company must obey as well as the reimbursement and risk sharing scheme between the regulator and the operator[4].

After the enactment of Law 549, subsidization practices began to develop differently in Italy. Before 1996, all LPT systems were run under cost-plus regimes, characterized by the full recovery of budget losses by local authorities[5]. According to this scheme, known in the regulatory practice as *management contract* (European Commission, 1998), the operator does not bear any risks on costs (industrial risk) and revenue (commercial risk). Thus, in the light of the new theory of regulation (Laffont and Tirole, 1993), it has no incentives to produce efficiently. From 1996 onwards, some municipalities introduced alternative reimbursement mechanisms that, even if not formalized within a proper service contract yet, virtually overcame the ex-post balancing of accounts: the *gross cost schemes*, under which the industrial risk is entirely borne by the operator while the commercial risk is borne by local authority, and the *net cost schemes*, that provide for the assumption of both types of risk by the company. These two types of contractual arrangements are traceable to what the theory of incentives in regulation names fixed-price schemes. In both cases, the transfer from the local authority is defined ex-ante, on the basis of expected operating costs (gross cost approach) or expected operating deficits (net cost approach), and realized costs/deficits that deviate from the fixed criteria will not influence the level of subsidies. Thus, compared to companies under the traditional cost-plus regime, the operators facing fixed-price mechanisms are assumed to confront high-powered incentives towards a cost minimizing behavior.

It is worthwhile to underline that both cost-plus and fixed-price schemes are not optimal rules in the sense specified by the new theory of regulation. According to this approach, because of the presence of informational constraints, optimal mechanisms must solve the trade-off between the efficiency incentives typical of fixed-price schemes and the rent extracting properties of a cost-plus regulation[6]. The complex problem of designing an optimal contract is out of the scope of our study[7], since only fixed-price or cost-plus schemes are practiced at the present time in the Italian LPT industry. Given the above discussion on the two regulatory mechanisms, the present paper is aimed at investigating if transit companies run under fixed-price regimes are more cost efficient due to the fact that they face stronger incentives to increase

[4] The contents of the service contract are define in detail by article 19 of *Decreto Legislativo* 422/1997.

[5] An exception is represented by Bolzano ACT-VVB, already subjected to a standard-cost regime from 1989.

[6] See Laffont and Tirole (1993) for a complete description of this problem.

[7] In this regard, see Wunsch (1994), Dalen and Gomez-Lobo (1995, 1997) and Gagnepain and Ivaldi (1999), and for an application to the Italian regulatory framework, Boitani and Cambini (2001b).