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Asymmetric Incentives of Private and Public Firms to Labour-Saving Technical Progress: Evidence from the Italian Motorways Industry

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Abstract

Although the superior performance (in terms of productivity or technical efficiency) of private vs public firms has been widely documented (Meggison and Netter, 2001 and Estrin *et al.*, 2009), only a dearth of paper has gone beyond simple productivity or efficiency comparison finding that the latter tend to be overstaffed (Borghi *et al.*, 2010) and have a lower growth rate of productivity (Elrich *et al.*, 1994).

We exploit a proprietary database covering the motorway industry in Italy to contribute to the literature on the specific production choices of public owned firms leading to their lower performance. We use a longitudinal dataset containing information on all 21 Italian motorway concessionaires over the years 1992-2007, mostly of which have been privatized within the years covered by our data. By estimating a cost function through a SUR model with fixed effects, we confirm the previous results (Benfratello *et al.*, 2009) that a significant technological progress of the order of 0.3% per year and a cost advantage of private firms of 2% exists. We then depart from previous literature by showing the non neutral (labor saving) nature of technical progress, mainly because of the introduction of new technologies for toll payments. We also find that private firms enjoy a higher technological progress than public ones, thereby showing that privatization does not lead only to a one-shot increase in productivity but also a higher growth rate over time. Finally, we find that only private firms enjoy a non neutral technical progress: faced with the new technological opportunities, private firms introduce the new technology whereas public ones do not.

The finding of a different reaction to labor saving technical progress of public and private firms is a new empirical results that qualifies previous findings of a lower productivity performance of public firms. This finding has several theoretical justifications: the traditional view in public finance and welfare economics (e.g. Musgrave, 1954; Atkinson and Stiglitz, 1980; Pestieau, 2009) which stresses the “social role” played by public firms and ensuing multidimensional objectives, among which employment policies; the theory of incomplete contracts (Hart, Shleifer and Vishny, 1997 and Shleifer, 1998) which posits that managers in public firms have relatively weaker incentives to make innovation and cost reducing investments; the recent strand of political economy literature (e.g. Shleifer and Vishny, 1994, 1998; Besley, 2006) which recognises that state-owned enterprises may have assigned distorted objective functions, involving the pursuit of politicians’ individual goals.