

Political Economy of Mass Transport in a South Asian Megacity: The case of Dhaka

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This article will analyze the dynamics and structure of mass transportation in a South Asian mega city. It is usually expected that competition will bring about better service and quality in a market. In transportation sector in Bangladesh it seemed that competition brought about the worst possible outcome for transportation. This paper investigates the reasons behind this phenomenon. We found that this is actually a classic case of market failure since mass transportation is essentially a public good with externality effect. Therefore, market equilibrium resulted into socially inefficient outcome.

Keywords: mass transportation, South Asia, Political economy

Introduction

In the month of July, an unique movement started in the streets of Dhaka, Bangladesh. School and high school kids came to streets protesting death of two of their friends. These two kids died in the race of two buses to collect passengers and thus increase the day revenue. This kids actually ruled the city for a few days.

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Key research questions

why mass transportation is public good

history and nature of public transportation in Dhaka, Bangladesh

consequences of competition in public transportation

Forms of Public Intervention

International best practices on public transportation management

Employment structure

Current state

Trips

A project titled “Dhaka Urban Transport Network Development” completed two surveys in 2009 and 2014 with the support of Japan International Cooperation Agency (JICA). In Dhaka, every day 33 million trips are made. Of this 72 percent are made in Buses. Another 15.4 percent are made in autorickshaw. Therefore, close to 90 percent of the trips are covered by bus and autorickshaw.

Fitness

According to Bangladesh Road Transportation Authority(BRTA)(Hossain 2018a), there are two hundred and 16 thousand cars which are without fitness. There are two aspects of fitness. One is external and another is internal or technical. To provide fitness, BRTA is required to consider 60 different types of issues. According to experts, let alone technical side, if we just consider external factors, 80-90 percent of Bus and Minibus is unfit to move around.

From (Hossain 2018b) After assuming office in 2009, the Bangladesh Awami League (AL)-led government announced that buses older than 20 years would be shortly withdrawn. In 2011, Obaidul Quader, also the president of road transport advisory council, took office of the road transport and bridges ministry.

Quader, after one year of taking office, came up with an announcement to withdraw all unfit vehicles. He made the same announcement in a meeting of the road transport advisory council in June of the following year, also the last year of this government's previous tenure.

Sometime close to the end of the tenure, minister Quader said, "We cannot do everything now even if we want to."

The AL came to power again after the 5 January elections in 2014 and Quader was handed over the responsibilities of the same ministry. Then, once again he made the announcement in a programme to withdraw unfit vehicles to ease traffic congestion in the Dhaka airport area. An 11-member taskforce, headed by the then chairman of the Bangladesh Road Transport Authority (BRTA), was also formed.

No. of buses

Over the years number of buses are decreasing. At 2015, bus numbers were reduced to 4500. This situation is quite strange. The factors behind this lower buses is lower profits, uncertainty on political unrest, hooliganism, etc.

Everyday, around 10 thousand buses are entering our city. Over the years, no. of buses are getting reduced. Bus company manufacturers and sellers might be an interested part to all this.

How other countries solved the problem

what was the experience of these following cities?

Dhaka, Kolkata, Bombay, Delhi, Karachi what is their experience?

Planning

Who is planning for whom? How the planning is done? Why it is not done?

Employment structure

This article will focus on the dynamics of employment structure in a South Asian mega city. In July, 2018 a bus killed two school children in a race to collect more passengers. It brought down protests throughout the country and particularly in Dhaka, the school students took over the control of the streets replacing the traffic surgeons. It created a great political upheaval in Bangladesh. The objective of this paper is to look into the economic incentive of Bus operators that lead to this stiff aggressively competitive behaviors which led to the tragic incident. We will look into the current employment structure which is actually determined by the whole mass transportation industry.

Current state

Describe the administrative structure of

According to Hossain (2018b), BRTA data shows there are 3.30 million vehicles in the country. In the same vein, according to BRTC, there are 35,000 buses and mini buses, half of which operate outside Dhaka. According to Bangladesh Road Transport Authority (BRTA), a total of 7,937 bus and mini buses ply along 246 routes in Dhaka and its adjacent areas.

Bus, CNG-run auto-rickshaw and rickshaw are three mainstays of public transport in the capital. Bus and auto-rickshaw contribute to as many as 87.40 per cent of road transport communication in Dhaka while bus alone makes 72 per cent.¹

Many bus owners have one or two buses. Dhaka Metropolitan Regional Transport Committee gives permission for movement of the vehicles. The committee members include police and representatives from BRTA, different departments of the government and bus owners and workers.

After the application for permission, traffic police, the opinions of bus owners-workers and the clout of the applicants are taken into consideration.

The route permission was given after setting certain conditions of the Motor Vehicle Act, without any consideration of passengers' route demands, population density or road capacity.

Due to unplanned and unnecessary routes and innumerable owners, the buses enter unhealthy competition. As there are many owners under the same company, the drivers of buses join in a competition as to who will pick up passengers first and this causes road accidents.

About 255 bus operators ply in the streets of Dhaka with around 8000 buses. There are around 129 routes on which this buses runs through. There are no planned structure on which bus operator will maintain which route, there are no time schedule. Unbridled competition has led to total chaos in this sector. This immensely affected the behaviour of drivers who are at the heart of maintaining safety on the road. The channel through which this drivers are affected is mainly their main source of livelihood, the salary earned from driving these buses. It is how their earning is determined will affect current state. Therefore the main focus of our discussion is the remuneration packages that is offered to these drivers.

Existing employment structures

Almost all of the bus operators in developing countries main revenue collection comes from fare. Therefore, a bus operation is considered successful only if it generates enough revenue from fare. But it is not always possible to monitor the bus crew. There is a strong possibility that they won't report all the revenue from bus. There may be also false issuance of tickets thereby defrauding the operators.

To counter the leakage of salary, the bus owners/operators offer drivers a share of fare revenue. it becomes salary or part of the salary. it creates incentive for the drivers for to report all the revenue but it falls short of solving the revenue leakage. monetary benefit of the driver is directly related to number of passengers a bus can have. in the absence of proper law enforcement and

¹These information comes from two major studies done by Dhaka Transport Coordination Board (DTCB) at the behest of Japan International Cooperation Agency (JICA). The first was completed in 2010 (DTCB 2010) followed up by (DTCB 2011). Considering this situation the government of Bangladesh formulated a 'Strategic Transportation Plan' (STP) in cooperation with the World Bank in 2005. The implementing agency is Dhaka Transport Coordination Board (DTCB) under the Ministry of Communications (MOC). The STP prepared 'Urban Transportation Policy' for 20 years (2004–2024), and identified priority issues such as improvement of mass transit system (buses and rail transportations), development of urban expressway and establishment of organization in implementation and maintenance/operation of the projects. Since the STP has already received the official approval of the government of Bangladesh, it is

service monitoring, this will lead to aggressive driving, over-speeding and leads to uncomfortable, unreliable and unsafe travel.

salary system of conductor and driver is similar. therefore they are all considered as whole.

According to Htun et al. (2012), there are mainly four types of driver salary system exists in the developing countries

- Share of fare revenue
- Bus fleet rental system
- Fixed salary system
- Fixed salary and incentives

In the following, we find a table where main features are highlighted:

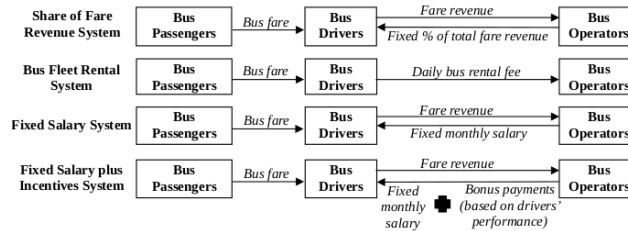


Figure 1: fig_title

Share of fare revenue

Major advantage of this system is that the driver has strong incentive to provide effort since they share of the pie will increase as the pie itself gets larger. At the same time it causes some undesirable and in some cases dangerous driving practices by the drivers. Number of bus passengers determine the salary of bus driver and bus drivers try to maximize this by collecting as much as passengers as possible. In that regard, following driving practices are observed: - Drivers race to next bus stop to beat rival's vehicles in picking up passengers - They stop for long periods of time at bus stops to wait for more passengers until a competitor appears - They often stop at unauthorised places along the road if there is a passenger.

The consequence of this driver behavior can create enormous safety problem. There is fairly undisputable evidence of high accident rates associated with this nature of competition. Such reckless driving makes the passengers even more uncomfortable and unsafe and disturbs traffic flow. This reduces road capacity and thereby causing traffic congestion in urban areas and can have a serious detrimental effect on bus services. Moreover using vehicles intensively can increase vehicle maintenance costs and results in more frequent breakdowns of vehicles during bus operations. Its true drivers are highly motivated but the thing is that it does not ensure high revenue. The crews still have incentive to report lower revenue.

As mentioned above, the principal advantage of this system is that drivers are more motivated to work harder while also providing bus operators with the incentive to earn better returns from their bus operations by encouraging their drivers' motivation to work. Furthermore, this system can give them strong incentive to combat fare evasion by passengers. However such system is not always effective deterrent against pilferage of revenue since it depends on the honesty of drivers to remit all fare revenue collected. In Santiago, this happened.

Bus fleet rental

a bus is operated by a driver who rents it on a daily basis from bus operators for a fixed daily sum. the driver can retain any surplus revenue as their remuneration. this is for the conventional bus in Jakarta. they take a lot of time to collect passengers and then drive very fast. advantage for the owners, they need not monitor the revenue

Fixed salary system:

weakest incentive for driver to provide effort, there is also revenue leakage problem

Fixed salary plus incentives system

bonus payments for reduced fuel consumption, fewer breakdowns, fewer accidents. but the revenue leakage problem still persists.

For empirical evidence of how the above system actually works in real life, Johnson, Reiley, and Muñoz (2015) compared two systems of bus driver compensation in Santiago, Chile. The first system is called payment based on per passenger transported. This is akin to shared passenger fare system. The second one is fixed wage is the same as fixed salary system. Examining these systems on similar routes in Santiago Johnson, Reiley, and Muñoz (2015) observed that shared passenger fare system leads to 67% more accidents per kilometer driven compared to fixed salary system.

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