

**Social Accounting of the
Delhi Transport Corporation
1985**

Research Study Number 85

National Institute of Urban Affairs
1st & 2nd Floor, Core 4B, India Habitat Centre, Lodhi Road,
New Delhi 110 003

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RESEARCH REPORT 2

TRANSPORT RESEARCH CELL
NATIONAL INSTITUTE OF URBAN AFFAIRS

SOCIAL ACCOUNTING OF THE
DELHI TRANSPORT CORPORATION

by

GOPAL KRISHAN

RAJESH CHANDRA INDU PATNAIK

NEW DELHI
1985

(ii)

The National Institute of Urban Affairs (NIUA) has examined these questions in this report. What the NIUA has done is to make a detailed analysis of the accounts of the Delhi Transport Corporation in an attempt to seek possible explanations for the losses that it has incurred. It has compared the performance of the D.T.C., with that of the B.E.S.T. and P.T.C.L., and specifically examined whether the D.T.C. can wipe out its losses if it raises its fares to those charged by B.E.S.T. and P.T.C.L.

The results of the analysis are interesting, to say the least. These show, for instance, that:

- (1) A greater part of the losses incurred by the D.T.C. can be attributed to the exceptionally low fare rates that it charges from its commuters. The Delhi commuters pay only one-half of the operational cost incurred by the D.T.C. The D.T.C. fare rates are the lowest for any city in the country, and are among the lowest compared to any city in the world.
- (2) Contrary to the belief that the concessionary and free commuting facilities offered by the Delhi Transport Corporation to the students, disabled persons, and residents of re-settlements colonies are the principal reasons for its losses, the fact is that these make a relatively small dent on the D.T.C.'s revenues. If all concessions and free commuting facilities are withdrawn by the D.T.C., the

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recovery rate of the operating cost improves by no more than 7 per cent points.

- (3) If the D.T.C. adopts the bus fare rates charged by the B.E.S.T., its operational cost recovery rate would improve to 93 per cent from only 52 per cent. Adoption of the P.T.C.L. rates by the D.T.C. would push its cost recovery rate to over 80 per cent.

The unmistakable conclusion that emerges from the analysis is that the Delhi Transport Corporation can improve its financial performance if it chooses to do so. It does not have to stay in the morass. The solution would seem to lie in revising its fare structure, and bringing it at par with that of B.E.S.T. or P.T.C.L. The analysis does not indicate that the losses are due to the financial mismanagement - its operational cost per passenger/km. compares favourably with those of the Bombay or Madras transport corporations.

The central question is as to whether the D.T.C. can raise its fares without encountering resistance not only from its users but also those who are at the helm of its affairs. It could well be argued that the gain of the D.T.C. in the form of higher revenues may well result in the loss of purchasing power of at least those who are either below the poverty line or on its margin. The NIUA shares this concern; at the same time, it is of the view that the losses of the D.T.C. can be reduced, if not wiped out, by pursuing any of the following approaches:

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- (1) Increase in the proportion of de luxe rate buses, and gradual withdrawal of ordinary buses from specific routes,
- (2) Indexing of the bus fares to the wholesale price index; and
- (3) Reduction in the number of buses from routes which are prone to heavy losses.

However, each one of the approaches need further investigation. The National Institute of Urban Affairs intends to do it in its subsequent studies.

This report has been prepared by a team of experts who presently man the Transport Research Cell of the NIUA: Dr. Gopal Krishan, Indu Patnaik and Rajesh Chandra. To each one of them, I owe deep gratitude for putting the facts of this highly sensitive and perplexing issue of the D.T.C.'s losses in proper perspective. Apart from the members of the team, I would like to thank Mr. P.V. Venkatakishnan, I.A.S., Executive Director, A.S.R.T.U. and Chairman, D.T.C., who has been the guiding spirit underlying this and other studies of the Transport Research Cell. I hope that the D.T.C. and other Corporations would find this report useful.

September, 1985

OM PRAKASH MATHUR
DIRECTOR

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CHAPTER I

INTRODUCTION

The Objective

The Delhi Transport Corporation (D.T.C.)* has been incurring huge and mounting losses over the years. During the year 1983-84 alone, its revenue amounted to Rs.65.55 crores against a total cost of Rs.166.61 crores. This represented a loss of over Rs. 100 crores. The Corporation was able to cover barely 39.34 per cent of the total cost through its own revenue. The comparable figure for 1979-80 was 65.22 per cent, suggesting a rather steep deterioration in the Corporation's financial performance.

The D.T.C. has consequently come under heavy attack on account of its increasing financial losses. It is accused of mismanaging its affairs. In its defence, the D.T.C. has maintained that there is evidence to demonstrate that its operational efficiency has not only improved over the years but is also better than that of similar other transport undertakings, such as Bombay Electric Supply and Transport (B.E.S.T.), and Madras Pallavan Transport Company Limited (P.T.C.L.). This could easily be verified in terms of staff/bus ratio, average run of a bus per day, load factor, kms. per litre of diesel or a new tyre, and accident rate (Table 1). Its

*In this report, the Delhi Transport Corporation has throughout been abbreviated as the D.T.C., the Bombay Electric Supply and Transport Undertaking as the B.E.S.T. and the (Madras) Pallavan Transport Company Limited as the P.T.C.L.

Table 1: Efficiency Indicators of Operational Performance of the D.T.C. (Delhi), the B.E.S.T. (Bombay) and the P.T.C.L. (Madras), 1983-84

Performance indicator*	Name of the Undertaking		
	D.T.C.	B.E.S.T.	P.T.C.L.
Staff ratio (staff/bus)	<u>9.23</u>	13.11	9.59
Fleet utilisation (available fleet/buses on the road)	84.42	88.31	87.67
Operational ratio--(operated trips/scheduled trips)	86.79	93.92	95.60
Kilometres per bus per day	<u>214</u>	208	206
Load factor (Passenger kms. ÷ seat kms. x 100, where seat kms. are based on carrying capacity which stands for seating capacity plus standees allowed)	<u>90.41</u>	68.00	82.80
Revenue per passenger km. (in paise)	2.92	9.59	8.07
Cost per passenger km. (in paise)	8.57	12.35	8.52
Accident rate (per lakh kms. operated)	<u>1.69</u>	8.58	3.40
Kilometres per litre of diesel	<u>3.65</u>	2.96	3.44
Average run of new tyres in kms.	<u>36,317</u>	34,988	33,583

Source: Delhi Transport Corporation, Operational Statistics
April, 1985, p. 14.

*The items in which the D.T.C.'s performance is the best are underlined.

losses are simply to be attributed to a variety of social benefits it provides to its customers. It runs the transport service not as a profit making enterprise but as a service in public interest. The financial losses suffered by it are expected to benefit the society at large by way of encouraging their mobility, regulating the transport modal split, and permitting a flexible land use pattern, among other things.

It is claimed on behalf of the D.T.C. that it also bears a tremendous physical burden in public interest. Its total system includes 5115 buses, out of which 4859 provide city services and 256 run on inter-state routes (Delhi Transport Corporation, 1983-84, pp. 3-4). An average of 37.62 lakh persons is served daily by the D.T.C. buses.

As many as 96 per cent of the Delhi commuters, using mass transport, travel by bus. The comparable figures for Bombay and Madras are 45 and 77 per cent respectively, with suburban railways accounting for 55 and 23 per cent of the commuters' traffic in these cities, respectively (National Institute of Urban Affairs, 1985, p.5). The Delhi commuters enjoy a highly subsidised fare rate as they pay only about one-third of what they would need to pay if the total expenditure of the D.T.C. is to be recovered.

Evidently, questions arise as to what reasons would explain such losses incurred by the D.T.C. Can these be explained by the benefits in terms of low fares as well as the concessionary passes that the Delhi commuters enjoy? Are these benefits shared equally or unequally by the different sections of the community? If these

facilities are to continue who should pay for them? In this study, the National Institute of Urban Affairs has attempted to address these questions through what one might loosely call the 'social accounting' of the Delhi Transport Corporation.

The study is based on an analysis of the D.T.C.'s accounts for the year 1983-84. This is the latest year for which the requisite data could be obtained. The sources of data include: (i) Annual Report, 1983-84 of the D.T.C., (ii) Performance Statistics of the State Transport Undertakings, 1983-84, brought out by the Central Institute of Road Transport, Pune, (iii) Accounts Department of the D.T.C., I.P. Estate, New Delhi, and (iv) Pass Section of the D.T.C., Scindia House, New Delhi.

Social Accounting

The conventional accounting system records all financial payments made to or by an undertaking. This is in the nature of a revenue-cost balance sheet. The basic purpose is to get an idea of the eventual gain or loss.

This accounting system, however, does not take into account the effect of social benefits on the revenue-cost pattern of an undertaking which runs services in public interest. These 'services' are supposed to render special benefits to all or some select sections of society. These are also supposed to reduce indirectly the overall resource cost incurred by a society in its day to day functioning.

Social accounting, on the other hand, is a supplementary

accounting system which identifies and valuates the 'social benefits provided and social costs avoided' (Fleiger, 1984 p.5). It takes stock of the losses in revenue suffered and additional burdens borne by an undertaking in public interest. The amount so estimated is adjusted to the actual losses. This evidently alters the ratio between revenue and cost to the benefit of an undertaking's financial performance.

Social Benefits Provided by the D.T.C.

The D.T.C. provides a number of benefits to its commuting population. The important among these are listed below:

- (i) It charges fares which are the lowest in the country, and one of the lowest in the world;
- (ii) It offers a variety of concessionary passes to certain groups, such as students, disabled persons, residents of resettlement colonies, police personnel and press representatives;
- (iii) It allows free commuting facility to its employees; and
- (iv) It operates a large number of uneconomic routes in order to connect distant colonies and farflung villages.

As a result of these benefits, the Delhi commuters stand to gain. First of all, the burden on the household incomes is lessened. This is particularly crucial for the poorer sections of society for whom commuting is generally inevitable by the very nature of the location of their work and residential areas. Secondly, the low fares permit dispersal of population, failing which there would be excessive residential over-crowding near the

work places. Lastly, personalised modes of transport, such as cars, two-wheelers, and bicycles, and the intermediate modes such as taxis, three-wheelers and cycle rickshaws, are discouraged, reducing to an extent the traffic congestion, pollution and accidents on the roads. As an offshoot of the same, fuel consumption is also lowered, helping in saving of the precious foreign exchange.

It may be added here that while it is feasible to quantify, in monetary terms, the 'social benefits provided', a comparable assessment of the 'social costs avoided' is an impractical task. The existing research methodology has few techniques to offer which could realistically translate the economic cost implications of pollution level or accident rate or nervous tension arising from traffic congestion. Therefore, in the present exercise relating to social accounting, the monetary implications of 'social costs avoided' could not be incorporated. Only the 'social benefits provided' were estimated in financial terms.

CHAPTER II

FINANCIAL PERFORMANCE OF THE DELHI TRANSPORT CORPORATION

The Task

A detailed analysis of the cost-revenue structure of the D.T.C. is a pre-requisite for assessing the effect of social benefits provided by it on its financial performance. It is equally essential to compare its financial performance with that of similar undertakings in other Indian cities, namely Calcutta, Bombay and Madras. The non-availability of data for Calcutta, however, restricts the scope of comparison to the D.T.C. (Delhi), the B.E.S.T. (Bombay), and the P.T.C.L. (Madras).

Components of the Financial Performance

Cost and revenue are the two basic parameters of financial performance. In the context of transport undertakings, costs are of two types: operating and non-operating. As per the budgetary procedure of the D.T.C., the operating costs include the expenditure on account of : (i) personnel, (ii) fuel and lubricants, (iii) stores and materials, (iv) taxes, (v) depreciation, and (vi) miscellaneous items. Non-operating costs include the interest on loans which the undertaking may have taken from the government/financial institutions to augment its capital assets or cover its losses. The revenue can also be divided into two categories, namely, traffic and non-traffic. The amount collected from the sale of tickets, advance booking,

general/concessionary passes, contract services and fines on commuters travelling without ticket or pass constitutes the traffic revenue. On the other hand, earnings from sale of scrap, display of advertisements, interest on short term deposits, and rent from its residential quarters are the major components of its non-traffic revenue.

Cost and Revenue of the Delhi Transport Corporation

Table 2 presents the cost structure of the D.T.C. for the five year period of 1979-80 to 1983-84. It is seen that the cost of the Corporation increased, at current prices (subsuming inflation), by more than three times from Rs. 50.89 crores in 1979-80 to Rs. 166.61 crores in 1983-84. Of the two components of the total cost, operating costs increased by about three times, that is from Rs. 41.20 crores to Rs. 119.92 crores, and non-operating costs (interest on loans drawn) increased by nearly five times, that is from Rs. 9.69 crores to Rs. 46.69 crores. Thus, the interest on loans taken by the D.T.C. has emerged as one of its major cost items.

Among the operating cost items, the expenditure on fuel, stores and materials increased by about three times from Rs. 14.98 crores to Rs. 41.03 crores, and personnel expenditure by two and a half times from Rs. 20.84 crores to Rs. 51.14 crores. The depreciation cost also marked a two and a half times increase from Rs. 3.58 crores to Rs. 8.69 crores. On the other hand amount paid as taxes declined from Rs. 1.81 crores to Rs. 1.61 crores. Thus, the rise in operating costs was largely on account of a rapid

increase in the price of fuel and materials and in the salary bills of the D.T.C. employees.

Table 2 also shows that in 1983-84, the operating costs comprised 71.97 per cent of the total cost and the non-operating costs accounted for the remaining 28.03 per cent. The personnel costs, including the salary, employer's contribution toward provident fund, medical benefits, etc. ranked as the item number one. This was followed by the interest on loans. The difference between the two was small as personnel costs worked out as 30.69 per cent of the total, and the interest on loans as 28.03 per cent.

Confining our analysis to the operating costs alone, the expenditure on personnel accounted for over two-fifths of the costs; fuel, stores and materials for one-third; and payment to private operators who run their buses on behalf of the Corporation, for one-eighth. The remaining small amount of the operating cost was assigned to depreciation and taxes.

A disproportionately high rise in the operating and non-operating costs of the D.T.C. is clearly brought out by the preceding discussion. There has been a regular increase in the obligations of the D.T.C. over these years. An increasing amount has been spent on additional staff, fuel, and materials. Simultaneously inflation has resulted in an increase in expenditure on each item. Revenue has, on the other hand, increased at far too slow a pace, falling short of expenditure by increasing amounts

Table 2: Delhi Transport Corporation:
Cost Components, 1979-80 to 1983-84

(in Rs. crores)

Item	1979-80	1980-81	1981-82	1982-83	1983-84
A. Operating cost					
Personnel	20.84 (40.94)*	25.21 (32.31)	32.35 (30.12)	37.75 (29.06)	51.14 (30.69)
Fuel, stores and materials	14.98 (29.43)	29.29 (37.55)	35.62 (33.16)	38.40 (29.56)	41.03 (24.62)
Taxes	1.81 (3.55)	2.05 (2.02)	3.19 (2.97)	1.26 (0.97)	1.61 (0.96)
Depreciation	3.58 (7.03)	4.01 (5.14)	6.26 (5.83)	7.41 (5.70)	8.69 (5.21)
Miscellaneous	-	-	3.00 (2.79)	11.12** (8.56)	17.46*** (10.48)
Total Operating Cost	41.20 (80.96)	60.55 (77.62)	80.41 (74.87)	95.94 (73.85)	119.92 (71.97)
B. Non-operating Cost					
Interest	9.69 (19.04)	17.45 (22.38)	27.00 (25.13)	33.97 (26.15)	46.69 (28.03)
Total Non-operating Cost	9.69 (19.04)	17.45 (22.38)	27.00 (25.13)	33.97 (26.15)	46.69 (28.03)
Total Cost	50.89 (100.00)	78.01 (100.00)	107.41 (100.00)	129.91 (100.00)	166.61 (100.00)

Source: Derived from Central Institute of Road Transport:

- (i) Performance Statistics of State Transport Undertakings 1982-83 and 1983-84 and Review of Performance 1983-84, Pune, pp. 92-93.
 - (ii) Performance Statistics of State Transport Undertakings 1981-82 and 1983-84, Pune, pp. 63-64 and 96-97; and
 - (iii) Report on the Performance of Nationalised Road Transport Undertakings 1979-80 and 1980-81, Pune pp. 127 and 151-152.
- * Figures in brackets are percentage of each item to the total cost in a particular year.
- ** Includes 8.66 crores paid to private operators.
- *** Includes 14.52 crores paid to private operators.

every year (Table 3). The D.T.C. had to take loans to cover the deficit. Loans piled up and so did the interest on them. The D.T.C. is placed in a very tricky situation.

The widening gap between the total cost and the total revenue of the D.T.C. is shown in Table 4. While the former multiplied by over three times, the latter grew by hardly two times during the 1979-80 to 1983-84 period. As a result, the gross recovery rate (total revenue as per cent of total cost) declined from 65.22 per cent in 1979-80 to 39.34 per cent in 1983-84. The net recovery rate (traffic revenue as per cent of operating cost) also slid down from 77.04 to 52.33 per cent during the same period (Table 5).

It may be added here that of the total revenue of Rs. 65.55 crores earned by the D.T.C. in 1983-84, Rs. 53.81 crores came from the city services, being provided by a fleet of 4,859 buses; Rs. 8.94 crores from the inter-state services with a fleet of 256 buses, and Rs. 2.80 crores from the non-traffic sources (Table 6). The city services, with about 95 per cent of the D.T.C.'s total fleet and accounting for over 92 per cent of the kilometreage covered, contributed around 85 per cent of its traffic revenue. Based on the percentage of the kilometreage covered, it can be estimated that out of the total cost of Rs. 166.61 crores incurred by the D.T.C. Rs. 153.78 crores are debitable to the city services and Rs. 12.83 crores to the inter-state services. In the case of operational costs, this division will be Rs. 110.69 crores and Rs. 9.23 crores.

Table 3: Delhi Transport Corporation:
Revenue Components, 1979-80 to 1983-84

(in Rs. crores)

Revenue item	1979-80	1980-81	1981-82	1982-83	1983-84
Traffic Revenue	31.74 (95.64)*	37.86 (95.14)	49.70 (96.25)	54.95 (96.82)	62.75 (95.73)
Non-traffic Revenue	1.45 (4.36)	1.93 (4.86)	1.94 (3.75)	1.81 (3.18)	2.80 (4.27)
Total Revenue	33.19 (100.00)	39.79 (100.00)	51.64 (100.00)	56.75 (100.00)	65.55 (100.00)

Source: (i) Delhi Transport Corporation: Annual Report 1983-84,
New Delhi, Annexure II, p.11.

(ii) Central Institute of Road Transport:

Performance Statistics of State Transport
Undertakings, 1981-82 and 1982-83, Pune, pp. 65 and
98; and Report on the Performance of Nationalised
Road Transport Undertakings, 1979-80 and 1980-81,
Pune, pp. 137 and 151.

* Figures in brackets represent percentages.

Table 4: Gross Recovery Rate of the Delhi Transport Corporation,
1979-80 to 1983-84

Financial indicators	(in Rs. crores)				
	1979-80	1980-81	1981-82	1982-83	1983-84
Total Revenue	33.19	39.79	51.64	56.75	65.55
Total Cost	50.89	78.01	107.41	129.91	166.61
Profit/Loss	-17.70	-38.22	-55.77	-73.16	-101.06
Gross Recovery Rate (in percentage)	65.22	51.01	48.08	43.68	39.34

Source: Derived from

(i) Delhi Transport Corporation: Annual Report 1983-84,
Delhi, Annexure II, pp. 11-12.

(ii) Central Institute of Road Transport: Performance
Statistics of the State Transport Undertakings 1981-
82 and 1982-83, Pune, pp. 65 and 98, and Report on
the Performance of Nationalised Road Transport
Undertakings, 1979-80 and 1980-81, Pune, pp. 151-152.

* Gross recovery rate is defined as the total revenue
as per cent of the total cost.

Table 5: Net Recovery Rate of the Delhi Transport Corporation,
1979-80 to 1983-84

(in Rs. crores)

Financial indicators	1979-80	1980-81	1981-82	1982-83	1983-84
Traffic Revenue	31.74	37.86	49.70	54.95	62.75
Operating Cost	41.20	60.55	80.42	95.94	119.92
Profit/Loss	-9.46	-22.69	-30.72	-40.99	-57.17
Net Recovery Rate* (in percentage)	77.04	62.53	61.80	57.28	52.33

Source: Derived from

- (i) Delhi Transport Corporation: Annual Report 1983-84,
Delhi, Annexure II, pp. 11-12.
- (ii) Central Institute of Road Transport: Performance
Statistics of State Transport Undertakings 1981-82
and 1982-83, Pune, pp. 65 and 98, and Report on the
Performance of Nationalised Road Transport
Undertakings 1979-80 and 1980-81, Pune, pp. 151-152.

* Net recovery rate is defined as the traffic revenue as per cent of the operating cost.

Table 6: City Services/Inter-state Services Break Up of the Revenue and cost of the Delhi Transport Corporation, 1983-84

Item	City services	Inter-state services	Total
Size of fleet (Number of buses)	4859	256	5115
Kms. operated (in crores)	30.44	2.54	32.98
Traffic Revenue (in Rs. crores)	53.81	8.94	62.75
Non-traffic Revenue (in Rs. crores, estimated on the basis of kms. operated)	2.58	0.22	2.80
Total Revenue (in Rs. crores, estimated on the basis of kms. operated)	56.39	9.16	65.55
Operating Cost (in Rs. crores, estimated on the basis of kms. operated)	110.69	9.23	119.92
Total Cost (in Rs. crores, estimated on the basis of kms. operated)	153.78	12.83	166.61

Source: Delhi Transport Corporation:

Annual Report 1983-84, pp. 7-8.

A Comparative View

The financial performance of the D.T.C. can be better understood if analysed in comparison with that of the two other comparable transport undertakings, namely the B.E.S.T. (Bombay) and the P.T.C.L. (Madras). This could be done by examining the volume and structure of both revenue and cost of the three undertakings. Cost-revenue relationship against the background of the bus fare rates charged by the three undertakings have also to be taken into account.

Table 7 presents the cost structure of the three transport undertakings. As would be noted, the basic difference in the cost structure of D.T.C. as compared to that of the other two undertakings lies in the share of non-operating cost, that is the interest payable on loans contracted by the D.T.C. As much as 28.03 per cent of the D.T.C.'s expenditure is debited to interest on loans. The comparable figures for B.E.S.T. and P.T.C.L. are only 6.33 and 7.34 per cent respectively. For reasons indicated earlier, the D.T.C. had to arrange increasing amount of loans to cover the widening gap between its cost and revenue.

Among the operating cost items, personnel account for 30 to 40 per cent of the total cost in the three transport undertakings. The personnel costs are the highest in the case of B.E.S.T. Fuel, stores and materials constitute the second major item of expenditure, accounting for one-fourth to three-eighths of the total cost. This item is relatively the most expensive for P.T.C.L. Taxes account for around five per cent of the total cost for B.E.S.T. and P.T.C.L. but less than one per cent for D.T.C.

Table 7: Cost Components of the D.T.C., the B.E.S.T. and the P.T.C.L., 1983-84

(in Rs. crores)

Item	D.T.C.	B.E.S.T.	P.T.C.L.
A. Operating Cost			
1. Personnel	51.14 (30.69)*	39.85 (39.50)	25.19 (38.88)
2. Fuel, stores and materials	41.03 (24.62)	27.03 (26.79)	24.54 (37.89)
3. Taxes	1.61 (0.96)	4.92 (4.88)	3.31 (5.10)
4. Depreciation	8.69 (5.21)	11.92 (11.82)	5.59 (8.63)
5. Miscellaneous	17.46 (10.48)**	10.78 (10.68)	1.40 (2.16)
Total Operating Cost	119.92 (71.97)	94.50 (93.67)	60.02 (92.66)
B. Non Operating Cost			
1. Interest	46.69 (28.03)	6.39 (6.33)	4.76 (7.34)
Total Non-operating Cost	46.69 (28.03)	6.39 (6.33)	4.76 (7.34)
Total Cost	166.61 (100.00)	100.89 (100.00)	64.78 (100.00)

Source: Derived from Central Institute of Road Transport (1985): Performance Statistics of State Transport Undertakings 1982-83 and 1983-84 and Review of Performance 1983-84, Pune, pp. 89-90 and 92-93. Data for Calcutta S.T.C. is not available for 1983-84.

* Figures in brackets represent percentages.

** Includes 14.52 crores paid to private operators.

The depreciation costs are the highest for B.E.S.T. (11.82 per cent) and the lowest for D.T.C. (5.21 per cent).

A somewhat different picture would be obtained if the cost components of the concerned undertakings are calculated in relation to the operating costs only. In that case, the personnel cost of all the three undertakings work around 40 per cent. The fuel, stores and material costs would remain relatively the highest for P.T.C.L. but the lowest for B.E.S.T. The relative position in respect of other items does not change much.

On the whole, D.T.C. is adversely placed in respect of the interest it has to pay on loans. On the other hand, it enjoys a favourable position in terms of low rate of taxes it pays as well as the low rate of depreciation it records.

A look at the revenue structure of the three undertakings is equally revealing (Table 8). The D.T.C. gets 95.73 per cent of its revenue from traffic sources, that is from the sale of tickets, advance booking, issue of general and concessionary passes and renting out of its vehicles. Only 4.27 per cent of the revenue is generated by non-traffic sources, including scrap sale, advertisements, interest on short term deposits and rent on its residential buildings. The position is virtually the same for B.E.S.T. which raises 93.90 per cent from non-traffic sources and the remaining 6.10 per cent from non-traffic sources. However, the P.T.C.L. presents a rather different picture. It derives 15.32 per cent of its revenue from non-traffic sources. How does the P.T.C.L. manage to earn a relatively high proportion of its revenue

Table 8: Revenue Components of the D.T.C., the B.E.S.T. and the P.T.C.L., 1983-84

(in Rs. crores)

Item	D.T.C.	B.E.S.T.	P.T.C.L.
Traffic Revenue	62.75 (95.73)*	73.49 (93.90)	51.97 (84.68)
Non-traffic Revenue	2.80 (4.27)	4.78 (6.11)	9.41 (15.32)
Total Revenue	65.55 (100.00)	78.27 (100.00)	61.38 (100.00)

Source: 1. Delhi Transport Corporation: Annual Report 1983-84, New Delhi, Annexure II, pp. 11.

2. Central Institute of Road Transport (1985): Performance Statistics of State Transport Undertakings 1983-84 and Review of Performance 1983-84, Pune, p. 91.

* Figures in brackets represent percentages.

from non-traffic sources? This is a point worthy of detailed investigation. Such an exercise holds a special significance for the D.T.C. as it is keen to augment its revenue from both the traffic and non-traffic sources.

Revenue-Cost Relationship of the Three Undertakings

An effective method to judge the relative financial performance of the three transport undertakings would be to compute the ratio between their revenue and cost. This has been done by computing firstly, the gross recovery rate which is the proportion of total revenue to total cost, and secondly, the net recovery rate which is the proportion of traffic revenue (total revenue minus non-traffic revenue) to the operating cost (total cost minus non-operating cost). The second method of computation falls in line with the recommendations of the National Transport Policy Committee (1980), which suggested that fares should be so fixed, that they are able to covers the short run operating costs. Therefore, for practical purposes, the computation of the ratio between the traffic revenue, and the operating costs is more meaningful than a computation of a ratio between the total revenue and total costs.

Table 9 shows that against a total revenue of 65.55 crores, the D.T.C. incurred a cost of Rs.166.61 crores in 1983-84. The resultant loss amounted to over Rs.100 crores. For B.E.S.T. the comparable figures were Rs. 78.27 crores and Rs. 100.89 crores, the total loss being around Rs.22 crores. The P.T.C.L. recorded a total revenue of Rs. 61.38 crores against a cost of Rs. 64.78 crores only. The total loss suffered by this undertaking was hardly about Rs.3 crores. Evidently, the magnitude of the losses

Table 9: Gross Recovery Rate of the D.T.C., the B.E.S.T. and the P.T.C.L., 1983-84

(in Rs. crores)

Financial indicators	D.T.C.	B.E.S.T.	P.T.C.L.
Total Revenue	65.55	78.27	61.38
Total Cost	166.61	100.89	64.78
Profit/Loss	-101.06	-22.61	-3.40
Gross Recovery Rate* (in percentage)	39.34	77.58	94.75

Source: Derived from

1. Delhi Transport Corporation: Annual Report 1983-84, New Delhi, Annexure II, p. 11-12.
2. Central Institute of Road Transport (1985): Performance Statistics of State Transport Undertakings 1983-84 and Review of Performance 1983-84, Pune, pp. 89.93.

* Gross Recovery Rate is defined as the total revenue as per cent of total cost.

Table 10: Net Recovery Rate of the D.T.C., the B.E.S.T. and the P.T.C.L., 1983-84

(in Rs. crores)

Financial indicators	D.T.C.	B.E.S.T.	P.T.C.L.
Traffic Revenue	62.75	73.49	51.97
Operating Cost	119.92	94.50	60.02
Profit/Loss	-57.17	-21.00	-8.05
Net Recovery Rate*	52.33	77.77	86.60

Source: Derived from

1. Delhi Transport Corporation: Annual Report, 1983-84,
Delhi, Annexure II, p. 11-12; and
2. Central Institute of Road Transport (1985):
Performance Statistics of State Transport Undertakings
1982-83 and 1983-84 and Review of Performance 1983-84,
Pune, pp. 89-93.

* Net Recovery Rate is defined as the traffic revenue as per cent of the operating cost.

Table 11: Fare Structure of the Ordinary Bus Service in the Four Super-Metropolitan Cities of India

Distance	Charge in paise in			
	Calcutta (C.S.T.C.)	Bombay (B.E.S.T.)	Delhi (D.T.C.)	Madras (P.T.C.L.)
upto 1 km.	40	50	30	40
2 kms.	40	50	30	40
3 kms.	40	50	30	50
4 kms.	40	50	30	50
5 kms.	40	50	40	60
6 kms.	40 (upto 6.9	50	40	60
7 kms.	50 kms.)	75	40	70
8 kms.	50	75	40	70
9 kms.	50	95	40	80
10 kms.	50	95	40	80
11 kms.	50	95	40	90
12 kms.	50	95	40	90
13 kms.	50	120	40	100
14 kms.	50	120	40	100
15 kms.	50	145	40	105
16 kms.	50	145	40	105
17 kms.	50 (upto 17.6	145	50	110
18 kms.	60 kms.)	145	50	110
19 kms.	60 (upto 19.6	145	50	115
20 kms.	Not available	145	50	115
21 kms.		145	75	120
22 kms.		145	75	120
23 kms.		145	75	125
24 kms.		145	75	125
25 kms.		145	75	130
26 kms.		145	75	130
27 kms.		145	75	135
28 kms.		145	75	135
29 kms.		145	75	140
30 kms.		145	75	140

Source: Central Institute of Road Transport (1985): Performance Statistics of State Transport Undertakings, 1982-83 and 1983-84, Pune and Association of State Transport Undertakings, New Delhi.

- Note:
1. No passenger tax is levied in Delhi and Madras. A passenger tax of 3.5 per cent is included in Bombay fares. It also includes a 5 paise nutrition charge on all tickets of 60 p. and above in Bombay.
 2. The fare structure listed above came into effect on 15.3.1983 in Calcutta, on 14.9.1984 in Bombay, on 22.2.79 in Delhi and on 1.4.1985 in Madras.

suffered by the D.T.C. is colossal.

If the scope of the analysis is restricted to the traffic revenue and the operating cost only, the losses get reduced to about Rs.57 crores in the case of the D.T.C. (Table 10). These marginally decrease to Rs.21 crores for the B.E.S.T. but increase considerably to about Rs.8 crores in the case of P.T.C.L. The special position of the P.T.C.L. is explained by the fact that it earns as much as 15 per cent of its total revenue from non-traffic sources. The exclusion of this revenue from the total revenue is automatically reflected in a higher amount of net loss.

In line with what has been stated above, the D.T.C. recovers only about two-fifths of the total cost; the B.E.S.T. over two-thirds, and the P.T.C.L. as much as 95 per cent. With reference to the traffic revenue and the operating cost, the recovery rates work out as 52.33 per cent for the D.T.C., 77.77 per cent for the B.E.S.T., and 86.60 per cent for the P.T.C.L.

Thus, from all counts, the financial performance of the D.T.C. is the weakest as compared to that of the B.E.S.T. and the P.T.C.L. Why is it so? What could it be attributed to? Is it due to the highly subsidised fare rates which the D.T.C. has been maintaining over the years (Table 11)? To what extent could this situation be explained by the various benefits that the D.T.C. provides to all or some groups of commuters? The next chapter examines these issues.

C H A P T E R I I I

ESTIMATION OF THE D.T.C. LOSSES DUE TO SOCIAL BENEFITS PROVIDED

A Recapitulation

A distinction between the conventional and the social accounting systems was drawn in the introductory part of this report. It was stressed that for a proper appreciation of the performance of an undertaking, conventional accounting should be supplemented by social accounting.

It was also noted that the D.T.C. renders the following social benefits as a part of its overall obligations 'to provide an efficient, adequate, economical and properly coordinated system of road transport in this metropolitan city of Delhi and its environs' (D.T.C. Annual Report, 1983-84, Preamble):

- (i) subsidised bus fare rates for all;
- (ii) concessionary and free passes to certain categories of commuters, and
- (iii) service on uneconomical routes.

The provision of these benefits naturally entails a 'reduction in revenue', or augmentation of losses for the D.T.C. This has been a recurring experience of the D.T.C. right since its formation in 1971.

The present chapter of the report would endeavour to estimate the 'reduction in revenue' that the D.T.C. suffers due to the above listed benefits.

Fare Rates

A total of 113.81 crores of tickets were consumed on the city routes of the D.T.C. in 1983-84. The total expenditure on the city bus services was estimated at Rs.153.78 crores (Table 6). It means that a ticket should have been priced at 135 p. on an average to recover the full cost. For covering the operating cost, the average price per ticket should have been 97 p. The actual income per ticket was, however, only 50 p.; this is reduced to 47 p. if only the traffic revenue is taken into account.

Among the metropolitan cities, Delhi is noted for the lowest bus fares (National Institute of Urban Affairs, 1985, p. 21). For a journey of 10 kms., a commuter pays 95 paise in Bombay, 80 paise in Madras, 50 paise in Calcutta and only 40 paise in Delhi (Table 11). Naturally the recovery rate of the total cost is higher in Bombay (77.58 per cent) and Madras (94.75 per cent) than in Delhi (39.34 per cent).

One of the ways to assess the effect of low bus fares in Delhi is to apply the Bombay and Madras bus fares rates to Delhi and see the resultant difference. This would give an idea of the estimated increase in revenue of the Delhi Transport Corporation if it adopts the B.E.S.T. or the P.T.C.L. fare rates. Of course, the underlying assumption is that the demand for transport would remain unchanged even at the enhanced rates. Such an assumption is justified on the ground that the Delhi commuter has very limited options, and virtually no alternatives modes of transport. As many as 96 per

cent of them using public transport system depend on the D.T.C. bus service.

For applying the B.E.S.T. (Bombay) and the P.T.C.L. (Madras) bus faring system on the D.T.C. (Delhi), the following methodology was followed:

- (i) The four distance slabs (of upto 4 kms., 4 to 16 kms., 16 to 20 kms., 20 to 30 kms.), as operative in Delhi, were adopted.
- (ii) The number of tickets consumed in Delhi for each of these distance slabs is then ascertained.
- (iii) The mid point of each distance slab was marked. Accordingly four mid-points of 2 kms. (for the distance slab of upto 4 kms.), 10 kms. (for the distance slab of 4 to 16 kms.), 18 kms. (for the distance slab of 16 to 20 kms.) and 25 kms. (for the distance slab of 20 to 30 kms.) were obtained.
- (iv) Bus fares due for these mid-points as per the B.E.S.T. and the P.T.C.L. rates were noted. The amount in each case was multiplied by the number of tickets consumed in respective distance slabs in Delhi. Separate calculations were done for the B.E.S.T. and the P.T.C.L. rates. Additional revenue expected to accrue in each case was noted.

Table 12: Estimated Revenue Due to Delhi Transport Corporation if the B.E.S.T. (Bombay) and the P.T.C.L. (Madras) Bus Fare Rates were Adopted, 1983-84

	Distance slabs with median distance				Revenue from sale of tickets
	0-4kms. (2kms)*	4-16kms. (10kms.)	16-20kms. (18kms.)	20-30kms (25kms.)	
Number of tickets sold in Delhi (in crores)	26.89	64.16	7.13	2.63	
D.T.C. rates for the median distance (in paise)	30	40	50	75	
Revenue as per D.T.C. rates (in Rs. crores)	8.07	25.66	3.56	1.97	39.26**
B.E.S.T. rates for the median distance (in paise)	50	95	145	145	
Estimated revenue for D.T.C. as per B.E.S.T. rates (in Rs. crores)	13.44	60.95	10.33	3.81	88.54
P.T.C.L. rates for median distance (in paise)	40	80	110	130	
Estimated revenue for D.T.C. as per P.T.C.L. rates (in Rs. crores)	10.75	51.32	7.84	3.42	73.34

Source: (i) Fare rates for Bombay and Delhi - Central Institute of Road Transport (1985): Performance Statistics of State Transport Undertakings 1982-83 and 1983-84, Pune, pp. 219-211, Madras rates - Pandiyan, M.S.S. (1985): "Bus fare hike and World Bank", Economic and Political Weekly, Vol.20, No.14, p. 582.

(ii) Information on tickets - Accounts Department, Delhi Transport Corporation, I.P. Estate, New Delhi.

Estimated increase in revenue for the D.T.C. if the B.E.S.T. (Bombay) rates were adopted: Rs.49.27 crores; if the P.T.C.L. (Madras) rates were adopted: Rs.34.07 crores.

* Figures in brackets indicate the median distance.

** An additional traffic revenue of Rs. 9.54 crores was earned through (1) the sale of tickets on deluxe/special buses, and (2) the sale of half-priced concessional tickets to children.

Table 12 demonstrates the way that the calculations have been done. It is noted that the revenue earned from the sale of the D.T.C. tickets increases by Rs.49.27 crores if the B.E.S.T. rates are adopted, and by Rs.34.07 crores in case the P.T.C.L. rates are applied.

The D.T.C.'s gross recovery rate of 39.34 per cent thereby improves to 68.92 per cent at the B.E.S.T. rates, and to 59.79 per cent at the P.T.C.L. rates (Table 13).

Likewise, the net recovery rate also improves. As much as 93.42 per cent of the operating cost of the D.T.C. can be met at the B.E.S.T. rates, and 80.74 per cent at the P.T.C.L. rates. At present, the D.T.C. recovers only 52.33 per cent of its operating cost (Table 14).

It follows that if the D.T.C. has to improve its financial position, a raise in its fares is inescapable. The B.E.S.T. fare rates seem to be more appropriate to it. These conform to an estimate made earlier that if the operating costs of the D.T.C. are to be recovered, a bus ticket in Delhi should be priced at Re.1/- on an average.

Table 13: Total Revenue - Total Cost Relationship if the B.E.S.T. and P.T.C.L. Rates are Adopted by the D.T.C., 1983-84

	Total Revenue (in Rs.crores)	Total Cost (in Rs.crores)	Gross Recovery Rate (in %age)
At existing D.T.C. rates	65.55	166.61	39.34
Estimates for D.T.C. if the B.E.S.T. rates are adopted	114.82	166.61	68.92
Estimates for D.T.C. if the P.T.C.L. rates are adopted	99.62	166.61	59.79

Source: Derived from Tables 9 and 12.

Table 14: Traffic Revenue - Operating Cost Relationship if the B.E.S.T. and P.T.C.L. rates are Adopted by the D.T.C., 1983-84

	Traffic Revenue (in Rs.crores)	Operating cost (in Rs.crores)	Net Reco- very rate (in %age)
At existing D.T.C. rates	62.75	119.91	52.33
Estimates for D.T.C. if the B.E.S.T. rates are adopted	112.02	119.91	93.42
Estimates for D.T.C. if the P.T.C.L. rates are adopted	96.82	119.91	80.74

Source: Derived from Tables 10 and 12.

Concessionary and Free Passes

Under the Free and Concessional Passes Regulations, 1954 and the proposed Free and Concessional Passes Regulations, 1982, the D.T.C. offers concessionary and free passes to certain categories of people. The details of these passes, alongwith the respective beneficiary group, are given below:

- (i) Student Concession Passes: These are available to bonafide students of the universities, set up in Delhi by an Act of Parliament, and those of the educational institutions run by Central Government, Delhi Administration and Delhi Municipal Corporation. Such passes fall in two categories:
 - (a) Destination (monthly) passes, which are charged at the rate of 30 single journey fares for 60 journeys, subject to a minimum of Rs.9.00 and a maximum of Rs.12.50 per month.
 - (b) All route (monthly or quarterly) passes, which are charged at the rate of Rs.12.50 per pass per month and Rs.37.50 per pass for every three months.

- (ii) General Passes: These monthly passes, issued to desirous persons, are of two types:
 - (a) Destination passes which are charged at the rate of 40 single fares for 60 journeys.
 - (b) All route passes, charged at the rate of Rs.70.

- (iii) Concessionary Passes for Residents of Resettlement Colonies: These passes are charged at the rate of Rs.15 per month for a

distance of upto 20 kms. and Rs.25 for distances exceeding 20 kms.

- (iv) Police Concession Passes: These are issued to the officials of the Police Department at the request of the police authorities at a flat rate of Rs.35 per pass per month for use on official duties.
- (v) Press Passes: The press representatives are eligible for these passes at the rate of Rs.50 per pass per month or Rs.150 for three months.
- (vi) Free Passes: These are issued to the following categories of persons:
- (a) Members of the Delhi Transport Corporation Board and Advisory Council;
 - (b) Officers and employees of the Delhi Transport Corporation;
 - (c) Government employees who are to make a journey for official work relating to the Delhi Transport Corporation;
 - (d) Representatives (not exceeding two in number) of each recognised union of the employees of the Corporation; and
 - (e) Disabled persons.

In order to estimate the losses in revenue attributable to various categories of concessionary passes, it was assumed that: (i) the destination passes, charging 40 single fares for 60 journeys in a month are justifiable as normally there are around 20 working days in a month, and (ii) all route passes, issued at the rate of Rs.70 per month, cover the cost likely to be incurred by an average commuter at the prevailing bus fare rates. Thus, the

destination and all route passes have been treated as no special loss cases for the present analysis.

Table 15 gives the number of passes issued by the Delhi Transport Corporation during 1982-83 to 1984-85. Passes are generally not only economical but also convenient. There has been an increase in the sale of passes of all types, barring the passes meant for police personnel, over the years. The decline in the number of police passes may be due to a larger number of these personnel them using the departmental vehicles.

Table 16 provides data on the estimated increase in revenue if all the all-route passes used by special categories of commuters were priced at Rs.70 per month. Student passes deserve a special mention. These are charged only Rs.12.50 per month for all route journeys. As such, one student pass causes a direct loss of Rs. 57.50 per month at the current rates. The revenue loss due to student passes is estimated at Rs.7.20 crores. As such, the net recovery rate of the D.T.C. would increase by 6.01 per cent points, if students are charged the same rate at which the general public is charged.

The losses due to concessionary passes to the press representatives, police personnel and disabled persons add up to a small amount. A full recovery from them would raise the net recovery rate by hardly 0.02 per cent points.

Table 15: Number of the D.T.C. Passes as Classified by the Type of Beneficiary Group: 1982-83 to 1984-85

Passes by type of beneficiary group	Number of passes issued		
	1982-83	1983-84	1984-85
1. Student Passes			
i) Destination (monthly)	11,345	16,913	16,916
ii) All route (monthly)	10,80,215	11,56,478	11,62,627
iii) All route (quarterly)	26,939	32,188	41,392
2. Passed issued to residents of resettlement colonies	90,812	93,035	93,269
3. General Passes			
i) Destination	5,57,730	7,21,634	8,47,218
ii) All route	59,344	82,447	1,04,003
4. All route police passes	961	625	315
5. Press Passes			
i) Monthly	-	9	29
ii) Quarterly	105	117	118
6. All route passes for the disabled	2,504	2,734	3,107

Source: Pass section, Delhi Transport Corporation, Scindia House, New Delhi.

Table 16: Estimated Increase in Revenue if all the Special Concessionary All Route Passes are Charged at the Rate of General All Route Passes (Rs. 70/- per month), 1983-84

	Category of all route passes						Total
	Student Passes		Press Passes		Police Passes	Passes for the disabled	
	Monthly	Quarterly	Monthly	Quarterly			
Number of passes issued	11,56,478	32,188	117	9	625	2,734	11,92,151
Rate (in Rs.)	12.50	37.50	50.00	150.00	35.00	Free	
Actual Revenue (in Rs.)	1,44,55,975	12,07,050	5,850	1,350	21,875	Nil	1,56,92,100
Estimated Revenue (in Rs.)	8,09,53,460	67,59,480	8,190	1,890	43,750	1,91,380	8,79,58,150
Estimated increase in Revenue (in Rs.)	6,64,97,485	55,52,430	2,340	540	21,875	1,91,380	7,22,66,050
Estimated rise in the Gross Recovery Rate (in per cent points)	3.99	0.33	0.0001	0.00003	0.001	0.01	4.33
Estimated rise in the net Recovery Rate (in per cent points)	5.55	0.46	0.0002	0.00005	0.002	0.02	6.03

Source: Information on passes was obtained from the Pass Section, Delhi Transport Corporation, Scindia House, New Delhi.

Around 38,000 employees and officers of the D.T.C. are entitled to free commuting by bus. If they are charged at the rate of all-route passes, the revenue gain would amount to only about Rs.0.32 crores. That works out to barely 0.27 per cent of the D.T.C.'s operating cost.

In sum, it can be said that the concessionary and free passes issued by the D.T.C. do not cause any major loss to the D.T.C.'s revenue. If all concessions are withdrawn, the recovery rate of the operating cost would not improve by more than 6.3 per cent points.

Service on Uneconomical Routes

Viewed in the context of very low bus fare rates in Delhi, virtually all routes of this supermetropolitan city are uneconomical, as revenue earned on all of them is less than the expenditure incurred. However, within the given system, certain routes must be more uneconomical than others. Under normal situations, the gains on certain routes are expected to neutralise the losses in the others. The Delhi situation appears as exceptional where every route is envisaged as a loss case. However, this matter has not been subjected to a rigorous analysis in view of constraints imposed by time and access to data, especially those relating to the number of passengers commuting and the number of buses operating in each route.

Social Account Balance Sheet

Tables 17 and 18 provide the social account balance sheet of the D.T.C. for the year 1983-84. It is evident that the D.T.C. can

Table 17: Delhi Transport Corporation: An Abstracted Social Account Balance Sheet, 1983-84

Cost (in Rs. crores)		Revenue (in Rs. crores)	
Operating Cost	119.92	Traffic Revenue	62.75
Non-operating Cost	46.69	Non-traffic Revenue	2.80
Total Cost	<u>166.61</u>	Total Revenue	<u>65.55</u>
Revenue credited in lieu of 'reduction in Revenue' due to 'social benefits provided':			
	i)	Low fare rates (based on estimated rise in Revenue if the B.E.S.T. fare rates were adopted by the D.T.C.)	49.27
	ii)	Concessionary passes of all variety	7.23
	iii)	Losses on uneconomic routes	Not taken into account*
		Total Revenue in lieu of 'social benefits provided'	<u>56.50</u>
		Estimated Revenue (in real terms)	<u>122.05</u>
		Gross loss (in relation to total cost)	-44.56
		Net loss (in relation to operating cost)	-0.67

* For explanation, see text, p.37. The meagre amount of net loss could easily be covered by any credit given to 'reduction in revenue' on account of 'uneconomic routes'.

Table 18: City Services of the Delhi Transport Corporation: An Abstracted Social Account Balance Sheet, 1983-84.

Cost (in Rs. crores)		Revenue (in Rs. crores)	
Operating Cost	110.69	Traffic Revenue	53.81
Non-operating Cost	43.09	Non-traffic Revenue (estimated)	2.58
Total Cost	153.78	Total Revenue	56.39
		Revenue credited in lieu of 'reduction in Revenue' due to 'social benefits provided':	
		i) Low fare rates (based on estimated rise in revenue if the B.E.S.T. fare rates were adopted by the D.T.C.)	49.27
		ii) Concessionary passes of all variety	7.23
		iii) Losses on uneconomic routes	Not taken into account*
		Total Revenue in lieu of 'social benefits provided'	56.50
		Estimated Revenue (in real terms)	112.89
		Gross loss (in relation to total cost)	-40.89
		Net loss (in relation to operating cost)	-0.38

* For explanation, see text, p.37. The meagre amount of net loss could easily be covered by any credit given to 'reduction in revenue' on account of 'uneconomic routes'.

achieve its break-even point, wherein revenue equals the operating cost, if it adopts the B.E.S.T. (Bombay) rates and if it is compensated for losses on concessionary/free passes. Even some marginal profit can be envisaged for D.T.C. if some additional compensation is allowed for running services on a large number of exceptionally uneconomic routes. It signifies that the D.T.C.'s staggering losses as computed by this system could easily be explained in terms of 'reduction in revenue' it bears in lieu of 'social benefits' it provides.

CHAPTER IV

THE NEED FOR A FARE RATIONALISATION OF THE DELHI TRANSPORT CORPORATION

The N.T.P.C. Recommendations

The National Transport Policy Committee (1980, p.7) recommends that all pricing must be cost based; the user should pay at least the full marginal cost; and the transport undertakings must recover their operating cost. Moving a step further, the Committee has approved of pricing above this minimum level so that the additional revenue could form a part of the national pool, which could be drawn upon by the various undertakings for expansion and modernisation of their fleet.

The state governments are expected to fix bus fares, in consultation with the state transport authorities and the state transport undertakings, keeping in view the cost of operations. In practice, however, this is generally not done in a systematic manner. It is mainly because no appropriate methodology has been evolved for determining the actual cost of inputs, and no inbuilt system has been developed to provide for an increase in fares commensurate with the increase in cost of inputs (National Transport Policy Committee, 1980, p.198). As a result, the periodic increases in fares are normally subjective and depend on the prevailing economic and political exigencies.

Pricing of Metropolitan Transport

One of the basic necessities of large urban concentrations is a reliable, efficient and affordable transport system. This is particularly true of metropolitan cities where commuting depends on a mass transport system which is a recurring and not a sporadic phenomenon. The physical spread and a spatially decentralised land use pattern of such places leaves no choice for the inhabitants but to commute repeatedly for various purposes even during a single day.

It is mainly for this reason that the metropolitan transport, practically all over the world, is subsidised. This service is normally operated by public sector undertakings, whose aim is to provide a 'service' rather than make a 'profit'. It is envisaged that a subsidised mass transport system would encourage mobility, regulate the modal split of transport, facilitate a desired pattern of urban land use, and maintain the quality of environment (National Institute of Urban Affairs, 1985, p. 12).

The Delhi Situation

Like most metropolitan transport authorities, the D.T.C. also pegs its fares low, rather exceptionally low. Consequently it suffers huge losses every year, as noted in earlier chapters. It is also under constant public pressure against any raise in fares.

An upward revision of the D.T.C.'s fare rates is unavoidable. All efforts should be made to recover the operating costs at least; at the same time the interests of the people inhabiting the slums

and other low income localities have to be safeguarded within a system which is both economically and practically sound.

Without doubt, any hike in bus fares is likely to arouse a great deal of resentment among the public. The likely political implications of the emerging situation cannot be ignored. Therefore, only a pragmatic approach will help in this matter. In place of enhancing the fare rates abruptly, it may be advisable to gradually increase the proportion of the de luxe rate buses (Re.1/- per ticket)* in the total fleet. The ordinary rate buses may be eventually withdrawn. This will give the necessary time to the commuter to absorb this additional budgetary burden. To give a special benefit to the poor, buses originating from and destined to low income localities may continue to charge the old rates.

Kundu (1985, p.5) also opines that there is little justification for not recovering the D.T.C.'s operating cost from the Delhi commuter. The per capita income of the Union Territory of Delhi is presently two times the national average. To subsidise such a relatively welloff population at the cost of the national exchequer does not stand to logic. Surely someone elsewhere is partly bearing the cost of the bus transport service which a Delhi commuter is enjoying.

Though fully convinced of such a measure, Kundu does not recommend a uniform fare revision for everyone. A discriminatory

* The term 'de luxe rate' buses implies ordinary buses charging de luxe bus rates, i.e. a flat rate of Re. 1/- per trip.

pricing scenario for Delhi is visualised. He stresses that the revised fare structure for the D.T.C. must include direct subsidies to the economically weaker sections through a system of concessionary monthly passes.

Though laudable in its spirit, such a policy will face a variety of problems at the implementation level. The definition of the economically weaker sections and their authentic identification will be the two critical issues to begin with. Another methodological issue would relate to an appropriate adjustment of the fare rates to different income levels. In any case, such a policy would leave a wide scope for fraud and corruption. It is also doubtful if the monthly pass system would be acceptable to the daily wage earner among the urban poor. The administrative cost involved in operating such a measure is also going to be high. Thus, a gradual conversion of the ordinary buses into the de luxe rate buses is the workable proposition.

Alternately, a gradual hike is suggested by increasing the minimum fare marginally and by splitting up the existing distance slabs, especially of 4 to 16 kms., so that the fare charged is commensurate with the operating costs involved.

The above suggestion also implies that the fare rates be linked with the cost of inputs so that any future hike rates would be small though more frequent. This would prevent the need to increase fares sharply as is imminent in the present situation.

We are, thus, led to the crucial task of working out an appropriate 'fare rationalisation'. The various alternatives have to be deliberated and debated upon. Implications of each and every recommended measure are to be critically examined. Prior to that, the fare box ratio' (what proportion of the total or the operating cost the commuter should pay and to what extent the commuter should be subsidised) has to be determined. This calls for another research exercise. The subsequent report of the Transport Research Cell on 'Fare Fixation' is earmarked for this purpose.

CHAPTER V

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

- (i) The D.T.C. has been suffering heavy and mounting losses over the years. In 1983-84, its revenue amounted to only Rs. 65.55 crores against an expenditure of Rs. 166.61 crores. This represented a loss of over Rs.100 crores and a gross recovery rate of less than 40 per cent. The D.T.C.'s operating cost amounted to Rs. 119.91 crores and accordingly its net recovery rate was worked out as 52.33 per cent. The traffic and total revenue from the D.T.C.'s city services was recorded as Rs. 53.81 crores and Rs. 56.39 crores respectively against an operating cost of Rs. 110.69 crores and a total cost of Rs. 153.78 crores.
- (ii) The D.T.C. losses are attributable largely to the exceptionally low bus fares it charges. Its fare rates are not only the lowest for any metropolitan city in India but also one of the lowest in the world. The entire commuting population, irrespective of its income level, gets subsidised.
- (iii) The above observation is substantiated from the fact that around 114 crores of tickets sold on the D.T.C.'s city routes earned a revenue of 50 p. each; rather 47 p. if only the traffic revenue is taken into account. On the other hand, each commuter trip costs 135 p. to the D.T.C. Even if only the operating cost of the D.T.C.'s city services is

considered, the average cost per ticket comes to 97 p. Thus, a D.T.C. ticket is being priced at only one-third of its total cost and one-half of its operating cost.

- (iv) The financial performance of D.T.C. stands to gain if it adopts the B.E.S.T. fare rates. Its operational recovery rate would improve from 52 per cent to 93 per cent at the Bombay rates. The B.E.S.T.'s own recovery rate was noted as 78 per cent.
- (v) The concessionary and free commuting facilities offered by the D.T.C. to a variety of commuter groups, such as students, disabled persons, residents of the resettlement colonies, and its own employees, do not amount to a large sum. Even if all concessions are withdrawn, the recovery rate of the operating cost would improve by less than 7 per cent points. The present policy of concessionary passes could, therefore, continue. However, the rates for the student concessionary passes, which are priced at rates fixed in 1972, call for an upward revision.
- (vi) Viewed in the light of very low bus fare rates charged by the D.T.C., virtually all routes run by it could be deemed as uneconomical. Some routes cause exceptionally heavy losses. However, these routes must be served in public interest.
- (vii) It is evident that the D.T.C.'s operational losses are wiped out if a due weightage is given to the highly subsidised service it gives to all commuters and the concessionary/free commuting facility it offers to a variety of groups. Even

some marginal profit can envisaged for it if an additional compensation is allowed for running services on a number of exceptionally uneconomic routes.

(viii) The heavy and increasing losses suffered by the D.T.C. could not be attributed to any inordinate mismanagement of affairs on its part. Rather operational efficiency is superior to that of the B.E.S.T. and the P.T.C.L. in several respects. This is not to say that all is well with its functioning. For augmenting its revenue, its particular, a more rigorous checking of ticketless travelling will pay handsome dividends. Also, sale of tickets at the crowded bus stops, especially to discourage commuting without ticket for short distances, should be considered as an additional measure to raise resources.

(ix) Evidently there is no escape from an upward rationalisation of the D.T.C. bus fare rates. There is a need to link the bus fares with: (i) operational costs, (ii) price index, and (iii) distance (to a greater extent than at present). The average operating cost per ticket was worked out as around Re.1/- and average traffic revenue per ticket as only 47 p. Therefore, an increase in the price of the 40 p. ticket to Re.1/- is justified, even if only the operating cost of the D.T.C. is to be recovered.

(x) Any hike of this nature in bus fare is likely to arouse a strong reaction from the commuting population. This may trigger agitation on the part of the public. Therefore, any

change of this sort has to be worked on pragmatic lines. In place of increasing the fares steeply, it may be advisable to progressively increase the proportion of de luxe rate buses in the total fleet. The ordinary buses may be withdrawn gradually. The buses originating from or terminating at low-income localities may continue to charge the prevailing low rates.

- (xi) In case the steps toward increasing the traffic revenue are deferred, the D.T.C. will record bigger losses in future. Other options available to increase revenue or reduce expenditure are very limited. Till the time the D.T.C.'s fare structure is rationalised, it deserves to be compensated by the government for 'reduction in its revenue' accruing from the various 'benefits' it provides. This compensation should come in the form of 'subsidy' rather than 'loans', as has been the case till now.

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