

# POTENTIAL OF PRIVATIZATION OF DOMESTIC AIR TRANSPORTATION IN BANGLADESH

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## ABSTRACT

Air transport is one of the most dynamic and fastest growing transportation systems. Formation of regional and sub-regional co-operation will have a significant influence on air transportation system. Realizing the potential of air transportation in the country and region, after the recent air transport deregulation in Bangladesh, a number of private airline companies have started their operation which results in a better and competitive market. The paper focuses on the impacts of privatization on aviation industry of Bangladesh. This paper presents the results of a study on the comparison among various private and public airline companies and analyses their problems and provides some guidelines for their development. The results show that the supply cost of the private airlines is 40 percent lower than the same for public airlines. The results of this study can be used by the South and Southeast Asian countries to develop policies in this regard.

## INTRODUCTION

Privatization of the airlines is more generally known as deregulation of the airlines industry. In the last two decades air transport world have witnessed dramatic changes in the deregulation in this sector. The movements towards the deregulation of the air transportation industries with the “1978 Deregulation Airline Act” have significantly altered the operating environment for the firms providing passenger and cargo transportation related services. With the airline deregulation, airlines were permitted to choose the routes and fares. These changes have had profound effects on many aspects of airline operations, particularly fares, level of service and routing.

Through privatization of air transportation in Bangladesh the Government has opened up a new horizon. To achieve a competitive environment and maximize the benefit, private airlines can control their scale of operation, effectively pursue cost reduction measures, and generate additional demand through improved services and reasonable fares. By providing improved level of service and lower fare the private airlines may create new demand which will result in unit cost reduction and allow further fare reductions and service improvement. This virtuous circle should continue to strengthen the position of the operators and increase consumers’ benefit. Moreover, recent trends in the development of regional and sub-regional co-operation together with foreign investments in remote areas will have a significant influence on air transportation system. These cooperative frameworks will demand dynamic changes both in routing and scheduling of air transportation. Public airlines are incapable of dealing with these changes due to their bureaucratic structure and lack of motivation.

To develop the policies for privatization and regulation of air transportation market it is necessary to analyze various aspects of the system. This paper focuses on the potentiality of the private air transport operators in Bangladesh. The paper has been prepared on the basis of

a detailed study on demand and supply of air transportation in the country (Karim, 1998). The paper discusses the impact of deregulation on different cost items of airline operation. The aggregate cost of operating the airlines has been segregated into major cost items. Then comparison is made between public and private airline operators on the basis of these cost items. The paper also identifies several areas where adequate regulations are required for the overall betterment of the system.

The objective of the study is to investigate the potentiality of the changes brought about by privatization in air transportation in Bangladesh. The results will help the operators in the industry to develop their strategies. As the East, Southeast and South Asia are expected to experience a high economic development as well as a shift towards service and hi-tech industries, their demand for air transportation is also expected to increase accordingly. In this regard, the results of this study are important for these countries also.

## AIR TRANSPORTATION AND AIRLINES IN BANGLADESH

The domestic air transportation network in Bangladesh is comprised of 8 conventional (full-size) airports, 8 airports for STOL (Short-Take-Off and Landing) aircraft including two airports under construction. The 8 conventional airports, which are used for commercial purpose, handle widely varying traffic volumes. The largest airport is Zia International airport near Dhaka and the smallest one is Cox's Bazar airport. The most important corridors, as measured by air passenger volumes, are those between Dhaka, at one end, and Chittagong, Jessore, Sylhet at the other end.

At present there are five airlines operating in Bangladesh. They comprise one public airline and four private airlines. The state owned national carrier, Biman Bangladesh Airline (BBA), is the oldest and has been the only operator in domestic arena until the recent past. It has generally been a losing concern contributed by many factors that could include inappropriate size of aircraft to handle low volume of demand, insufficient level of operation and inefficient management. Although air transport carries only a small portion of total passenger and cargo movement in the country, its relative importance is much higher if aspects such as value of the product as well as time, speed and efficiency of the alternative modes are considered. Realizing its importance and considering the opportunities that exist, private airline companies (PAC's) have now joined the fray of enticing domestic passengers and freights. This trend in domestic air transportation market is expected to reduce the monopoly of BBA and make air transport mode a better as well as competitive one for domestic transportation.

Biman Bangladesh Airlines and four independent airline companies are regulated by the government authority named Civil Aviation Authority of Bangladesh (CAAB). Fares are subjected to the approval of CAAB and certain minimum standards of service are imposed on the airline companies. Initially the fares of private airlines were 39 to 50 percent higher as compared to that of BBA. Recently BBA has increased its fare by 25 percent. Although it seems that the fares of the private airlines are higher than the same of BBA, the demand of private airlines has been increasing. This may be caused by better quality of service which include punctuality, regularity, improved customer services and lower waiting time.

## INTRODUCTION OF PRIVATE AIRLINE COMPANIES

In October 1993 the CAAB advertised for applications from the interested parties to

start airline operation. Although about 50 organizations submitted their proposals, the Government of Bangladesh (GOB) permitted twenty-seven of them to operate. Three of them have already started carrying passengers and one has ventured into cargo transportation. These airlines tended to become very popular and the passengers who used to travel by Biman for so long have started showing their interest in traveling by private airlines in domestic routes. A brief description of these airlines is given in the following section, which is also summarized in Table 1.

#### Aero Bengal Airlines (ABA)

Aero Bengal Airlines was the first private airlines in the country and started its flight operation on Dhaka-Barisal route with two Chinese built 17-seater Y-12 aircraft. Later a leased Russian built 48-seater N-24 aircraft was included in ABA fleet for the operation in Dhaka-Sylhet and Dhaka-Chittagong routes.

#### Air Parabat

The airline has started commercial flight operation with two brand new Czech-built 19-seater LET L410 aircraft on all the routes operated by Biman (except Ishurdi). It is now planning to add destinations like Thakurgaon, Lalmonirhat, Shamshernagar to its network in near future after procuring two more Czech-built LET L410 aircraft. Air Parabat has appointed Airspan as its General Sales Agent (GSA) which will be responsible for all the advertising and customer services for Air Parabat and in this way they are saving their overhead expenditure. At the moment, it is operating profitably and has no dues owed to the CAAB. The airline is expecting to recover their investment in 7 years.

#### GMG Airlines

Starting operation of commercial flights in early 1998, GMG airlines have emerged as the leading private airlines in Bangladesh. GMG started with Canadian manufactured Bombardier built 37-seater full-fledged aircraft. It operates a number of flights in Dhaka, Chittagong, Sylhet, Jessore, and Barisal every day and has plans to expand the network of destinations at home and abroad. The airline has signed an inter-line traffic agreement with British Airways (BA) enabling them to sell tickets to different destination of the world via BA. GMG Airlines have already made an investment of Tk. 1.00 billion (US\$ 20 million). It has also planned to spread wings overseas and already sought permission from the government to operate in international destinations. This is a good planning because if GMG make progress and can operate South Asian countries, they would probably become the leading private airline in the region.

#### Omni Airlines

This airline only deals with cargo operation. Most of the cases the company provide the logistic support via using aircraft of other companies. It has also started air cargo operation for international destinations. During the devastating flood of 1998 when most of the national highways and railways were inundated and surface transportation became inoperable, many exporters especially garments manufacturers used the airline to transport their product to the port.

Table 1 presents a comparison among the inventories of BBA and PACs. This

comparison indicates that BBA operates at lower load factor with respect to PAC's. This may be caused by the size of aircraft, which seems to be too large for low level of air travel demand existing in the country.

Table 1 Inventory of the Airline Companies Operating in Bangladesh.

Name of the airlines	Year of Starting Service	No of Aircraft	Type of Aircraft	No. of seats	No of weekly flights	Avg. Pass. Load factor	Avg. No. of Pass. (Weekly)
Biman Bangladesh Airlines	1972	4	F-28	85	68	55-60% (approx.)	5134
			ATP	70			
Aero Bengal Airlines	July, 1995	3	AN-24	48	18	75-80% (approx.)	1016
			Y-12	17			
Air Parabat Limited	January, 1998	2	LET-410 - UVPE.	19	56	80-85% (approx.)	1294
GMG Airlines	April, 1998	2	DASH 8-SRS 100	37	35	80-85% (approx.)	1520

For the three PAC's the sizes of the aircrafts seem to be more preferable for profitable operation. Figure 1 illustrates as comparison of usage among BBA and PAC's in the domestic routes. In most important routes BBA is still dominant whereas in other routes passenger movement of BBA and PACs are almost same. In the Dhaka-Barishal (BZL) route the number of passengers carried by PCAs is higher than the same for BBA because the latter does not operate regularly in the route.

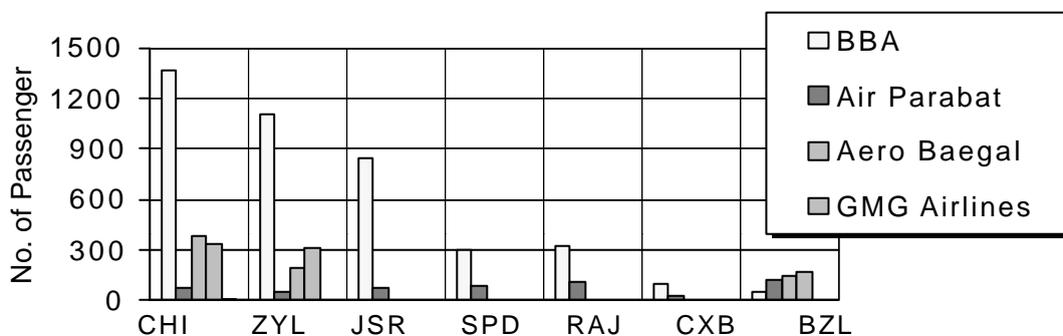


Figure 1: Passenger Movement Comparison between BBA and PACs

#### AIRLINE OPERATION COST IN BANGLADESH

In this section, the cost of operating airlines in Bangladesh is analyzed. The costs for public and private airliners are analyzed separately to facilitate comparison between them. Here the cost elements are calculated on the basis of average monthly costs because actual data supplied by various airlines are monthly data for different cost items. This cost is transformed into the cost per passenger for different routes.

For the development of cost function nine principal cost elements are included in the analysis. The cost variables included on the analysis are shown in Table 2. The values of these variables are calculated on the basis of twenty-two secondary cost factors, which are

also mentioned along with the principal cost variables in the table. For the analysis, data has been collected for several years for all the routes considered in the study.

Table 2 Cost Elements Analyzed in the Study with their Notations

Cost Elements	Symbol	Secondary cost components
Administrative Cost	$C_1$	No. of flight (Fl), Capacity of aircraft (Q), Load factor (I)
Maintenance Cost	$C_2$	No. of flight (Fl), Capacity of aircraft (Q), Load factor (I)
Marketing Cost	$C_3$	No. of flight (Fl), Capacity of aircraft (Q), Load factor (I)
Civil Aviation Charges	$C_4$	Night surcharge ( $N_s$ ), Hanger charge ( $H_n$ ), Cost of parking charges ( $P_a$ ), Landing ( $L_a$ ), Security charges ( $S_u$ ) and Navigation charges ( $N_a$ ).
Running cost	$C_5$	Cost fuel per liter ( $F_u$ ), fuel consumption of aircraft per hour ( $F_c$ ), Trip distance of travel (TD)
Capital Cost	$C_6$	Fleet size ( $L_a$ ), Flying time of aircraft ( $F_t$ ), Cruising speed of aircraft ( $S_p$ )
Contingency Cost	$C_7$	Total cost
Procurement Cost	$C_8$	Number of flights (Fl)
Profit	$C_9$	Total cost (TC)

#### Important Cost Elements

To describe the supply analysis conveniently all the costs are grouped under two heading namely 'Total Operating and Maintenance Cost' (TOMC) and Total Cost (TC). TOMC includes administrative, maintenance, Civil Aviation charges, running, capital and marketing costs and TC includes TOMC, contingency and procurement cost.

Among the nine principal cost elements, running cost is the most important one (on an average 39 percent of TOMC. Other important cost elements are capital cost (33 percent) and maintenance cost (19 percent). Small variation in these figures will result in a significant change in operator's revenue and profit.

Among the nine cost elements administrative, Civil Aviation charges and marketing cost do not vary significantly although these costs includes both fixed and variable cost. Fixed cost is the main portion of these costs because these costs don't vary greatly with the increase in the number of flights or distances traveled.

#### Effects of Scale of Operation on the Cost Elements

Using small-scale aircrafts, civil aviation charges and capital cost can be saved significantly. For larger aircrafts greater charges are imposed by the Civil Aviation Authority. Similarly, capital cost is a function of cost per hour of operation and load factor, which also depend on the size of the aircraft. For example, private airlines use comparatively smaller size of aircraft that results in savings of 20 percent of civil aviation charges. Also by using smaller aircrafts these airlines are able to attain higher load factor than BBA. Due to higher load factor the capital cost per passenger reduces significantly. For the same reason a small amount of maintenance and running cost can also be saved. Although BBA purchased larger sized aircrafts to operate in domestic routes to achieve scale economy, it seems that smaller aircrafts are more suitable due to low air travel demand in the country.

One of the major cost items of air transportation for both types of operator is unexpected accident or technical fault of aircraft during the operation period. Contingency and procurement cost are 15 percent and 12 percent of TC respectively. If operators can maintain their aircraft more efficiently they can enjoy significant savings in these areas also.

#### Cost Comparison between Public and Private Airlines

Comparison between the public and private airlines on the basis of various cost items is given in Table 3. The values in the table represent the ratio between cost per passenger for BBA and average of the same for PACs for all the cost elements discussed earlier. It shows that the costs incurred by BBA are higher for all the cost elements. The differences are very prominent for administrative cost, maintenance cost and civil aviation charges. The negative ratios for the case of profit imply that for BBA the total cost is higher than fare, which results in losses for the airline.

Table 3 Ratio between the Costs of Public and Private Airlines on the basis of cost elements.

Routes	Adm Cost (C <sub>1</sub> )	Maint Cost (C <sub>2</sub> )	Aviat. Charge (C <sub>3</sub> )	Run. Cost (C <sub>4</sub> )	Capit. Cost (C <sub>5</sub> )	Mark. Cost (C <sub>6</sub> )	Cont. Cost (C <sub>7</sub> )	Proc. Cost (C <sub>8</sub> )	Profit (C <sub>9</sub> )
DAC-CHI	1.6	1.37	1.23	1.16	1.04	1.15	1.17	1.23	-3.46
DAC-ZYL	1.58	1.31	1.23	1.19	1.07	1.11	1.22	1.21	+0.01
DAC-JSR	1.66	1.39	1.23	1.21	0.98	1.16	1.19	1.14	-2.38
DAC-SPD	1.88	1.56	1.19	1.03	1.14	1.19	1.06	1.09	-1.46
DAC-RJH	1.89	1.57	1.19	1.39	1.28	1.21	1.26	1.25	-1.16
DAC-CXB	1.93	1.44	1.24	1.04	1.11	1.11	1.08	1.09	+0.26
DAC-BZL	1.51	1.14	1.24	1.04	1.03	1.12	1.41	1.23	-1.36

## IMPACTS OF PRIVATIZATION ON AIR TRANSPORTATION IN BANGLADESH

The introduction of PAC's in the aviation sector of Bangladesh is expected to bring about some short and long-term effects in the air transportation sector of Bangladesh, at least in the domestic routes. These effects are discussed below.

### Making Profit Oriented Service

Introduction of private airline in Bangladesh will compel the state-owned BBA to be a profit-oriented organization rather than being only service oriented because the plane journey is made by the rich who do not require any subsidy. The competition is also expected to improve level of service.

### Increase in Fare

Pursuing a wrong policy, the fares charged by BBA in domestic have always been less than the actual cost which resulted in huge losses (over US\$ 4 million in 1997). Private airline imposes a higher fare pressuring Biman to increase fare. It increased fare by 15% in July 1996 and could make up losses of about US\$ 1 million annually. In 1998 BBA again raised fare so that it can reach breakeven point and make profit on the domestic sector.

### Improvement of Customer Service

Due to the introduction of private airlines, the customer facilities have improved a lot. Customers seem to be very satisfied with the overall services provided by the private airlines. Private airlines provide regular and punctual services with less waiting time and, very easy and informal ticket confirming process that improves the level of service of the operation.

#### Better Competitive Market

In case of GMG Airlines the promoters have sought for permission from the government to operate air service on the international routes. Government is considering to accord permission to private airlines so that they can operate service among SAARC countries. In that case the government of SAARC nations will have to change their rules allowing more than one carrier of each country to operate air service among SAARC nations. All these changes will make the domestic as well as regional air travel market a very competitive one and this open air policy will construct a good future for the coming private airlines in this market.

#### REGULATIONS NEEDED FOR PRIVATE AIRLINES

Although PAC's have shown a great a potential to improve the airline market of Bangladesh into a better competitive mode, but there exist some issues which should be carefully considered to develop a better future for the industry. Some of these issues are discussed in the following section.

#### Schedule Problem in low Demand Routes

Due to insufficient demand in some domestic routes, sometimes private airlines have failed to maintain their schedules properly or stopped operation in those routes. This may hamper future expansion in these routes. Government may consider subsidizing these routes.

#### Choice of Aircraft

One of the dominant factors of airline business is the appropriate size of aircraft. But some airlines have failed to procure proper and suitable aircraft for their operation. They have purchased aircrafts those are too backdated for safe and profitable operation. Proper advice and guidance are required in this regard.

#### Development of long-term Strategic Plan

Except GMG Airlines others have no long-term strategy or any specific future plan to expand and develop their operation. These airlines even had not even made any feasibility study before they started their business. As airline industry requires huge capital investment, long term strategies are vital for survival in the business.

#### Level of Service Standards

In some cases the private airlines have failed to improve quality service especially in the case of passenger compensation. Government should make strict regulation in this regard and ascertain consumers' right.

#### Poor Performance in Analyzing the Current Condition

The PCAs do not have good record keeping mechanism and thus unable to make routine performance evaluation or at least analyze or check the current cost and revenue conditions. Due to lack of experience in the aviation market, these new airline companies sometimes ignore the basic management principles. Lack of adequate consideration in this area may lead to financial and management crisis.

#### Safety Aspect

For profit maximization purpose, private airlines may neglect the safety issue, which is the most important factor of airline business in terms of reliability. Civil Aviation authority must impose some strict guidelines and safety precautions for providing the service on the private companies.

At present twenty-seven airlines have the permission to operate in the domestic routes of Bangladesh. For the success of privatization policy it is essential for the airlines currently in operation to present a better and efficient performance. As the air travel demand in the country is still very low, entry of too many operators may jeopardize the situation. Also proper training related to the technology and systems need to be arranged.

#### CONCLUSIONS

A comprehensive review of the potentiality of privatization of domestic air transportation system of Bangladesh has been presented in this paper. The short-term trend suggests that the private airlines have a great opportunity in the domestic air travel market of the country. Their performances are quite satisfactory. There still exist a lot of room for improvement. This paper is concluded by addressing some implications in the light of the results of this study.

(1) The trends in domestic air travel demand in Bangladesh suggest that in near future private airline companies will dominate the domestic market.

(2) The operating costs of government operators are about 25-30 percent higher than those of the private operators under the same level of service.

(3) From the cost elements it is evident that the administrative and maintenance costs of the public airline are significantly higher than the same for private airlines. This is indicative of the lack of management efficiency existing in the country.

(4) Due to the introduction of private airlines the consumers' benefit has increased significantly.

(5) Although the private air line companies have so far performed quite satisfactorily, for betterment of aviation industry of the country and success of privatization policy of the government, some regulations need to be imposed. For this purpose a governing and advisory organization is required.

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