

**Abstract:** We investigate how cost conditions of private firms affect optimal privatization policy and private firms' profits. We find that the optimal degree of privatization is decreasing with the costs of private firms unless the public firm is fully privatized in equilibrium. A cost reduction in a private firm increases the degree of privatization and benefits for all private firms. Therefore, each private firm's profit is increasing with its rival private firms' costs, which is in contrast to the result when the degree of privatization is given exogenously. This interesting property yields two important results. The profit of each private firm can increase with the number of private firms, and the positive externality of innovation accelerates private firms' R&D.