

An Analysis of Goods Mobility to Build Logistic Systems in Bangladesh

バングラデシュにおけるロジスティックスシステム構築のための貨物流動分析

Hokkaido University	○Graduate Student	Chowdhury, A. R. M. M
Hokkaido University	Research Associate	Kunihiro Kishi
Hokkaido University	Professor	Keiichi Satoh

Introduction:

In transportation, goods traffic is a higher proportion of the world. A large number of goods transportation depends on the road transports in Bangladesh. New physical links between town and villages created greatly enhance both the national and regional importance of Bangladesh. In developed countries route level plays an important role in sustaining and motivating economic growth. But in Bangladesh due to the ineffective logistics system goods distribution are suffering from different form of problem. An efficient and effective logistic system permits the specialization of labor, equitable distribution of manufactured goods, and thus encourages competition in distant markets.

Objectives:

- To identify the problem and to introduce goods transportation networks in Bangladesh.
- To review the current goods movement.

Goods mobility in Bangladesh:

In Bangladesh a number of domestically products agricultural, mineral, industrial and imported goods are move to one place to another place and to supply in the town and villages according to its importance by the term of "Transport".

Logistics and its prospect in Bangladesh:

'Logistics' is a military term originating in the Napoleonic era and being used in more restricted forms; such as business logistics, production logistics, supply logistics and transportation logistics etc. Managing the distribution of goods has been, until recently a neglected area of business activity in Bangladesh. The distribution of goods is not often a simple operation; goods are rarely supplied directly from a producer to the final customer. Logistics activities provide the "bridge" between the production activities and the markets and it's a profound effect on the economic structure of a country.

Current situation:

Bangladesh a relatively small country covering

148,393 square kilometers. With rapid growth and development, sustainability has emerged as a critical issue for all sectors, especially in transportation. To go from one part to another part of Bangladesh, it's needed to long time unusually. Presence of lot of slow paddle rickshaws, push carts and unorganized vehicles make the problems even worse. There is no any legislation to control the non-motorized vehicles.



Figure 1. Goods moving vehicle

The population and volume of traffic increased dramatically, the number of streets has not increased in the proportion and is highly inadequate.

In Bangladesh northern to southern region goods transport can't move easily and in between Aricha Ferry Terminal is the main way of traffic. But there is occurring many mechanical fault and shortages of ferry; authority failed to serve the prevailing situation. Southern parts of Bangladesh have very good highway communication, but many roads are plying on the city area, it's a big abominable traffic in Bangladesh.

Regarding of traffic and lack of goods network, prices of essential commodities like rice, vegetable, fertilizer etc. short up in the local markets due to disruption of distribution. In long time traffic jams damages the goods, raw goods not early on the way, occurring unhealthy environment, burn valuable fuel; the final scene is economic degradation. In Bangladesh there were a big number of goods distributed by unorganized way, which is the big impediment of new and modern economic improvement.

Data analysis¹:

According to the table.1, availability of goods in 1986-87, crops for transportation was 15,818,000 metric ton, it was 31.8% of the total goods. In 1996-97 its rose to 20,178,000 metric ton and it were 25.5% of

the total goods. For domestically products like in forestry, livestock, fishery, for the period 1986-87 the figure was 6.1%, 0.8% and 1.0% of the total goods. In 1996-97 it rose to 8.0%, 1.1% and 1.1% of the total goods. For other products like minerals, industrials and imported goods, in the period 1986-87 the figure was 22.7%, 22.7% and 14.9% of the total goods respectively. The grand total was 49,753,000 metric ton. For the same category of goods, in the period 1996-97, the figure rose to serially 22,135,000, 17,476,000 and 11,237,000 metric ton, it was 28.0%, 22.1% and 14.2% of the total goods respectively with

Table 1. Availability of goods in Bangladesh

Goods	1986-87 (%)	1996-97 (%)	Increasing rate
Crops	15,818,000 (31.8%)	20,178,000 (25.5%)	1.28
Forestry	3,018,000 (6.1%)	6,305,000 (8.0%)	2.09
live-stock	422,000 (0.8%)	871,000 (1.1%)	2.06
Fishery	517,000 (1.0%)	834,000 (1.1%)	1.61
Mineral Products	11,283,000 (22.7%)	22,135,000 (28.0%)	1.96
Industrial goods	11,302,000 (22.7%)	17,476,000 (22.1%)	1.55
Imported goods	7,393,000 (14.9%)	11,237,000 (14.2%)	1.52
Total	49,753,000 (100.0%)	79,036,000 (100.0%)	1.59

(Metric ton)

a grand total of 79,036,000 metric ton. Table.1 shows that, goods in the period 1986-97 crops increased 1.28 percent and the total goods increasing rate were 1.59 percent. In table.1 blazing up the goods like forestry, livestock and mineral products were increased speedily 2.09%, 2.06% and 1.96% respectively.

Table 2. Distribution of goods in Bangladesh

Transport	1986-87 (%)	1996-97 (%)	Increasing rate
Air Transport	2,000 (0.01%)	1,000 (0.002%)	0.50
Bangladesh railway	1,984,000 (5.41%)	2,996,000 (4.953%)	1.48
Water Transport	5,633,000 (15.37%)	11,072,000 (18.678%)	1.97
Road Transport	29,022,000 (79.21%)	45,269,000 (76.367%)	1.56
Total	36,641,000 (100.0%)	59,278,000 (100.0%)	1.62

(Metric ton)

The movement of goods by means of air transportation in 1986-87 was 2,000 metric ton and it's a 0.01% of the total goods transportation, in 1996-97 it was 1,000metric ton and 0.002% of the total distribution amount. Transportation by other means like rail, water and road, for the period 1986-87 was 5.41%, 15.37% and 79.21% of the total goods respectively, with a grand total of 36,641,000 metric ton. Like wise in the year 1996-97, the figure rose to 2,936,000, 11,072,000 and 45,269,000, metric ton, it was the 4.953%, 18.678% and 76.367% of the total goods respectively, with a grand total of 59,278,000 metric ton. Table.2 shows that, the distribution of goods in between 1986-97 period, road transport was increased 1.56 percent and the total amount increasing was 1.62 percent. Its displayed goods mobility of Bangladesh mainly depends on road transports, which were 76.37% of total distribution.

The amount of undistributed goods in the period 1986-87 was 13,112,000 metric ton, and rose to

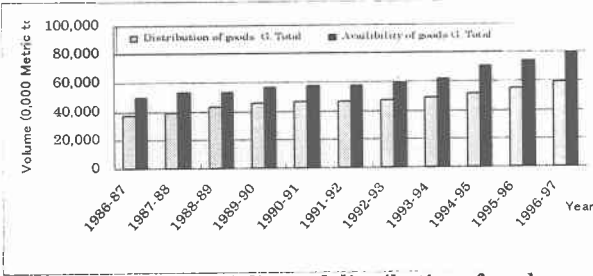


Figure 2. Availability and distribution of goods

19,758,000 metric ton in 1996-97. The period of 1986-97 in 11 years' distribution of goods was moving to the front slowly. And also indicates that at least 25% of goods were out of distribution within that period.

Distribution and Logistics:

Logistics is now widely used and defined as a planning framework for the management of supply and delivery chains and ending with the delivery. The concept of advanced logistics is synchronizing the activities of multiple organizations and feeding back necessary information to organizations in production and physical distribution sectors on a real time basis. New and advanced technologies in the information and transport sector creating profound changes in logistics operation throughout the world.

Problem identification:

1. According to data analysis of this paper a big amount of goods are undistributed.
2. Lack of proper policy and management systems.

Future initiatives:

1. To need Proper design and management in goods movement in Bangladesh's transports sector.
2. To need the existing road network by logistic systems and to need traffic engineering techniques.

Conclusion:

This study has analyzed the current goods transportation in Bangladesh and point out the need of logistic distribution systems. Incitement of logistic activity the economy can improve within the country and it occurs from the route level. In Bangladesh such as trucks and warehouses, were pulled by the traditional way. New trends are likely to be needed, but the development described might be restricted by the increasing congestion of transport infrastructures, which is the demand in Bangladesh in every where.

References:

- 1) 1998 Statistical Yearbook of Bangladesh, (1999), Statistics Division, Ministry of Planning, Govt. of the Peoples Republic of Bangladesh.