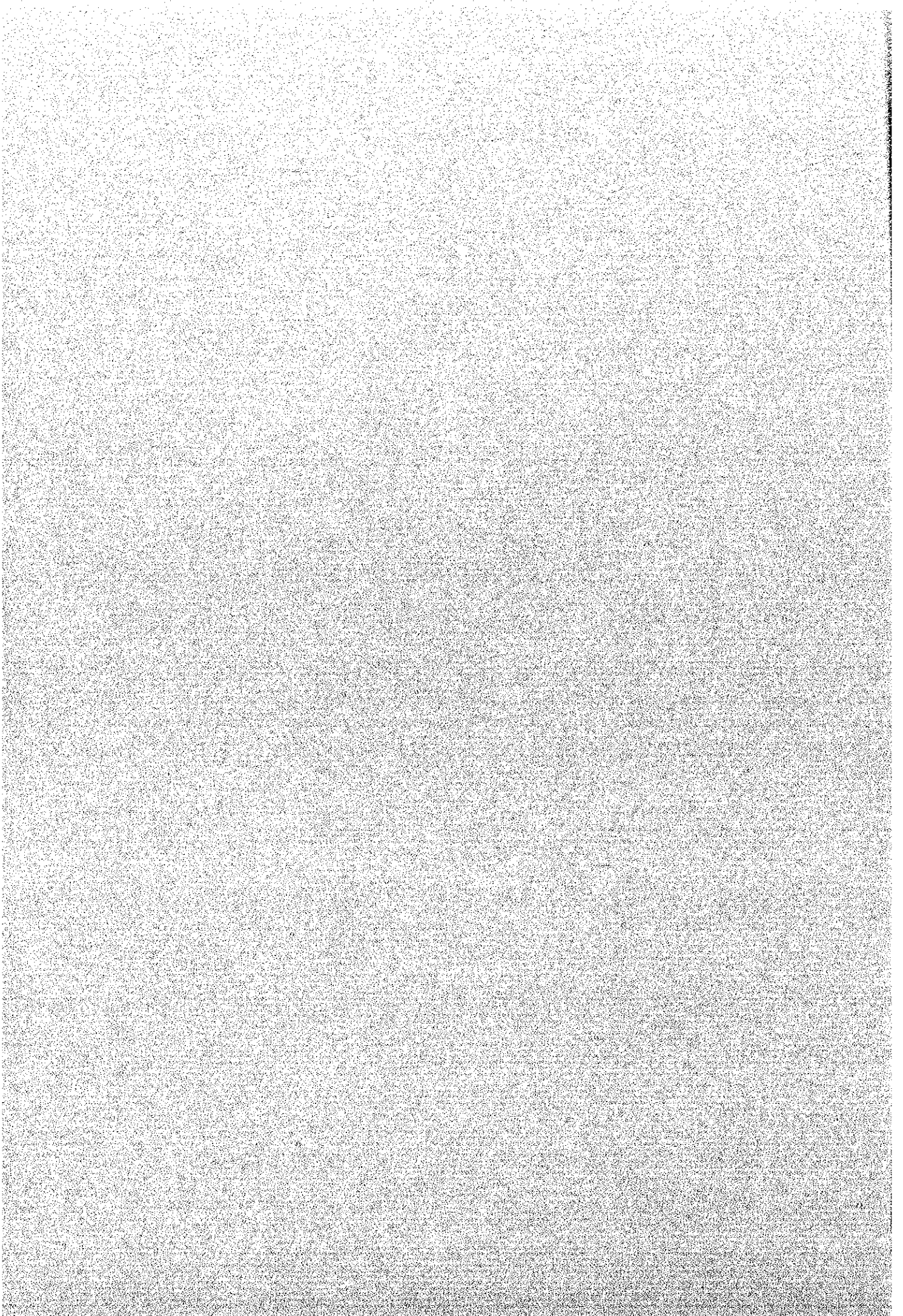


CHAPTER 2

SOCIOECONOMIC CONDITIONS OF THE STUDY AREA



CHAPTER 2 SOCIOECONOMIC CONDITIONS OF THE STUDY AREA

2.1 Definition of Influence and Study Area

The study area covers Khulna city, Mongla port and the area of their outskirts. Moreover, in this study, taking account of the existing transport networks, administrative units and the jurisdiction of RHD local offices (i.e. circles), the scope of influenced area from this project is defined as two areas of Khulna Former District including the study area and Jessore Former District (Fig. 2.1.1).

* For administrative purposes, Bangladesh is divided into six (6) divisions. Each division is further sub-divided into 64 zilas. Zila is divided into a number of Thanas. Currently there are 490 thanas. At present, the units of former districts are mainly used as statistical units.

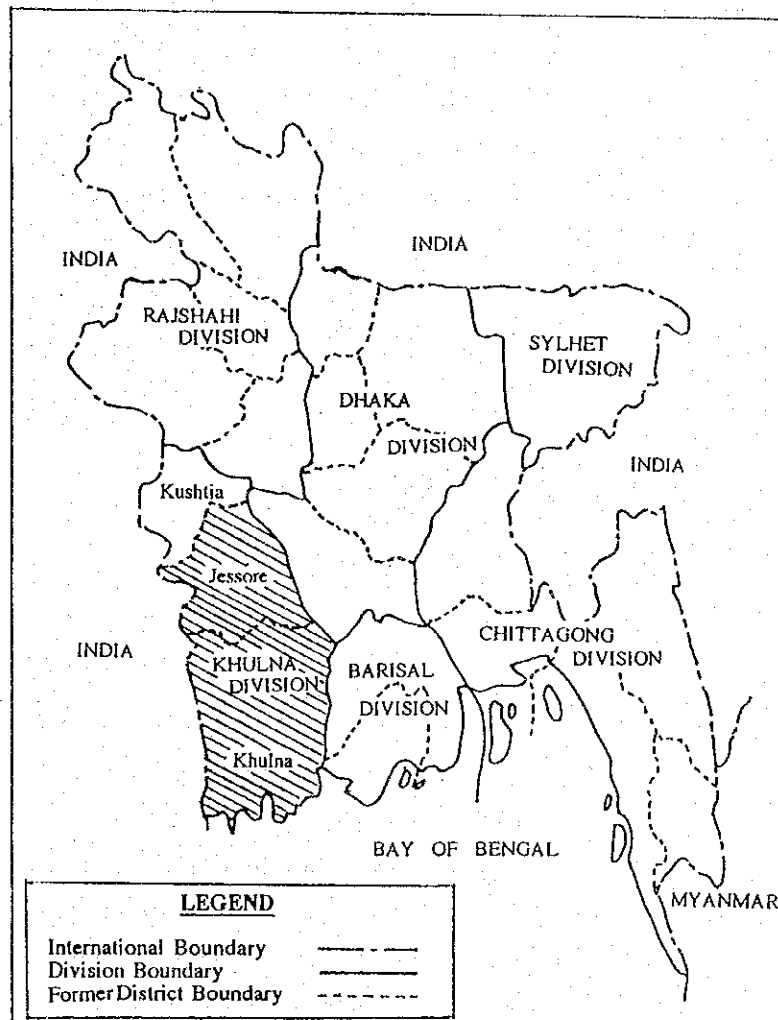


Fig. 2.1.1 Influence and Study Area

2.2 Social Conditions

2.2.1 Population

The Bangladesh Bureau of Statistics (BBS) conducted the third population census in the country in 1991. The population of the country was 111.455 million in 1991. The percentage of urban population was 19.6% while that of rural was 82.8%. The population growth rate from 1981 to 1991 was 2.5% per annum, and from 1991 to 1995 it was estimated as 1.85% per annum. Assuming medium variant of declining fertility and mortality by BSS, the country is expected to reach a population of 129.6 million by 2000. The country-wide intensive family planning measure is aimed at reducing the growth rate.

The population density was approximately 590 persons/Km² in 1981. It has increased to 755 persons/Km² in 1991 (Table 2.2.1). The sex ratio of population was 106 males per 100 females. The literacy rate of the country obtained from 1991 census was 32.4% for population 7 years and above. The percentage of Muslim population was 88.3% while that of Hindu, Buddhist and Christian was 10.5%, 0.6% and 0.3% respectively. There were 19.4 million households in the country, and the average household size was 5.6 persons in 1991.

Table 2.2.1 Population in Bangladesh

	1974	1981	1991	1995
Population (million persons)	71.5	87.1	111.5	120.0
Population Annual Average Growth Rate (%)	-	2.86	2.50	1.85
Population Density (persons/Sp. Km)	485	590	755	813
Population by Age Group (%)				
0 - 14	48.00	46.70	45.30	42.90
15 - 65	48.50	50.80	52.10	53.10
65 -	3.50	2.50	2.60	4.00
Urban population (as % of total population)	8.80	15.20	19.63	22.00
Sex Ratio (Male/Female)	108	106	106	106

Source: 1996 Statistical Yearbook of Bangladesh

Table 2.2.2 shows population in Khulna Areas including Khulna and Bagerhat zilas in 1991. Total population in Khulna and Bagerhat zilas was 3.62 million (3.2% of Bangladesh population), of which 2.13 million are in Khulna zila, 1.49 million are in Bagerhat zila. The percentage of urban population was 47.3% in Khulna zila and 12.7% in Bagerhat zila. The growth rate of total population from 1981 to 91 was 2.0% per annum, while that of Khulna and Bagerhat zila was 1.8% and 2.2% respectively. Especially that of Khulna SMA (Statistical Metropolitan Area) was 3.7% per annum. It is evident that the population concentration on metropolitan area is also in progress in Bangladesh same as other developing countries.

Table 2.2.2 Population in Khulna Areas in 1991

	Khulna Zila	Khulna SMA	Khulna City Corporation	Bagerhat Zila	Khulna Division
Population (thousand persons)	71.5	87.1	111.5		120.0
Population Annual Average Growth Rate (1981 - 91,%)	-	2.86	2.50		1.85
Population Density (persons/Sp. Km)	485	590	755		813
Urban population (as % of total population)	8.80	15.20	19.63		22.00
Sex Ratio (Male/Female)	108	106	106		106

Source: (1) 1996 Statistical Yearbook of Bangladesh

(2) Bangladesh Population Census 1981, Community Tables of All Thanas of Khulna District

(3) Bangladesh Population Census 1991, Volume 3 Urban Area Report (Nov. 1997)

Note : Khulna SMA (Statistical Metropolitan Area) includes Khulna City Corporation and whole of Rupsa and Daulatpur thanas.

At present, the Khulna city is the third largest metropolitan city of Bangladesh after the capital city of Dhaka and the city of Chittagong. Khulna is an important inland river port and provides link to Mongla Port by national highway and waterways. It is connected by railway, roads, waterways and airway (through Jessore) with the rest of the country. The city has already been assuming the status of urban agglomeration consisting of industrial and commercial developments along the Khulna-Jessore highway and now along the Khulna-Mongla highway. The growth of Khulna is also related to trade and commerce with overseas countries. Moreover, Khulna is the Divisional Headquarters of administrative Division of the same name. It has been developing in recent years as a place of learning and culture with the establishment of the Khulna University. Inflow of population is resulting in the increasing demand of services and utilities in the Khulna City Corporation (KCC) area and its outskirts.

Important developments in Khulna area took place initially from 1960s. Some of these are shipyard, jute mills, newsprint factory, match factories, Khulna Development Authority (KDA) industrial estate at Shiromoni, housing estates and land development schemes at Khalishpur, Mujgunni and Boyra, roads like the Outer Bypass connecting Khulna-Jessore highway with the proposed bridge over the Rupsa river, new market, inter-city bus terminal, parks, cantonment, medical college, university and other activities. Over the years, some areas adjacent to the KCC area have been developing. The present trend of growth is on the south side of Rupsa river and along the Khulna-Mongla highway which is emerging as the new axis of urban growth, and some developments on Khulna-Satkhira road began to take place after the establishment of Khulna University and housing areas like Nirala area.

2.2.2 Labour Forces

According to 1995-96 Labour Force Survey (LFS), the total civilian labour force of the country was estimated at 56.0 million, of which 34.7 million are male and 21.3 million are female, while it was 51.2 million in 1990 - 91, of which 31.1 million are male and 20.1 million are female in 1990-91 LFS as per extended definition. In extended definition, the activities like care of livestock, processing, husking, preservation of food etc. are considered as economic activities which are usually performed by females in and out of the agriculturally based household in rural areas.

In conventional usual definition, the above activities are not considered as economic activities. According to 1995-96 LFS, the total civilian labour force was estimated at 41.7 million, while it was 35.9 million in 1990-91. The female labour force stands at 7.6 million in 1995-96 in usual definition, while it was 4.9 million in 1990-91. The female participation rate was estimated at 18.1% in 1995-96 as compared to 14.2% in 1990-91.

Out of the number of employed population by major industry, the agriculturally based population is the most. Its share to total employed population was 66.7% in 1990-91 LFS and 62.7% in 1995-96, respectively. The changes of each industrial share between 1990-91 and 1995-96 were from 11.8% to 7.5% in manufacturing, 1.0% to 1.8% in construction, 8.6% to 11.1% in trade and restaurant, 3.2% to 4.2% in transport, storage and communication, 0.6% to 1.1% in finance and business service, 3.8% to 9.3% in community and personal service and 4.4% to 2.2% in household sector (Table 2.2.3 and Fig. A-2.2.1 in Appendix A). Taking account of the phenomenon mentioned above, it is clear that the industrial structure in Bangladesh is changing.

Though the open unemployment rate (about 30% in 1996-97) based on official statistics is low, extremely high underemployment caused by the less demand for labour, is a major challenge in the labour market. It is estimated that about 40% of the labour force 56.0 million are underemployed, or are forced to work less than full time. Wage rates are substantially different between the rural and urban areas, public and private enterprises, and informal and formal.

An international comparison shows that labour costs in Bangladesh are probably one of the lowest in Asia. For example, the annual wage rate for making shirts in Bangladesh is only one half that in India and Sri Lanka, one quarter that in Pakistan.

Table 2.2.3 Summary Labour Force Statistics

	(million)		
	1985/86	1990/91	1995/96
Civilian Labour force	30.9	51.2	56.0
Male	27.7	31.1	34.7
Female	3.2	20.1	21.3
Employed Population	30.5	50.2	54.6
Male	27.4	30.5	33.8
Female	3.1	19.7	20.8
Unemployed Population	0.4	1.0	1.4
Male	0.3	0.6	0.9
Female	0.1	0.4	0.5
Employment in Major Industry	30.6	50.2	54.6
Agri., Forestry, Fisheries	17.5	33.3	34.5
Mining and Quarrying	0.0	0.0	0.0
Manufacturing	3.0	5.9	4.1
Electricity, Gas, Water	0.0	0.0	0.1
Construction	0.6	0.5	1.0
Trade and Restaurant	3.8	4.3	6.1
Transport, Storage, Communication	1.3	1.6	2.3
Finance, Business service	0.4	0.3	0.6
Community and Personal service	2.6	1.9	5.1
Household sector	1.3	2.2	1.2

Source : 1996 Statistical Yearbook of Bangladesh

The number of economically active persons aged 15 and over was 50.3 million in Bangladesh, of which 1.3 million are in Khulna zila and 0.8 million are in Bagerhat zila. As presented in Table 2.2.4, the economically active persons in urban area are 18.3% in the country, while those are 70.4% in Khulna zila and 9.5% in Bagerhat zila. The share in Khulna zila is almost same in capital Dhaka, and it shows that Khulna zila has many chances of economic activities in urban. On the other hand, it shows that the economic activities in Bagerhat zila are mainly the agriculturally based economic activities.

Table 2.2.4 Economically Active Persons aged 15 and over by zila in 1995-96

	(thousand)		
	Urban	Rural	Total
Bangladesh	9187	41150	50337
(%)	18.3	81.7	100
Dhaka Zila	2046	845	2891
(%)	70.8	29.2	100
Chittagong Zila	1182	1170	2352
(%)	50.3	49.7	100
Khulna Zila	901	378	1279
(%)	70.4	29.6	100
Bagerhat Zila	73	699	772
(%)	9.5	90.5	100

Source : 1996 Statistical Yearbook of Bangladesh

2.2.3 Transportation System

Bangladesh is served by four (4) modes of transport, namely rail, road, water and air transport. More and less, these four modes of transport are faced with a number of problems and being constrained by these problems, the transport system in Bangladesh has been operating across the different regions of the country. The summary of the existing individual transport mode is as follows:

(Rail Transport)

The rail transport of the country consists of both broad gauge and meter gauge lines. Out of total 2,706 Km route, broad gauge accounts for 34%, while the meter gauge accounts for 66%. The existing railway system is divided into roughly two equal parts by the river Jamuna and Padma. The bulk of the meter gauge lines are in the eastern part of the country and remainder are in the western part. The two systems are linked by ferries at two points of the river Jamuna, namely Bahadurabad-Fulchhari and Jamalganj-Sirajganj. On completion of the Jamuna Multipurpose Bridge, two parts of the country will be linked by "Dual gauge" line to be laid on the bridge.

Bangladesh railway is absolutely a government owned transport mode and designed to function as part of government administration. The Bangladesh Railway (BR) as national railway at present possesses a fleet of 279 locomotives, 1,323 passenger cars, 155 other coaching vehicles and 17,498 freight wagons in 1994-95. With these rolling stocks, BR provides passenger and freight services all over the country through 489 stations.

(Road Transport)

The road transport of Bangladesh plays an important role in providing nationwide transport services. The growth of traffic (both passenger and freight) over the years has been largely shared by the road transport of the country. Although the other modes of transport are also sharing the increased traffic, the predominance of road transport (both motorized and non-motorized) in carrying the increased traffic is remarkable.

A road network in Bangladesh is classified as national highways, regional highways, feeder roads (type A and B) and local roads. The definition of each highway and road is as follows:

- National highways connect the national capital with district headquarters, port cities and international highway.
- Regional highways connect different regions and district headquarters which are not connected by the national highways.
- Feeder roads type A connects thana (lowest tier of administration) headquarters and important growth centers to the main arterial roads.
- Feeder roads type B connects growth centers with other growth centers and thana headquarters.
- Local roads include municipal roads and rural roads.

At present, the total length of road network under Roads and Highways Department (RHD) stands at 15,668 Km. In addition to this road network, there are 179,000 Km of roads which are under the Local Government Engineering Department (LGED) in collaboration with the local government bodies.

The RHD is responsible for construction, improvement and maintenance of national and regional highways and feeder road type A. Feeder roads type B and rural roads are built and maintained by the LGED. Construction and maintenance of municipal and urban roads are charged with municipal bodies like city corporation and municipalities.

Presently, the ferry facilities are provided with about 80 river gaps without bridges on the RHD road network, of which the ferry ghats (piers) are developed at 75 river gaps; among them 12 are on national highways, 19 on regional highways and 44 on feeder roads. There are 12 ferry ghats in Khulna RHD zone (one of the seven regional administrative zones under RHD, Ministry of Communication).

(Water Transport)

Inland water transport is the oldest mode of transport in Bangladesh. In fact, rivers in Bangladesh are the life line of nation which provide the cheapest means of transport and water for agricultural operation and ensure supply of fish for the people. The inland water transport is composed of both mechanized and non-mechanized water vessels plying in the country. These water vessels provide services across the country's navigable waterways. The navigable waterways consist of roughly 5,968 Km during monsoon and about 3,865 Km in the dry season. The river network is a natural drainage of the country and it has been a major means of transport for some areas, particularly the southern districts such as Khulna and Bagerhat zilas of the country. The inland water transport services are mainly provided by the private sector.

The two seaports of Bangladesh are Chittagong and Mongla. Among many river ports and terminals, Dhaka, Narayanganj, Chandpur, Barisal, Khulna, Aricha, Goalando, Nagarbari, Serajganj ghat, Jagannathganj ghat, Bhairab Bazar, Bahadurabad and Fulchari ghat are important.

(Air Transport)

Air transport system in Bangladesh operates through eight (8) operational airports including two (2) international airports. Dhaka is connected by air with a lot of major foreign cities (e.g. Tokyo, Bangkok, Singapore, Kuala Lumpur, Karachi, Bombay, Calcutta, Katmandu, Dubai, Jeddah, Kuwait, Bahrain, Abudhabi, New York, New Delhi, London, Paris, Rome, Athens, Brussels, Amsterdam and so on) by the national airline (Biman). A number of foreign airlines operate their international services with a link to Dhaka. Regular air services are operated by the Biman between Dhaka and other major cities in the country. Moreover, the private airline (GMG Airlines) started operating on the domestic routes from April, 1998.

2.3 Economic Situation

2.3.1 Gross Domestic Product (GDP) and Sector's Contributions

Recent macroeconomic management in Bangladesh have achieved successes in promoting stability in the economy. GDP growth has improved in recent years. Table 2.3.1 shows that annual growth rate of GDP was 4.7% from 1990-91 to 1996-97.

As Bangladesh economy is structurally an agrarian economy, the agriculture sector continued to play a major role in the Bangladesh economy. Although the share declined in the last decade, it still constitutes about one third (32.8% in 1996-97) of total GDP, and engages two third (62.7% in 1995-96) of total domestic labour force. Food security and the performance of agriculture both continue to be important factors in the country's overall economic performance in general and poverty alleviation in particular.

In the recent years, although manufacturing sector's contribution is slightly more than that of previous years, it is not yet substantially high. The contribution of manufacturing sector increased from 9.8% in 1990-91 to 11.3% in 1995-96. The contribution of large scale manufacturing consistently increased, however that of small scale manufacturing declined during 1991-1996.

Apart from agriculture and manufacturing, the other sectors of importance as their contribution to GDP, are transport & communication, trade services, housing services, construction and professional services. It may be seen in Appendix A, Fig. A-2.3.1. that the contribution of professional services gradually increased from 10.5% in 1990-91 to nearly 12% in 1996-97, while the contribution of trade services increased from 9.1% to 10.1% . Contribution of other sectors to GDP remained more or less stagnant during 1991 - 1997.

The GDP has increased steadily during 1991 - 1996, however, the per capita GDP has not significantly increased over the years. From TK.4,694 in 1990-91, per capita GDP has increased to TK.5,262 in 1995-96 at constant market price. Annual growth rate of per capita GDP was 2.3% during the same period.

Table 2.3.1 Gross Domestic Product (GDP) by Industrial Sector in Bangladesh
(Constant 1984-85 Prices)

	(million TK)						
	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97 *
A. Agriculture	193,421	197,662	201,230	201,915	199,822	207,126	219,700
1. Crops	152,575	155,101	156,392	153,852	148,068	152,168	160,700
2. Forestry	12,845	13,147	13,536	14,077	14,712	15,338	16,000
3. Livestock	14,102	14,615	15,522	16,841	18,239	19,706	21,300
4. Fisheries	13,899	14,799	15,780	17,145	18,803	19,914	21,700
B. Industry	88,294	94,558	102,105	110,044	119,234	125,603	130,100
1. Mining & Quarrying	80	94	107	121	137	174	200
2. Manufacturing	50,423	54,117	59,033	63,665	69,165	72,823	75,200
a. Large Scale	29,269	32,342	36,627	40,363	44,884	47,595	49,000
b. Small Scale	21,154	21,775	22,406	23,302	24,281	25,228	26,200
3. Construction	31,087	32,471	34,032	36,074	38,593	40,146	41,600
4. Electricity, Gas & Water	6,704	7,876	8,933	10,184	11,339	12,460	13,100
C. Services	232,727	243,969	256,894	271,881	290,737	309,712	328,800
1. Transport & communications	60,840	63,349	66,416	70,089	74,203	77,889	82,600
2. Trade Services	46,707	48,561	50,631	53,284	58,669	64,544	68,700
3. Housing Services	39,316	40,656	42,197	43,792	45,457	47,204	49,000
4. Public Administration & Defence	22,334	24,184	26,240	28,484	30,962	33,533	36,300
5. Banking & Insurance	9,755	10,002	10,302	10,663	11,090	11,478	11,900
6. Professional & Miscellaneous Services	53,775	57,217	61,108	65,569	70,356	75,064	80,300
GDP at Constant Prices	514,442	536,189	560,229	583,840	609,793	642,441	678,800
Population (million)	109.6	113.3	115.5	117.7	119.9	122.1	-
Per Capita GDP	4,694	4,732	4,850	4,960	5,086	5,262	-
Annual Growth of GDP (%)	3.4	4.2	4.5	4.2	4.4	5.3	5.7
Annual Growth of Per Capita GDP (%)	1.4	2.1	2.5	2.3	2.5	3.5	-

Note : a ; provisional
Source : 1996 Statistical Yearbook of Bangladesh

In general, the regional GDP variations reflect the effects of a number of factors such as natural resources, location of industry, availability of agriculture land and government policies on regional development and investment. The GDP variations of each former district in Bangladesh lied between TK.11,378 million (Patuakhali Former District) and TK.83,021 million (Dhaka Former District) in 1994-95. In Khulna Former District including Khulna, Bagerhat and Satkhira Zilas, the regional GDP and per capita GDP were TK.32,702 million and TK.5,638 respectively. Khulna's contribution to whole country's GDP was 5.4% in 1994-95. The annual growth rate of GDP during 1991-1995 in Khulna was 4.4%, this was almost same that of GDP in whole country (Table 2.3.2 and Fig. A-2.3.2 in Appendix A). Although the composition of GDP by industrial sector in Khulna is structurally same that of whole country, the shares of manufacturing and transport & communication sector in Khulna are a few higher than that in whole country, on the contrary electricity, gas & water, banking & insurance and professional services sector are low. It is by reason of that Khulna possesses a number of industries such as textile, newsprint, hardboard, iron-rolling, ship building, engineering workshop and fish processing, and includes Mongla port which is the second sea port of the country and is performing an important role by facilitating transshipment of freights between Bangladesh and other countries of the world.

Table 2.3.2 GDP by Industrial Sector in Khulna Former District (Constant 1984-85 Prices)

	(million TK)				
	1990-91	1991-92	1992-93	1993-94	1994-95
A. Agriculture	10,279	10,643	11,508	11,435	11,006
1. Crops	6,041	6,302	6,502	6,472	5,811
2. Forestry	3,137	3,205	3,370	3,549	3,582
3. Livestock	662	671	1,053	778	835
4. Fisheries	439	465	583	636	778
B. Industry	4,409	4,753	5,235	5,784	6,259
1. Mining & Quarrying	0	0	0	0	0
2. Manufacturing	2,562	2,825	3,189	3,589	3,895
a. Large Scale	2,473	2,733	3,095	3,411	3,793
b. Small Scale	89	92	94	98	102
3. Construction	1,568	1,638	1,717	1,820	1,947
4. Electricity, Gas & Water	279	290	329	375	417
C. Services	12,794	12,988	13,643	14,446	15,437
1. Transport & communications	3,743	3,897	4,086	4,312	4,565
2. Trade Services	2,485	2,161	2,810	2,957	3,256
3. Housing Services	1,983	2,051	2,128	2,209	2,293
4. Public Administration & Defence	1,070	1,159	1,244	1,364	1,498
5. Banking & Insurance	491	504	479	496	490
6. Professional & Miscellaneous Services	3,022	3,216	2,896	3,108	3,335
GDP at Constant Prices	27,482	28,384	30,386	31,585	32,702
Population (million)	5.3	5.4	5.4	5.5	5.8
Per Capita GDP	5,185	5,256	5,627	5,743	5,638
Annual Growth of GDP (%)	3.0	3.3	7.1	3.9	3.5
Annual Growth of Per Capita GDP (%)	1.1	1.4	7.1	2.1	-1.8

Source : 1996 Statistical Yearbook of Bangladesh

2.3.2 Government Finance and Investment

Fiscal reforms broadened the coverage of the value-added tax (VAT) and non-tax revenue source. In the meantime, the government's current expenditure was largely under control. As a result, it was able to increase its financial share of the Annual Development Program (ADP) as government's development expenditures. While the overall fiscal deficit remained high, it was however on the decline, excluding 1994-95 when the government's expenditure on food grain subsidies increased due to poor crop production.

Revenue collection increased about 10% in 1995-96 to previous fiscal year (Table 2.3.3). While non-tax revenue was affected by the poor performances of State-Owned Enterprises (SOE) such as the Bangladesh Petroleum Corporation, Bangladesh Telegraph & Telephone and Bangladesh Railway, the collection of major tax revenue items including customs duties, VAT and income tax were near or exceeded the target level. On the expenditure side, revenue (current) expenditure slightly exceeded the budget target due to unexpected interest payments on domestic debt and an increase in subsidies to SOEs. The share of ADP as development expenditures of total expenditure has fluctuated between about 42% and 50% during 1991-1996.

Table 2.3.3 Receipts and Expenditures of Government of Bangladesh

	(million TK)					
	1990/91	1991/92	1992/93	1993/94	1994/95 (R.E)	1995/96 (B.E)
Revenue Receipts	81,769	97,236	113,189	123,883	142,103	154,495
Tax	78,234	90,989	97,601	93,820	106,651	117,041
Non-Tax	13,791	19,002	22,200	30,063	35,452	37,454
Development Receipts	64,779	65,390	66,400	67,610	82,830	90,400
Project	87,859	41,678	44,851	44,794	47,290	52,310
Food & Commodities	26,180	21,959	20,798	22,384	31,600	36,290
Internal Resources	740	1,753	751	432	3,940	1,800
Total Receipts	146,548	162,626	179,589	191,493	224,933	244,895
Revenue Expenditure	72,651	78,386	86,429	91,555	99,982	114,544
Wages & Salaries	25,184	29,038	38,380	37,229	39,192	39,718
Commodities & Services	13,402	19,343	22,539	21,687	26,981	26,115
Transfer	31,213	26,972	22,728	28,317	29,305	41,347
Other Services	2,852	3,033	2,782	4,322	4,504	7,364
Development Expenditure	52,700	60,240	65,500	89,830	103,030	96,530
Agriculture	5,267	5,115	4,415	4,361	5,858	5,488
Industry	9,116	4,211	2,550	1,761	2,031	1,902
Flood Control & Water Resources	7,768	7,678	9,806	9,166	7,872	7,375
Rural Institution	2,348	3,709	5,783	4,982	7,198	6,744
Power & Natural Resources	11,844	15,488	24,412	26,388	14,509	13,594
Transport	8,526	12,912	7,356	16,214	22,998	21,547
Communication	1,333	2,240	2,789	8,788	5,405	5,063
Others *	6,498	8,887	8,381	18,170	37,159	34,817
Total Expenditure	125,351	138,626	151,929	181,385	203,012	211,074

Note : - (R.E) Revised Estimate (B.E) Budget Estimate

- * Others include Education & Training, Health, Population Control & Family Planning, Physical Planning & Housing, Social Welfare, Labour Training, Science & Technology and Research & Public Administration.

- Real public expenditure has been obtained by deflating total expenditure in current prices by implicit national income deflator ; (1984-85 = 100).

Source : 1996 Statistical Yearbook of Bangladesh

Fig. 2.3.1 shows the trend of ADP investment by sector. The increased investment during the Fourth Five Year Plan (1990 - 1995) period was due to inclusion of large-scale projects such as the Jamuna Bridge, Madhyapara Hard-rock and Barapukuria Coal Development projects. Moreover, the increased investment in education sector and the rapidly enhanced investment in rural roads, electrification, water supply, etc. also necessitated significantly high resource development in the public sector.

The private investment during the Fourth Five Year Plan period is shown Fig. 2.3.2. The realized total private investment from 1990-91 to 1994-95 during the Fourth Five

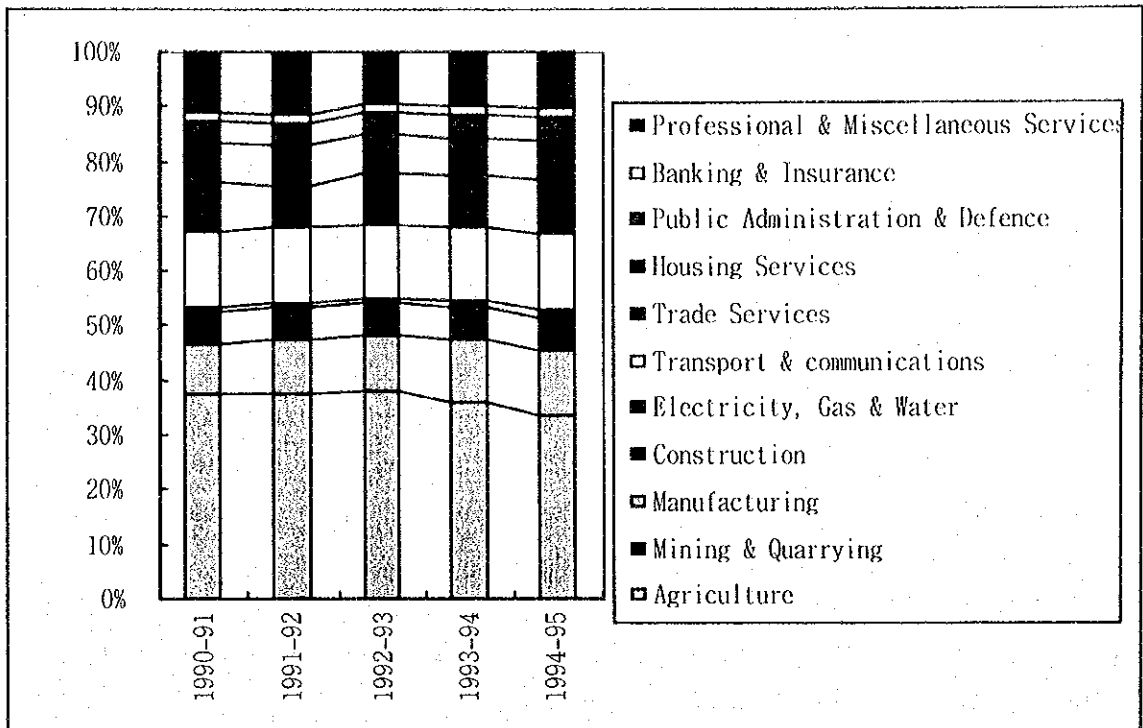


Fig. 2.3.1 Trend of GDP Composition by Sector in Khulna Former District

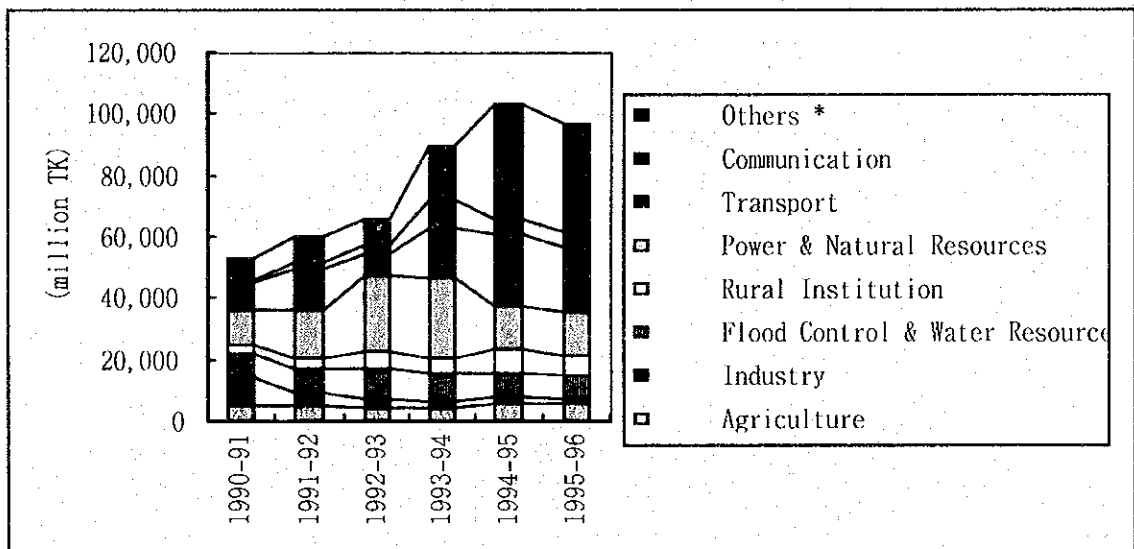


Fig. 2.3.2 Expenditures for Public Investment by Sector

Year Plan period was higher than the targeted private investments. At the sector's level, although the investment for the industry and trade & other service sector amounted to large shares, the performance of industry sector exceeded the Plan target.

2.3.3 Trade

Trade liberalization and export promotion policy initiated in the early 1990s resulted in a sharp expansion of external trade in Bangladesh. As detailed in Table 2.3.4, the average growth rate for exports during 1990 - 1996 was about 17%, in terms of US dollars. Imports increased at about 13% per annum during the same period. In the recent year, the export earnings from ready-made garments increased largely. Export earnings from knitwear, raw jute, agri-products, tea and chemical products also grew progressively. In fact, garments and knitwear alone account for two thirds of the total exports. On the other hand, the proceeds from leather exports declined, as did those of jute products, reflecting a softening of external demand. Export prospects of frozen foods, the fastest growing sector, slowed down due to an outbreak of disease and cyclones, and declining prices in the international market. Imports grew slowly. This low growth is attributable mainly to a decline in foodgrain import. Moreover, the weak growth of the industrial sector and a stagnant private investment reduced the import demand for raw materials and machinery.

Fig. 2.3.3 shows the direction of export and import. The share of export to European countries from Bangladesh in 1993-94 was the highest, second to North America area. The highest share of import was from Asian countries excluding Middle East.

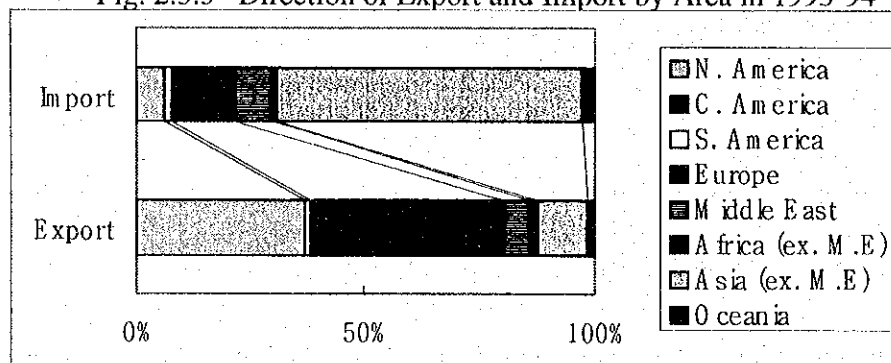
Table 2.3.4 Export and Import

	(US\$ million)						
	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97 ^a
Export	1,718	1,994	2,383	2,534	3,473	3,882	4,380
Import	3,510	3,526	4,071	4,191	5,834	6,881	7,170
Balance	-1,792	-1,532	-1,688	-1,657	-2,361	-2,999	-2,790

Note : a provisional

Source : Country Economic Review, Bangladesh (ADB, Oct. 1997)

Fig. 2.3.3 Direction of Export and Import by Area in 1993-94



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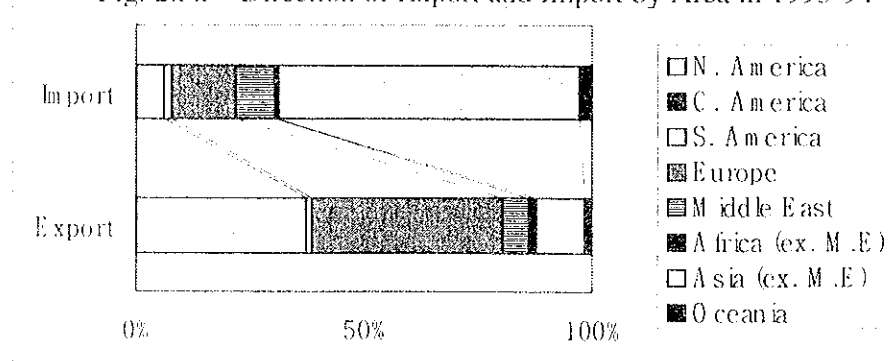
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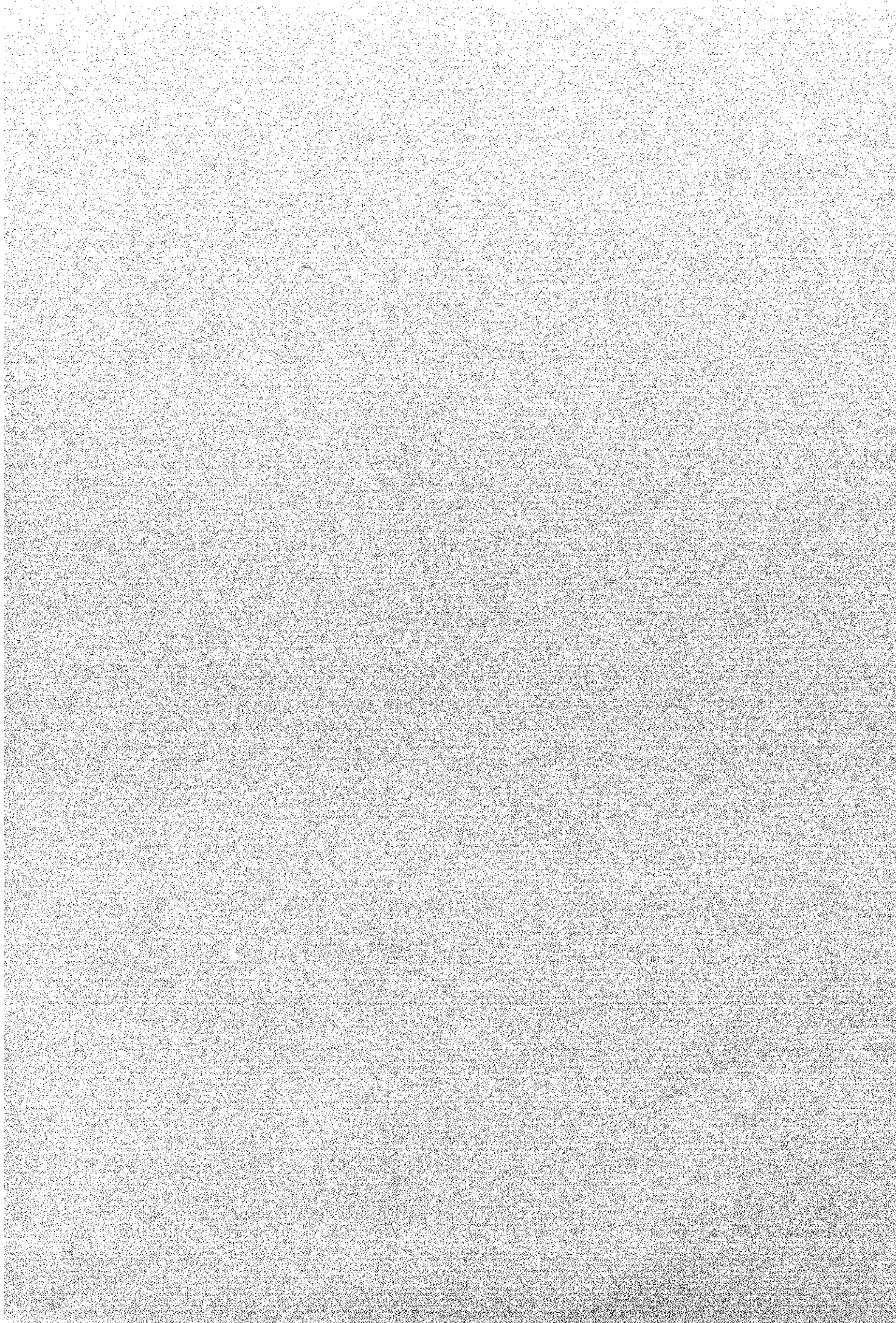
Source : Country Economic Review, Bangladesh (ADB, Oct. 1997)

Fig. 2.3.3 Direction of Export and Import by Area in 1993-94



CHAPTER 3

SOCIOECONOMIC FRAMEWORK



CHAPTER 3 SOCIOECONOMIC FRAMEWORK

3.1 Review of the Fifth Five Year Plan

The Fifth Five Year Plan (1997-2002) (hereinafter referred to as the “5FYP”) was formulated in June, 1997, as a vision-rich guide towards comprehensive development in Bangladesh. The main points of the 5FYP are described herein.

The 5FYP aims to achieve a target GDP growth rate of over 7% with an estimated outlay during the 5FYP period of TK 2,034 billion. Out of this, the public sector will contribute about 42% of the total outlay with the remaining 58% to be financed by the private sector. The 5FYP aims toward achieving a high degree of self reliance. That is to say, about 74% of the total outlay will be financed from domestic sources.

The 5FYP will give priority to the agricultural sector so as to maximize its contribution to overall growth of the economy and food security. Next in priority is the industrial sector, the key to Bangladesh’s entry into the 21st century as a modern growing economy.

3.1.1 Objectives and Strategies of the 5FYP

The objectives of the 5FYP are as follows:

(National Level Objectives)

- Alleviation of poverty
- Generation of productive employment
- Achievement of self-sufficiency in food production
- Human resource development
- Infrastructure development
- Control of population growth
- Provision of social amenities
- Strengthening of the technological base
- Protection of the environment
- Closing the gender gap
- Establishment of better social justice

(Local Level Objectives)

- Improvement in the quality of life of the rural residents
- Transformation of the rural socioeconomy towards equity
- Establishment of effective local government institutions
- Development of necessary physical and socioeconomic infrastructure
- Mobilization of the rural masses and resources at their command for equitable and sustainable growth

Moreover, to achieve these objectives during the 5FYP period, the constituent elements of the strategy are as follows:

- Accelerated agricultural production
- Participatory rural development
- Population control and the promotion of mother-child health
- Human resource development
- Stimulation of the private sector
- Export-led industrialization
- Good governance and public accountability

Human resource development serves both as a target objective as well as a strategy, as it holds the key to the maximization of social welfare through acceleration of growth including all regions and classes of people in Bangladesh.

3.1.2 Plan Size, Allocation by Sector, and Major Targets

While there has been substantial improvement in macroeconomic management due to the structural adjustment program being undertaken by the Government of Bangladesh, the 5FYP identifies a need for massive investment, with private sector playing the major role, in order to lift the economy out of low growth and poverty.

Table 3.1.1 shows the scale of the Plan by the terminal year (2001/2002). The average annual growth rates during the 5FYP period are 7.3% for GDP, 1.36% for population, 4.1% for employment, and 5.5% for per capita GDP, respectively.

Table 3.1.2 shows the distribution of outlay by sector during the 5FYP period. In the 5FYP, it is expected that the private sector will be the main engine of growth. The Government of Bangladesh is committed to a free market economy, privatization of public enterprises,

liberalization, deregulation of public control, and reforms and structural adjustments that will create an environment for the expansion of the private sector. The private sector will be further encouraged through proper incentives and facilities toward establishing an export-led industrial base, through the soliciting of both foreign and domestic investment.

Table 3.1.1 Scale of the 5FYP (at 1996/97 Prices)

	1996/97	2001/2002	Annual Growth Rate (%)
GDP (million TK)	1,402,235	1,993,504	7.3
Agriculture	418,306	508,933	4.0
Industry	129,765	263,919	15.3
Construction	82,346	115,495	7.0
Power, Gas	30,834	94,099	25.0
Transport	158,040	225,048	7.3
Housing Services	134,117	165,109	4.2
Public Administration	79,048	98,508	4.5
Health	19,184	27,541	7.5
Education	58,685	83,566	7.3
Trade Services	125,799	179,137	7.3
Banking, Insurance	28,084	37,583	6.0
Prof. & Misc. Services	138,026	194,565	7.1
Population (million)	123.8	132.5	1.36
Employment (x1000 persons)	49,071	62,312	4.1
Agriculture	30,912	36,918	3.0
Industry	3,650	6,466	10.0
Power, Gas	103	238	15.0
Construction	1,015	1,323	4.5
Transport, Communications	2,196	2,904	4.8
Trade, Other Services	11,195	14,463	4.4
Per Capita GDP (TK)	11,494	15,045	5.5

Note : Base year of Employment is 1995/96 (from Labour Force Survey).

Per Capita GDP is calculated by the Study Team.

Source : The Fifth Five Year Plan 1997-2002

Table 3.1.2 Distribution of Plan Outlay by Sector during the 5FYP
(at 1996/97 Prices)

	(million TK)		
	Public Sector	Private Sector	Total
Agriculture	202,675	157,147	359,822
Industry	11,793	292,557	304,350
Housing, Construction	49,816	211,902	261,718
Power, Gas	114,401	37,726	152,127
Transport, Communications	145,990	160,213	306,203
Trade, Other Services	334,265	315,743	650,008
Total	858,940	1,175,288	2,034,228

Note : Public Sector includes non investment expenditures.

Source : The Fifth Five Year Plan 1997-2002

Table A-3.1.1 in Appendix A shows the major materials targets for the 5FYP. The realization of these targets will depend not only on inflows of new investment but also on efficient use of existing capacities through development of management capability in both the public and private sectors.

In the 5FYP document, the outlook for future population in the whole country is described in Table 3.1.3

Table 3.1.3 Outlook of Population

	1996/97	2001/2002	2004/2005	2009/2010	2019/2020
Population (million)	123.8	132.5	137.8	147.1	166.5
Growth Rate (%)	1.75	1.36	1.32	1.31	1.25

Source : The Fifth Five Year Plan 1997-2002

3.2 Development Plans for the Transport Sector

3.2.1 Development Plans for the Transport Sector in the 5FYP

An adequate and efficient transport system is a prerequisite for both initiating and sustaining economic development. Investment in improving transport efficiency is the key to expansion and integration of markets.

(1) Objectives in the Transport Sector

To achieve an average GDP growth rate of over 7% per annum and to transform from a subsistence to a market-based economy, the transport sector growth rate would be expected to increase considerably by 8-9% per annum. This high growth in transport volume would necessitate a substantial improvement in the transport system for smooth operation. Accordingly, keeping in mind increased domestic traffic as well as the necessity for the future accommodation of traffic from the Asian Highway and Trans-Asian Railway, a principal objective of the 5FYP is to develop a balanced and integrated transport network.

(2) Development Strategies

One result of the strategy of striving for an optimal mix of the 'market integration approach' and 'poles of development approach' is that development efforts will be concentrated in five (5) main corridors:

Dhaka - Chittagong, Dhaka - Northwest, Dhaka - Khulna,
Dhaka - Sylhet, Khulna - Northwest

In particular, development efforts on the Dhaka - Chittagong, the Dhaka - Northwest, and the Khulna - Northwest arterial corridors are to be emphasized. The main development strategies to be conducted during the 5FYP period are as follows:

- "Arterial Corridors" will be redesignated as "Strategic Corridors" and the necessary investment made for the development of bridges, ferries and road on these corridors. Emphasis will be on the Khulna - Northwest corridor to raise it to international standards capable of serving regional and inter-regional traffic.
- The two seaports, Chittagong and Mongla, will be further developed and linked to Dhaka, thereby connecting all the four major regions of the country.
- Railway linkages will be established between eastern and western Bangladesh.
- The development strategy for rural transport will be reoriented toward efficient external access, and through the optimal integration of road and inland water transport with rural roads.
- Assurance of deficit-free operation of Bangladesh Railway as envisaged in Railway Recovery Program, (among other targets).

(3) Priority Investment Programs/Projects

- Completion of the Jamuna Multipurpose Bridge project along with access roads.
- Completion of Dhaka Eastern Bypass.
- Construction of three major road bridges: the highway-cum-railway bridge at Khulna, the Paksey bridge on the Khulna - Northwest corridor, and the Bhairab bridge at Ashuganj on the Dhaka - Sylhet corridor.
- Completion of the Jamuna Railway project.
- Rehabilitation and completion of the construction of ongoing arterial roads projects including their maintenance.
- Construction of container terminals at Chittagong sea port, and expansion and modernization of container handling facilities at sea ports.

- Development of a new cargo-cum-general container composite port at Dhaka, and an inland container depot at Dhaka and Tongi/Joydevpur.
- Maintenance of the draught of sea ports as well as inland navigational channels through appropriate dredging.
- Development of a deep sea port at Chittagong.
- Improvement of Chittagong and Sylhet Airports to international standards.
- Expansion of the airports at Barisal, Bagerhat (Khan Jahan Ali Airport), Bogra, Rajshahi and Saidpur to accommodate larger aircraft, (among other targets).

(4) Projected Transport Demand and Modal Shares

The annual growth rates for transport demand are assumed to be 7.5% and 8.0% for passenger and freight traffic respectively for the year 2002 (Table 3.2.1) as per projected GDP growth rate.

Table 3.2.1 Projected Transport Demand and Modal Shares

Year	Passenger				Freight			
	Total Passenger-Km (billion)	Share (%)			Total ton-Km (billion)	Shares (%)		
		Road	IWT	Rail		Road	IWT	Rail
1997	90	72	17	11	12	65	28	7
2002	152	70	18	12	19	72	20	8
Growth rate (%)	11.1	-	-	-	9.6	-	-	-

Source : The Fifth Five Year Plan 1997-2002

(Financial Outlay in the 5FYP)

Table 3.2.2 Allocation for Transport Sector in the 5FYP
(million TK)

	Total Allocation	Ongoing Projects	New Projects
Road Transport	63,205.5	51,500.0	11,705.5
Railway Transport	23,500.0	17,900.0	5,600.0
Water Transport	13,500.0	9,750.0	3,750.0
Air Transport	7,500.0	6,160.0	1,340.0
Sub-Total	107,705.5	85,310.0	22,395.5
Jamuna Bridge	14,500.0	14,500.0	0.0
Total	122,205.5	99,810.0	22,395.5

Source : The Fifth Five Year Plan 1997-2002

Transport sector allocation in the 5FYP is shown in Table 3.2.2. From Table 3.2.2, of the total Plan allocation, only 18.3% is available for new projects. The highest allocation is given to the road sub-sector (about 58.7%) excluding Jamuna Multipurpose Bridge, followed by railway sub-sector (21.8%). The allocation for Jamuna Multipurpose Bridge is about 12% of the total transport sector outlay.

3.2.2 Structural Plan, Master Plan, and Detailed Area Plan for Khulna City

The Khulna Development Authority (KDA) wishes to revise the outdated 1961 Khulna Master Plan. A revised Master Plan would better enable the city to perform its role in stimulating metropolitan economic growth and socioeconomic development through the instruments of physical planning, water supply, and housing, as identified in the national development plan. At present, a study of this plan is in progress, and the final report on the plan is to be submitted in May of 1999. The planned projects at present phase are as follows (Fig. 3.2.1)

(New Projects by Government Finance)

- a) Khulna City Bypass (on the Pultala to Satkhira Road) 17.35 km
- b) Widening and Improvement of the Jalil Swarani - Kaya Bazar Road 6.90 km
- c) Road Link from the Inter-District Bus Terminal to the W.D.B. Embankment Road 2.00 km
(Privately-financed new project)
- d) Sonadanga Residential Area Development 121 acres
- e) Rupsa Satellite Town Development 100 acres
- f) Galiamari Residential Area Development 51 acres
- g) Fulbari Gate Residential Area Development 20 acres
- h) Ashanabad Residential Area Development (north of Khulna University) 150 acres
- i) Proposed Sundarban Commercial/Residential Area Project (Khulna Textile Mill) 24.38 acres (Government-financed ongoing project)
- j) Outer Bypass Road (Phase II)
- k) Road from Shiromori Market to Bhairab River 1.00 km
- l) Structural Plan, Master Plan, and Detailed Area Plan for Khulna City

(Privately-financed new project)

- m) Mirerdanga Low Cost Housing 42.54 acres
- n) Mini-Community Center at KDA Office Building Premises
- o) Establishment of a Park and Rest House in the Mujgunni Residential Area

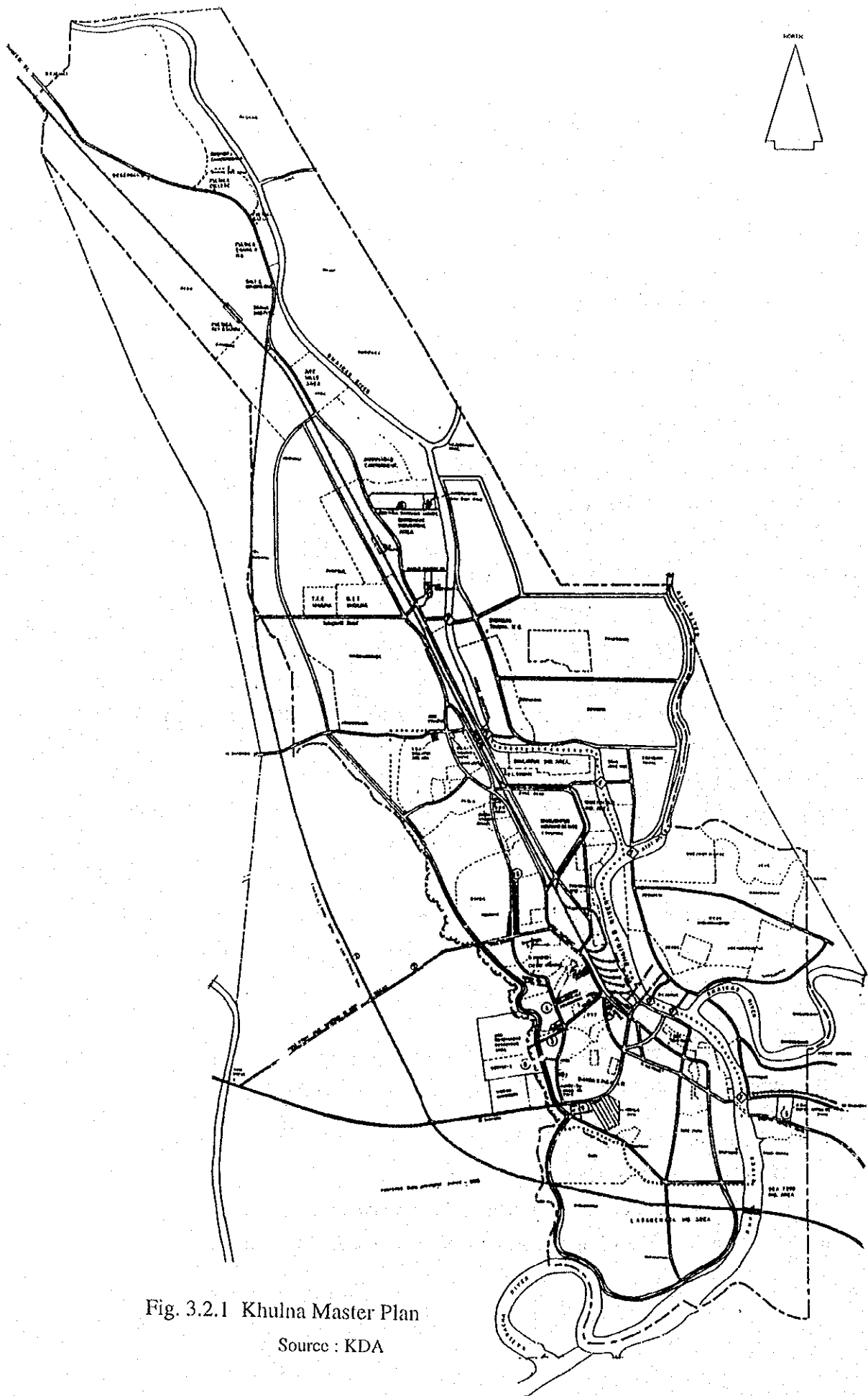


Fig. 3.2.1 Khulna Master Plan

Source : KDA

3.2.3 Related Infrastructure Development Projects

Infrastructure development projects related to the Study are as follows:

(1) Mongla Port Development Plan

Many studies on Mongla Port development have been carried out. At present, a study entitled "Bangladesh Port System Development Project Master Plan and Trade Facilitation", focussing on the Chittagong, Mongla, and Dhaka ports, is being conducted with financing from the World Bank. This study proposes the construction of multipurpose berths at Mongla Port and rehabilitation of the Roosevelt Jetty at the Khulna River Port

Mongla Port Authority which administers the Mongla port, Benapol and Bohmra dry ports is carrying out the development and expansion project on Benapole dry port. Furthermore, the study on Bohmra dry port development at Sakhira zila is intended to be conducted.

The actual truck traffic volumes generating from Benapole and Bohmra dry port are as follows:

Benapole dry port	around 100 trucks/day (peak season about 200 trucks/day)
Bohmra dry port (open at May 1995)	1996/97 2,669 trucks/year (to India 3)
	1997/98 5,531 trucks/year (to India 19)

(2) Paksey Bridge Construction Project

Northwest Bangladesh is an important agricultural area; however, the area is separated from the Capital, Dhaka, by the Jamuna River. The northwest is also separated from Mongla Port, a foreign trade seaport in southwest Bangladesh, on the Padma River. This situation has resulted in the economic development in the northwest lagging behind other regions, and northwest development is one of main problems in the country. Accordingly, the establishment of a highway route along the Khulna - northwest corridor connecting Mongla Port with the northwest via Khulna (the core city of west Bangladesh) is necessary for northwest development. The construction of the Paksey Bridge over the Padma river would complete this road link.

Scale of Paksey Bridge	Length	1,786 m
	Total width	17.57 m (two-lanes)

(3) Dhaka-Mawa-Khulna Road Development Project

Recently, the report of "Preparation of the Third Road Improvement Project, Preliminary Feasibility Study" by ADB finance was submitted to RHD. This includes updating the feasibility study done for the Bhanga - Bhatiapara - Khulna portion of the Dhaka - Khulna highway by the Government in 1990. Part of this road section is not yet built and can be considered as a missing link in the RHD highway network. The Dhaka - Mawa - Bhanga sections were not included in that study. This latter section forms part of national highway N8, the Dhaka - Barisal highway, and serves as the common alignment for the Dhaka - Khulna highway as well. After the completion of the Jamuna bridge, the government is actively considering construction of the Padma bridge at Mawa. Beyond the ferry crossing at Padma there are few major ferries connecting the alternative routes to Khulna. The government considers this corridor as very important both for the development of the backward regions as well as for development of the Mongla Port region. Utilization of Mongla Port capacity (the second largest sea port in Bangladesh) would be desirable to relieve severe congestion at the Chittagong port. Furthermore, the government has plans to set up an Export Processing Zone near Mongla Port to facilitate industrialization of the region and the export-import trades. Taking account of this situation, the development of Dhaka-Mawa-Khulna highway will be very important.

Two alternative routes between Bhanga and Khulna for the Dhaka - Mawa - Khulna highway have been suggested. The two alternative routes are as follows:

Alternative 1: Bhanga - Kasiani - Narail - Phultola - Khulna (106.7 km)

Alternative 2: Bhanga - Takerhat - Gopalganj - Noapara - Khulna (115.1 km)

3.3 Future Socioeconomic Framework

3.3.1 Socioeconomic Outlook from Existing Data and Information

(1) Bangladesh Government Economic Growth Targets

Economic growth targets for Bangladesh have been presented in Table 3.1.1. In the 5FYP, the principal aims of the Government of Bangladesh are to:

- Raising the GDP growth rate to a level that will take Bangladesh to the threshold of takeoff in the shortest possible time and allow the pursuing of the poverty alleviation program more efficiently and generation of productive employment opportunities.
- Higher growth rate will be brought about through higher rate of investment and greater efficiency via productivity enhancing policy packages and skill development.

Based on these fundamental objectives, the 5FYP aims at an average annual growth in GDP of 7.3%. Annual average growth in the electricity/gas sector and industrial sector are set higher than in other sectors at 25.0% and 15.3% respectively. The lowest target is in the agricultural sector at 4.0%.

Population growth estimates are shown in Table 3.1.3. The estimated population for 2002, the final year of the 5FYP, is 132.5 million, 147.1 million for 2010, and 166.5 million for 2020.

(2) Economic Growth Prospects for Bangladesh as seen by World Bank(WB)

According to the World Bank's "Bangladesh annual economic update 1997, economic performance, policy issues and priority reforms", the GDP growth estimates are as follows:

	GDP Growth Rate(%)
1996/1997	5.7
1997/1998	5.5
1998/1999	5.8
1999/2000	6.1
2000/2001	6.4
2001/2002	6.7
2002/2003	7.0

These GDP growth estimates are based on the following assumptions

- Bangladesh has a good opportunity to improve prospects for economic growth and development by capitalizing on the intensified Foreign Direct Investment (FDI) interest shown in various sectors, particularly the energy sector.
- Benefits from potentially sizable FDI could be enhanced if the pace of reforms is accelerated, thus improving the investment climate.
- Furthermore, with the early resolution of the pending problems associated with exports of knitwear and frozen food, strong export performance could be maintained and improved by pursuing a competitive real exchange rate policy and continuing trade liberalization.

(3) Economic Growth Prospects as seen by the Asian Development Bank (ADB)

According to the “Country Economic Review, Bangladesh” issued by the ADB, the GDP growth rates as based on two scenarios are as follows:

- Scenario A: Major structural reforms are implemented effectively and macroeconomic stability is largely maintained during the projection period.
- Scenario B: Maintenance of the status quo

The GDP growth rates based on the two scenarios are shown in Table 3.3.1.

Table 3.3.1 GDP Growth Rate Projections, 1998-2002

	1995/96	1996/97	Projections				
			1997/98	1998/99	1999/2000	2000/2001	2001/2002
Scenario A							
Real GDP	5.4	5.7	6.0	6.4	6.8	7.0	7.1
Agriculture	3.7	6.0	2.5	2.8	3.0	3.0	3.0
Industry	5.3	3.6	8.5	10.0	11.5	12.0	12.2
Services	6.5	6.2	7.2	7.1	7.2	7.2	7.2
Scenario B							
Real GDP	5.4	5.7	4.6	4.7	4.7	4.8	4.9
Agriculture	3.7	6.0	2.5	2.6	2.5	2.5	2.5
Industry	5.3	3.6	4.8	5.0	5.2	5.4	5.5
Services	6.5	6.2	5.7	5.7	5.7	5.8	5.9

Source : Country Economic Review, Bangladesh (Oct. 1997, ADB)

3.3.2 Setting up a Socioeconomic Framework

Taking the various economic forecasts as preconditions, this Study has constructed the following framework for economic growth until 2015.

i) Annual average GDP growth prospects during each projection period were adopted as follows:

- 5FYP: 7.3%
- WB: 6.3%
- ADB Scenario A: 6.7%
- ADB Scenario B: 4.7%

ii) Using long term annual targets for GDP growth of 4.0 - 5.0% as suggested in the "Bangladesh Integrated Transport System Study" by Bangladesh Government, Planning Committee, and considering the state of the Asian economy, an annual increase of 4.0% in GDP was adopted. Population estimates in the 5FYP were also used:

The socioeconomic framework under consideration is illustrated in Table 3.3.2 and Fig. A-3.3.1 in Appendix A. Using 1996/1997 as the base year, target average annual growth in GDP is estimated as:

- based on 5FYP estimates: 5.5%
- based on WB estimates: 5.0%
- based on ADB Scenario A estimates: 5.2%
- based on ADB Scenario B estimates: 4.4%

Table 3.3.2 Socioeconomic Framework

	1996/97	1997/98	1998/99	1999/00	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2009/2010	2014/2015	2019/2020
The 5FYP												
Population (million)	123.8			129.0		132.5			137.8	147.1	156.5	166.5
Growth Rate (%)	1.75					1.36			1.32	1.31		1.25
GDP (billion TK)	1402.58	1486.90	1594.94	1713.89	1847.18	1998.48	2144.36]	2300.90]	2468.87	3003.76	3654.53	
Growth Rate (%)	5.7	6.01	7.27	7.46	7.78	8.19	7.3	7.3	7.3	4.0	4.0	
WB												
GDP (billion TK)	1402.58	1479.72	1565.55	1661.04	1767.35	1885.76	2017.77	2144.89	2280.01	2773.99	3374.98	
Growth Rate (%)	5.7	5.5	5.8	6.1	6.4	6.7	7.0	6.3	6.3	4.0	4.0	
ADB												
(Scenario A)												
GDP (billion TK)	1402.58	1486.73	1581.89	1689.45	1807.72	1936.06	2065.78]	2204.19]	2351.87	2861.41	3481.34	
Growth Rate (%)	5.7	6.0	6.4	6.8	7.0	7.1	6.7	6.7	6.7	4.0	4.0	
(Scenario B)												
GDP (billion TK)	1402.58	1467.10	1536.05	1608.25	1685.44	1768.03	1851.13]	1938.13]	2029.22	2468.86	3003.74	
Growth Rate (%)	5.7	4.6	4.7	4.7	4.8	4.9	4.7	4.7	4.7	4.0	4.0	

Note : (1) Annual growth rates of GDP until 2004/2005 apply average annual growth rates during projection period in each scenario.

Average annual growth rates of GDP after 2004/2005 apply 4.0%.

(2) Boldfaced figures show the projected figures in each scenario. The other figures show the estimated figures by the Study Team.

Source : (1) The Fifth Five Year Plan 1997-2002

(2) Bangladesh Annual Economic Update 1997, Economic Performance, Policy Issues and Priority Reforms (Oct. 1997, The world Bank)

(3) Country Economic Review Bangladesh (Oct. 1997, Asian Development Bank)

According to these figures, three possible economic frameworks for the future of Bangladesh can be considered: high growth, medium growth, and low growth, as defined below.

Average annual growth in GDP
(1996/97 - 2014/2015)

- High growth case: 5.5%
- Medium growth case: 5.0%
- Low growth case: 4.4%

Hereafter in this study, the medium growth case as future economic framework is adopted for the forecast of cargo demand handling at Mongla port and traffic demand alignment forecast.

Then, the future socioeconomic framework for Khulna Former District forecasted based on the national socioeconomic framework is shown in Table 3.3.3.

Table 3.3.3 Socioeconomic Framework for Khulna Former District

	1996/1997	1999/2000	2004/2005	2009/2010	2014/2015	Average Annual Growth Rate (%)			
						1997-2000	2000-2005	2005-2010	2010-2015
Population (million)	5.919	6.188	6.635	7.100	7.568	1.49	1.40	1.36	1.28
Khulna zila	2.501	2.674	2.931	3.205	3.490	2.25	1.85	1.80	1.71
Bagerhat zila	1.630	1.683	1.782	1.881	1.978	1.07	1.15	1.08	1.01
Satkhira zila	1.788	1.831	1.922	2.014	2.100	0.80	0.97	0.94	0.83
GDP (billion TK)	79.187	93.779	128.725	156.614	190.545	5.80	6.54	4.00	4.00

Note : GDP at 1997/97 prices

Source : Estimates by JICA Study Team

3.3.3 Forecast for Vehicle Ownership

The motorized vehicle ownership is forecasted by the method of regression analysis based on the trend data of registered vehicles and per capita GDPs.

The correlation of number of registered vehicles and per capita GDPs in Bangladesh becomes clearly high as shown in Fig. 3.3.1. Based on the results of regression analysis, number of vehicles by type in the year 2015 is estimated. The results are shown in Table 3.3.4

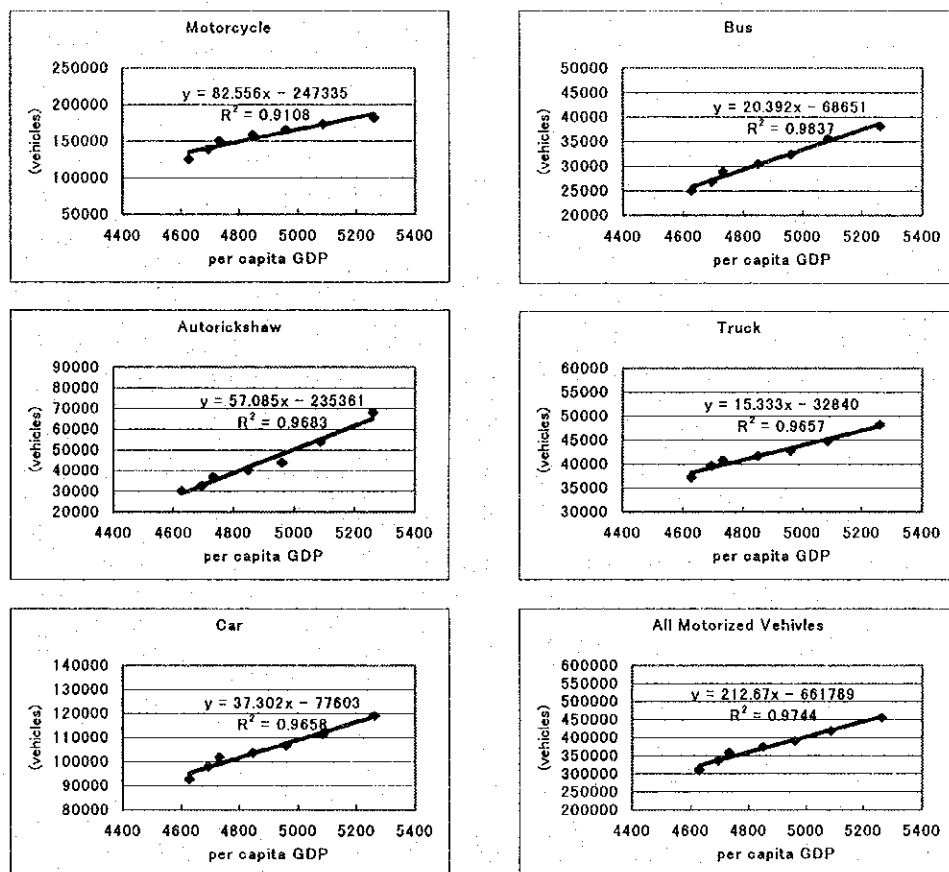


Fig. 3.3.1 Correlation of number of vehicles and per capita GDPs

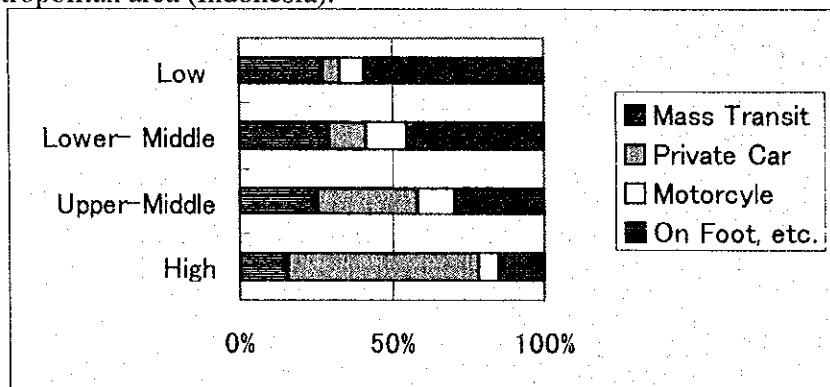
Table 3.3.4 Forecast of Vehicle Ownership by Type

	Motorcycle	Autorickshaw	Car	Bus	Truck	All Vehicles
1989/90	125,000	30,200	92,650	25,000	37,200	310,050
1990/91	138,750	32,616	97,943	26,750	39,512	335,571
1991/92	150,171	36,796	101,806	28,820	40,752	358,345
1992/93	158,588	40,114	103,511	30,444	41,632	374,289
1993/94	165,360	43,863	106,634	32,335	42,723	390,915
1994/95	173,167	53,851	111,392	35,601	44,691	418,702
1995/96	182,035	68,039	119,020	38,156	48,175	455,425
1997/98	236,000	99,000	141,000	51,000	57,000	584,000
1999/2000	267,000	121,000	155,000	58,000	63,000	664,000
2004/2005	414,000	222,000	221,000	95,000	90,000	1,041,000
2009/2010	506,000	286,000	263,000	117,000	107,000	1,279,000
2014/2015	614,000	360,000	312,000	144,000	127,000	1,558,000

From the forecast results, level of vehicle ownership will increase from 4.1 vehicles/1000 persons in 1997/98 to 10.0 vehicles/1000 persons in 2014/2015.

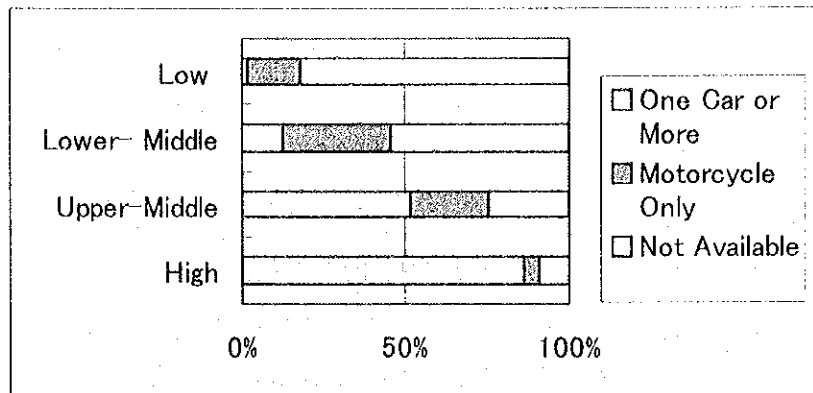
According to the experience of traffic surveys in metropolitan areas of developing countries, it was understood that a rise in the per capita income influences largely the selection of traffic modes. That is to say, the situation of private vehicle ownership changes such as from bicycle owner to motorcycle owner, and motorcycle to car in accordance with the increase of per capita income. Moreover, the selection of traffic modes is looked to differ in accordance with the difference of private income levels. Utilization rates of private cars in the group of high income are high. The group of low income uses more public traffic modes and the traffics on foot are also more. Motorcycles as the private traffic mode for the groups of upper-middle and lower-middle income are used more.

Figures 3.3.3 and 3.3.4 shown below represent an example of the traffic survey results in Jakarta metropolitan area (Indonesia).



Source : The Arterial Road System Development Study in Jakarta Metropolitan Area, Summary (Sep. 1987)

Fig. 3.3.3 Modal Composition by Income Group



Source : The Arterial Road System Development Study in Jakarta Metropolitan Area, Summary (Sep. 1987)

Fig. 3.3.4 Availability of Motorized Vehicle by Income Group

3.3.4 Frameworks for Socioeconomic Development in Surrounding Countries

(1) India

Projections for India's socioeconomic future can be summarized as follows:

- despite an annual increase in population of 2% over the past 30 years, the annual average increase in population is projected to fall to 1.56%.
- a target average annual increase in GDP of 6.5 - 7.5% is to be achieved through the four central national policies of "Increasing quality of life", "Expanding opportunities for productive employment", "Regional balance", and "Self-reliance".

Target values for the Ninth Five Year Plan (1996/97 - 2001/2002) based on the above long-term projections are given in the Table A-3.3.1 in Appendix A.

(2) Nepal

Development targets issued by the Government of Nepal are as follows:

- Economic growth with a decrease in population growth is seen as necessary to increase the income of those living below the poverty line. A decrease to an annual population growth rate of 1.8% is seen as necessary.
- Eradicating poverty and unemployment are seen as the pillars for achieving high economic growth. Securing an annual economic growth rate of 6.5% as outlined in the

Ninth Five Year Plan is seen as the key to obtaining an average annual increase of 7.2% within the next 20 years.

Target values for development based on the Ninth Five Year Plan (1996/1997 - 2001/2002) are as briefed in Table A-3.3.2 in Appendix A.

In contrast, the Asian Development Bank's short term forecast for Nepal ("Country Economic Review, Nepal (Jan. 1998)) is estimated as follows:

Table 3.3.5 Nepali GDP Growth Projection by ADB

	(%)				
	1995/96	1996/97	1997/98	1998/99	1999/2000
Real GDP Growth	5.4	3.8	3.5	4.0	4.5
Agriculture	4.4	3.4	2.8	3.5	4.0
Industry	5.8	3.5	3.4	4.0	4.4
Services	6.3	4.3	4.2	4.5	5.0

Source : Country Economic Review Nepal (Jan. 1998)

Moreover, the scale of Nepal's future economy can be predicted given demand forecasts for the handling of Nepal-related freight, as will be mentioned later in the description of Mongla Port. Two cases for economic growth by this Study's target year of 2015 were forecasted based on long term development targets issued by the Government of Nepal, and adopting the projected 4.0% average annual growth rate in GDP predicted in the short term by the ADB. Table A-3.3.3 in Appendix A indicates the result of estimation for both cases based upon the differing assumptions.

(3) Bhutan

Long term socioeconomic projections for Bhutan in the "Bhutan Eighth Five Year Plan (1997-2002) Vol. I Main Document (Aug. 1996, Ministry of Planning)" are illustrated in table A-3.3.4