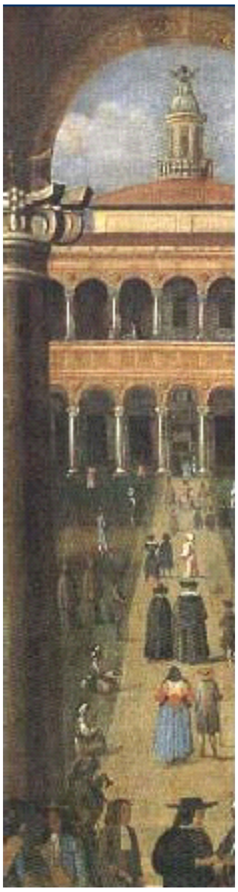

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Public Enterprises – Objectives and Performance

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Abstract: Public ownership is a way to provide goods and services where market performance is not satisfactory, or when the economy would otherwise be stagnant, provided that its costs do not overshadow its benefits. We provide a brief review of the existing theoretical and empirical literature. While far from exhaustive, the review suggests that there is no unanimous body of research showing that public ownership is inefficient to such an extent that private ownership is always socially superior. More research is needed on the costs and benefits of different forms of ownership, and we emphasise the need of analysing potential intrinsic motivation, service quality and the impact of international competition. Moreover, the fact that privatisation has often been implemented through outsourcing suggests a need of analysing renationalisation through buyer power.

Keywords: public ownership, cost efficiency, intrinsic motivation, quality, international competition, renationalisation
JEL-classification: H41, H42, H44, L32, L33

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1. Introduction: Why Public Enterprises?

State enterprises in market economies have usually emerged not in order to replace private producers that work properly, but as a solution where markets would otherwise fail. This also explains why public ownership is still prominent in such industries (Florio, 2014). Profit maximisation would for example lead to excessive prices in a natural monopoly, or because of a natural monopoly bottleneck such as the rail network. To produce public goods would on the other hand not be profitable, because non-payers (who are associated with zero marginal costs) can free-ride.

State enterprises with wider objectives than profit maximisation may also reduce the profit margins in an oligopoly. The market is then a so called *mixed oligopoly* (De Fraja and Delbono, 1990). Such markets have existed at least in the UK (Vickers and Yarrow, 1988: 127, 130-34), Argentine (Xu and Birch, 1999), Finland (Miettinen, 2000; Willner, 2006), the U.S. (Martin, 1959), and France (Sheahan, 1966).

The state has also established companies because of a lack of private venture capital for example in several industries in Finland (Willner and Grönblom, 2016a). Similar reasons also partly explain public ownership in the generation and transmission of hydroelectric power in the US (Hausman and Neufield, 1999). Related motives are post-war restructuring in for example Austria, Germany, and Italy, and countercyclical policies in for example France, Germany, and the UK (for details, see Willner, 2003).

There is evidence for a positive relationship between economic growth and the size of the public enterprise sector (Fowler and Richards, 1995).[1] This calls for a revival of the notion of a potential economic surplus (which includes unemployed resources and resources that are mis-spent on luxuries and military equipent) in stagnant or less developed countries (Baran, 1962). Growth would be generated by spending these resources on productive investments.

2. Reasons for Privatisation and Liberalisation

Despite early examples such as in West Germany in the 1950s and 1960s and Portugal and Chile in the 1970s, the privatisation wave did not take off until Mrs Thatcher's second

[1] Finland's growth is consistent with this result: GDP was higher in 1998 than in 1913 by a factor of 8.7, which is second only to Japan (Maddison, 2001: 264).

government in Britain 1983-1987. There was then no established body of research supporting the notion that the social costs of public ownership would overshadow its benefits. Professional economists were often sceptical. A privatised monopoly was not usually seen as beneficial, but competition was not always seen as feasible (Kay and Thompson, 1986; Vickers and Yarrow, 1988).

The political rhetoric in Britain emphasised cost efficiency (Ikenberry, 1990; Thatcher, 1993: 676-677), partly inspired by influential think tanks (Pirie, 1988). The monitoring and cost-cutting incentives were seen as stronger in private firms that can go bankrupt or become subject to hostile takeovers (*Bureaucrats in Business,* 1995). The same applies to some other countries, but to a lesser extent than usually believed (for details, see Willner, 2003). Mrs Thatcher's memoirs also reveal an ideological component (Thatcher, 1993: 676-677), which was present also at least in Portugal and France (Parker, 1998). The necessity of following the bandwagon dominated the rhetoric in other countries, like Denmark, Finland, and the Netherlands (Willner, 2006; Hulsink and Schenk, 1998).[2]

Recent research emphasises on the other hand the motive to raise revenues, as highlighted by the Government's priority to sell not the weakest but the most successful of the British state enterprises (Parker, 2009). A fundraising motive occurred in Finland, France, and Germany as well. Other motives include widened share ownership, elimination of distortionary political objectives, encouragement of R&D and other investments, and elimination of disloyal competition (for details, see Willner, 2003).

Most of the other objectives can be better reached through other means than complete privatisation and will therefore below get less attention than cost efficiency. Fundraising and widened share ownership can for example be achieved through partial privatisation in several industries rather than full privatisation of one firm.[3] Distortions caused by selfishness (see section 5) can be eliminated also by granting autonomy (such as

[2]"Certainly, for a small and open economy such as the Netherlands it would be difficult to ignore developments elsewhere in Europe. Thus, the Dutch privatisation programme can be described as a 'curtsy to the times' rather than the result of a positive, grand design to revitalise the economy." (Hulsink and Schenk, 1998: 255.)

[3]Privatisation may also be counterproductive: dividends are lost, assets cannot be sold twice, and widened share ownership through undervaluation just means that assets are re-sold to large investors (Vickers and Yarrow, 1988; Bös, 1993), thus causing a housing bubble (Lashmar, 1994).

for listed companies, independent central banks, and traditional public-sector universities). Such distortions are believed to include excessive employment and/or output in public firms in order to please voters (Boycko, *et al*., 1996; on excessive quality, see section 5).[4] But why would privatisation prevent such selfish decision-makers from causing similar distortions through taxes, and subsidies? Would these decision-makers be able to achieve adequate asset pricing and successful post-privatisation regulation? (Note also the prediction that public ownership would work better under dictatorship if the basic problem is a desire to please voters!)

The motive to encourage R&D is about dynamic efficiency, i.e. low costs (or new products) in the future. However, welfare maximisation as such would strengthen the incentive to invest in cost-reducing activities. Inadequate investments would therefore either reflect static inefficiency (inefficiently organised R&D) or a political distortion (an unwillingness to maximise welfare), as addressed above and in section 5. As for funding other types of investments, this motive it is valid only if state-owned firms for some reason have restricted access to the banking sector.

To eliminate predatory competition (and/or need of subsidies) as caused by wider objectives (Berne and Pogorel, 2005; Clifton et al., 2006; Bös, 1993; Haskel and Szymansky, 1992) has been another motive, not least because of EU-regulations. However, higher output levels or lower prices than under profit maximisation are anti-competitive only if a firm's *purpose* is to become a profit-maximising monopolist, but not if they conform to its objective function (De Fraja, 2009).

Finally, privatisation is often advocated as a response to globalisation. Divestiture often means selling companies to international investors (Florio, 2013), and capital mobility without federalism is often perceived as calling for a 'narrow straightjacket' of deregulation, low taxes, and privatisation (Rodrik, 2000). However, what matters is then not so much ownership but the firm's behaviour, which can be addressed without changing its ownership (see however section 5).

3. Cost Efficiency: Empirical Findings

Privatisation does indeed often increase profitability (Dewenter and Malatesta, 1997), but

[4] The welfare effect of privatisation would then be ambiguous under imperfect competition, because of a bias in the opposite direction (Willner, 2001).

high profits may then reflect the market failure that was previously addressed through a lower emphasis on profits. It is therefore more meaningful to look at cost efficiency and total factor productivity. The inferiority of public ownership is often treated more or less as a stylised fact (Boycko, *et al*., 1996; Bradburd, 1995; Norbäck and Persson, 2012), but privatisation in Britain affected cost efficiency in both directions, and improvements generally took place before divestiture (Martin and Parker, 1997; Florio, 2004).[5] A study of 39 firms in Italy suggests higher labour productivity but no significant increase in total factor productivity (Fraquelli and Erbetta, 2000). Similar results have been reached in Austria (Dockner et al, 2005). Results on other performance dimensions than profitability are mixed and most improvements took place in the run-up to privatisation also according to Dewenter and Malatesta (1997, 2001), who studied an international sample of 500 firms. Similar mixed results are reported also in a meta-study by Hodge (2000).[6]

Another line of research compares firms under different ownership. Studies or meta-studies such as Millward (1982), Boyd (1986), Molyneux and Thompson (1987), and Iordanoglou (2001) do not support the negative view of public ownership.[7] Moreover, the distinction between services and industrial production adopted in Willner (2001) suggests a pattern among the seemingly conflicting findings. Costs tend more often to be higher under public ownership among labour intensive service producers. This applies to 7 out of 13 studies on refuse collection. Similar findings are reported also when it comes to transport, hospitals, health and social care (but insurances appear as better organised under public ownership). However, such comparisons are difficult to interpret if higher quality

[5] Martin and Parker conclude that their investigation: ”...provides little evidence that privatisation has caused a significant improvement in performance. Generally the great expectations for privatisation evident in ministerial speeches have not been borne out. Certainly, privatisation has been associated with improvements in some of the eleven firms studied, especially in terms of profitability and value added per employee, although what performance improvement there was often pre-dated privatisation.” (Martin and Parker, 1997: 217)

[6] This ambiguity does not necessarily contradict Megginson and Netter (2001), who focus on third-world and transition economies with weak governance traditions, while ignoring many contributions referred to in the present overview or in its sources.

[7] Borcherding *et al.* (1982), who are often cited in support of privatisation, warn against premature conclusions and emphasise the importance of competition. Moreover, many of their sources are non-academic contributions, including municipal reports.

costs more, as in most of these industries.[8] Costs may in addition reflect wages and working conditions, and thus also income distribution and social justice.

Such factors are less prominent in the industrial production of relatively homogeneous goods. For example, public ownership is at least no worse and often even superior in cement and plastics, electricity, and water (Willner, 2001).[9] The tendency to privatise electricity and water, where privatisation would also lead to high profit margins because of low demand elasticity (Willner, 2000/1996), is therefore surprising.

Analysing the production function is an alternative if an industry is not mixed or if no privatisation has taken place. This suggests that postal services and railways (in 19 and 22 countries respectively) were fairly efficient in the 1980s (Deprins, *et al*., 1984; Perelman and Pestieau, 1988).

As for the significance of competition, it seems that exposure was no guarantee for higher post-privatisation efficiency at least in Britain and Italy, as also highlighted by the British car industry (Martin and Parker, 1997; Fraquelli and Erbetta, 2000). Moreover, privatisation in an oligopoly can lead to higher prices despite somewhat lower costs.

Privatisation and competition in a network industry can cause the upstream monopoly to reduce its spending on the bottleneck infrastructure (Buehler, 2005), as highlighted by the staff reductions in rail and gas pipe maintenance (12,000-16,000 and 1000 persons respectively) in Britain in the 1990s (*Guardian*, 3 April, 2001 and 18 June, 2001). Deregulation and unbundling have been blamed also for the Californian electricity crisis in 2001 (Lijesen, *et al*., 2001). The benefits of vertical integration in the electricity industry might on the other hand amount to 13% for the median firm and 15-20% for larger firms in a European sample (Gugler et al., 2014). There is evidence of benefits from vertical integration also in European railways (Cantos-Sánchez, 2001; Pittman, 2003, 2005). The British upstream monopolist had to become non-profit maximising after safety concerns (Crompton and Jupe, 2003, Newbery, 2006). Moreover, state ownership did no harm to the Canadian and US railways (Caves and Christensen, 1980; Caves, *et al*., 1982), and the British restructuring failed to reduce the need of subsidies (Shaoul, 2004; Newbery, 2006). Such experiences suggest that the EU should revise its policy towards network industries (Martin et al, 2005).

[8]For example, some public or voluntary health-care providers in the US were less costly (Willner, 2001), but they may represent low-quality services for low-income groups.

[9]On the water industry, see also Abbott and Cohen, 2009, and *Utility Week,* 5 July 2011

Despite different views on privatisation and liberalisation in general, telecommunications (which are no longer associated with a natural monopoly infrastructure) are usually seen as more suited for restructuring than railways (Newbery, 2006, Pittman, 2005). Telecommunications became cheaper, but in the US and Europe at least partly because of technical progress and regulation (MacAvoy, 1998; Taylor and Taylor, 1993; Sung, 1998; Daßler et al., 2002). Moreover, despite initial quality improvements (Boylaud and Nicoletti, 2000), there were also signs of subsequent deterioration (van Dam and Went, 2001; Stephen, 2001). The market is seen as confusing, and there are concerns about universal access, as highlighted by the need to reduce the digital divide (*The Guardian*, 14 October, 2001; Clifton, 2011; Florio, 2013).

4. Cost Efficiency: Theoretical Results

Higher costs under public ownership are usually explained by lower incentives to reduce costs. An owner-manager who is exposed to competition has incentives to cut costs, but public firms are run by a manager who is usually assumed to value incomes and dislike efforts. She is assumed to know more than the owner about the state of nature. To prevent her from shirking, pretending that costs are high because of unfavourable conditions, she must get an incentive to reveal the true state of nature, without reducing her utility below the outside-option level.

Public enterprises usually occur in industries with firms that would be managerial also if privatised. Private firms would indeed be more efficient if such selfish managers do not get performance-related pay only under public ownership.[10] However, state enterprises with performance-related pay and wider objectives would in fact be *more* efficient (De Fraja, 1993; for extensions to a market setting and active and passive ownership, see Willner and Parker, 2007, and to network industries, see Willner and Grönblom, 2013).

The intuition for the superiority of public ownership is based on the manager's greed and laziness. A weight for the consumer surplus strengthens the incentive to pay for cost-reducing efforts. Private shareholders would pay only to the extent that it promotes profitability. Entry would reduce the post-privatisation profit margins, but also the willingness to pay for cost-reductions (Martin, 1993, Willner and Parker, 2007), in

[10]Performance-related pay to private-sector top managers was on the other hand not wide-spread before the 1990s (Jensen and Murphy, 1990).

particular if competition also requires unbundling (Willner and Grönblom, 2013).[11] The selfishness assumption is criticised in section 5, but the analysis provides a counterexample to the belief that it calls for private ownership and competition.

As for the notion of high costs caused by overstaffing or excessive wages, privatisation and/or competition can indeed reduce labour rents (Newbery, 2006; Grönblom and Willner, 2008).[12] But both profits and labour rents are part of the total surplus, which means that privatisation is not beneficial unless it reduces costs by more than if higher costs depend on just waste (Willner, 1996/2000; Grönblom and Willner, 2008).

Moreover, while public ownership may bias labour intensity upwards, private firms are biased in the opposite direction, with ambiguous consequences for total factor productivity (Pint, 1991). As for 'excessive' wages, this mainly applies to low-wage workers, so privatisation is likely to increase inequality (de Castro et al., 2010).[13] It is not self-evident that the private sector should set the norm in these cases. The same applies to the accusation that public ownership leads to excessive quality (Ferguson, 1988; see also section 5).

5. Recent and future research

The assumption of self-interest is useful in the right context, but cannot sensibly be extended to all our social roles, and it may bias the analysis of organisations with different objectives. An important extension is replace the assumption of laziness by an assumption of (potential) intrinsic motivation, so that efforts (or organisational performance) can yield not only costs but also benefits (Frey, 1997). To signal a suspicion of low work-morale through rewards and punishment (extrinsic work motivation) may then crowd out the

[11]Such failings of privatisation and competition suggests a need of regulation, which would on the other hand subordinate managers to principals with conflicting interests (Laffont and Tirole, 1991).

[12] *Public-sector* wages are in general higher in the EU, except for in Denmark, Finland, Slovakia, Estonia, and Hungary (de Castro et al., 2010), but this is not equivalent to higher wages in state-owned firms in mixed markets. Note also that the public-sector ambition to be a model employer seems to be a thing of the past.

[13]Also, the gender gap increased when the Swedish public sector began to adopt private-sector practices in the 1980s (Zetterberg, 1992).

intrinsic motivation, and thereby reduce the organisation's performance (Frey, 1997)[14].

An interesting approach is to analyse the interaction between a firm's ownership or objectives, its pay schedule, and the presence or absence of intrinsic motivation among its staff. Public firms may be more cost efficient under such conditions as well, but they can also become *less* efficient, for example because of motivation-reducing reforms in the spirit of the New Public Management (Grönblom and Willner, 2014). This stands in contrast to contributions favouring just one form of ownership.

We may also ask whether globalisation really undermines the case for wider objectives. Do state-owned firms become unable to break even, or will such objectives mean predatory behaviour (see references in section 2)? Suppose that the public firm gives a weight to the consumer surplus. How does international competition then restrict the permissible range of this weight, given that public and private firms should be able to break even?

The trend to privatise and liberalise suggests research also on quality.[15] A monopoly can over- or underprovide quality (Spence, 1975). This may happen in an oligopoly as well under asymmetric information (Belleflamme and Peitz, 2010). However, less is known about the impact of privatisation and competition. Tentative results suggest a quality reduction after both privatisation and entry if quality and marginal or sunk costs are positively related (Willner and Grönblom, 2016b).

Finally, privatisation, liberalisation, and outsourcing can make the public sector a provider rather than a producer. Renationalisation might be expensive if needed, unless there is a way to undermine the profitability of the oligopolistic producers. Inelastic demand would make their profit margins high, but an elastic demand would have the opposite effect (Belleflamme and Peitz, 2010, p. 27, 71). Suppose that the public sector is a monopsonist or a significant buyer of an output that is provided free of charge. Can it make its demand more elastic and increase the amount provided given its budget?

[14]Frey and Benz (2005) suggest that private firms should learn from the public sector to rely on intrinsic motivation, career paths that discourage opportunism, and non-pecuniary rewards. See also Guttman and Schnytzer (1989) on why the Soviet *Kolkhoz*-system was less efficient than the Israeli *Kibbutz*-system.

[15]The state-owned cleaning service Engel in Finland always lost after becoming subject to competitive tender, until it discovered the key to success: to leave more dust in the corridors (*Helsingin Sanomat,* 30 November, 1997).

6. Concluding remarks

The notion that public ownership cannot work has seriously reduced the policy options in markets with unsatisfactory performance, or in economies facing secular stagnation. To favour a mixed economy is now perceived as old-fashioned, and more orthodox than the standpoint that only private ownership can work. However, neither theory nor evidence suggests that public ownership is associated with higher cost to such an extent that they overshadow all social costs associated with private ownership under imperfect competition or other forms of market failure. Moreover, competition in the product market is not always desirable or even feasible.

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