Fazioli et al. and Levaggi focused only on the extra-urban and urban transport respectively; Fabbri analyzed both compartments. Levaggi works on a sample of companies operating throughout Italy, while Fabbri and Fazioli et al. concentrate only on a region of North-Italy (Emilia Romagna). The three studies differ also in the measure of the output: vehicle-kilometers and seat-kilometers (both "supply-oriented" measures) in Fabbri and Fazioli et al. respectively, passenger-kilometers ("demand-oriented" measure) in Levaggi.

Table 2. Econometric cost studies on the Italian LPT sector

Authors	*Type of Model*	*LPT sample*	*Output*	*Economies of scale* (*mean point values in parenthesis*)
Fabbri (1998)	Variable cost function, translog form	9 urban and extra-urban bus companies, Region Emilia Romagna, 1986-1994	Vehicle-kms	- high economies of size in both the short (1.66) and the long run (1.71); - importance of size economies decrease with increasing firm dimension.
Fazioli, Filippini and Prioni (1993)	Total cost function, translog form	40 extra-urban bus companies, Region Emilia Romagna, 1986-1990	Seat-kms	- high economies of size (1.70) and network density (2.61); - importance of size and network density economies decrease with increasing company dimension.
Levaggi (1994)	Variable cost function, translog form	55 urban bus companies, Italy, 1989	Passenger-kms	- very high economies of use intensity in both the short (8.29) and the long run (5.40); - relevant size economies in the short run (1.43) but weak size diseconomies in the long run (0.92); - relevant network density economies in the short run (1.38) but weak network density diseconomies in the long run (0.89).

Source: Piacenza (2000b)

buses in Fabbri (1998).

[16] Levaggi (1994) underlines (page 71) that the main consequence of the grants-in-aid program providing funds to purchase capital has been that «the price of capital the firms face is much lower than its actual price. If this is the case, the firms are no longer minimizing costs with respect to all inputs in the short run, rather they minimize costs with respect to the variable inputs».