Utilization of passenger transport subsidy in Kolkata: A case study of Calcutta State Transport Corporation

Sudakshina Gupta*, Aparajita Mukherjee

Centre for Urban Economic Studies, Department of Economics, University of Calcutta, 1, Reformatory Street, Kolkata 700 027, India

ARTICLE INFO

ABSTRACT

The present study tries to see whether the subsidy given to CSTC, which is the oldest and the largest state transport corporation operating in and around Kolkata, is really being used to cover the losses they make over the years or to merely cover-up an inefficient performance. The state owned buses are required to serve, not only non-profitable routes in off-peak hours, but also to give social security or employment to a large section of society. The burden of carrying a huge staff structure and serving at an administered and less than competitive price for welfare reasons, makes CSTC liable to an operating loss. Therefore, it makes a case for subsidy. However, the regular commuters experience regarding the condition of and the services provided by these raises a question about the justification of subsidy. In the study it is seen that the subsidy given is not based on any of the components on which it should, economically.

© 2012 Elsevier Ltd. All rights reserved.

1. Introduction

Economic development of a country depends upon many factors, improved transport facilities being one of them as transport is the most important intermediate good. Technological advancement of the various modes of transportation along with improved infrastructure and network results in a number of economic advantages like reduced transport costs, better quality of service, larger output etc. All these result into saving of time and increased productivity of the transport user. Moreover improved transportation results in easy movement of goods from one place to another leading to stability in prices. Due to improved transportation remote areas get connected to the city hub, which causes their rents and values to rise; labour mobility increases so that benefits from division of labour can be had. Without cheap transport, centres of large-scale production are less likely to prosper and the competitive character of the economy is hurt (Khot, 1973).

Since the price of transport enters into the pricing of other goods and services, a need for government intervention is often felt in the case of transport, so that price stability can be maintained. One form of government intervention is granting of subsidies.

Subsidies, however, breed inefficiency (World Development Report, 1988, pp. 117–173). The operators are not interested in raising their productivity and hence generating profits because they are certain of being bailed out in situations of financial difficulty. Moreover the burden of subsidies is borne by the taxpayers rather than the users of the facilities. This results in a skewed income distribution. Therefore, inequality in income distribution and inefficiency are the two negative effects of subsidy. This is true for both private and public operators of transport. The present study deals with subsidy on passenger transport in a state owned sector.

A large number of people in the urban areas of a developing economy are dependent on public transportation for travelling to their workplace and back, for going to and from schools and colleges etc. In our country, particularly in Kolkata, the situation is no different. Here, both private and state-run buses ply on roads to satisfy travel needs. The state transport corporations that operate buses in Kolkata are the Calcutta State Transport Corporation (CSTC), the South Bengal State Transport Corporation (SBSTC), the North Bengal State Transport Corporation (NBSTC), the West Bengal Surface Transport Corporation (WBSTC) and the Calcutta Tramways Corporation (CTC). As a case study we analyse the role of subsidy in CSTC, which was set up in 1948, as the State Transport Organization, a department under the Government of West Bengal and later turned into a corporation in 1960. The CSTC is selected as a sample for the present study because it is the oldest transport corporation.

The regular commuters' experiences, who avail of the services of the CSTC, throw up a number of factors worth considering. First, commuters depending solely on CSTC buses find that the number of buses on road is very few. Secondly, most of the state buses are ill-

* Corresponding author. Tel./fax: +91 (33) 2479 0156.
  E-mail address: sudakshinagupta@yahoo.co.in (S. Gupta).

maintained. They are fuel-guzzling vehicles that emit polluting smoke. Moreover the condition of the doors, windows, seats and the general body of the buses is in ramshackle. Thirdly, another very important factor is that the services are irregular. Many a time the principal users of public transport like office-goers and school children are late in reaching their destination either because the buses do not come on time or they do not come at all. The problem becomes particularly acute on those routes where private vehicles do not ply. Lastly, there is lack of sincerity on the part of the conductors in collecting fares and on the part of the drivers in collecting passengers.

Given the above points, the objective of the present study is to see whether the subsidy given to CSTC is really being used to cover the losses they face over the years or to merely cover-up an inefficient performance. In other words the question that arises is that whether the subsidy given to CSTC is justified, and if so on what grounds.

2. Materials and method

The study tries to see and analyse the relationship between subsidy given to a state owned passenger transport corporation and some other financial parameters like operating revenue, operating cost, operating loss, net loss and gross kilometres for the time period 1997–'98 to 2006–'07.

2.1. Data collection

Data on financial parameters were mainly collected from the office of CSTC. Financial data on operating revenue, operating cost, operating loss and subsidy were collected from the audited and published, Profit and Loss Statement Report of CSTC. Data on the various components of cost like those of labour, fuel tyres, batteries, lubricants etc. and land expenditure were collected. Data on gross kilometres covered by CSTC buses were obtained. Data relating to the performance of the Central Work Shop (CWS) of CSTC were also obtained.

2.2. Correction of data

The data collected were corrected with the help of index numbers including both consumer price index as well as wholesale price index. The Index Number for Wholesale Prices with base 1993–'94 was used to separately deflate operating revenue, operating cost, operating loss, net loss as well as subsidy.

The expenditure on fuel, lubricants, batteries, spare parts, and tyres and tubes were individually deflated using separate wholesale price indices with base year as 1993–'94.

The wages and salaries of CSTC as well as CWS were deflated using Consumer Price Index with base 1982–'83 changed to 1993–'94.

2.3. Tabulation and presentation of data

The data collected were arranged into tables as given in the Appendix. The data regarding gross mileage, total or absolute amounts of operating revenue, operating cost, operating loss, net loss and subsidy for the ten-year period i.e. from 1997–98 to 2006–07 are represented in Appendix A The coverage of operating loss, operating cost, wage bill, wage bill plus land expenditure by subsidy is given in different tables in Appendix B.

2.4. Statistical methods applied

Pearsonian Product Moment Correlation and Multiple regression analysis were primarily used to analyse the data (Das, 1986). The Pearsonian Product Moment Formula (Das, 1986) is as follows:

$$r = \frac{\sum(x - X)(y - Y)}{\sqrt{\sum(x - X)^2(y - Y)^2}}$$

where x and y are the two variables with X and Y being their means and r is the correlation coefficient. The ANOVA table was formed to summarize the required results. The regression coefficients were tested using the t-test and the F-test. (Gujrati & Sangeetha, 2008)

2.5. Graphical representation of data

Linear graphs and bar charts were used to graphically represent the tabulated data. The linear graphs show the relationship between subsidy and the other financial parameters i.e. operating revenue, operating cost, operating loss net loss and gross mileage separately. Bar chart was used to show the coverage of operating loss, cost, wage bill, and land expenditure by subsidy.

3. Theory and calculations

3.1. Transport

Transport is a point to point movement of men and materials in space and time, in response to demand for commodities and services (http://en:wikipedia.Org/wiki/subsidy, accessed in August 2010). The contribution of transport to modern economies is huge as already mentioned in the introduction.

The literature on transport broadly classifies costs of transport into private costs and external costs. There are two meanings of "private costs of transport". From the point of view of the transport supplier, it is the cost of economic resources incurred to provide the service, whereas from the point of view of the transport user, it is the money payment made for the use of the transport and includes the service quality, e.g. speed and comfort, obtained in return (Milne, 1955; Gupta, 2007).

'External costs' have been defined as "disutility or losses imposed upon them without their agreement" (Milne, 1955). The different kinds of external costs of transport are; direct financial costs, like cost of accidents, cleaning of dirt etc. paid for by parties other than the transport operator, indirect financial costs, e.g. development of one mode affecting adversely the demand for other modes, non-financial real costs, like noise, air pollution, etc. and other costs like growth of cities, separation and integration of people due to the growth of transport, leading to violence and crimes (Stubbs, Tyson, & Dalvi, 1984).

Most of the literature found on transport pricing involves discussions on marginal cost pricing, where price is set equal to marginal cost (Stubbs et al., 1984). One of the difficulties of this principle in the transport sector is that this sector shows a particular difficulty of indivisibilities or 'lumpiness' of inputs, e.g. staff rolling stock and track, which makes its marginal cost discontinuous (Gwilliam, 1964, p. 30).

Another pricing option is Peak Load Pricing which involves charging different prices at peak and off-peak hours. Peak load pricing is objected to on the ground that it comes as a load to those who need to use the service at the peak (Gupta, 2007).

In India, transport pricing in the state sector has been what we may call administered. A series of such administered prices have two definite components: a cost component and a tax or subsidy