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Regulatory Constraints and Cost Efficiency of the Italian Public Transit Systems: An Exploratory Stochastic Frontier Model*

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Abstract

The core of the present study is to analyse the cost efficiency of public transit systems in Italy, investigating the way subsidization mechanisms and network characteristics affect the x-inefficiency levels of firms. The analysis uses a seven-year (1993-1999) unbalanced panel of 45 Italian public-owned companies run under two different regulatory schemes (cost-plus or fixed-price). A stochastic cost frontier is estimated by applying the Battese and Coelli (1995) econometric model, which allows the inefficiency measures to depend on observable factors that are firm-specific and can vary over time. The results provide some insights regarding the appropriate mechanism of granting subsidies, and in turn they are useful for assessing the ongoing reform of the sector. The evidence indicates that there is scope for transport policy to increase cost efficiency. Efforts have to be intensified in the twofold direction of replacing cost-plus subsidization mechanisms with high-powered incentive schemes and improving exogenous operating conditions of the network. The latter goal could be pursued by acting on factors such as the road space allocation (exclusive lanes for trams and buses, parking and private traffic regulation), or the provision of incentives for the use of public modes.

Key words: Local public transport, Cost efficiency, Regulation, Stochastic frontier

JEL: C13, C24, L51, L92, R41

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