

## **ANALYSIS OF PORT MANAGEMENT IN BANGLADESH: CHALLENGES AND POTENTIALS**

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### **ABSTRACT**

*In the present zeitgeist of integrated global economy, role of ports has shifted greatly from mere geographical gateway to transportation hub. Therefore, it requires efficient service delivery in ports as well as in other associated areas to ensure competitiveness of port in the global market. However, Bangladeshi ports are not yet considered efficient to the global standard in terms of both technical and non-technical issues. This study draws attention, besides technical efficiency, to various issues of port management in Bangladesh which is required for the competitive pursuit. The study reviewed some successful ports in global perspective based on secondary literature. It also analyzed problems and prospects of Bangladeshi ports through interviewing experts in ports management. This study found operational inefficiency, infrastructural bottleneck, backward transportation network, poor ICT usages, difficulties in overall financial system, etc. as the most pressing problems in port management in Bangladesh. Conversely, having Sub-South Asian hinterland is a great opportunity for the port development in Bangladesh. To accrue utmost benefits from the ports, ensuring overall congenial environment addressing multi-sectoral issues for smooth operation of port is very essential in Bangladesh. The study concludes that if Bangladesh Government wants to develop, ports are to be considers a much wider spectrum of economic subsectors and appropriate policy has to be designed accordingly.*

***Keywords: Seaport, Land Port, Chittagong Port, Mongla Port, Turnaround.***

### **1. INTRODUCTION**

Bangladesh is blessed geographically with its entire southern part open to the Bay of Bengal, consisting of two seaports, and rest connected with India and Myanmar through 20 land ports. Ports are considered contributive besides trade liberalization and other policies to its trade openness,

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increased from 21% in 1979 to 47% in 2013 (Md. Abdul Wahab, 2014). Container traffic in country's largest seaport 'Chittagong seaport' that handles 92% of seaborne export grew at around 14% (Authority C. P., 2013). Land ports also experienced significant growth during the last five years. Total volume of export-import in land ports culminated to 7.6 million M.T. in FY 2013-14 from 3.8 million M.T. in FY 2009-10 (Authority M. P., 2014).

However, Bangladeshi ports are struggling with existing efficiency, shackled by operational inefficiency, fragile infrastructure and disruptive communication system. "Chittagong port has been known as one of the most costly and risky ports in the world" (Tanvir Mahmud, 2007). Other ports are not well connected with major cities; nevertheless where connected, transportation condition and other associated services are not adequate for efficient products delivery. Railway communication though could become very cheap and very efficient mode of transportation for trade purpose yet remained largely a very sluggish sector. There is no direct railway communication with Mongla seaport and only 10% of the total containers of Chittagong seaport are transported through railway transports. Rest 75% and 15% of goods are transported respectively through road and river transportation (Ahmed, 2013). This study, instead of merely focusing on technical minutia, delves into the various aspects of port management related to ports efficiency addressing multiple issues, viz., port infrastructure, transportation, banking and financial arrangements, trade relation etc. and highlights potentials of Bangladeshi ports for future actions.

### **1.1. Objectives of the Research**

Port efficiency is the outcome of an integrated process performed in the economy which starts from the loading and unloading goods from and in a port and end with reaching the desired customer. However, merely focusing on the loading and unloading of goods as process of understanding the port efficiency issue misses greater and crucial part of the business. The main objective of this study is to unearth broad issues of inefficiency in Bangladeshi ports. More specific objectives of this study are the following:

- i. to identify the issues responsible behind the inefficiency in port management of Bangladesh;
- ii. to outline the future potentials for Bangladeshi ports;
- iii. to outline the probable actions needed for port development in Bangladesh.

### **1.2. Literature Review**

Bangladesh has two seaports and 20 land ports of which 11 are under construction. These ports handle different types of products ranging from agricultural products to industrial heavy machineries.

#### **1.2.1. Seaports**

Chittagong seaport is the country's largest port that handles more than 92% of country's total maritime export and import products, situated on the bank of the Karnafuli River. 188 m long ships can move through 300 m. width and 9.2 m. deep navigable water of this port. It had started its operation as seaport in present location in 1887 and full fledged operation in 1910 having 4

jetties with the capacity to handle 0.5 million ton of cargo annually (Authority C. P., 2013). In 2011-12 Chittagong seaport handled 41 million metric tons of cargo including 1.34 million TEUs containerized cargos (Hossain, 2012). According to Chittagong Port Authority (CPA) it has 33 jetties and moorings for ocean going vessels and 20 for inland coasters and vessels. Moreover, it has 4067 TEUs container holding capacity, 1,36,954 sq. m. yard area, 8,182 sq. m. container freight stations, 350 railway wagons for container transportation and 1097 m. railway terminal (Authority C. P., 2013). Main exporting products of Chittagong port are ready made garment products, tea, jute products, skins, molasses, frozen fish, shrimps, fertilizer etc. and main importing products are food grain, cement, petroleum, sugar, salt, fertilizer, general cargo, iron materials and chemicals (Mazid S. H., 2012).

Mongla port was been established in its current place in 1954. It is situated on the bank of Passur River that provides navigational facility to ships of 200 meter length and 7 meter width (Hossain, 2012). “The port has 11 jetties, 7 shades for loading and unloading of goods and 8 warehouses. It uses 12 swinging moorings or floating berthing places in deeper sections in the river (Uddin, 2014). It is capable to handle and to operate 33 ships and can facilitate 38 vessels to enter or exit within the mooring areas with 6.5 million metric ton goods. About 40% of total national traded food grain and fertilizers are handled from this port (Hossain, 2012). Following table shows total cargo handling performance of the two seaports.

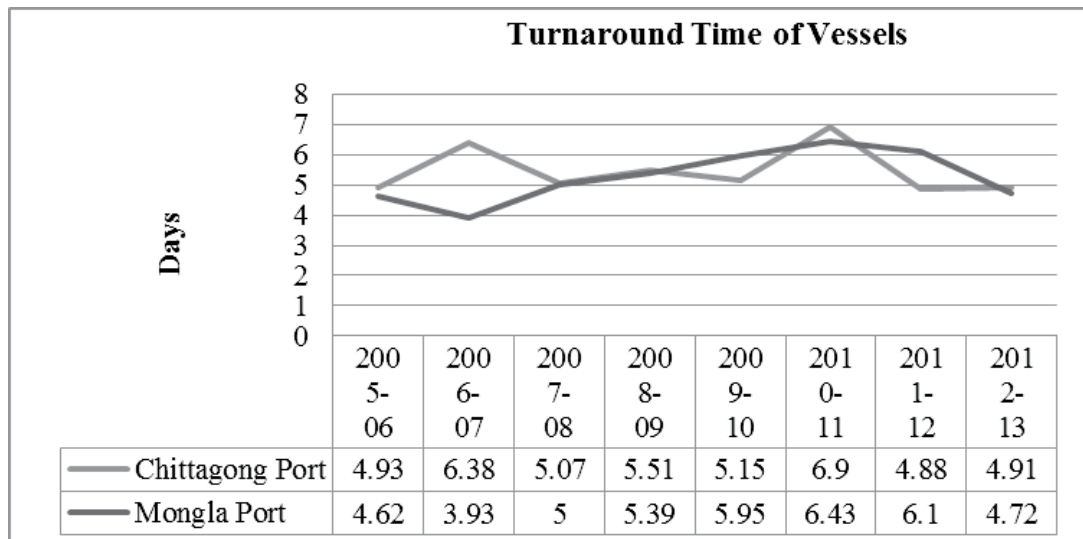
Table-1: Trend of cargo handle by two seaports in Bangladesh

| Year | Cargo Handled (M.T.) |                  |
|------|----------------------|------------------|
|      | Chittagong Port      | Mongla Port (FY) |
| 2009 | 38,169,124           | 1,137,826        |
| 2010 | 45,396,663           | 1,649,283        |
| 2011 | 49,273,937           | 2,696,271        |
| 2012 | 48,738,776           | 2,619,897        |
| 2013 | 35,262,779           | 3,147,574        |

Source: Chittagong Port Authority & Mongla Port Authority 2015

Number of cargoes handled by two seaports is increasing gradually. Number of cargoes handled by Chittagong port in 2009 was 38.17 million M.T. which has increased to 48.748 M.T. in 2012. Same happened in case of Mongla port where the total number of cargoes was 1.14 million M.T in 2004-05 FY which increased to 3.14 million in 2012-13 FY. However, time efficiency in product loading and unloading in Bangladeshi seaports is much less than that of other seaports in the world. Bangladeshi ports are lagging behind in turnaround time. Time efficiency of two seaports is given below.

Figure-1: Average turnaround time of Bangladeshi seaports



Source: Chittagong Port Authority & Mongla Port Authority 2015

Turnaround time of ships in globally leading seaports is around one day whereas Bangladeshi seaports require almost 2 and a half days for international ships and 5 days for local ships.

### 1.2.2 Land Ports

Land ports are mainly boarder between two countries that has LC facilities for trading. Bangladesh has 2400 km border area, 92% of which is with India and 8% is with Myanmar (Mazid M. A., n.d.). It has 20 land ports (Authority L. P., 2014) of which 16 are regulated by Bangladesh Sthala Bandar Kortripakkha (BSBK) or alternatively known as Bangladesh Land Port Authority (Mazid M. A., n.d.). Among these 16 land ports, 14 are operated through Private Port Operators on Build, Operate & Transfer (BOT) basis (GED, 2011).

Benapole land port has 40,000 MT storage capacity and can handle 2 mln MT goods. Both Burimari and Akhaura land ports have 2,000 MT storage capacity each and handling capacity of respectively 0.50 mln and 750,000 MT yearly. Whereas Sonamosjid, Hilli and Tetulia land ports have storage capacity of 1000 MT, 2000 MT and 500 MT respectively and handling capacity of 2.0mln MT, 1.00mln MT and 0.5 mln MT (manual-yearly) respectively. Teknaf, Bibirbazar and Birol land ports are operated on BOT basis. Storage capacity of Teknaf and Bibirbazar land ports are 1000 MT and 500 MT and handling capacity of these ports are 300,000 MT and 0.5 mln MT yearly. Construction activities of Bhomra land Port, situated at Sadar Upazila, Satkhira with an area of 15.7298 acre, are going on in full swing under a development project costing Tk. 190.00 million by BSBK. Nakugaon land port, an area of 13.46 acre, costing Tk. 156.8, also has been undertaken by BSBK. Infrastructure development of Tamabil land port with an area of 14.72 acre and Dharshana land ports are yet to start. Backward transportation network, poor port

infrastructure, lack of mechanization in the port operation etc. have been posing great hindrances towards the development of land ports in Bangladesh.

## 2. METHODOLOGY

This study employed qualitative method. It is primarily based on literature review of secondary resources. It has utilized existing literatures on various aspects of port efficiency of globally most efficient and successful ports. It analyzed information, technical models and other socio-economic issues associated to port efficiency of global ports. It also reviewed websites of global and Bangladeshi port authorities consisting information on various performance indicators of ports. Furthermore, this study also employed primary data, collected through the in depth interview of experts while analyzing information and constructing arguments.

## 3. ANALYSIS AND FINDINGS

### **3.1. Problems towards Port Efficiency in Bangladesh**

#### ***3.1.1. Operational Efficiency***

Operational efficiency, measured through turnaround time, is very important indicator of port development. The Chittagong port, which has expanded very significantly during last couple of decades and undertook many initiatives including administrative reform and technical advancement, is, however, struggling with turnaround time efficiency till today. Lack of cargo handling machineries, shortage of required human resources, burden of bureaucracy, institutionalized informal practices within the port, poor level of digitalization, etc. are the most important reasons of operational inefficiency in Chittagong port. Though, it had brought down turnaround time at around two and half days for international ships but still much higher than Port of Singapore and Taiwan seaport where turnaround time required only 12 hours and 10 hours respectively (Ahmed, 2013). Mongla port does not have huge container traffic but due to technical and infrastructural limitations it could not reduce the turnaround time significantly.

Operational inefficiency in the land ports is not only due to internal reasons like poor infrastructure, poor communication, inadequate transportation network, etc. but also due to some external reasons like congestion in India, prolonged commodity clearance certification process of India etc. In Banapole land port about 200-250 trucks are amassed carrying exporting goods everyday but only 100-150 trucks are cleared from Indian side and rest have to wait in Bangladesh side causing huge traffic congestion. Consequently, exporting cost increase due to extra fare charges paid by transportation agencies for delayed delivery. Quality checking of Akhaura port's exported goods at Shilong causes unreasonable delay which could be minimized by shifting this process to Agartala.

#### ***3.1.2. Infrastructure of Ports***

International mobility of goods has increased multiple times greater than ever before. Therefore, accommodation facilities for large vessels, security and time efficiency have become vital issues for port development. If present growth of traffic continues in Chittagong seaport, it will be

hardly possible for it to serve the future demand with present infrastructure. Moreover, presently Chittagong seaport can entertain around 2500 TEUs to 3000 TEUs vessels to dock but modern vessels usually range from 5000 TEUs to 18000 TEUs (Ahmed, 2013). Thus, Chittagong port has to expand its berthing space and renovate port infrastructure in order to ensure docking of international modern vessels which requires huge investment. Continuous capital dragging along with other infrastructural development is therefore, prerequisite to maintain present operation as well as to meet the future demand of the port. If Chittagong seaport fails to renovate its infrastructure in accordance with global demand, in addition to international market of port renting, it will lose the market of other associated forward and backward industries.

Major problems of Mongla seaports are depreciation of old equipments bought during 1983, poor transportation infrastructure and most severely continuous siltation due to Farakka barrage in India. It is imperative to replace existing old and less efficient machines by installing modern equipments of port operation and maintain continuous dredging. It could accommodate berthing of at least 8.5 meter draught ships through ensuring regular dredging (GED, 2011). Infrastructure is also a great problem for the land ports. Most of the land ports suffer from lack of efficient cargo handling machineries, shortage of necessary space for container holding tracks to stand and shortage of road facilities to clear the trucks very efficiently. Therefore, building and maintaining appropriate infrastructure are very essential for the smooth operation and future development of ports in Bangladesh.

### ***3.1.3. Transportation System***

Transportation system is one of the great impediments towards efficient port management in Bangladesh. Railway network between Chittagong seaport and Dhaka city is severely underutilized. Commodities of Chittagong port are dispatched mainly through road transportation which is more costly than railway communication. Furthermore, maintenance of Dhaka-Chittagong railway and highway and further branching out to the rest of the country is very poor. Road and railway connection of Chittagong city with other cities is dilapidated and creates deadlock situation for commodity transportation and causes unintended delay of export and import. Due to delay in transportation, exporters who rely on imported goods or capital machineries have to incur additional cost. 'For Bangladeshi traders, the exporting of a standard container of goods costs US\$ 450 as port charges out of a total of US\$ 1025, while importers have to pay around US\$ 650 out of a total of US\$ 1430'(Ahmed, 2013)

Weak transportation network with its hinterland is also a major hindrance towards the development of Mongla port. There is no railway communication between Mongla port and its hinterland. Waterway communication is there but is slower than railway and road communication. Land ports are mostly connected through road transportation network, which, however, fail delivering goods and services timely due to poor road condition. Construction of two new ports Tamabil and Dharshona had been stopped due to lack of transportation facilities. However, the Padma Bridge is a new hope for Mongla port and southern part of the country's transportation. It is expected that after the construction of the Padma Bridge, as proposed would be possible within 2018, communication system will be improved.

#### **3.1.4. Digitalization of Port**

A strong Port Management Information System (PMIS) facilitates efficient port management in berth planning, resource management, status tracking and conflict identification, billing management, etc. In addition to increasing time efficiency, port digitalization is also associated with the improvement of port's governance. Though the intensity of ICT use in port management increases bureaucratic delay, the implementation will reduce corruption and operational inefficiency. Ironically Bangladeshi ports are not embellished with modern ICT based operation. Therefore, operational efficiency in the ports is not in global standard.

#### **3.1.5. Banking and Insurance Systems**

Banking and Insurance systems lie at the heart of port development, which provide the traders financial assistance as well as security against potential disasters. Easy access to financing with strong insurance market is one of key elements of the success in the Singapore Port and also in some other Asian ports. Banking and Insurance sectors in Bangladesh though have emerged as strong sectors for the economic development of the country, still lacks international trade related products and services. Major segment of foreign banking in Bangladesh is mainly concerned with foreign remittance. It is imperative to create an integrated banking and insurance market in accordance with the present and future demand of the users of Bangladeshi ports.

#### **3.1.6. Trade Network**

Success of a port largely depends on its user base: large number of potential users with vast bulk of tradable products fosters ports' expansion. But ironically trade network of Bangladeshi ports is very limited. Very small amount of international trade is transported through Bangladeshi ports.

### **3.2. Potentials for Bangladeshi Ports**

#### **3.2.1. Indigenous User Base**

Bangladeshi ports have strong advantages regarding the user base. A strong endogenous port user community has been growing at a very commendable rate in Bangladesh. Total export of goods was BDT 9799 crore in 1993-94 which has been increased to BDT 189437 crore in 2012-13 and total import of goods was BDT 16766 crore in 1993-34 which has been increased to BDT 272328 crore in 2012-13. It is very likely that growth trend of commodity trade in Bangladesh will grow in future and hence growth of ports will be much more robust in future.

#### **3.2.2. Sub-South Asian User Base**

Geographically Bangladesh is in better position such that India, Nepal and Bhutan have greater advantages of using Bangladeshi ports for their regional as well as international trades. Assam, a state of India, exports their tea to Europe using Kolkata port through the "Chicken neck" which takes 1400 km. to reach Kolkata port but could have been 50% shorter through Chittagong seaport (Rahmatullah, December 2009). Southern border of Tripura State is about 275 km. away from Chittagong port but goods from Agartala are required traveling 1645 km distance reaching Kalkata



port through the “Chicken neck” which could only be 208 km if there were any transit arrangement between Bangladesh and India.

Mongla port has great potential to transport Nepalese and Bhutanese products. India allowed a transit between Nepal and Bangladesh across the “Chicken neck” and Bangla Bandha, but for bilateral trade only, and not for the third country trade of Nepal, which now has to pass through already congested Kolkata port (Rahmatullah, December 2009). Bangladesh has great opportunity to have transportation arrangement with India and Nepal in this regard. If Bangladesh can make transportation arrangement with India and Bhutan, Bhutan can use Mongla port for their international trade purpose. According to (Amin, July 2009 ) the merchandise trade in the Bangladesh, China, India and Myanmar (BCIM) region would increase by US\$ 5.7 billion, US\$ 4.1 billion and US\$ 2.7 billion under full, moderate and partial tariff liberalization, respectively on the other hand, trade would be total US\$ 12 billion, US\$ 9 billion and US\$ 5 billion in case of adding China and Myanmar to SAFTA.

### ***3.2.3. Construction of Deep Seaport***

Bangladesh government has initiated to build a deep seaport on Sonadia Island, near Cox’s Bazar district which is expected to address Chittagong’s inability to host large ships of more than 188 meters in length (Ahmed, 2013). After the completion of the first phase of the project, Bangladesh will be able to handle at least 7.41 million ton containers per year and will be raised up to 325.2 million tones (Hossain, 2012) finally. Several countries including India, China and USA have shown interest in the construction of deep-sea port. Moreover, “the Dubai-based DP World, the world’s third largest port operator, had conveyed keenness to invest between US\$ 3 billion and US\$ 4 billion for the Sonadia port (Ahmed, 2013) which will be very critical for infrastructural development around the port. It is expected that after the completion of first phase, economy of the country will achieve 1.5% of the GDP; and additionally 18% to 30% of the transportation cost will be reduced in export-import business. But, Bangladesh government could not manage starting the project activities yet. Considering the current global and national socio-economic condition, intervention in holistic manner towards port development is very urgent for Bangladesh.

## **4. RECOMMENDATIONS**

Bangladeshi ports: both seaports and land ports require an integrated support from various sub-sectors, ranging from proper infrastructure to supportive financial system. Following recommendations may be considered for the efficient port development in Bangladesh:

- Establishing appropriate infrastructure is prerequisite for an efficient port. Bangladesh government should ensure appropriate infrastructure so that ports’ Management can maintain their regular operation smoothly.
- Efficiency should be taken as the key principle of port management. Deployment of information technology, automation of service delivery, use of information technology for performance measurement, etc. should be maintained for the pursuit of efficiency in the ports.



- Railway is the cheapest and best suited transportation network for loading imported and exported goods and especially for heavy materials. Therefore, an integrated railway network, especially for the ports should be developed.
- Bangladesh, India, Nepal and Bhutan have potentials for sharing common transportation network and transit policies. Bangladesh government may develop a sub-region tariff and transit policy for the development of ports.
- Based on the current uses and hinterlands, Mongla port may be specialized for food grain, RMG products and other goods of Nepal, Bhutan and India.
- Port development initiatives, where possible, should prioritize endogenous resource for the development of port. In that case involvement of private sector through PPP and other mechanism can be utilized.
- Government may consider outsourcing of the service delivery systems of ports which require efficient service delivery and prompt decision making.
- Government may also consider developing of ports' supportive financial system where service delivery and other formal systems will be customized according to the need of efficient port development.

## 5. CONCLUSION

Ports have been working as catalysts of economic development, and most of the developed cities around the world are situated on the bank of different rivers and are virtuous because of their ports. Historically, Chittagong port was the gateway of trade in this region. Though could not subdue fully the economic distress of the people of this region, still along with the other ports, it has been playing significant role in Bangladesh economy. Bangladeshi ports could not ensure economic progress at the desired level due to pitfall of poor infrastructure and connectivity, inefficiency, absence of international cooperation, etc. Moreover, absence of capital required for invigorating ports was also very scarce resource for Bangladesh, which hindered adoption of new technology and greater yield by the ports. However, recently PPP had been evolved as a very effective way of channeling private resources for public cause in an artful manner. Mongla seaport already has experienced PPP and 13 land ports are in this process. It is expected that PPP will be very helpful to materialize the goals of Bangladeshi seaports. Nevertheless, in the present penetration of PPP in different areas of transportation and port development, attention is not sufficient. The Government has to consider a much wider spectrum of economic subsectors and has to design appropriate policy for the development of ports.

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