

while Section 3.2 deals with the modeling of x-inefficiency effects. The database is described in Section 4. Section 5 comments on the empirical results, discussing both the technology properties (Section 5.1) and the evidence on cost inefficiency (Section 5.2). Section 6 summarizes the major findings and provides some policy indications.

2. Subsidization mechanisms and incentives

A common feature of the regulatory framework of public transit systems in most countries is the provision for transfers from the local authority to the LPT firm. Since the latter face universal service obligations, commercial revenues are generally not high enough to cover operating costs. The payment of a subsidy is then required to ensure the balance of the budget. In 1995 the share of public subsidies over operating costs for the Italian bus-line companies amounted to about 71%. The LPT industry in Italy has been interested by several important regulatory interventions during the last seven years, in the effort to reduce the waste of public funds spent on collective transport.² In 1995, Law 549 implied the abolition of the old system of redressing deficits of LPT firms through resources drawn on the National Transport Fund, a central government grant system properly created for this purpose. The opportunity cost of public funds was thereby transferred to the Regions, who are nowadays in charge of the programming of services. Subsequently the Reform has been implemented by the *Decreti Legislativi* 422/1997 and 400/1999.

An important innovation that the legislator tried to introduce in the organization of local public transport is the increase of the financial responsibility of all the subjects operating in the sector, i.e., local authorities and LPT firms. The purpose is to better select which public service deserves to receive subsidies³ and to stimulate the recovery of productive efficiency by transportation companies. Here the necessity comes to eliminate the transfers from the central government and to replace them with forms of taxation at regional level, in order to make binding for local authorities any measure for an efficient use of public resources. In parallel, the reform dictates that the relations between the regulatory subject and the transit service provider are governed through the so-called *service contract*, a formal agreement which defines the rules that the LPT

² The Italian regulatory framework is analyzed in detail in Piacenza (2000b) and Boitani and Cambini (2001a).

³ *Decreto Legislativo* 422/1997 names these categories “minimum services”. In practice, the definition of minimum service should correspond to the level of service that a community wants to make universally and actually affordable to each of its member, normally at non-market special tariff conditions.