

### 3. The Finances of Public Utilities

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#### INTRODUCTION

This section analyses the finances of three major public utilities of the Government of NCT of Delhi, namely, the DTC, the DVB, and the DWB. These three agencies are responsible for providing basic infrastructural services, i.e., bus transport, electricity, and water in Delhi. While the DVB and DWB enjoy a near monopoly in respect of the supply of electricity and water, the services of DTC are supplemented by other modes of private transport.

Adequate provision of bus transport, electricity and water to the citizens of Delhi has historically been a subject of widespread debate and examination. The organisational set-up of agencies responsible for their provision has been frequently altered with a view to improving their performance and efficiency. For example, the MCD ran the transport services in Delhi from 1957 to 1970 by virtue of a provision in the *Delhi Municipal Corporation (DMC) Act, 1957*. This arrangement was, however, jettisoned in 1971 in favour of a new statutory corporation of the central government, created under the *Road Transport Corporation Act, 1950*. As a public sector corporation, DTC was required to function on commercial lines and be financially self-sufficient. Its financial position, however, continued to be grossly unsatisfactory. It had no equity capital and was financed wholly through interest-bearing repayable loans for funding the development schemes and ways and means assistance for meeting the annual revenue deficits. However, as pointed out by the *Balakrishnan Committee*,<sup>1</sup> far from being permitted to function as a corporation aimed at achieving financial viability, direct, often day-to-day control was maintained over this body by the Ministry of Surface Transport (Government of India). The present status of DTC is that it has been transferred to the Government of NCT with effect from August 5, 1996, after writing off its loan liabilities and the interest accrued thereon.

The DVB which replaced the DESU has passed through a similar phase of organisational restructuring. Prior to the inclusion of electricity as an obligatory function under the *Delhi Municipal Corporation Act, 1957*, generation and distribution of electricity in Delhi was the responsibility of the Delhi Central Electric Power Authority Ltd. (DCEPA), and subsequently of the Delhi State Electricity Board. DESU was set up under section 42 of the *Delhi Municipal Corporation Act, 1957*, with the object of developing and maintaining an efficient, coordinated and economical system of electric supply to the union territory. However, within a short period it accumulated massive losses. Taking note of the fact that Delhi generated only about 20–25 percent of the total demand for electricity and the balance had to be purchased from outside for which the DESU was not considered an appropriate body, DESU has, with effect from 24 February 1997, been replaced by an autonomous board, called the Delhi Vidyut Board (DVB), and is now governed by the provisions of the *Electricity (Supply) Act 1948 (54 of 1948)* and the *Delhi Vidyut Board Rules, 1997*.

The DWB is a recent entity having been constituted on April 6, 1998 under the *Delhi Water Board Act, 1998*. It has replaced the DWSSDU which had been constituted under the *Delhi Municipal Corporation Act, 1957*, and was obliged under the *Act* to provide wholesome water to citizens within the jurisdiction of MCD as also supply water in bulk to NDMC and DCB and receive their sewage for

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1 MHA (Ministry of Home Affairs) 1989. Committee on the Reorganisation of the Delhi set-up. New Delhi: MHA, Government of India.

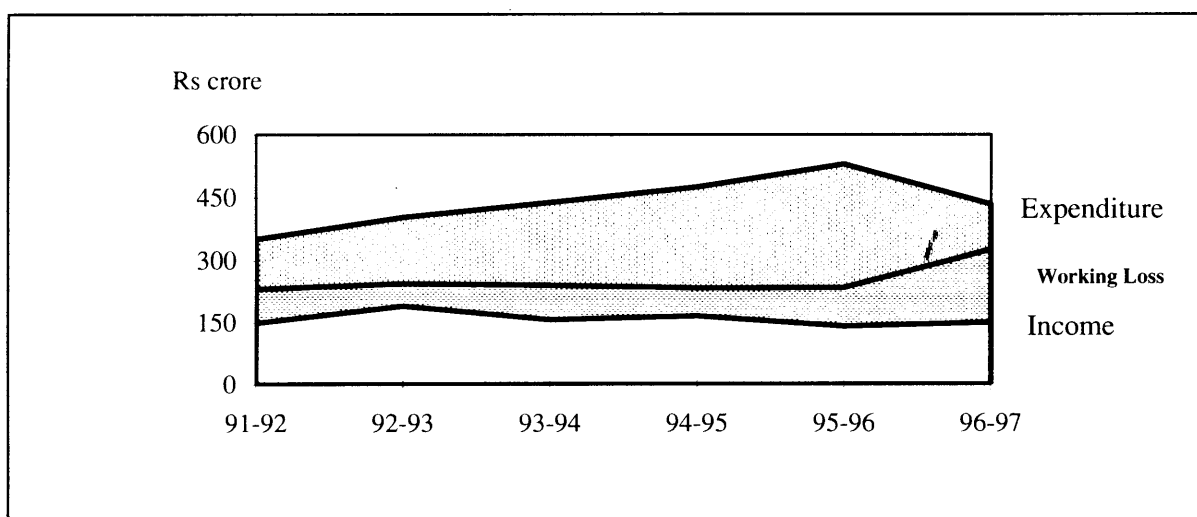
appropriate treatment and disposal. Like the DTC and DVB, the revenue income of DWSSDU has been unable to keep pace with its expenditure, and the DWSSDU has been incurring substantial deficits. It is in the context of this general background that their finances are analysed below.

## THE DELHI TRANSPORT CORPORATION (DTC)

The DTC runs two sets of services—a city service and an intercity service. In addition, it also manages a bus service under a private operators' (PO) scheme. In 1996–97, while it had a fleet of 2,682 buses, on an average, 1,648 buses were operated daily. The DTC's fleet as also the average number of buses on the roads has sharply dropped from a peak of 4,399 bus fleet and 3,860 buses on the road at the close of the financial year 1989–90. The fleet utilisation, which was high in the mid-1980s and early 1990s, has declined to a low of 53.7 percent in 1995–96. It improved to 61.8 percent in 1996–97. Similarly, the operational efficiency has also declined substantially over the period 1989–90 to 1996–97.

The DTC derives its income from the sale of tickets and periodic sale of scrap material; the main expenditure heads include wages and salaries, fuel costs, operation and maintenance of buses, payment to private operators, depreciation and interest payments. In 1996–97, the total traffic earnings and other miscellaneous income amounted to Rs. 149.9 crore. Against this, the total working expenditure was Rs. 326.5 crore, posting a working loss of Rs. 176.6 crore. In 1996–97, traffic and other earnings were able to cover only 46 percent of the operating expenditure and only 34.6 percent of the total expenditure. Total losses declined in 1996–97 compared with the losses in the earlier years on account of the writing off of loans and interest thereon, by the central government.<sup>2</sup> On a per kilometre basis, the total income of DTC in 1996–97 was 930 paise, while working expenditure (excluding depreciation and interest) was 2027 paise per kilometre. Thus, for every kilometre of service, DTC incurred a loss of 1097 paise. The working loss on a per kilometre basis has risen substantially since 1993–94, as may be seen in graph 6.

**Graph 6: DTC: Income–Expenditure Balance (Rs. crore)**



<sup>2</sup> The total loans and interest written off amounted to Rs. 2123.21 crore. These included a capital loan component of Rs. 415.08 crore; ways and means loan of Rs. 565.76 crore, and interest of Rs. 1142.37 crore.

A disquieting feature of DTC's finances lies in the overall burden caused by depreciation and interest on government loans. Notwithstanding writing off loans and interest liabilities upon transfer of DTC to the Government of NCT, losses on this account were 37.8 percent of the total losses in 1996–97. It is important to note that the 1996–97 commercial losses of DTC constituted 0.64 of Delhi GSDP, and 17.1 percent of the total income of the Government of NCT.

Viewed in another way, the accounts of DTC show that—

- i The index of DTC's income with 1985–86 as the base rose to 177 in 1996–97. Significantly, the income index of DTC remained virtually stationary between 1987–88 and 1990–91, moved upwards in 1991–92 and 1992–93, and has dwindled since then. In comparison, the index of working expenditure rose to 201.1 in 1996–97, with 1985–86 as 100. During the mid-1980s, it remained stable at the base level, registered a moderate increase in the early 1990s, and accelerated thereafter.
- ii Of the two main constituents of working expenditure, the index of labour cost which forms anywhere between 60–68 percent of the total working expenditure, rose to 225.8 during the 1985–86 to 1996–97 period. Excluding the *Fifth Central Pay Commission* factor would reduce the index to 211.3. The material cost index constituting 23.29 percent of the total working expenditure rose at a slower pace, notwithstanding a much sharper increase in the price of fuel, tyres and tubes.<sup>3</sup>
- iii Working losses per kilometre are far greater in the case of city service compared to those registered either with the inter-state service or under the PO scheme. In March 1998, losses per kilometre amounted to 800.7 paise for the city service, 324.9 paise for the inter-state service, and 335.6 paise under the PO scheme.

**Table 11: DTC: Revenue Account Income–Expenditure Balance**

Year	Revenue Account (Rs. crore)			
	Income	Expenditure	Working loss	Total loss
1	2	3	4	5(3-2)
1991–92	148.6	351.3	82.7	202.7
1992–93	189.8	403.3	54.9	213.5
1993–94	156.9	438.6	83.6	281.7
1994–95	165.9	475.2	68.3	309.3
1995–96	140.7	529.6	94.2	388.9
1996–97	149.9	433.6	176.6	283.7

- iv The DTC has a total staff complement of 30,460 persons, or 11.07 persons per bus. While the number of staff has declined from a peak of 42,183 in 1985–86, it is significantly higher than the

<sup>3</sup> The price of diesel, petrol and other lubricants rose from Rs. 3395 per 1000 ltrs in 1985–86 to Rs. 7958 in 1996–97. Similarly, the price of tyres (index), rose by 159 percentage points during the same period. See for details, Delhi Transport Corporation 1998. *Operational Statistics*, New Delhi.

prescribed norm of 8 persons per bus. Needless to say, maintaining a complement of staff at the prescribed level would reduce the labour costs by nearly 28 percent. Adherence to these norms would have reduced the working losses of DTC by at least 35.37 percent in 1996–97.<sup>4</sup>

**Table 12: DTC: Index of Financial Results**

Year	Income	Index		
		Working expenditure		
		Material	Labour	Total
1985–86	100.0	100.0	100.0	100.0
1990–91	146.5	137.5	158.5	127.7
1991–92	175.6	154.8	176.1	142.5
1992–93	224.3	154.0	189.6	150.8
1993–94	185.4	148.3	189.3	148.2
1994–95	196.0	139.1	186.4	144.3
1995–96	166.2	118.8	198.0	144.7
1996–97	177.1	147.1	225.8*(211.3)	201.1*

\* Including the impact of the recommendations of the *Fifth Central Pay Commission*. Figures in parentheses are exclusive of the impact of the recommendations of the *Fifth Central Pay Commission*.

- v Like most metropolitan transport systems, the DTC also provides concessional travel facility to students, residents of resettlement colonies, and senior citizens. There are also general all-route passes, passes to police and press, free passes to the disabled, freedom fighters, sportsmen, national award winners, and war widows and their dependents. The total amount involved in such concessions in 1996–97 was estimated at Rs. 26.8 crore or 16 percent of DTC's total revenue income.
- vi Compared to the metropolitan transport undertakings of Calcutta (CSTC), Mumbai (BEST) and Chennai (PTC), the performance of DTC in general is poor in respect of such indicators as (a) the percentage of overaged buses, (b) fleet utilisation, (c) staff per bus, (d) staff cost, and (e) cost per kilometre. Comparative statistics are seen in table 13.

Excessive staff, a very high proportion of semi-variable cost, and infrequent revision of bus tariff underlie the poor financial performance of DTC. In order to meet its recurrent expenditure, the DTC has had to often divert capital loans, which has adversely affected its plans to improve the quality of its buses. Breaking out of the current financial mess would require a multi-pronged strategy.

4 The DTC introduced a Voluntary Retirement Scheme several years ago, which, in fact, resulted in the retirement of nearly 6,000 employees. However, in view of the difficulties that arose with the operation of private buses, there has been a slow-down in the implementation of this scheme. The DTC now plans to expand its operations once again.

**Table 13: Performance of Metropolitan Transport Undertakings: A Comparison (1996-97)**

Indicators	DTC	CSTC	BEST	PTC
Percent of overaged buses	31.4	N.A.	15.1	12.2
Fleet utilisation	61.8	73.0	94.4	89.2
Staff per bus	11.4	9.0	11.7	7.8
Revenue per kilometre (paise)	1058	738	2095	1044
Cost per kilometre (paise)	2103	1837	2285	1295
Staff cost per kilometre (paise)	1116	1057	1192	636

### THE DELHI VIDYUT BOARD (DVB)/DELHI ELECTRIC SUPPLY UNDERTAKING (DESU)

The DVB, until recently DESU, is responsible for the provision of electricity to areas falling within the jurisdiction of MCD and supplying electricity in bulk to NDMC and DCB who, in turn, distribute it in their own areas. In 1996–97, the total electricity which was available for Delhi was 11554.1 mkWh of which about 23 percent was *locally generated* and the balance was purchased from *outside*, mainly from the central grid. There has been, at best, a tardy growth — annual average of 2.5 percent, in the total electricity that is available for Delhi. Neither has there been any noticeable increase in local power generation, nor has Delhi been able to negotiate a larger supply from the central grid, with the result that the DVB is unable to meet the rapidly increasing demand for power. Consequently, Delhi has been a victim of power breakdowns and load-shedding. Load-shedding, for instance, occurred on 338 days in 1997–98, representing a rather high point in an upward trend over the last several years. Other measures of technical performance have shown a similar pattern (see annex tables).

**Table 14: DVB/DESU: Supply of Electricity**

Year	Electricity (mkWh)		Sales as a % of total	
	Generation	Purchases	Total	
1992–93	2432.5	8084.9	10517.4	76.0
1993–94	2281.1	8644.8	10926.0	68.6
1994–95	2280.0	9693.2	11973.3	57.1
1995–96	2343.5	10039.1	12382.7	58.9
1996–97	2670.8	8883.4	11544.1	68.5
1997–98	2578.5	11833.5	14412.0	57.0*

\* Provisional

The NCT has, on a per capita basis, the highest consumption of electricity in the country. In 1994–95, per capita consumption for Delhi was estimated at 746 kWh compared with 319 kWh for all-India, and 599 kWh for Gujarat and 499 kWh for Maharashtra. Further, the pattern of electricity consumption in Delhi is in contrast with other states. While in the other states, a significant percentage

of consumption is accounted for by agriculture — with a national average of 29 percent, in urban Delhi, the agricultural sector consumes only 0.9 percent of the total electricity sold. On the other hand, households consume 45.8 percent of the total electricity sold; industry consumes one-fourth and the balance is consumed by the residual sectors. The oft-repeated argument that electricity boards in the country suffer losses in supplying subsidised power to the agriculture sector is, therefore, not applicable to DVB.

The revenue receipts of DVB/DESU consist of income from the sale of electricity, rental of metres, commission on collection of taxes on behalf of MCD, and other miscellaneous recoveries. Revenue expenditure of DVB/DESU comprises expenditure on general administration, expenditure on generation, operation, maintenance and distribution of power, and power purchased from outside. Other expenditure of DVB/DESU includes expenditure on debt and interest payments, and provision for renewal and replacement of machinery equipment and the like.

In 1996–97, the total revenue receipts of DVB/DESU amounted Rs. 1678.2 crore. Against this, the total revenue expenditure amounted to Rs. 2200.7 crore. Operating losses of DESU were estimated for this year at Rs. 248.7 crore and total losses at Rs. 522.5 crore, forming respectively 0.9 percent and 1.89 percent of Delhi's GSDP. DESU has had a long history of losses which has remained unchanged, notwithstanding the changes made in its organisational and managerial set-up. The growth in revenue receipts of the organisation has almost invariably fallen behind the rate of growth of revenue expenditure, resulting in DESU's continual dismal performance.

**Table 15: DVB/DESU: Revenue Account Income–Expenditure Balance**

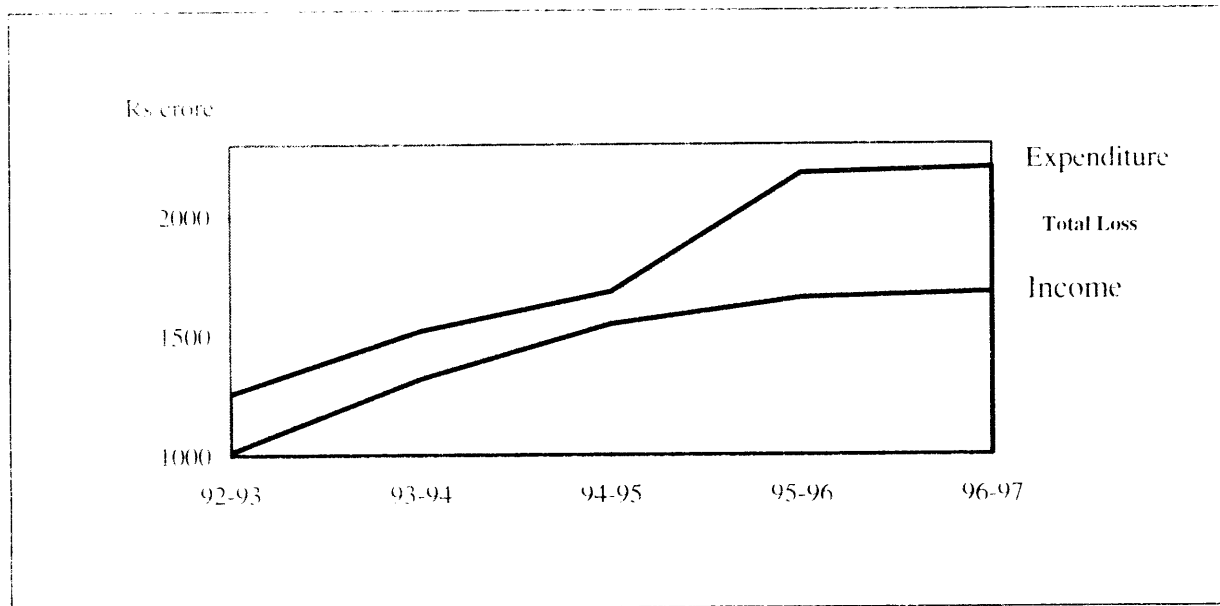
	Income	Operating expenditure	Expenditure	Loss/profit operating	Total
1	2	3	4	5 (3–2)	6
1992–93	1014.4	1125.73	1258.16	–111.33	–243.76
1993–94	1319.98	1355.51	1520.65	–35.53	–200.67
1994–95	1548.93	1485.2	1683.45	63.73	–134.52
1995–96	1656.77	1947.46	2179.2	–290.69	–522.43
1996–97	1678.19	1926.92	2200.71	–248.73	–522.52

What explains the losses? Is it the tardiness in revenue generation, or the inability to control expenditure? Several observations emerge out of a detailed examination of DESU's accounts—

- i* **Mounting transmission and distributional losses and other forms of leakages.** According to the published sources, the total losses or the difference between the total available electricity and the total electricity sold, were a massive 24 percent in 1992–93; 31.5 percent in 1996–97; and 43 percent in 1997–98. These losses reflect in part the fact that approximately 30 percent of Delhi's population live in unauthorised colonies where it has so far not been possible to provide regular connections. DVB's losses are also attributable to inadequate metering of connections, although this phenomenon is not as extensive as it is in other states. DVB estimates that its technical losses

are in the range of 15–20 percent.<sup>5</sup> Evidently, reduction in these losses will increase the income of DVB/DESU by anywhere between 15–20 percent.

**Graph 7: DVB/DESU: Income-Expenditure Balance (Rs. crore)**



- ii **Lag in tariff adjustment.** DVB/DESU, like other electricity boards, pursues a policy of price discrimination in the fixation of power tariff. In 1995–96, the average tariff (tariff earnings divided by the units sold) was 226.9 paise per kWh; the tariff differences between agriculture, household (or domestic), and industry was in the ratio of 1:1.77 (agriculture and domestic), and 1:4.77 (agriculture and industry). The ratio between domestic and industry was 1:2.69. Average cost of production and distribution of energy in 1995–96 was placed at 301 paise, which explains the continuing losses of DESU. Further working of the data shows that there is a loss of nearly Rs. 315 crore on supplying energy for domestic purposes; and a loss of Rs. 418 crore for other non-industrial purposes. Industry, however, neutralises part of the losses by generating a surplus of Rs. 213 crore.

Tariff in Delhi compared to the all-India averages is lower for domestic and industrial users. For agriculture, it is higher but on account of the fact that agriculture consumes only 0.9 percent of the total power, the higher tariff rate is not able to make any impact on the revenues of DESU.

<sup>5</sup> DVB's losses are similar to those incurred by many of the state electricity boards on this account. The Government of NCT argues that Delhi has special problems which has made the working of DVB/DESU particularly difficult. These problems include unplanned and haphazard growth of the city, large number of industrial units (135,000) in non-conforming areas, and unauthorised colonies and *jhuggi-jhonpuri bastees*. These problems exert serious constraints on the development of a proper electricity network, leading to high transmission and distribution losses.

**Table 16: DVB/DESU: Average Tariff (1995–96)**

Consumer category	Average tariff by consumer category as % of the overall average	
	NCT of Delhi	All-India
Domestic	50.6	65.2
Agriculture	28.6	17.4
Industry	136.3	155.2
Overall average	100.0	100.0

- iii ***Absence of leverage with the DVB/DESU to impact the cost structure of energy in Delhi.*** Power purchased from outside accounts for a little over 60 percent of the total expenditure by DVB/DESU in the production and distribution of energy in Delhi. Another 17 percent of expenditure is incurred on establishment, depreciation and interest charges which have shown tendency to rise at a faster rate compared with the other cost components. Both these facts leave little manoeuvrability with the DVB/DESU to be able to alter the cost structure of electricity and thereby reduce losses.
- iv ***Inability of DVB/DESU to collect its dues from municipal and other government bodies.*** DVB/DESU recovers approximately 88 percent of the total revenues that are billed to consumers. However, a number of municipal and government bodies owe substantial amounts to the DVB. According to the DVB, the Delhi Water Board/DWSSDU currently owes Rs. 108 crore to DVB. Total receivables from local bodies are estimated at Rs. 161 crore.
- v DVB's accumulated losses and dues to NTPC and Coal India Ltd., are approximately Rs. 5,000 crore which are three times its current annual revenue receipts. The recent policy pronouncement that these dues may be adjusted against plan allocations could seriously affect the overall budget size and also the plan outlays of the Government of NCT.

## **THE DELHI WATER BOARD/DELHI WATER SUPPLY AND SEWAGE DISPOSAL UNDERTAKING**

The DWB/DWSSDU is responsible for providing wholesome water to the population based in the MCD area. Under section 259 of the *Act*, it is also bound to supply water in bulk to NDMC and DCB, and to receive in bulk their sewage. Over the past several years, there has been a phenomenal growth in the demand for water supply and sewage disposal facilities. In 1985–86, the supply of water was estimated to be 350 million gallons per day (mgd). The water requirements at the end of the Seventh Five Year Plan were estimated at about 590 mgd while the supply was only 417 mgd. In 1996–97, the demand supply gap was placed at about 220–225 mgd. The sources of water for Delhi are limited and consist mainly of supply from the river Yamuna that passes through several states, use of which is subject to inter-state agreements. The DWSSDU has made efforts to augment water supply by tapping underground water resources but a substantial gap exists between demand and supply. Essentially the same position persists for sewage which is far greater in quantity than the sewage treatment capacity. The disposal of untreated sewage constitutes one of the major pollution hazards in Delhi.



The DWSSDU derives its income from water tax and charges, scavenging tax, bulk sale of water to NDMC and DCB, and payment received from NDMC for sewage treatment and disposal. Its expenditure consists of expenditure on the cost of raw water, debt charges, general administration, repairs and maintenance, and other staff-related expenses.

The accounts of DWSSDU are maintained in two parts: one relates to bulk supply of water to NDMC and DCB which is maintained on commercial lines, while the second relates to the internal distribution of water to the MCD area whose accounts are maintained on a cash basis. The former accounts reveal that the DWSSDU's income in 1994–95 was Rs. 9.06 crore and the actual cost to DWSSDU for producing and supplying water to these two bodies was Rs. 9.16 crore. In 1996–97, the income of DWSSDU and the cost to DWSSDU for supplying water had risen to Rs. 11.88 crore and Rs. 12.00 crore respectively. DWSSDU thus incurs a loss on water transactions with NDMC and DCB. However, compared to the total water transactions, these losses are minor and are of little significance.

**Table 17:** Loss to DWB/DWSSDU on Account of Bulk Sale of Water to NDMC and DCB

Year	NDMC				DCB			
	Water sold (million ltrs)	Income (Rs. crore)	Cost (Rs. crore)	Profit/loss (Rs. lakh)	Water sold (million ltrs)	Income (Rs. crore)	Cost (Rs. crore)	Profit/Loss (Rs. lakh)
1994–95	51,111	7.41	7.49	-8.26	11,353	1.65	1.66	-1.83
1995–96	54,225	7.94	8.03	-8.57	12,601	1.85	1.87	-1.98
1996–97	57,951	9.82	9.91	-9.46	12,165	2.06	2.08	-1.99

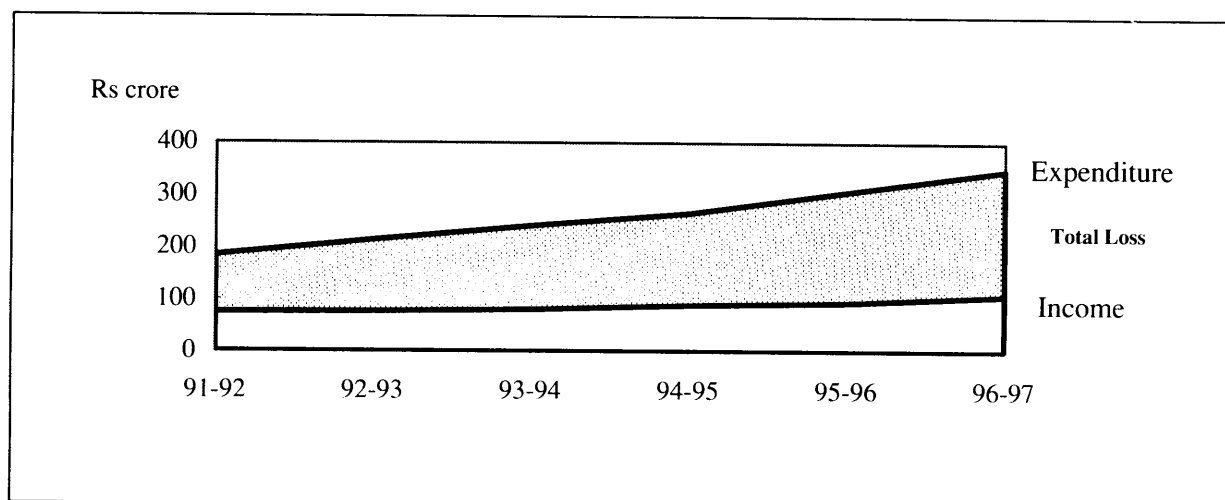
The overall finances of DWB/DWSSDU are in an extremely poor state. Income of the organisation has, over the period 1991–92 to 1996–97, risen by about 44 percent; in comparison, its expenditure including debt charges, has increased by 88 percent. The total losses of DWSSDU which were about Rs. 109 crore in 1991–92, had risen to over Rs. 239 crore in 1996–97. The unpaid loans in the year 1996–97, the last year for which actuals are available, were estimated to be Rs. 194 crore. The most disconcerting feature of DWSSDU's accounts is that the accumulated deficit has reached a staggering amount of Rs. 1507.1 crore, or 5.5 percent of Delhi's GSDP. Accumulated losses have increased by 160 percent over this period, indicating that no action was taken during this period to address the issue of losses by either designing policies to augment the income or controlling the expenditure.

The main expenditure head for the DWSSDU is the cost of water. In 1994–95, the cost of water was 67 percent of the total expenditure. Other key expenditure heads included expenditure on administration (20.2%), debt charges (14.8%), and collection of water charges (3.4%). The share of expenditure on administration and debt charges has consistently increased over the past five years.

As in the case of the DVB/DESU, the DWB faces the problem of unaccounted-for water. Estimates of the unaccounted-for water are not available but there is said to be extremely high. In addition to the loss of income due to unaccounted-for water, DWB's income is equally affected by relatively low water rates. The result is that the income of DWB has fallen behind expenditure, resulting in mounting deficits. In order to meet the recurrent expenditure, DWB has resorted to using the typical routes, such as that of seeking ways and means loans, deferment of interest payments, and making use of capital loans.

**Table 18:** DWB/DWSSDU: Revenue Account Income-Expenditure Balance

Year	Revenue account (Rs. crore)				
	Income	Expenditure	Loan account not paid	Total losses	Accumulated deficit
1991-92	75.03	184.97	87.88	109.9	579.55
1992-93	76.81	231.41	105.89	137.5	717.07
1993-94	80.62	241.31	124.45	160.7	877.77
1994-95	89.05	265.83	144.63	176.8	1054.56
1995-96	94.45	307.28	173.82	212.8	1267.40
1996-97	107.86	347.76	194.50	239.9	1507.10

**Graph 8:** DWB/DWSSDU: Income-Expenditure Balance (Rs. crore)**Table 19:** DWB/DWSSDU: Expenditure on Establishment and Interest Charges (Cash Account)

Year	As percentage of Total Expenditure on Revenue Account	
	Establishment	Interest charges
1991-92	18.9	13.5
1992-93	18.2	14.2
1993-94	18.3	14.0
1994-95	20.2	14.8
1995-96	20.9	15.8
1996-97	21.9	15.4

The losses of DWB/DWSSDU relate to both water supply and sewage disposal. Sewage disposal services are collective in nature, and are, therefore, charged indirectly by levying a 5 percent tax on the rateable value of the property. This scale of levy is far too low in relation to the total cost involved in the collection, treatment and disposal of sewage. Moreover, because it is linked to the rateable value, it carries the inadequacies of the rateable value as being the measure of property values. Income from sewage disposal is only a fraction of the total cost incurred on this activity. During the period 1994–95 to 1996–97, this income has been in the range of 8–9 percent of the total cost. It is important that anywhere between 40–60 percent of the losses of DWB/DWSSDU are on account of this service.

## CONCLUSION

That the finances of Delhi's three most important public utilities are in a dismal state is evident from the above analyses. Taken together, the total losses of DTC, DVB/DESU, and DWB/DWSSDU amounted to Rs. 1,045 crore in 1996–97, or 3.8 percent of Delhi's GSDP and nearly 37 percent of NCT's total revenue income. Their accumulated losses are massive—approximately Rs. 5000 crore in the case of DVB and Rs. 1507 crore of DWB/DSEEDU.<sup>6</sup> In reality, these losses are in the nature of perpetual loans, and merely carried over in the accounts from one year to the next. No other aspect of the finances of the Government of NCT is as disconcerting as the fact of the losses of DTC, DVB/DESU, and DWB/DWSSDU, collectively attributable to off-system leakages, thefts, relatively lower tariff, their infrequent adjustment to costs, and at least in the case of DTC, oversized organisation. Moreover, these organisations appear to be in a vicious trap: because they incur losses on revenue account, they are unable to meet their interest obligations; and because they are not able to meet their interest obligations, the government adjusts these obligations towards capital loans which in turn, affects their plans to augment the services. Breaking out of this trap constitutes one of the most important fiscal challenges for the Government of NCT.

Two observations are necessary to be taken note of in designing any reform agenda for these organisations. One, is the dependence of Delhi on external sources for its electricity and water requirements. As stated earlier, this dependence is extremely high. It is unlikely that Delhi will be able to reduce to any appreciable extent, its dependence on external sources. This factor has a crucial bearing on the cost structure of DVB and DWB and needs to be explicitly recognised in any agenda for improving their financial performance. It also impinges on the inter-state arrangement and agreements, calling attention to the role of non-fiscal initiatives in improving their financial performance. A second observation concerns the losses on account of illegal connections, thefts and leakages. Tackling losses on this account constitutes the single most important agenda for this utility. Indeed, it will be crucial for ensuring the success of other reform measures such as privatisation, adjustment of tariff and the like. These are discussed in section V of this study.

<sup>6</sup> DTC's losses were absorbed by the central government upon its transfer to the Government of NCT.