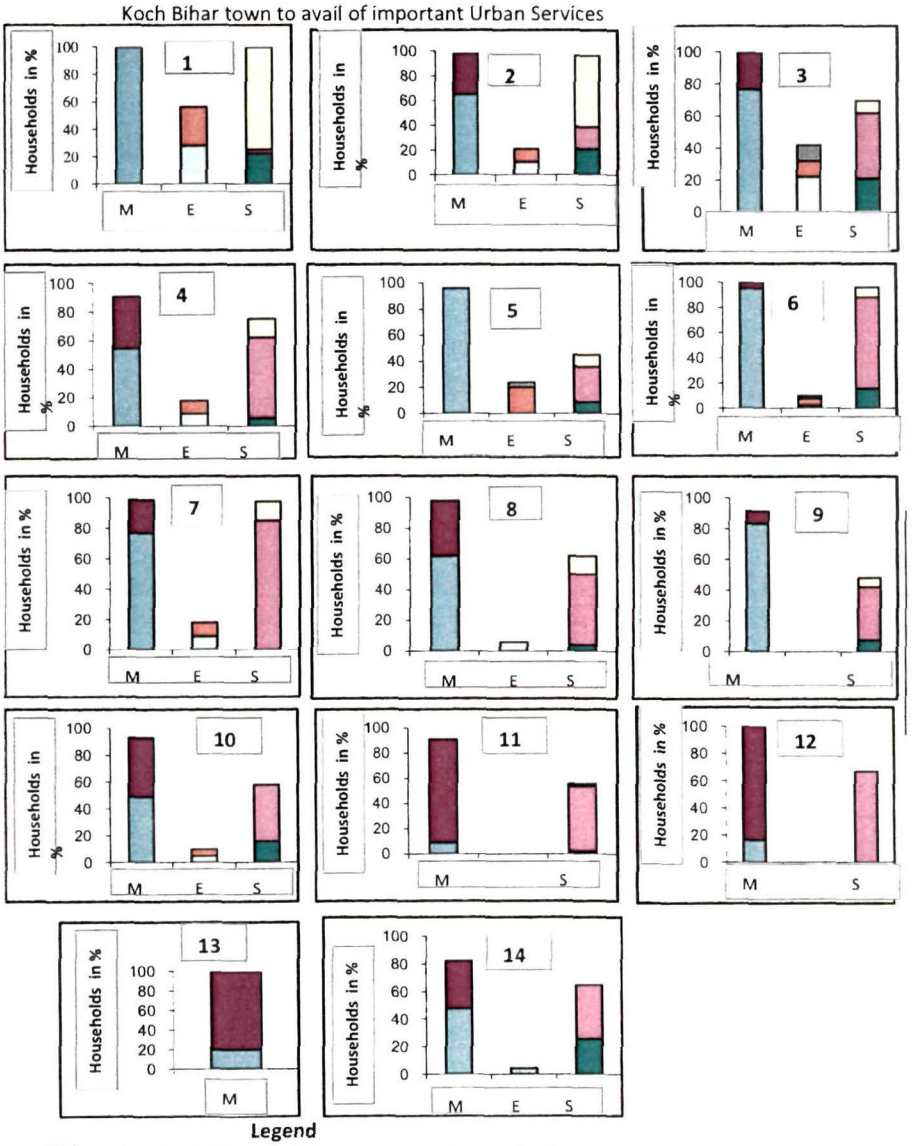
Thus, although proximity and good communication have facilitated the medical interaction between the hinterland villages and their core towns, yet remoteness and poor linkage cannot impede the rural people much from being treated at the selected towns in their dire necessities.

Interestingly, with increasing distance from towns, the proportions of households depending on regular medical services have declined while the proportions of dependents in emergencies have increased. This pattern may be found to be more distinct from the figures 4.10, 4.11, 4.12, 4.13 and 4.14 showing the proportions of rural households availing of important urban services respectively from Koch Bihar, Dinhata, Tufanganj Jalpaiguri and Alipurduar towns. In these figures, the villages have been arranged according to their distance from the respective nearest towns.

Obviously, there exist some intra-zonal and inter-zonal variations considering the five selected hinterlands. For example, in spite of being in the same distance zone (15-20 km), a diametrically opposite trend in medical dependence has been observed in the two villages, viz. Dhumpur Balasi and Barapak. 83% households of Dhumpur Balasi get regular medical services and 8% avail of in emergencies, while from Barapak, people from 9% households come to the town for their regular check-up and 82% come in emergencies. The former one is situated at a distance of 17km and the latter one is 20km away from Koch Bihar and are connected by kutcha road with the town. There is no health infrastructure in these two villages. So only the factor of difference in distance by 3 km might explain this wide variation. As a matter of fact, most of the people of Barapak go to a health centre located in the neighbouring big village for regular treatment.

The rural inhabitants who avail of medical services in emergencies cannot afford to commute at primary stage for regular medical check-up; they are rather compelled to depend on their village infrastructure. On the contrary, compulsion pushes them to move to the towns when they face serious condition of their patients. Thus, physical distance becomes hindrance for rural people to interact with urban areas to a certain extent; but urgency in human life may overcome that obstacle and, in that sense, the urban-rural interaction becomes successful as has been reflected in the present context.

Proportion of Rural Households sending members to Koch Bihar town to avail of important Urban Services



Legend

- Medical (Regularly)
- Medical (In Emergency)
- Education (Regular)
- Education (Regular & Private)
- Education (Private)
- Shopping (Regular Items)
- Shopping (Special Items)
- Shopping (All Items)

M: Medical services

E: Educational services

S: Shopping

Village: 1: Takagach, 2: Ghughumari, 3: Chakchaka, 4: Nageswarguri, 5: Talliguri, 6: Baneswar 7:Kaljani, 8:Nawabganj Balasi, 9: Dhumpur Balasi, 10:Sajherpar Ghoramara, 11: Barapak 12:Daharerpar, 13: Chatra Chekapdara, 14: Chhat Singimari.

Fig. 4.10

The effect of distance on the medically-commuting rural households has been worked out by product-moment correlation, which is shown in table 4.4

Table: 4.4 **Results of Correlation Analysis between the Proportions of Rural Households dependent on medical services of Core Town and the Distance of Hinterland Villages from the town**

Hinterland Villages of Core towns of	Correlation coefficients ('r') for Distance and Households (%) Dependent on Urban Medical Services---	
	Regularly	*In Emergencies*
Koch Bihar	-.718**	.647*
Dinhata	-.842*	.711*
Tufanganj	-.888*	.661
Jalpaiguri	-.819*	.877**
Alipurduar	-.733	.494
KochBihar District (Combined)	-.734**	.602**
Jalpaiguri District (Combined)	-.644*	.725**
Koch Bihar and Jalpaiguri Districts (Combined)	-.692**	.582**

Note: ** Significant at .01 level of significance

* Significant at .05 level of significance

Computed by the author

Table 4.4 confirms that significant negative relation exists between distance and the percentage of households commuting for regular medical services in the hinterlands of Koch Bihar, Dinhata, Tufanganj and Jalpaiguri; for the hinterland of Alipurduar the negative relation is not statistically established. The fact that as distance from the towns increases the number of people coming to the towns on emergent medical grounds also increases, which has been significantly proved in the cases of Koch Bihar, Dinhata and Jalpaiguri. The other two areas also show positive correlation between the two indicators, but the relationship is insignificant. The decrease and the increase, respectively, of the proportion of dependents along with distance for regular and emergent medical services have also been statistically justified for the urban-hinterlands of the Koch Bihar and Jalpaiguri districts taken individually and taken together. Thus, for the majority of cases all sorts of hypothesised association between distance from core towns and the proportion of rural dependents on the town's medical services have been substantiated.

4.3.iii Access to Urban Educational Services

In a region, urban centres are the cultural hub where the educated mass concentrates and interacts. These centres are supposed to provide services to their neighbouring rural areas. People from rural areas travel to towns to be associated with the formal and the non-formal education system developed in towns.

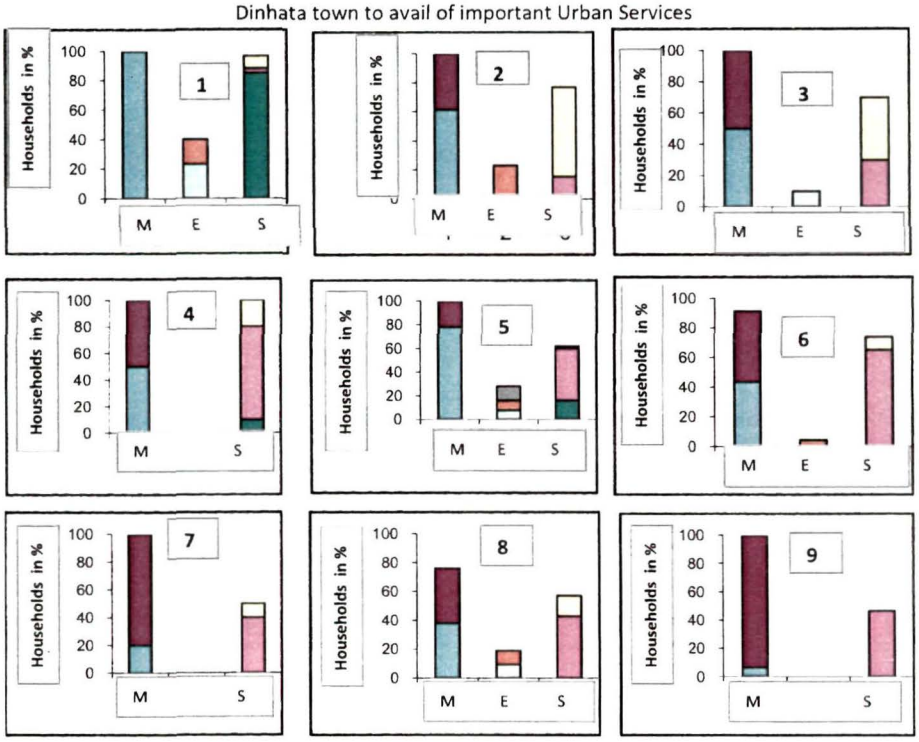
The educational hinterlands of the towns of Koch Bihar and Jalpaiguri have been delineated with the help of information obtained from different colleges of the towns. From the records, it has been found that the educational hinterlands of Koch Bihar and Jalpaiguri extend beyond the district but the purpose of the present study is to identify the limit of the hinterland within the districts.

In the case of Koch Bihar, the hinterland has evidently engulfed the towns of Dinhata and Tufanganj. As is observed from figure 4.5, it includes some part of Mathabhanga on the west and on the north it extends almost up to the northern boundary of the block of Koch Bihar II. An inner hinterland may be identified with 30% of rural students in proportion to the total students' strength of the colleges, while the outer boundary corresponds with a value of 10% students. The complementary zone (conceived after Reilly) is larger than the intermediate zone and smaller than the outer boundary of the educational hinterland.

Similarly, the service area of education of Jalpaiguri town extends almost up to Alipurduar town in the east and in the south west it corresponds with the district boundary, while in the west it covers the larger parts of Rajganj, Mal (Figure 4.7). The two blocks--Alipurduar I and parts of Kalchini--form the eastern boundary of the outer zone, corresponding to 5 students. The intermediate zone bearing the value of 25 students, matches with the complementary zone conceived after Reilly's model. But the deviation is shown in the eastern part, where intermediate zone outstretches the complementary zone.

In comparison, the educational service area is larger than the medical hinterland of Jalpaiguri town. But both of these have an eastward extension. The same reasons as that of the medical hinterland may justify such extension of the educational hinterland.

Proportion of Rural Households sending members to Dinhata town to avail of important Urban Services



Legend

- Medical (Regularly)
- Medical (In Emergency)
- Education (Regular)
- Education (Regular & Private)
- Education (Private)
- Shopping (Regular Items)
- Shopping (Special Items)
- Shopping (All Items)

M: Medical services

E: Educational services

S: Shopping

Village: 1: Bhangni Dwitiyo Khando, 2: ChhotaSakdal , 3: Gokunda, 4: Rajakhora, 5: Ruier Khuthi, 6: Khalisa Gosanimari 7:Pet Bhata Seora Guri, 8:Salmara, 9: Atialdanga .

Fig. 4.11

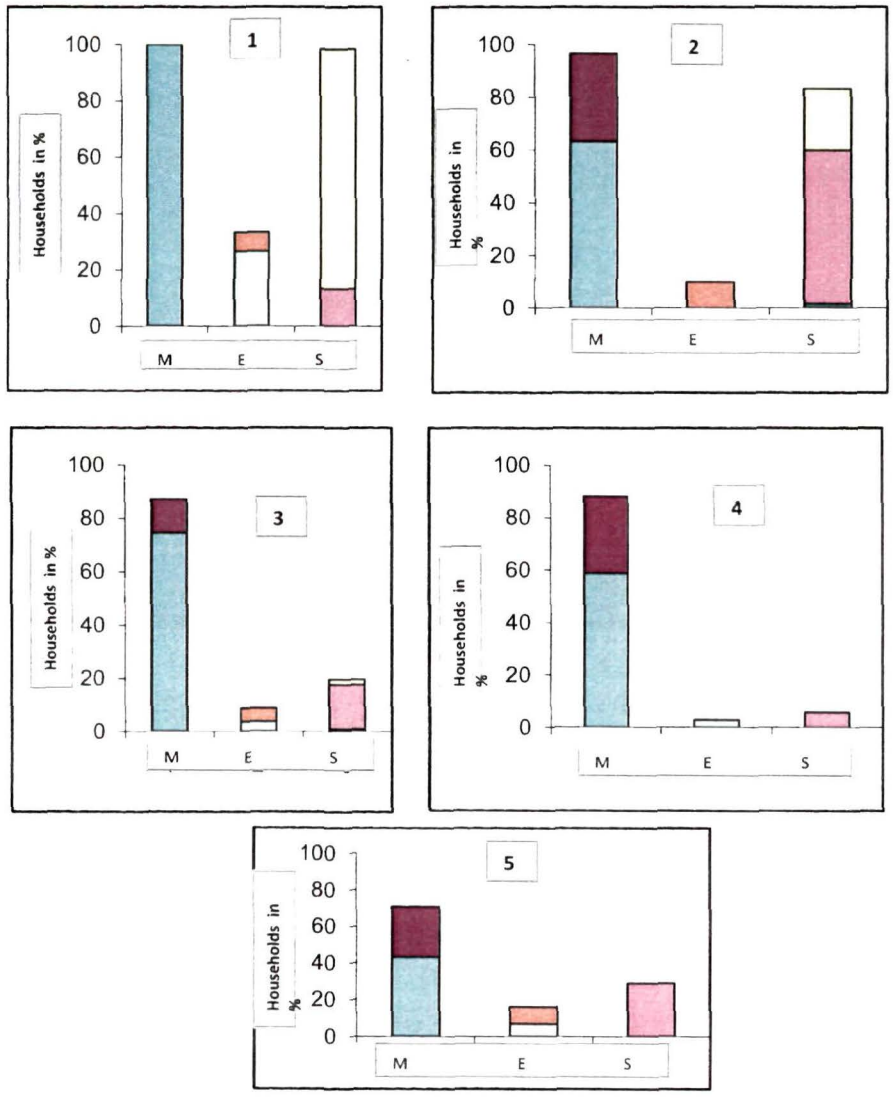
In the present study, to evaluate the extension of urban educational services to the rural mass, the rural households have been classified according to the volume of members dependent on (a) regular educational services (b) regular and private education and (c) only private education system. The 'regular' educational services in Indian perspective indicate the services rendered by the formal educational institutions (schools, colleges, universities, institutes etc.) of urban areas in which people (students from rural hinterlands) come to attend on a regular basis. On the contrary, the people who do not go to any such institutions but avail of learning privately from urban educated people or from any private tutoring centre located in the town and commute for such purposes, are classified as the beneficiaries of 'private' education system, i.e., group c. The beneficiaries of both 'regular' and 'private' education system are grouped under 'b'. People belonging to this section, generally attending village schools, take tuitions from urban teachers as they do not get such facilities in their native places.

Table 4.5 presents the distance-wise classification of rural families (of the selected hinterlands) whose members move to the respective towns for receiving different nature of educational facilities.

In the district of Koch Bihar, the distance-decay effect on educational services is prominent up to a distance of 19km from the town of Koch Bihar, after which it peters out. However, within 19 km, this effect is far from steady, showing variations even within the same distance zone. For instance, the absence of educational commuters from the village Dhumpur Balasi situated at 17 km as against 10% households of Sajherpar Ghoramara (19 km) sending members to the town for the said purpose (Ref. Table 4.5), is explained by the existence of high school in the former and its absence in the latter. Besides, Sajherpar with its rail station has got better communication with Koch Bihar than Dhumpur Balasi.

An exception to the limit of 19 km is illustrated by the fact that members of a very negligible proportion of families (4%) travel to attend different schools in the town even from Chhat Singimari at 25 km., while the villages less distant than that, e.g. Barapak, Daharerpar and Chatra Chekapdara do not have any educational commuters to the town. The relatively better developed communication system of Chhat Singimari with National Highway (31) and frequent bus services favours this educational interaction, while the other three aforementioned villages are lacking such interaction,

Proportion of Rural Households sending members to
Tufanganj town to avail of important Urban Services



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- Medical (Regularly)
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- Education (Regular)
- Education (Regular & Private)
- Education (Private)
- Shopping (Regular Items)
- Shopping (Special Items)
- Shopping (All Items)

M: Medical services

E: Educational services

S: Shopping

Village: 1: Chamta 2: Deocharai 3: Bhanukumari 4: Takoamari 5: Chhat Barochowki

Fig. 4.12

as these villages are connected to the town with poorly maintained roads. That is why travel time between Chhat Singimari and Koch Bihar town is much less than that from Barapak, Daharerpar and Chatra Chekadara to the town. The limit of educational hinterland of Koch Bihar, thus, extends up to 25 km in a feeble way.

Interestingly, the limits of drawing people for educational purposes are almost uniform in the cases of Dinhata and Tufanganj towns of Koch Bihar district, being 22km in the former case and 21 km for the latter. Of course, there are intra-zonal and inter-zonal variations (considering each distance-- zone as a single zone). The intra-zonal differences are exemplified by Raja Khora and Gokunda and the inter-zonal variations are represented by Pet Bhata Seora Guri and Salmara in Dinhata and Takoamari and Chhat Barochowki in Tufanganj. (Ref. figure 4.11 and figure 4.12). The difference between Raja Khora and Gokunda is certainly a function of the differences in their transport linkage with Dinhata; while Gokunda, having metalled road connection with Dinhata has a bus-frequency of 10, Raja Khora with no metalled road to the town has zero frequency of buses (ref. table 4.1).

Again, despite the fact that the village of Salmara is remoter from the town of Dinhata town than that of Pet Bhata Seora Guri, no one from the latter commutes to avail of the town's educational services, while students comprising about 19% households of Salmara move to the town for educational purposes. There are primary, middle and high schools in Salmara wherefrom the students come to the town for higher studies. Their spatial movement is favoured by the presence of bus service and pucca road connection between their village and the town. Thus, the presence of educational infrastructures has led to better interaction of Salmara with the town since the villagers' aspiration for higher learning, being favoured by good transport linkage, has disregarded the factor of distance from the town of Dinhata. This trend somewhat contradicts that of Dhumpur Balasi in the hinterland of Koch Bihar where the presence of educational infrastructure restricts the movement of its inhabitants to be educationally associated with the town.

With certain exceptions, the percentage of households sending members to the nearest town for educational services declines with increasing distance from the town of Tufanganj. While the rural habitat, Chhat Barochowki, sends students from 16% of its surveyed households from a distance of 21 km, students from only 3% families of

Proportion of Rural Households sending members to Jalpaiguri town to avail of important Urban Services

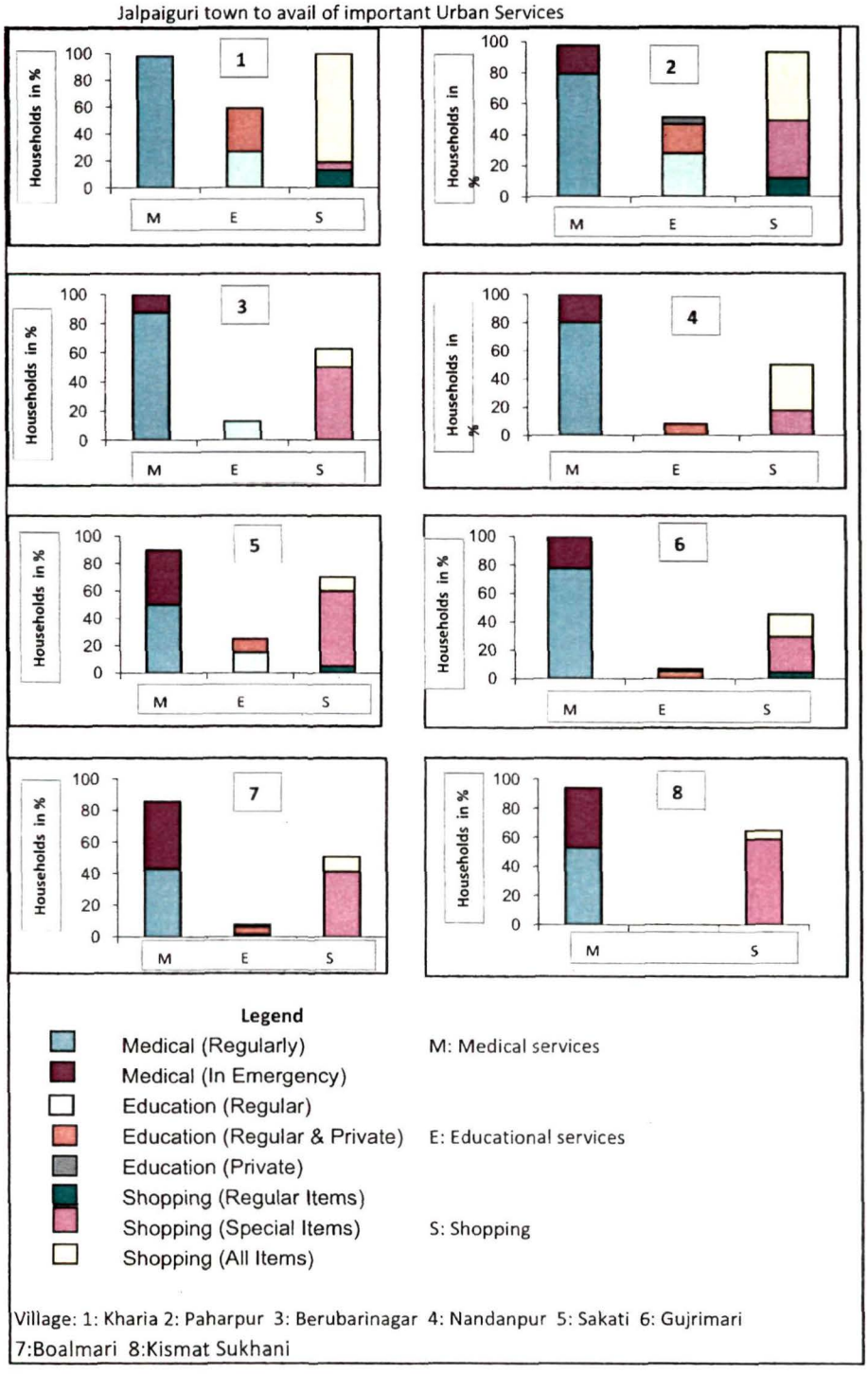


Fig. 4.13

Takoamari travel 20 km to reach the town for schooling. The presence of adult literacy centre at Takoamari might be a reason for lowering the said proportions.

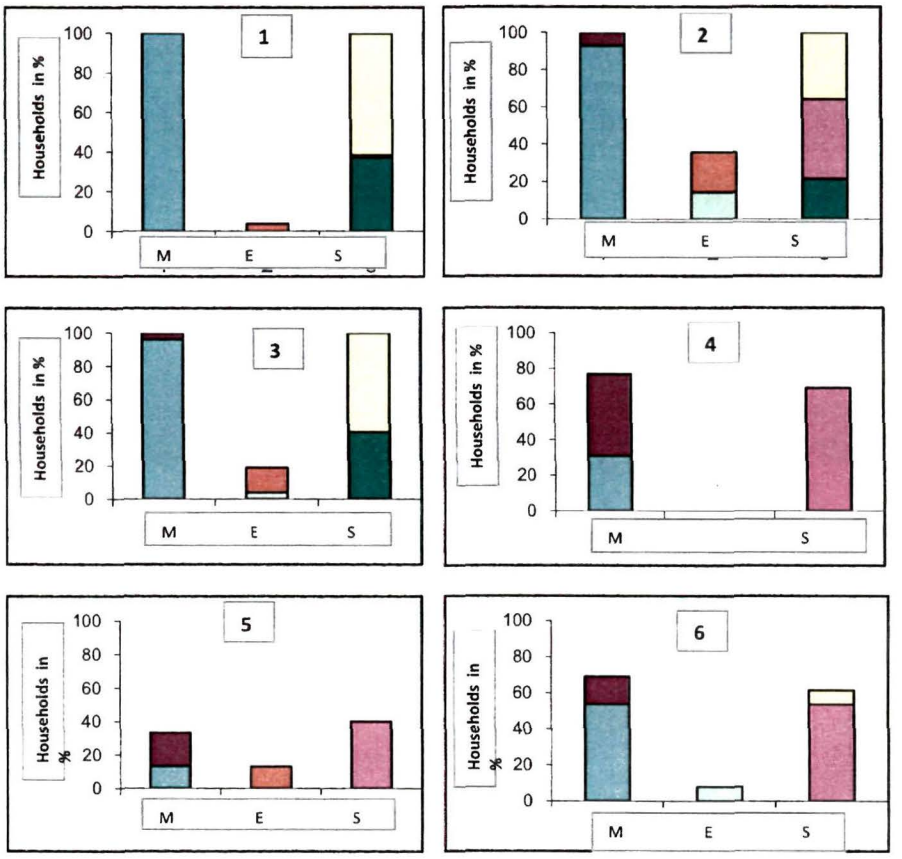
In this respect, it may be observed that the extent of educational interaction is greater for the hinterland of Koch Bihar town than that of Dinhata and Tufanganj.

In the district of Jalpaiguri, it has been observed that the distance-decay effect on the educational interaction is well-defined for the hinterland of Jalpaiguri.

Secondly, the limits of educational interaction maintain more or less uniformity in the two hinterlands of Jalpaiguri and Alipurduar, though exceptions have been found in a few of them, e.g., the village of Birpara of Alipurduar sends very few people to obtain educational services from Alipurduar town. This is because of the fact that the village itself is developed with a number of schools making its inhabitants educationally less dependent on the town. Again, the villages of Dakshin Sonapur and Silbari Hat send students from a distance of 16km and 21 km respectively as against Naottoartari at 13 km wherefrom no one is dependent on the town in terms of educational facilities. In this respect, the kutcha road communication has played a negative role for Naottoar Tari as compared to the well-knit linkage of Dakshin Sonapur and Silbari Hat with the town.

The commonality between the three hinterlands of Koch Bihar, Dinhata and Jalpaiguri concerning educational interaction is that people of very few villages in these hinterlands obtain only private education services from the town. The distance range of these villages from their core towns varies from 9km. to 12 km. This fact indicates that a segment of rural students within moderate distance from the core towns avail only of private coaching in the towns as they are basically attached to the schools of their native places. The other two hinterlands, i.e. of Tufanganj and Alipurduar do not have commuters in this category.

Proportion of Rural Households sending members to
Alipurduar town to avail of important Urban Services



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- Medical (Regularly)
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- Education (Private)
- Shopping (Regular Items)
- Shopping (Special Items)
- Shopping (All Items)

M: Medical services

E: Educational services

S: Shopping

Village: 1: Birpara 2: Dakshin Majher Dabri 3: Chapatali 4: Naottoartari 5: Dakshin Sonapur 6: Silbari Hat

Fig. 4.14

Table: 4.5 **Percentage distribution of Rural households with members commuting to Core town for availing of urban Educational Services: A Distance-wise categorisation**

Core Towns (A)	Villages (B)	Distance (km) from Core Town (C)	Distance Zone (km) (D)	Households (%) sending members to avail of Educational Services			Households (%) not sending members (H)
				Regular (E)	Regular and Private (F)	Private (G)	
Koch Bihar	Takagach	4	0-5	28.23	28.23	0	43.5
	Ghughumari	5	0-5	10.6	10.6	0	78.8
	Chakchaka	10	5--10	22	10	10	58
	Nageswarguri	10	5--10	9	9	0	82
	Talliguri	10	5--10	0	20	4	76
	Baneswar	11	10--15	2.5	5	2.5	90
	Kaljani	12	10--15	9	9	0	82
	Nawabganj Balasi	15	10--15	5.8	0	0	94.2
	Dhumpur Balasi	17	15--20	0	0	0	100
	Sajherpar	19	15--20	5	5	0	90
	Barapak	20	15--20	0	0	0	100
	Daharerpar	21	20--25	0	0	0	100
	Chatra Chekapdara	21	20--25	0	0	0	100
	Chhat Singimari	25	20--25	4.35	0	0	95.65
Dinhata	Bhangni Dwitiyo Khanda	1	0-5	23.33	16.67	0.00	60.00
	Chhota Sakdal	7	5---10	0	23.08	0	76.92
	Gokunda	8	5--10	10	0	0	90
	Raja Khora	8	5---10	0	0	0	100.00
	Ruier Khuthi	12	10---15	8.00	8.00	12.00	72.00
	Khalisa Gosanimari	15	10--15	0	4.35	0	95.65

	(B)	(C)	(D)	(E)	(F)	(G)	(G)
	Pet Bhata Seora Guri	18	15-20	0	0	0	100.00
	Salmara	22	20-25	9.52	9.52	0.00	80.95
	Atialdanga	24	20-25	0	0	0	100.00
Tufanganj	Chamta	1	0---5	26.7	6.7	0	66.67
	Deocharai	8	5---10	0	10	0	90
	Bhanukumari	12	10—15	3.9	4.9	0.0	91.2
	Takoamari	20	15—20	3	0.0	0.0	97
	Chhat Barochowki	21	20—25	7	9	0	84
Jalpaiguri	Kharia	4	0---5	27	32	0	41
	Paharpur	9	5---10	27.9	18.6	4.7	48.8
	Berubari Nagar	15	10--15	13	0	0	87
	Nandanpur	15	10--15	0	8	0	92
	Shakati	20	15--20	15	10	0	75
	Gujrimari	20	15--20	0	5	2	93
	Boalmari	22	20---25	1.6	4.8	1.6	92.1
	Kismat Sukhani	22	20---25	0	0	0	100
Alipurduar	Birpara	1	0---5	0	4	0	96
	Dakshin Majher Dabri	3	0---5	14.3	21.4	0	64.3
	Chapatali	10	5---10	4	15	0	81
	Naottoartari	13	10--15	0	0	0	100
	Dakshin Sonapur	16	15--20	0	13	0	87
	Silbari Hat	21	20---25	8	0	0	92

Source: Field Survey

If we compare the correlation between distance and educational commuting, it may be found that the significant correlation is observed only in the hinterland of Koch Bihar and Jalpaiguri. That is to say, the hypothesised inverse relationship between distance and commuting for educational purposes may be established in Koch Bihar and Jalpaiguri town, but not for the hinterlands of the other three towns (ref. table 4.6).

The inter-district comparison, as obtained from the table, reveals that a stronger correlation is observed in the district of Koch Bihar than Jalpaiguri.

Table: 4.6 **Results of Correlation Analysis between the Proportions of dependent Rural Households on Educational services of Core Town and the Distance of Hinterland Villages from the Core Town**

Hinterland Villages of Core towns of	**Correlation coefficient ('r') for distance and Households dependent on Urban Educational Services--**		
	Regular	***Regular and Private***	***Private***
Koch Bihar	-.662**	-.801**	-.292
Dinhata	-.496	-.468	-.038
Tufanganj	-.622	-.339	---
Jalpaiguri	-.822*	-.859**	-.184
Alipurduar	-.133	-.423	---
Koch Bihar District (Combined)	-.589**	-.594**	-.130
Jalpaiguri District (Combined)	-.392	-.605*	.033
Koch Bihar and Jalpaiguri Districts (Combined)	-.513**	-.585**	-.095

Note: ** Significant at .01level of significance
* Significant at .05 level of significance

Computed by the author

To have an idea of the dependence of the rural mass on the urban education system among previous generation, the heads of the surveyed families were enquired for ascertaining the places where they completed their education. In this connection it has generally been observed that the persons (heads) with comparatively higher degrees had education at core towns. In this respect, the town of Koch Bihar has maximum impact than that of the other towns as there is a higher proportion of heads who exploited Koch Bihar's educational facilities. The town of Dinhata does not have such

cases. This may be clear from table 4.7 which shows only those villages having such persons.

The adjacent villages show that the larger proportion of the heads had education in the town. Here, again, the negative relation between distance and the percentage of heads who had education in core towns, has been justified significantly for Koch Bihar as the computed 'r' value is -.601(significant at 5% level of significance). There are of course few distant villages where such persons are also present.

4.3.iv Urban centres as the shopping plaza to the rural mass

The inadequacy of rural markets and non-availability of many consumer goods in rural areas push the rural population to urban areas. These rural people move to the town markets for purchasing their necessary goods and selling off the products of their labour and thereby satisfy their demands of living. This spatial movement assists in the process of urban-rural interface to a great extent and is determined by several factors, e.g. distance from town, linkage or transport facility with the town, presence of market or hat in the village, economic condition of the commuting villagers, their nature of occupation etc. In this context, one can refer to B.G.Jones who has clearly elucidated the marketing relations between rural and urban centres. "The characterization of rural-urban relationships... indicates that urban populations are prime markets for the products of agriculture and rural industry, and the rural populations are an undeveloped potential market for the final demand goods produced by urban industries."[3] (Jones, 1986, p.203)

The present study seeks to understand the commuting behaviour of the surveyed rural population travelling to their core towns for the purpose of purchasing items which are their necessities. On the basis of our survey, it has been observed that the

Table: 4.7 **Percentage Distribution of Households-Heads received Education from Core Town according to the levels of education**

Core Towns	Villages	Distance(km) From Core Town	Distance Zone (km)	Levels of Education				
				Secondary	HS	Graduate	PG	Total
Koch Bihar	Takagach	4	0-5	3.53	1.18	17.65	1.18	23.54
	Chakchaka	10	5--10	1.45	2.9			4.35
	Baneswar	11	10--15			10		10
	Kaljani	12	10--15			1.28		1.28
	Nawabganj Balasi	15	10--15			1.92		1.92
	Sajherpar Ghoramara	19	15--20			5.26		5.26
Tufanganj	Chamta	1	0—5			1.67		1.67
	Chhat Barochowki	21	20—25			3		3
Jalpaiguri	Paharpur	9	5---10	2.33		2.33		4.66
	Sakati	20	15--20			5		5
Alipurduar	Dakshin Majher Dabri	1	0---5			7.14		7.14
	Dakshin Sonapur	16	15--20			6.67		6.67

Source: Field Survey

villagers who use urban markets as shopping places procure goods for daily needs or purchase items for special purposes or occasions. Of course, there are some people who get 'all items', i.e. things both for their regular needs and for special uses from the town marketplace. Hence, the sampled rural households have been classified as purchasing (a) regular items (b) special items (c) all items and (d) not using urban places as their shopping malls. Such a cataloguing of the villages in the light of the distance from their core towns has been shown in table 4.11 and in figures 4.10, 4.11, 4.12, 4.13, 4.14.

The commonalities observed among the selected hinterlands are as follows:

a) The urban markets are the fascinating places for 'special' items for the people of both the adjacent and the remote hinterlands of all the towns studied in the present case.

b) Moreover, the proportions of households buying only 'special' items from urban marketplaces increase with the distance from towns for all the urban fields while the reverse trend is observed for the households getting 'regular' and 'all' items from town markets. This is because of the fact that the people from the distant places cannot afford to travel to the towns for getting things of regular uses which they obtain from the markets of their own locality or from nearby larger market settlements ('Bandar'). But for purchasing items for special purposes and for occasional needs, they are compelled to go to the towns since such items are not available in their villages. That is why, the range of 'special items' is greater than that of the 'regular' and 'all' items.

c) The predominance of purchasers of 'all' items from the fringe settlements happens to be quite natural in view of the general consensus regarding relatively more availability of quality and cheaper goods in urban areas than in the villages. Further, apart from products of agriculture and allied activities, other consumer goods of daily needs are brought from the towns into the village shops. Therefore, villagers who commute to the towns for their occupation or for other important reasons prefer to shop 'all' items from the urban markets instead of depending on the rural markets.

Table: 4.8 **Percentage Distribution of Rural Households dependent on markets of the Core Town**

Core Towns (A)	Villages (B)	Distance Zone (km) (C)	Distance (km) from Core Town (D)	Households (%) dependent on markets of core town for shopping			Households (%) not dependent on markets of core towns (H)
				Regular Items (E)	Special Items (F)	All items (G)	
Koch Bihar	Takagach	0-5	4	22.40	3.00	74.60	0.00
	Ghughumari	0-5	5	21.17	17.7	57.65	3.53
	Chakchaka	5--10	10	21.2	40.9	7.6	30.3
	Nageswarguri	5--10	10	5.8	56.52	13.04	24.64
	Talliguri	5--10	10	9	27	9	55
	Baneswar	10--15	11	16	72	8	4
	Kaljani	10--15	12	0	85	12.5	2.5
	Nawabganj Balasi	10--15	15	4	46	12	38
	Dhumpur Balasi	15--20	17	7.7	34.6	5.8	51.9
	Sajherpar Ghoramara	15--20	19	16	42	0	42
	Barapak	15--20	20	2.4	51.2	2.4	44
	Daharerpar	20--25	21	0	67	0	33
	Chatra Chekadara	20--25	21	0	0	0	100
	Chhat Singimari	20--25	25	26	39	0	35
Dinhata	Bhangni Dwitiyo Khando	0--5	1	85.0	3.3	8.3	3.3
	Chhota Sakdal	5--10	7	0.0	15.4	61.5	23.1
	Gokunda	5---10	8	0.0	30.0	40.0	30.0
	Raja Khora	5---10	8	10.0	70.0	20.0	0.0
	Ruier Khuthi	10--15	12	16.0	44.0	2.0	38.0
	KhalisaGosanimari	10---15	15	0.0	65.2	8.7	26.1
	Pet Bhata Seora Guri	15-20	18	0.0	40.0	10.0	50.0
	Salmara	20-25	22	0.0	42.9	14.3	42.9
	Atialdanga	20-25	24	0.0	46.7	0.0	53.3

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
Tufanganj	Chamta	0—5	1	0.0	13.3	85.0	1.7
	Deocharai	5—10	8	1.7	58.3	23.3	16.7
	Bhanukumari	10—15	12	1.0	16.7	2.0	80.4
	Takoamari	15—20	20	0.0	5.9	0.0	94.1
	Chhat Barochowki	20—25	21	0.0	29.0	0.0	71.0
Jalpaiguri	Kharia	0---5	4	13.51	6.8	81.8	11.4
	Paharpur	5---10	9	11.6	37.2	44.2	7.0
	Berubari Nagar	10--15	15	0.0	50.0	12.5	37.5
	Nandanpur	10--15	15	0.0	17.5	32.5	50.0
	Shakati	15--20	20	5.0	55.0	10.0	30.0
	Gujrimari	15--20	20	4.5	25.0	15.9	54.5
	Boalmari	20---25	22	0.0	41.3	9.5	49.2
	Kismat Sukhani	20---25	22	0.0	58.8	5.9	35.3
Alipurduar	Birpara	0---5	1	37.1	1.4	61.4	0.0
	Dakshin Majher Dabri	0---5	3	21.4	42.9	35.7	0.0
	Chapatali	5---10	10	40.7	0.0	59.3	0.0
	Naottoar tari	10--15	13	0.0	69.2	0.0	30.8
	Dakshin Sonapur	15--20	16	0.0	40.0	0.0	60.0
	Silbari Hat	20---25	21	0.0	53.8	7.7	38.5

Source: Field Survey

d) The part of rural households who get only 'regular' items from towns do not need 'special' items from the respective towns as either they cannot afford to obtain those items or they get those items from places farther from and larger than their core towns. With few variations within the zones, these people come from the comparatively nearer villages.

e) Obviously, there are some residents in rural hinterlands whose propensity to move for urban shopping is restricted by their economic incapability for which they are entirely dependent on rural markets. The percentage share of these types of households gradually rises as remoteness of the rural habitations increases. The story of these sections of people has been reflected in the last column of the table 4.8.

The inter-zonal disparities exist in terms of the extent of the range for all sorts of the purchased items. For example, the range of daily ('regular') items is maximum (25 km) in the urban field of Koch Bihar (with intra-zonal variations), while it is 12km, 12km, 20km and 10km. respectively for Dinhata, Tufanganj, Jalpaiguri and Alipurduar. In that sense, it appears that the town of Koch Bihar can draw people from a larger area. The extent of these ranges has been attributed to the fact of good connection in case of Chhat Singimari at 25 km. from Koch Bihar.

Hence, the two district towns represent greater contact over space in view of the shopping activities of the rural mass in their core towns.

The distance-decay of shopping behaviour has been reflected by the correlation analysis as revealed in table 4.9. The relationship between distance from core towns and the inclination of the householders' shopping all items from core towns has been found to be negative for all the cases considered here. But it has been significantly proved only for the urban fields of Koch Bihar and Jalpaiguri. Between these two, the magnitude of association is greater in Jalpaiguri. Again for shopping regular items, only the urban-field of Jalpaiguri town has shown significant inverse relationship with distance from the town. Therefore, the district of Jalpaiguri as a whole has responded to this relationship more prominently than the district of Koch Bihar.

Table: 4.9 **Results of Correlation Analysis between the Proportions of Rural Households dependent on markets of Core Town for shopping and the Distance of Hinterland Villages from Core Town**

Hinterland Villages of Core towns of	Correlation coefficient ('r') for distance and		
	Households (%) dependent on Urban Markets for Shopping		
	Regular items	**Special Items**	**All Items**
Koch Bihar	-.312	.160	-.769**
Dinhata	-.627	.488	-.442
Tufanganj	-.301	-.175	-.875
Jalpaiguri	-.797*	.644	-.939**
Alipurduar	-.746	.546	-.751
Koch Bihar District (Combined)	-.397*	.219	-.698**
Jalpaiguri District (Combined)	-.729**	.559*	-.795**
Koch Bihar and Jalpaiguri Districts (Combined)	-.492**	-.329**	-.717**

Note: **Significant at .01 level of significance
*Significant at .05 level of significance

Computed by the author

Apart from the purchase of goods of different kinds, rural people also sell their produces to the urban markets. To have an overview of this sort of transaction of commodities, heads of the surveyed households were interviewed about the places of disposing off their produced goods. Table 4.10 represents the results of those queries and shows only those villages from where people come to the respective core town for selling their products.

But before going into the details of the results of the household-level survey, a generalised pattern of the supply zones of agricultural produces has been demarcated for the two district towns--Koch Bihar and Jalpaiguri based on the survey of the markets of the particular towns. The survey reveals that a large quantity of agricultural products flow to the urban markets from distant rural places, crossing the district and even the state boundaries, as a result of the improvement of transport facilities. This phenomenon has changed the nature of rural-urban interaction to some extent in modern times. In spite of this, the importance of the neighbouring and distant villages within the district can not be overlooked in serving their nearest town markets, and in turn, be served by the demand of the population of those nearest towns. Figures 4.6 and 4.9 illustrate that.

The supply zone of agricultural products involving Koch Bihar urban markets within the district, as revealed by figure 4.6 extends beyond the two blocks of Koch Bihar on western and eastern side, respectively to some parts of Mathabhanga and Tufanganj blocks. Otherwise, it covers almost all parts of the sadar blocks and includes the ten selected villages, except the villages named Chhat Singimari in the extreme north-west corner and Barapak, Daharerpar and Chatra Chekapdara in the extreme south-eastern part. The location of Pundibari hat, which is much nearer to Chhat Singimari than Koch Bihar and Dewanhat Bandar, nearer to Barapak, Daharerpar and Chatra Chekapdara than Koch Bihar, limit the supply zone of Koch Bihar in these two directions to some extent. Except its north-western and eastern protrusion, the supply zone of agricultural products is outstretched by the complementary zone, demarcated after Reilly's model, to a large extent, especially in the westerly direction from the town.

The supply zone of agricultural products of Jalpaiguri town covers the sadar block leaving out its northern and southern tips. Beyond the sadar block, the zone is spread up to a large part of Maynaguri in the east and some parts of Rajganj block in the west. It goes beyond the complementary zone (based on Reilly's model) in the western and eastern part, while in the northern side the complementary zone extends far beyond it. That means the zone of supply of agricultural products cannot cover the ideal influence zone in the northern part as agriculturists on that part are not dependent on the markets of Jalpaiguri for disposing off their products.

Table 4.10 shows only those villages from which people come to their nearest town (core town) for selling off their products.

As observed from table 4.10, that very few among the surveyed households, are dependent on the urban markets of Koch Bihar for disposing off their agricultural and non-agricultural products; the latter includes the products of cottage and household industries and the output accrued from business. Such households selling their products exist only in the closest hinterland of Koch Bihar. An almost similar trend has been experienced by the other district town, Jalpaiguri, where the adjacent villages consist of households selling both agricultural and non-agricultural products with higher percentage of the latter and the lower of the former; and this is but expected.

Table: 4.10 **Percentage distribution of Rural households selling their output to Core Town**

CORE TOWNS	Villages	Distance Zone (km)	Distance (km) from Core Town	Households (%) selling off products to the core towns	
				Agricultural	Non - Agricultural
Koch Bihar	Takagach	0-5	4	4.7	3.5
	Ghughumari	0-5	5	3	6
	Chakchaka	5--10	10	3	6
	Baneswar	10--15	11	0.25	0
	Dhumpur Balasi	15--20	17	0.083	0
Dinhata	BhangniDwitiyoKhanda	0--5	1	17	2
	Chhota Sakdal	5--10	7	15	69
	Gokunda	5---10	8	10	90
	Ruier Khuthi	10--15	12	2	2
	Khalisa Gosanimari	10---15	15	4.3	9
	Salmara	20-25	22	9.5	24
Tufanganj	Chamta	0—5	1	53	20
	Deocharai	5—10	8	35	3.3
	Bhanukumari	10—15	12	48	1
Ja palguri	Kharia	0---5	4	4.5	10
	Paharpur	5---10	9	5	7
	Berubari Nagar	10--15	15	0	12.5
	Sakati	15--20	20	30	5
	Boalmari	20---25	22	5	2
Alipurduar	Birpara	0---5	1	41	49
	Dakshin Majher Dabri	0---5	3	14	0
	Chapatali	5---10	10	81.5	4

Source: Field Survey

But with the increasing distance the trend comes to be reversed with sellers of agricultural products becoming higher than the sellers of non-agricultural products: this has been witnessed by only two distant villages (Sakati and Boalmari) in Jalpaiguri's urban field.

In contrast to the small proportion of rural sellers to Koch Bihar and Jalpaiguri, Tufanganj and Alipurduar towns attract quite a substantial proportion of selling agriculturists even from their neighbouring villages.

The picture in Dinhata is to some extent mixed as it draws some selling agriculturists (lower than that of Tufanganj and Alipurduar but higher than Koch Bihar and Jalpaiguri) from the contiguous as well as from the remote villages. The proportions of rural non-agriculturist sellers are the highest in Dinhata market (considering all the surveyed villages) as compared to the other four city-regions; this may be because Dinhata is purely a business town.

From the above observation, it is clear that the two higher-order towns (Koch Bihar, Jalpaiguri) support lesser sellers of rural produces than the three lower-order urban centres (Dinhata, Tufanganj and Alipurduar). An inference from this observation is that except for the urban-adjacent villages, the rural sellers (particularly agriculturists) generally prefer to sell their output in the nearby larger village-hats or 'Bandar' or in rurban centres instead of moving to their distant nearest towns (core towns) involving more expenses on transport and time. Such larger villages or 'Bandar' or rurban centres act as the intermediate settlement that are mainly the transacting regions or distributing centres, wherein the agricultural products flow from production centres and wherefrom they flow out to the markets of the higher order urban centres. In the case of Koch Bihar and Jalpaiguri, the provision of such settlements are larger than in the cases of Dinhata, Tufanganj and Alipurduar for which the rural producers are relatively more dependent on these three towns than the rural producers in the urban field of Koch Bihar and Jalpaiguri.

This is how the settlement hierarchy has tended to move towards greater interaction of smaller order towns with their hinterland than the larger urban centres.

A summarised picture of important urban services (medical, educational, marketing) as availed of by rural households may thus be obtained from the figures 4.10—4.14. It may be observed that, in case of medical services, the proportions of

total dependent rural households have not changed much in terms of the increasing distance from the towns. Distance has certainly changed the nature of their dependence, as the households' ratio for regular medical services has decreased and that for emergencies has increased along with increasing distance. Of course, there are some exceptions, as evidenced by Naottoartari, Dakshin Sonapur and Silbari Hat in Alipurduar's region and Salmara in Dinhata's urban field, where the overall proportions of households availing of urban medical services is much less than the nearer villages of the respective hinterlands.

In view of educational services availed of by the rural households, the total proportion has significantly changed in the reverse direction along with the increasing distance. In some cases, this proportion has happened to be zero with increasing distance as no one avails of this particular service from the distant chapter.

Considering the urban market services to the rural people for the purchase of different sorts of items, the nature of dependence has varied with increasing distance, as people purchasing 'regular' items has been replaced by people purchasing items for 'special needs' in the cases of distant villages in general. Moreover, the overall dependence on urban markets has also declined for the distant settlements as compared to their close counterparts.

Thus, the hypothesis (no. 2a, as mentioned in the 'Introduction') of inverse relation between distance and proportions of households depending on urban services is substantiated for 'regular' medical service, educational service and shopping. But for 'emergent' medical service the inverse relation has become reverse.

4.3.v Urban centres as the Administrative headquarters for the rural population

Because of the fact that an urban area is the administrative heart of a region, people of its rural surroundings are required to travel to the towns for various official activities. In this connection, it has to be noted that among the five selected towns, Koch Bihar and Jalpaiguri are the two district capitals and Dinhata, Tufanganj and Alipurduar are the sub-divisional headquarters. Naturally, these towns, housing different offices such as those of D.M. (in case of Koch Bihar, Jalpaiguri), the S.D.O. (in case of Dinhata, Tufanganj, Alipurduar), the D.L.L.R.O., the Settlement office, the

Agriculture and the Irrigation offices, Police Stations, Zilla Parishad offices, Courts, Food Supply offices etc. pull the villagers towards them so that their administrative and legal requirements are satisfied.

But, the benefits of these offices are not as regularly and frequently regarded as the needs discussed previously [economic (shopping and selling off goods), medical, educational etc.] These are required only when the occasion demands them. So any definite formal pattern or trend is difficult to discern in respect of the administrative requirements (ref. Table 4.11) to their needs. It has been noticed that even from the remotest village an equal or a larger ratio of people has got administrative linkage with their core towns as compared to the people of the closer villages (e.g. Birpara and Silbari Hat in Alipurduar). Thus, remoteness cannot restrict the movement of the villagers to the towns for administrative purposes. From the conversation with the people of a far-off village (e.g. Sakati in the surroundings of Jalpaiguri), it has been gathered that though many of the villagers do not have any form of contact with the town of Jalpaiguri, they are rather compelled to move to the district headquarters for different administrative work when it is needed. Further, in no village any negative finding has been obtained for showing the members of the households commuting for the administrative and legal purposes. That is why, distance from the towns or communication with the towns cannot either be a problem or be a help in this regard.

It is curious to note in this respect that on the whole the ruralites are in greater need of administrative services than the services offered by post offices, ranging between a minimum of 5% (Baneswar) to 95% (Nandanpur). Further, there is not a single village without this service, while in the case of banking services, at least 10 out of a total of 43 villages, do not require it and 7 villages have no need for postal services. Besides, the range varies widely as well for banking and postal services, varying between a minimum of 2% and a maximum of 45.9% for the former and between 2.5% and 62.3% for the latter. The more startling facts are narrated in the following paragraphs.

Table: 4.11 **Distance-Wise Distribution of Rural Households dependent on the Administrative, Banking and Postal services of Core Town**

CORE TOWNS	Villages	Distance Zone (km)	Distance (km) from Core Town	Households (%) whose members commute to the core town for availing		
				Administrative services	Banking services	Postal services
Koch Bihar	Takagach	0-5	4	51.8	45.9	21.18
	Ghughumari	0-5	5	59.1	12.1	15.2
	Chakchaka	5--10	10	79.7	29	62.3
	Nageswarguri	5--10	10	54.5	9	9
	Talliguri	5--10	10	72	36	28
	Baneswar	10--15	11	5	20	2.5
	Kaljani	10--15	12	50	15.4	6.4
	Nawabganj Balasi	10--15	15	55.8	9.6	15.4
	Dhumpur Balasi	15--20	17	41.7	0	0
	Sajherpar	15--20	19	36.6	2.4	7.3
	Barapak	15--20	20	27	0	0
	Daharerpar	20--25	21	67	0	17
	Chatra Chekapdara	20--25	21	20	0	0
	Chhat Singimari	20---25	25	52.2	4.3	0
Dinhata	BhangniDwitiyoKhanda	0---5	1	31.7	6.7	45.0
	Chhota Sakdal	5---10	7	84.6	15.4	7.7
	Gokunda	5---10	8	90.0	10.0	10.0
	Raja Khora	5---10	8	80.0	0	20.0
	Ruier Khuthi	10--15	12	70.0	10	44.0
	Khalisa Gosanimari	10---15	15	56.5	0	0.0
	PetBhata Seora Guri	15----20	18	50.0	2.00	0
	Salmara	20---25	22	33.3	0	9.5
	Atialdanga	20--25	24	46.7	0	6.7
Tufanganj	Chamta	0—5	1	48.3	21.7	18.3
	Deocharai	5—10	8	65.0	31.7	13.3
	Bhanukumari	10—15	12	49.0	27.5	2.9
	Takoamari	15—20	20	64.7	23.5	8.8
	Chhat Barochowki	20—25	21	39	0	10
JalpaIguri	Kharia	0---5	4	86.4	36.4	45.5
	Paharpur	5---10	9	76.7	30.2	18.6
	Berubari Nagar	10--15	15	87.5	25.0	25.0
	Nandanpur	10--15	15	95.0	7.5	7.5
	Sakati	15--20	20	85.0	25.0	15.0
	Gujrimari	15--20	20	75.0	34.1	22.7
	Boalmari	20---25	22	68.3	12.7	22.2
	Kismat Sukhani	20---25	22	70.6	23.5	35.3
Alipurduar	Birpara	0---5	1	25.7	10	0.0
	DakshinMajher Dabri	0---5	3	64.3	57	42.9
	Chapatali	5---10	10	66.7	22.2	7.4
	Naottoartari	10--15	13	46.2	23.1	7.7
	Dakshin Sonapur	15--20	16	93.3	20	13.3
	Silbari Hat	20---25	21	61.5	0	7.7

Source: Field Survey

4.3.vi Urban centres as the commercial hub for the rural population

Nevertheless, it needs to be stressed in this connection that the financial institutions in a town render services not only to its own residents but also to the people of its hinterland. Apart from savings and investments, villagers generally depend on banks for various schemes of financial assistance and credits. In that respect, both rural and urban banks have a major role.

The urban centres considered in our investigation also draw people from their surroundings for interacting with banks. There exist inter-zonal and intra-zonal variations in the proportions of dependents on urban banks. Yet, commonly, all the hinterlands show gradual tapering off of the rural dependents on urban banks with increasing distance from towns. But in some areas more people of the remoter villages transact with the town banks than those of the nearer villages (e.g. Bhangni Dwitiyo Khando and Chhota Sakdal in Dinhata and Chamta and Deocharai in Tufanganj). Actually, the existence of rural banks in the nearer villages (Bhangni Dwitiyo Khando and Chamta) and their absence in the remoter villages (Chhota Sakdal and Deocharai) are the reasons for this anomaly.

4.3.vii Urban centres as the Communication service centres to the rural population

An urban centre offers certain services that facilitate peoples' contact over space. Of these, postal service is an important one because of its user-friendliness. The presence of post office or post and telegraph office in a region makes that region communicative. Thus, from this point of view, the post offices of urban settlements have a great pull to draw rural population. Of course, such movements are decided by the existence of rural post-offices and the distance of the rural area from the urban centre.

In the present inquiry, responses of rural commuters to the urban postal services are shown in table 4.8. The distance-decay is almost a steady pattern in all the urban fields; it implies a greater rural contact with urban post offices on the part of the near-by villages and its reverse in the case of the distant villages. Many of these rural areas

have post offices while many lack them; it is this fact that decides rural peoples' access to urban postal services. (Census data)

The effect of distance on the commuting rural households for urban administrative, banking and postal facilities has been analysed by computing correlation coefficients between the distance and the percentage of households sending members to avail of those facilities (Table 4.12)

Table: 4.12 **Results of Correlation Analysis between the Proportions of Rural Households availing of Administrative, Banking and Postal Services of Core Town and the Distance of Hinterland Villages from the towns**

Hinterland Villages of --	'r' values for distance and Proportions of households availing of the following services from Core towns--		
	Administrative	Banking	Postal
Koch Bihar	-.278	-.768**	-.467
Dinhata	-.385	-.603	-.561
Tufanganj	-.076	-.532	-.605
Jalpaiguri	-.475	-.445	-.349
Alipurduar	.527	-.525	-.285
Koch Bihar District (Combined)	-.302	-.561**	-.478*
Jalpaiguri District (Combined)	.351	-.415	-.123
Koch Bihar & Jalpaiguri Districts (Combined)	-.076	-.466**	-.356

Note: ** Significant at .01 level of significance Computed
* Significant at .05 level of significance

Table 4.12 confirms the indifference of the factor of distance to the factor of administrative commuting to the towns. Further, though the negative correlation of the distance with the commuting for availing of banking and postal services has been deduced for all the regions, the significance of these associations has been proved only for the hinterlands of the towns of Koch Bihar District, combined as a whole. Among all the five hinterlands, and the urban field of Koch Bihar witness significant negative correlation between distance and households availing of urban banking facilities.

Summary

The upshot of the various analysed aspects of urban-rural interface emerging out of the access to the crucial urban services may be summarised as follows:

1) Regarding the urban transport services to rural areas, it has been observed that the transport linkage between the village and its server town--as measured by bus-frequencies, travel time and transport fare--is largely determined by the distance between them; while the frequencies of buses decrease with distance, travel time and fare increase, which is quite expected.

There are of course two variants to this uniformity in regard to travel time and transport fare:

a) the spatial extent of the availability of bus services and b) the importance of transport arteries.

2) Concerning the *medical dependence* of the hinterland populace on their core towns, although the effect of distance from core towns cannot be ignored to have positive or negative impact, yet the hindrance of distance has been offset by the dire necessity of the villagers in emergenies. Again, the existence and non-existence of proper health infrastructure in the native village or any nearby place, the nature of connectivity of the concerned village with its core town, the economic capabilities of the villagers and the extent to which the core town can serve as their working place, along with the factor of distance, are some of the deciding factors for them to avail of town medical services in regular course. In some cases, the presence of dependable rural health infrastructure readily available in the villages, or again economic incapability, has restricted the people's movement to towns for medical purposes even from the adjacent habitations, while proper transport facilities have led even the remote people to be medically more interactive with the core town despite people's poor economic condition. Of course, the hypothesised relation between distance and medical dependence of households has been established for the towns of Jalpaiguri, Koch Bihar and Dinhata.

3) The fact that the component of *educational commuting* of the rural mass is governed principally by the distance of their localities from the server urban places has been statistically established for the hinterlands of the two district towns considered

here. But, apart from distance, the nature of transport connectivity with the town, the presence or absence of educational institutions in the rural areas, economic affordability of the family, and the educational level of the family head reflected in the psychological desire to educate their children in urban environment are all deciding factors for educational interaction with the concerned urban centres. The educational hinterland extends to its maximum centring the town of Koch Bihar as compared to the other towns; and the inverse relation between distance and educational interaction has been statistically proved for the hinterlands of the towns of Koch Bihar and Jalpaiguri. Distance has also a bearing on the educational attainment of the heads of the households, particularly in the town of Koch Bihar.

4) Regarding the *shopping behaviour* of villagers from their nearest towns, it has become clear that the extent of 'special items' to draw rural mass is larger than that of other types of goods, because of the fact that the non-availability of items for special purposes in the villages compels the remote inhabitants to come to towns; their mobility otherwise remains restricted for procuring 'regular' items from the distant 'nearest towns'. As such, the distance-decay of shopping relations is significantly justified for the tributary areas of the towns of Koch Bihar and Jalpaiguri.

5) The administrative linkage has disregarded the factor of distance either in the positive or in the negative sense. It is the administrative necessity which has drawn people from remote corners to the towns even if they do not have any sort of contacts with the town.

6) The dependence on the *urban financial institutions*, e.g., *banks* is governed chiefly by the aspect of distance and the presence of banks in the native villages. Similarly, the principal determinants of the *interaction with the town post offices* indicating *communication services* are the distance of the village and the existence of post offices in the respective village. Here the urban fields of the towns of Koch Bihar district as a whole has shown confirmed inverse relation between the dependence on town banks, post offices and distance from the urban centres. Among the five hinterlands, only the urban-hinterland of Koch Bihar town experiences the significant negative relation in respect of the villagers' dependence on urban banking facilities.

Thus services, in general, maintain a negative relationship with distance, i.e., decreasing with increasing distance, except in the case of administrative services, which are found to be almost unresponsive to distances, as explained above.

The findings mostly justify their corroboration with the hypotheses made earlier.

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