

level of average commercial speed⁷⁵. On the other hand, the modest effects of the regulatory change detected for some units in the sample, or even deterioration in the performance showed by others, is possibly imputable to worsened operating conditions⁷⁶, i.e., lower network speed, in addition to the impact exerted by time and the exogenous shocks captured by the stochastic term w_{ft} that can have unfavorable repercussions on cost efficiency.

So far we have focused on the differential impact of regulatory schemes over time, by comparing predicted inefficiencies for a given LPT company before and after the introduction of a fixed-price mechanism. To better highlight the separated effects on cost efficiency of the regulation and network characteristics, as well as the relevance of their mutual interaction, it may be convenient to fix the attention on cross-sectional comparisons among firms. In fact, it is in this context that the most marked variability in both the subsidization rules and the levels of average commercial speed is observable. In such a way, we are also able to exploit the inefficiency estimates concerning companies for which a time-serial match of the two types of regulation is not possible, because of the lack of information over the period leading up the adoption of fixed-price schemes (e.g., Firm 3, Firm 8, Firm 18).

To our end, we concentrate on the individual predicted inefficiencies pertaining to years 1996, 1997 and 1998. We have chosen this sub-period since, excepting Firm 41, for which a fixed-price oriented scheme is in force from 1997 only, the other 43 companies of our sample are univocally characterized by a definite regulatory mechanism during this years. In order to leave aside time effects, we calculated a mean inefficiency level over the period for each operator and considered the x-inefficiency values as average realizations of a specific subsidization rule. This allows us to classify the LPT firms on the basis of their inefficiency levels and to interpret the ensuing ranking in terms of the different regulatory schemes and network characteristics faced by each company. The list is presented in Table 5. Instead of reporting $\hat{C}I_{ft}$, we computed the percentage increase in costs due to x-inefficiency from the expression $\{\hat{C}I_{ft}-1\}$, so the entries in Table 5 can be directly taken as mean cost distortions over the frontier between 1996 and 1998. They have been ranked from the best performance (Firm 44), characterized by observed operating costs that are, on average, 2.07 percent only above the frontier, to the worst performance (Firm 25), for which the cost

⁷⁵ It is the case, for instance, of Firm 43, which reduced its level of x-inefficiency by about 42% between 1995 and 1996, or Firm 33, for which the recovery during the same period reached about 60%.

⁷⁶ Firm 14 and Firm 35, for example, faced a decline in their network speed level between 1995 and 1996; while during the same period their cost inefficiency increased by about 21% and 115%, respectively, despite the transition to fixed-price reimbursement schemes. The performance deterioration exhibited by Firm 35 is drastic because of the already poor level of commercial speed faced in 1995 (16.5 kms/h).