

Appendix II

(Socio-Economic Structure in the Northern Region)

Table 1 Production of Crops and Ranks (in ³⁰ Honds)

District Regions	population (in100)	Rice	per100 people	Wheat	p/100 prod.	Jute	p/100 prod.	Sugar cane	p/100 prod.	Potato	p/100 prod.	Total Rank scores.
Bogra	2718	15734190	579 (1)	1292952	48 (4)	885525	33 (3)	6879990	253 (5)	2158467	79 (1)	14-20
Rajshahi	5262	22018455	481 (4)	1937005	37 (5)	497329	9.45 (5)	41317425	7.85 (1)	1864063	35.42 (3)	18-20
Pabna	3418	9761957	286 (5)	2008428	59 (2)	610750	18 (4)	13311070	315 (3)	497607	15 (5)	19-20
Rangpur	6490	33965143	523 (3)	3332834	51 (3)	4489750	69 (2)	18673110	268 (4)	2275644	35 (4)	16-19
Dinajpur	3198	17229785	539 (2)	3543237	111 (1)	4560325	142 (1)	14049090	439 (2)	1846075	56 (2)	8-12

Data computed

Source : Individual District statistics(1983).

Note : Figure in Parenthesis shows ranks.

Table-2 Food Grain consumption & Surplus (in tons) (1981).

District Regions	Population (in1000)	Foodgrain Production Rice & Wheat	Requirements	Surplus
Bogra	2728	625500	431000	194500
Dinajpur	3200	758845	505000	253845
Pabna	3424	539785	541000	1215
Rajshahi	5270	880160	832000	48160
Rangpur	6510	1377380	1028000	349380

Source : Statistical Year Book 1985

Individual District statistics 1983.

Table 3. Bank advances and deposits by region and locality (1981-86)

Regions (old districts)	Locality	Total Advances Tk in Million	Per capital Advances (in Taka)	Rank	Total deposits Tk in Million	Per capital Deposits in Tk	Rank
Bogra	Urban	3323/6	2729/=	1	3291/5	2702/=	1
	Rural	4022/2	266/=	1	2047/=	135/=	3
	Total	7345/8	449/=	1	5338/5	325/=	1
Dinajpur	Urban	1675/1	1019/=	3	2964/95	1803/=	2
	Rural	4435/1	253/=	2	1968/60	112/=	4
	Total	6110/20	318/=	3	4933/55	257/=	4
Pabna	Urban	2309/5	965/=	4	3471/3	1450/=	4
	Rural	4320/8	238/=	4	2556/6	141/=	2
	Total	6630/3	323/=	2	6027/9	293/=	3
Rajshahi	Urban	3669/2	1122/=	2	5102/3	1560/=	3
	Rural	5805/=	205/=	5	4481/5	158/=	1
	Total	9473/2	300/=	5	9583/8	303/=	2
Rangpur	Urban	3852/1	904/=	5	4140/=	943/=	5
	Rural	8374/8	241/=	3	2701/8	78/=	5
	Total	12226/9	313/=	4	6847/8	175/=	5

Source : Data computed, statistical year Book, 1985, P.382; 1987, P.416.

Table 4. Registered Factories Having 10-50 and More than 50 Labourers by Regions 1987

Regions (old District)	Labour 10-50		Labour >50		Labour 10 and above		Labourer/ 10,000 People
	Total Establish ments	Total Labourers	Total Estb.	Total Labour	Total Esto.	Total Labourers	
Bogra	101	2624	26	7564	197	10188	30.90
Pabna	24	470	"	4077	35	4347	10.98
Dinajpur	45	1078	25	7280	70	8358	21.61
Rangpur	36	770	41	16555	77	17325	22.02
Rajshani	58	1206	19	8955	77	10161	15.78

Source : Data Computed

Table 5. Rail & Road ways Accessibility on the basis of Population & Area, by Districts, 1983-84

Region (old District)	Railway & Road Accessibility on per 100,000 Population (in K.M.)				Railway & Road way Accessibility on Per 100 sq K.M.			
	Mettalled Road	Mettalled & Non-Met. Total	Railway Road & Railway	Mettalled Road	Mettalled Road	Mettalled & Unmettalled Road (Total)	Railway	Mettalled Road & Railway
Bogra	13.02	221	4.6	17.6	9.1	154.7	3.2	12.3
Dinajpur	15.60	333	6.6	22.2	7.6	162.1	3.2	10.8
Pabna	11.29	112	2.7	14.0	6.2	80.6	1.9	10.1
Rajshahi	10.68	229	4.0	14.7	5.9	127.3	2.2	6.2
Rangpur	10.15	333	5.7	15.8	6.8	225.2	3.6	10.78

Calculated Composite Index :-

									Total Rank Value	
Bogra	52.66	49.32	48.72	78.26	100	51.24	68.42	100	548.62	2
Dinajpur	100.00	100.00	100.00	100.00	53.12	56.36	68.42	63.41	641.31	1
Pabna	20.92	0.00	0.00	0.00	71.88	0.00	0.00	46.34	139.14	5
Rajshahi	9.72	52.94	33.33	15.21	0.00	46.7	15.79	0.00	173.69	4
Rangpur	0.00	100.00	76.92	39.13	28.13	100.00	100.00	62.93	507.11	3

Data Calculated

Source : Zila statistics, Bogra Region, 1986.

Note : The method used for calculating composite index is according to

Hammond. etal. (1978 :43);

$$S = \frac{R - R_{\text{Worst}}}{R_{\text{Best}} - R_{\text{Worst}}} \times 100$$

Where, S = Scale Value,
R = Raw Value.

Table 6. Average Daily Traffic & Passenger Car Equivalents on Major Roadways in 1976-77.

Sr. No.	Name of the Routes	Truck	Tanker	Pick-up.	Bus	Mini-Bus.	Taxi	Car	Motor Cycle	Auto-Rickshaw.	Cycle-Rickshaw.	Cart	Total Vehi-cles.	P.C.E.
1.	Chittagong-Feni	603	65	68	385	42	16	385	119	487	351	44	2771	5919
2.	Chittagong-Kularhat	508	44	77	664	48	32	603	219	1740	316	108	4528	8567
3.	Tangail-Dhaka	204	42	21	217	9	10	108	101	112	1523	104	3252	6070
4.	Dhaka-Aricha	591	42	77	498	44	35	273	73	122	15	8	1838	4292
5.	Dhaka-Tangail	473	61	117	589	133	6	438	98	111	32	5	1898	4512
6.	Natore-Rajshahi	97	8	18	111	10	4	37	12	9	617	134	1184	2479
7.	Natore-Pabna	91	4	3	140	15	2	62	22	4	253	152	1024	4256
8.	Bogra-Nagarbari	284	14	12	174	49	32	115	72	112	639	340	2497	6238
9.	Bogra-Rangpur	179	11	15	169	86	22	76	90	301	1223	148	3363	589*
10.	Dinaipur-Sayedpur	77	1	2	67	3	1	26	35	6	15	48	357	962
11.	Dinaipur-Thakurgaon	96	2	3	96	4	1	40	24	-	13	29	407	944
12.	Dinaipur-Beldanga	119	1	4	155	3	1	58	57	3	15	39	592	1362
13.	Kashinathpur-Bogra	197	14	4	108	4	3	36	10	4	244	35	814	1670
14.	Kashinathpur-Pabna	156	4	4	145	3	9	25	7	2	80	29	336	1401
15.	Kashinathpur-Nagarbari	132	16	10	153	5	7	30	8	3	160	33	663	1601
16.	Chittagong-Cox's Bazar	243	7	32	299	17	-	302	88	331	-	316	1635	4945
17.	Chittagong-Capti	71	-	12	179	19	-	78	24	246	-	-	609	1147
18.	Comilla-Brahmanbaria	169	8	14	159	3	1	50	30	99	133	342	1017	2055
19.	Comilla-Daudkandi	343	3	18	240	10	12	131	44	264	144	336	1585	3177
20.	Sylhet-Naulavibazar	154	3	12	344	37	13	89	45	871	376	1380	3357	5805
21.	Sylhet-Sunamgonj	71	-	15	117	15	3	55	48	626	267	588	1965	3948
22.	Tangail-Mymensingh	220	8	10	173	17	2	95	37	28	406	409	1600	3215
23.	Faridpur-Magura	161	3	6	30	2	1	39	16	12	335	866	1326	3869
24.	Faridpur-Barisal	41	1	6	94	3	10	49	13	52	341	1004	1632	2875
25.	Jessore-Khulna	361	55	14	331	12	14	122	58	30	594	421	2132	4555
26.	Jessore-Jhenaidah	316	36	22	179	9	1	78	17	26	1576	1097	3742	5272

Source :- Statistical Year Book, 1980, P.520.

Note :- P.C.E.(ESCAP) - Used in Traffic Engineering; Coefficient of Conversion within Parenthesis.

1. Cars, Jeeps, Pick-ups & M.Cycles (1); 2. Light Commercial Vehicles (1);

3. Medium & Heavy Commercial Vehicles (3); 4. Buses & Coaches (3);

5. Trucks (3); 6. Carts (8); 7. Bi-cycle (0.05); 8. Rickshaw (2).

* P.C.E. 589 figure is doubtful.

Table 7. District-Wise Fuel Consumption

Regions (old Dist.)	All types of Fuel 1983/84 (in M. ton)	Consumption per 1000 people	Petrol, Diesel & Lubricating oil (in Litre) 1987/88	Consumption per 1000 People
Bogra	37,843	12.33	13,37,195	34.49
Dinajpur	18,990	5.27	5,42,237	14.02
Fabna	31,589	8.20	9,03,136	21.82
Rajshahi	32,626	5.50	11,28,186	17.71
Rangpur	39,323	5.37	13,49,821	17.16
Northern Region	1,60,371	6.73	50,60,575	19.38

Data Computed

Source : Officers of the Jamuna, Meghna and Burma Oil Co. Ltd. Bogra

Table 8. Urban Population (10ys & over) by Main Activity by Districts

Districts (old)	Total pop.	Non workers	Rank	Students	Rank	House hold work	Rank	Cultiva- tion	Rank	Agri Noncrop	Rank	Manu factu ring	Rank	business	Rank	Others	Rank	Total Rank score
Bogra	145705	17293		20393		43420		13417		394		3691		17200		29897		
		11.87	1	14.00	3	29.80	2	9.21	4	0.27	4	2.53	2	11.80	1	20.52	1	18
Dinajpur	199131	27627		28573		59656		17891		432		3920		21819		39213		
		13.87	2	14.35	2	29.96	3	8.98	2	0.21	5	1.97	4	10.96	3	19.70	2	23
Pabna	279203	44864		37730		87002		19595		1345		12179		30703		43785		
		16.07	4	13.51	4	31.16	4	7.02	3	0.48	1	4.36	1	11.00	2	16.40	4	23
Rajshahi	414682	90832		99193		105656		23297		1367		15147		31465		57725		
		21.90	5	23.92	1	25.48	1	05.62	1	0.33	2	1.24	5	7.59	5	13.92	5	25
Rangpur	507555	77776		56574		160451		68505		1545		11718		45889		85097		
		15.32	3	11.15	5	31.61	5	13.50	5	0.30	3	2.31	3	9.04	4	16.77	3	31

Data computed

Source : Report on urban Area 1987:27

Note : Figures in parenthesis indicate percentage of respective activity.

Table 9: Mineral Deposits of Northern Region

Name of Rocks/ Minerals	Location	Extension in sq.km.	Thickness (in feet)	Reserve in Million tons	Occurs at depth (in feet)	Remarks
Coal						
	1. Jamalganj Paharpur (Joupurhat, Naogaon)	26	210 (6 seams)	1053.9 (within 7 sq.km.)	2200- 3800	Mining under consideration since long may be postponed.
	2. Kuchma (Near Bogra town)	N.A	170	N.A	7176- 9433	Economically not viable.
	3. Baropukuria (Fulbari, Dinajpur)	11	N.A (7 seams)	285	422- 1200	Prospective for mining
	4. Firgunj (Rangpur)	10	132		934	Much emphasis is given for exploitation. As per experts view, 15% of the reserve can meet the demand of Bangladesh for 100 years
Lime Stone						
	Joyburnat	241	1		1700	Very prospective for Bangladesh. cement factory is under construction
White clay						
	Patnitola (Naogaon)	4	30	N.A	1331- 1376	No step for mining
Hard rock						
	Madhyapara (Dinajpur)	-	-	Inex- haustible	422	Project are taken

Table 10. Measurement of Regional Inequality
(position on 1977/78 and 1985/86)

Old Districts	Population (estimated) '000 Nos.	GDP per capita	$(Y_i - \bar{Y})^2$ A	$\frac{f_i}{n}$ B	A x B	$\frac{AB}{\bar{Y}}$	Re- sult
1. Bogra	3,146	4,195	2,83,024	0.031	78,774.00	1.86	1.36
Rajshahi	6,077	3,711	10,32,256	0.060	61,935.00	13.10	3.62
Rangpur	7,507	3,930	6,35,209	0.073	46,359.00	9.80	3.13
Dinaipur	3,690	3,962	5,85,225	0.036	21,068.00	4.46	2.11
Pabna	3,950	3,553	13,78,276	0.038	52,375.00	11.08	3.33
2. Bogra	2,633	1,562	5,184	0.031	160.70	0.098	0.31
Rajshahi	5,096	1,448	34,596	0.060	2,076.00	1.29	1.12
Rangpur	6,434	1,358	76,176	0.076	5,789.00	3.54	1.88
Dinaipur	3,065	1,678	1,936	0.036	69.70	0.043	0.21
Pabna	3,327	1,406	51,984	0.039	20.27	1.24	1.11

1. in 1985/86

Data computed

2. in 1977/78

Source : - Individual District Statistics.

Note :- (1) There is a strong general tendency for regional differences to be at their least in the advanced regions, and at their greatest in the poorest region.

(2) To measure inequality, Williamson's (1965: 19) formula (index of regional divergences of income) is used as :

$$V_w = \sqrt{\frac{(Y_i - \bar{Y})^2 \cdot \frac{f_i}{n}}{\bar{Y}}}$$

Where f_i = Population of region i (here districtwise population).

n = National population

Y_i = Income per head in region i (here per capita GDP in taka).

$\bar{Y}$ = National average income per head.

V_w = Weighted measure of inequality.

Table II : Level of Regional Development by Selected Socio-Economic Indicators.

Sr.No.		Bogra			Rajshahi			Rangpur			Dinajpur			Pabna		
		Raw data	Index value	Raw data	Index value	Raw data	Index value	Raw data	Index value	Raw data	Index value	Raw data	Index value	Raw data	Index value	Raw data
1.	Percentage of Urban population to total population	7.44	0.00	10.34	68.88	10.91	82.42	8.56	96.60	11.66	100.00	11.66	100.00	11.66	100.00	11.66
2.	Literacy Rates (5 years & above)	22.90	100.00	20.70	54.16	18.10	0.00	21.60	79.92	19.20	99.91	21.60	79.92	19.20	99.91	21.60
3.	Cottage Industries/1000 households	15.17	26.10	14.51	15.23	13.58	0.00	19.67	100.00	13.77	3.77	19.67	100.00	13.77	3.77	19.67
4.	Workers in Cottage Indus./1000 population	7.59	54.14	6.65	13.10	6.35	0.00	8.64	100.00	6.38	1.31	8.64	100.00	6.38	1.31	8.64
5.	Handloom establishments/000 households	11.00	21.32	2.25	0.67	2.00	0.00	3.00	9.70	39.00	100.00	3.00	9.70	39.00	100.00	3.00
6.	Handloom workers/000 population	2.82	5.32	1.88	3.31	0.33	0.00	1.39	2.26	47.13	100.00	1.39	2.26	47.13	100.00	1.39
7.	Railway route Kilometres/100,000 population	5.19	68.86	2.34	28.83	4.29	100.00	3.85	83.94	1.55	0.00	3.85	83.94	1.55	0.00	3.85
8.	Railway route Kilometres/100 sq. km.	15.25	100.00	9.17	17.72	7.86	0.00	13.14	71.44	12.77	66.44	13.14	71.44	12.77	66.44	13.14
9.	Metalled road Kilometres/100 sq. km.	29.65	100.00	14.15	0.00	14.80	4.19	17.24	19.93	24.55	67.09	17.24	19.93	24.55	67.09	17.24
10.	Metalled road Kilometres/100 sq. km.	51.32	100.00	51.23	94.61	50.69	62.28	50.00	20.96	49.65	0.00	50.00	20.96	49.65	0.00	50.00
11.	No. of Primary Schools/100,000 population	11.00	70.43	9.49	4.78	10.75	59.57	9.38	0.00	11.68	100.00	9.38	0.00	11.68	100.00	9.38
12.	No. of Colleges/100,000 population	0.83	50.00	1.01	100.00	0.65	0.00	0.66	2.00	0.82	47.22	0.66	2.00	0.82	47.22	0.66
13.	No. of Post Offices/100,000 population	7.41	91.07	7.06	70.24	5.88	0.00	7.56	100.00	6.40	30.95	7.56	100.00	6.40	30.95	7.56
14.	No. of Telephone Sets/100,000 population	76.83	100.00	42.30	13.70	36.82	0.00	44.75	19.82	42.85	15.07	44.75	19.82	42.85	15.07	44.75
15.	No. of T.V. Sets/10,000 population	21.09	100.00	11.06	33.29	6.07	0.00	8.02	13.00	7.14	7.12	8.02	13.00	7.14	7.12	8.02
16.	No. of Radio Sets/10,000 population	5.87	100.00	4.02	8.82	4.13	14.79	3.91	1.78	3.88	0.00	3.91	1.78	3.88	0.00	3.91
17.	Health Centres/100,000 population	0.51	53.66	0.29	0.00	0.37	19.51	0.38	21.96	0.70	100.00	0.38	21.96	0.70	100.00	0.38
18.	Seating Capacity/10,000 population	39.89	74.77	20.72	0.00	25.16	17.32	25.19	17.43	46.36	100.00	25.19	17.43	46.36	100.00	25.19
19.	No. of Cinema Halls/100,000 population	7.04	100.00	6.21	72.05	4.07	0.00	5.78	57.58	5.96	3.64	5.78	57.58	5.96	3.64	5.78
20.	No. of Bank Branches/100,000 population	132.00	100.00	85.00	0.00	92.00	14.89	105.00	42.55	94.00	19.15	105.00	42.55	94.00	19.15	105.00
21.	Per capita Advances (in taka)	180.00	92.39	187.00	100.00	95.00	0.00	134.00	42.39	164.00	75.00	134.00	42.39	164.00	75.00	134.00
22.	Per capita Deposits (in taka)	28.08	100.00	12.32	25.34	6.97	0.00	14.47	35.53	24.82	84.56	14.47	35.53	24.82	84.56	14.47
23.	No. of Motor Vehicles/100,000 population	26.82	99.53	19.14	10.44	26.86	100.00	18.24	0.00	22.43	48.61	18.24	0.00	22.43	48.61	18.24
24.	No. of Padel Rickshaws/100,000 population	2298.00	64.72	1781.00	0.00	2230.00	56.20	2580.00	100.00	1992.00	24.41	2580.00	100.00	1992.00	24.41	2580.00
25.	Per capita Gross Regional Products (in taka)	1444.07	58.86	1092.15	0.00	1464.25	62.24	1630.00	100.00	1127.85	5.97	1630.00	100.00	1127.85	5.97	1630.00
26.	Per capita value added from Agriculture	34.95	29.13	20.14	0.00	21.57	2.82	28.14	15.70	70.80	100.00	21.57	2.82	28.14	15.70	70.80
27.	Per capita value added from Industry	148.27	44.27	177.66	95.53	126.66	6.58	122.89	0.00	180.22	100.00	122.89	0.00	180.22	100.00	122.89
28.	Per capita value added from Transport, Storage & Communication	235.10	26.26	213.38	18.32	242.06	47.05	275.13	100.00	199.53	0.00	275.13	100.00	199.53	0.00	275.13
29.	Per capita value added from Trade Services	5.15	25.79	1.71	0.00	2.93	72.73	4.38	56.45	6.44	100.00	4.38	56.45	6.44	100.00	4.38
30.	Gas, Water & Sanitary Services	74.00	100.00	72.00	83.33	68.00	50.00	71.00	75.00	62.00	0.00	71.00	75.00	62.00	0.00	71.00
31.	No. of Farm Households/100 households	176.00	86.27	135.00	0.00	183.00	100.00	138.00	11.77	161.00	56.86	138.00	11.77	161.00	56.86	138.00
32.	Intensity of Cropping	7.00	100.00	5.00	60.00	4.00	40.00	4.00	40.00	2.00	0.00	4.00	40.00	2.00	0.00	4.00
33.	Gross Irrigated Area/1000 population	59.01	61.28	58.95	60.34	59.00	61.11	61.52	100.00	55.07	0.00	61.52	100.00	55.07	0.00	61.52
34.	No. of hand tubewells/10,000 population (rural areas)															

Data Computed:

Source : Statistical Year Book, 1987; Industrial District Statistics, 1983; Reports on Urban Area, 1987.

Note:-

(i) Composite index formula

$$S = \frac{R - R_{\text{Worst}}}{R_{\text{Best}} - R_{\text{Worst}}} \times 100; \text{ (for details see ...)}$$

(ii) Raw data- standardised figure of respective indicator.