



PUBLIC AND PRIVATE SECTOR EFFICIENCY

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Introduction

Evidence, not assumptions

It is often assumed that privatisation or PPPs will result in greater levels of technical efficiency. That is, the private sector can always deliver a given level of service with less input costs than the public sector. Politicians, media, academics and consultants frequently refer to 'private sector efficiency'. This assumption is often shared even by critics of privatisation.

But there is now extensive experience of all forms of privatisation, and researchers have published many studies of the empirical evidence on comparative technical efficiency. The results are remarkably consistent across all sectors and all forms of privatisation and outsourcing: there is no empirical evidence that the private sector is intrinsically more efficient. The same results emerge consistently from sectors and services which are subject to outsourcing, such as waste management, and in sectors privatised by sale, such as telecoms.

The importance of comparative efficiency

The comparative efficiency of the public and private sector is an important part of the arguments over privatisation and outsourcing, for two major reasons.

Firstly, the empirical evidence undermines a fundamental part of the argument for privatisation and use of the private sector. If private companies are no more efficient on a technical level, then the usual case for privatisation collapses.

This is because privatisations, outsourcing and PPPs are at a clear disadvantage in relation to most other economic criteria. The biggest single disadvantage is that the cost of investment finance is nearly always significantly more expensive with private operators, because of higher profits for shareholders, and lower credit ratings – which means private companies pay higher interest rates. Unless the private sector can deliver real substantial savings from efficiency, then it is invariably worse value.

This has been very clearly summarised by the IMF, in a 2004 policy paper which is concerned with PPPs, but the argument applies in the same way to outsourcing and privatisation by sale, and so these terms have been added to the following quote:



“when [outsourcing, privatisation or] PPPs result in private borrowing being substituted for government borrowing, financing costs will in most cases rise. Then the key issue is whether [outsourcing, privatisation or] PPPs result in efficiency gains that more than offset higher private sector borrowing costs..... much of the case for [outsourcing, privatisation or] PPPs rests on the relative efficiency of the private sector. While there is an extensive literature on this subject, the theory is ambiguous and the empirical evidence is mixed.... It cannot be taken for granted that [outsourcing, privatisation or] PPPs are more efficient than public investment and government supply of services...” (IMF 2004)¹

Secondly, efficiency is not the same as cutting costs. Lower costs may simply mean lower quality of service; or they may mean that the company is taking its profits by cutting the jobs, pay and conditions of its workers, without improving systems of work. This does not increase efficiency, it just redistributes income to the company at the expense of others. Assessing even technical efficiency requires considering results as well as inputs.²

Lower operating costs may also conceal real additional costs for the public, which do not show up in analyses of the company costs alone. The public sector carries the extra ‘transaction costs’ of sales, tendering, monitoring and regulation; a low cost tender may be used to win a contract, but the contractor then renegotiates the price upwards – or the quality downwards - to become more profitable. Some assessments of comparative costs and efficiency take account of some of these factors, but most do not.

Thirdly, in practice, comparisons between public and private sector performance are rarely made. In the great majority of cases, private companies only compete for outsourced contracts against other private companies; and a privatisation by sale goes, by definition, to a private buyer. The more basic decision is the choice between public and any form of tendering or privatisation, which has to draw on the general empirical evidence from actual experience.

Effectiveness, efficiency and definitions

This does not mean the private sector can deliver public services just as well as the public sector. The more fundamental question is whether systems using private companies can deliver public services as *effectively* as public sector

¹ International Monetary Fund 2004 Public-Private Partnerships paras 22,25.

<http://www.imf.org/external/np/fad/2004/pifp/eng/031204.htm>

² Stone, Christopher. 2013. False Economies: Decoding Efficiency. Centre for Policy Development, http://cpd.org.au/wp-content/uploads/2013/04/CPD_Decoding_Efficiency_Chris_Stone.pdf



systems. Public and private provision must be compared for their effectiveness in delivering these public goods, not just their cost-efficiency. It cannot be assessed through the results of individual companies, because it concerns the social and environmental and economic effects of the system as a whole. It requires much better ways of assessing the quality of these effects, and more democratic processes for doing so: a review of healthcare efficiency measures, for example, found that very few made any attempt to consider quality of care.³

Most of the evidence discussed in this briefing does not cover the assessment of effectiveness – it is restricted to technical efficiency. The studies and reviews discussed here use a range of methodologies and definitions of technical efficiency. These different methods include measuring labour productivity, defined in terms of value added per employee, or ‘total factor productivity’, which also attempts to measure the efficient use of capital investments.

Some use company profitability as a measure of efficiency, despite the fact that this can be at the expense of higher prices to users or worse pay for workers. Some use measures specific to the sector: for example, the weight of refuse collected per employee, the number telephone connections per employee, or more general measures such as the percentage of the population with water and sewerage connections.

These variations in definition are clearly very important for attempts to assess the effectiveness and efficiency of actual public services. But the comparative studies discussed in the following sections find similar results whatever definition they use. Moreover, many of these studies have been carried out by economists expecting to confirm a theoretical argument that privatisation is intrinsically more efficient, which makes the results more striking. The evidence contradicts the assumptions.

³ Lethbridge J. 2012 ‘Broken Promises The Impact of Outsourcing on NHS Services’. Public Services International Research Unit May 2012. Accessed May 7. <http://www.psir.org/reports/broken-promises-impact-outsourcing-nhs-services>

Evidence across sectors and countries

No superior private sector efficiency

The major reviews of international literature and experience, covering a number of different sectors and service, are summarised below. They reach a consistent conclusion – that the evidence shows no significant difference in efficiency between public and privately owned companies in public services. This is true both for privatisations by sale and privatisations through outsourcing or PPPs.

The most comprehensive review of research on the effects of outsourcing was published in 2011 by the Danish institute AKF. It examined 80 studies since the year 2000 on the effects on costs and quality of services, and the impact on employees, including the sectors of water, waste management, electricity, public transport, education, healthcare, social care, employment, prisons and other services. It concluded that:

“it is not possible to conclude unambiguously that there is any systematic difference in terms of the economic effects of contracting out technical areas and social services”

While there may be ‘relatively small’ savings from outsourcing of ‘technical’ areas [such as waste management], these may be offset by changes in quality; and in the ‘social’ services:

“there is no general evidence here to say that private actors deliver the services cheaper or with a higher quality than the public sector itself does”.⁴

The same result emerged from a formal statistical analysis by Bel and Warner in 2010 of the results of 27 *econometric* empirical studies of the waste and water sectors in several countries, all of which examined the comparative costs of the services. The review concluded that :

“there is no statistical support for an empirical effect of private production on costs ... costs are dependent on service characteristics, geographic area, and time period of the study.. We do not find a genuine empirical effect of cost savings resulting from private production”⁵



The PIQUE project compared long-term trends in productivity, from 1970 to 2004, before and after privatisation or liberalisation, in Austria, Belgium, Germany, Poland, Sweden and the UK. In electricity and gas, post and telecoms, the fluctuations over time showed clear signs that productivity was significantly driven by common, globalised technologies (such as combined-cycle gas generation of electricity, or the development of digital and wireless telecoms), but

⁴ Petersen, O., Hjelmar U., Vrangbæk K. and la Cour L. 2011 Effekter ved udlicitering af offentlige opgaver - en forskningsbaseret gennemgang af danske og internationale undersøgelser fra 2000-2011. AKF, Copenhagen Report, September 2011 ISBN/ISSN electronic version: 978-87-7509-083-9. English version: www.akf.dk/udgivelser_en/2011/5111_ohp_udliciteringsrapport/, Effects of contracting out public sector tasks: A research-based review of Danish and international studies from 2000-2011

⁵ Bel, Germà, Xavier Fageda, and Mildred E. Warner. 2010. ‘Is Private Production of Public Services Cheaper than Public Production? A Meta-Regression Analysis of Solid Waste and Water Services’. *Journal of Policy Analysis and Management* 29 (3): 553–77. doi:10.1002/pam.20509. <http://onlinelibrary.wiley.com/doi/10.1002/pam.20509/abstract>



showed no evidence of being affected by privatisation or liberalisation. However, the drivers of productivity changed. Before privatisation or liberalisation, most productivity gains came from increased value-added (production), whereas the main driver of post-marketisation labour productivity increases was a relative employment decrease.⁶

The most recent and largest study of the comparative efficiency of companies privatised by sale found that privatised companies are significantly *less* efficient than those that remain publicly owned. The study, whose authors include the Nobel prize-winner Joseph Stiglitz, was published in 2013, and looked at all European companies privatised between 1980 and 2009. It compared their performance with that of companies which remained public – and with the performance of the companies before privatisation. This enabled them to correct for the fact that privatised companies were already performing better than average before they were privatised. The analysis showed, with a high level of statistical significance, that privatised companies did *worse* than those that remained public, and continued to do so for a period of 10 years: “the privatization group underperforms the group of sectors remaining public”. The authors add that this fits with the experience of Russia, where: “GDP declined with privatization, faster privatization did not lead to improved performance.”⁷

Detailed studies of the UK privatisations of electricity, gas, telecoms, water and rail have also found no evidence that privatisation has caused a significant improvement in productivity. A comprehensive analysis in 2004 of all the UK privatisations concluded:

“These results confirm the overall conclusion of previous studies that ...privatisation per se has no visible impact I have been unable to find sufficient statistical macro or micro evidence that output, labour, capital and TFP productivity in the UK increased substantially as a consequence of ownership change at privatisation compared to the long-term trend.”⁸

Evidence from developing countries points to the same conclusion. A global review of water, electricity, rail and telecoms by the World Bank in 2005 concluded (at least for the first two sectors):

“the econometric evidence on the relevance of ownership suggests that in general, there is no statistically significant difference between the efficiency performance of public and private operatorsFor utilities, it seems that in general ownership often does not matter as much as sometimes argued. Most cross-country papers on utilities find no statistically significant difference in efficiency scores between public and private providers.” (Estache et al 2005).

A 2009 World Bank review of privatisations in former communist (transition) countries examined the effects of privatisation in central and eastern Europe, former Soviet Union, and also in China. It examined 17 studies looking at total factor productivity and 10 studies looking at profitability. It concluded that “The most important policy implication of our survey is that privatization *per se* does not guarantee improved performance”, though privatisations to foreign companies seemed to have a generally positive effect.⁹

⁶ PIQUE 2009 Summary report of the project ‘Privatisation of Public Services and the Impact on Quality, Employment and Productivity’ (PIQUE) http://www.pique.at/reports/pubs/PIQUE_SummaryReport_Download_May2009.pdf

⁷ Knyazeva, Anzhela, Diana Knyazeva, and Joseph E. Stiglitz. ‘Ownership Change, Institutional Development and Performance’. *Journal of Banking & Finance* 37, no. 7 (July 2013): 2605–2627.

<http://www.sciencedirect.com/science/article/pii/S0378426613001052>

⁸ Florio M. 2004. *The Great Divestiture*. MIT Press. <https://mitpress.mit.edu/books/great-divestiture>

⁹ Saul Estrin, Jan Hanousek, Evžen Kočenda and Jan Svejnar. 2009. ‘Effects of Privatization and Ownership in Transition Economies’. *Journal of Economic Literature* 47 (3): 699–728.

Some reviews do conclude that privatisation has a systematically positive effect on performance, but they are fewer in number and less convincing. For example, a report in 2011 from the Swedish institute IFN reviewed international articles, and argued that the evidence shows that public sector outsourcing generally reduces costs without hurting quality. However, the overview itself is limited; it references just 30 studies, half of which were published in the 1980s and 1990s; its coverage of studies since 2000 is poor – for example, it ignores the work of Bel and Warner, Lundahl’s meta-review on prisons (see below); and it takes no account at all of studies on public transport, water, and electricity.¹⁰

Sectors

The results of studies on specific sectors show the same picture: the evidence does not support the assumption of superior private sector efficiency. This evidence is summarised below for each of 9 sectors which have been subject to various forms of privatisation.

Sector	Sale of assets	Outsourcing	Concessions/ PPPs
Buses		X	X
Electricity	X		X
Healthcare		X	X
Ports and airports	X		X
Prisons		X	X
Rail	X	X	X
Telecoms	X		
Waste management	X	X	X
Water		X	X

In all cases, even where some individual studies find evidence of cost savings or efficiency by private companies, these are offset by a greater number of studies which found no difference or greater public sector efficiency.

Buses

The most wide ranging international study of bus services covered 73 cities with different types of bus operators, in all continents – 29 from the EU, three from Eastern Europe, five from Australia and New Zealand, five from Canada, ten from the USA, three from Latin America, two from the Middle East, eight from the Far East, five from Africa and three from Japan.

It found no significant difference in efficiency between public or private operators, and also found that efficient operators can be seen on all continents:

“Statistical tests do not show any significance as regards relationship between efficiency and the type of operator....The efficient cities ... are spread over different continents and public administration styles – Anglo-Saxon, Nordic and bureaucratic – and they are not concentrated in any specific type of operator.”

<https://openknowledge.worldbank.org/bitstream/handle/10986/4009/WPS4811.pdf?sequence=1>.

<http://www.istor.org/stable/27739983>

¹⁰ Andersson, Fredrik and Jordahl, Henrik, Outsourcing Public Services: Ownership, Competition, Quality and Contracting (June 15, 2011). IFN Working Paper No. 874. Available at SSRN: <http://ssrn.com/abstract=1868279> or <http://dx.doi.org/10.2139/ssrn.1868279>



It also found that the factors which were significant for efficiency were fuel use, bus-kilometres, and speed.¹¹

In the USA, an analysis of over 400 public transport authorities over 9 years compared the cost per vehicle-hour of publicly operated bus services and contracted-out services. The study adjusted for selectivity, and the extent to which efficiency savings were due to lower wages in the private sector, and, unusually, took account of transaction costs. Although private contractors were on average 5.5% cheaper than public operators, after adjusting for these other factors the study found that there was no statistically significant difference in costs attributable solely to contracting-out. The study also found lower wages in the private sector, equivalent to a reduction in costs of about 18.6%.¹²

A study of 72 bus and metro operators across Europe found that publicly owned firms had significantly lower productivity, but noted that this could be due to selectivity: “more productive and profitable firms have been sold to private shareholders, so that only less productive firms remain in public hands”, and also that it did not take account of service quality: “we have no data on service quality”.¹³ In Sweden, where the great majority of services have been contracted-out since 1985, there is no evidence that this use of competitive tendering has reduced costs – rather, the cost per passenger trip increased sharply in real terms from 1986 to 2009, by between 28%-228%, and efficiency levels fell steadily from 95% to 60%.¹⁴

Since the 1980s, many developing countries either outsourced bus services to private operators, or relied on a deregulated market, under the influence of structural adjustment programmes. There are two comparative studies of public and private bus transport efficiency. A study in India found that private bus operators seemed more efficient, but noted that this could be due to the selection of more profitable routes, and to cuts in wages and conditions of workers; in Taiwan, there was a rise in productivity of buses after privatisation, but this was found to be due to technological changes, not efficiency gains.¹⁵

Electricity

There is a widespread belief that the private sector is always more efficient than the public sector, in electricity as in other sectors. This belief is not supported by evidence. The empirical evidence includes a global study in 1995 by Pollitt, which compared dozens of public and private electricity operators all over the world, and found no significant systematic difference between public and private in terms of efficiency.¹⁶

¹¹ Pina, Vicente, and Lourdes Torres. ‘Analysis of the Efficiency of Local Government Services Delivery. An Application to Urban Public Transport’. *Transportation Research Part A: Policy and Practice* 35, no. 10 (December 2001): 929–944.

<http://www.sciencedirect.com/science/article/pii/S0965856400000331>

¹² Iseki, Hiroyuki. 2010 ‘Effects of Contracting on Cost Efficiency in US Fixed-route Bus Transit Service’. *Transportation Research Part A: Policy and Practice* 44, no. 7 (August 2010): 457–472, www.sciencedirect.com/science/article/pii/S096585641000042X

¹³ Boitani, Andrea, Marcella Nicolini, and Carlo Scarpa. 2013. ‘Do Competition and Ownership Matter? Evidence from Local Public Transport in Europe’. *Applied Economics* 45 (11): 1419–1434. doi:10.1080/00036846.2011.617702.

<http://www.tandfonline.com/doi/abs/10.1080/00036846.2011.617702>

¹⁴ Holmgren, Johan. ‘The Efficiency of Public Transport Operations – An Evaluation Using Stochastic Frontier Analysis’. *Research in Transportation Economics* 39, no. 1 (March 2013): 50–57. <http://www.sciencedirect.com/science/article/pii/S0739885912000686>

¹⁵ Pucher J., Korattyswaroopam N., Ittyerah N. 2004 *The Crisis of Public Transport in : Overwhelming Needs but Limited Resources* *Journal of Public Transportation*, Vol. 7, No. 4, 2004; Cho, Hsun-Jung and Fan, Chih-Ku. 2007 *Evaluating the Performance of Privatization on Regional Transit Services: Case Study J. Urban Plng. and Devel.*, Volume 133, Issue 2, pp. 119-127 (June 2007)

¹⁶ Pollitt, M. (1995), *Ownership and Performance in Electric Utilities: the International Evidence on Privatisation and Efficiency*, Oxford University Press, Oxford

A 2013 study of productivity in electricity companies in 20 EU countries found mixed results on the relationship between public and private companies, and concluded that “the link between private or public ownership with TFP is not straightforward”.¹⁷

Insofar as efficiency is reflected in prices, most international studies have found that private ownership is linked to *higher* prices for consumers. A 2000 study of OECD countries found that privatisation was linked to higher prices; a 2010 study of electricity reforms in OECD countries found that “wholly private ownership of electricity operators [is] associated with prices that were 23.1 per cent *higher* than if ownership were wholly public”.

A 2013 study of electricity prices in 15 west European countries over a 30-year period found that “after controlling for other factors, *public* ownership is associated with lower residential net-of-tax electricity prices”. A 2007 study covering 83 countries found that privatisation lowered prices for industrial consumers in developed countries, while it was linked to *higher* prices for households in Asian and CEE countries, but otherwise made no significant difference.¹⁸



Similar results have been found in developing countries. A 2008 study of electricity companies in Africa found that levels of efficiency in the region were quite independent of the degree of vertical integration or the presence of a private actor. This confirmed the results of a 2002 study on developing countries, which found that the effect of privatisation alone was statistically insignificant on efficiency, except for capacity utilisation.¹⁹

A global review of the evidence on utility sectors in 2005 by the World Bank concluded:

“For utilities, it seems that in general ownership often does not matter as much as sometimes argued. Most cross-country papers on utilities find no statistically significant difference in efficiency scores between public and private providers.”

A more complex study by the World Bank’s privatisation agency, the PPIAF, published in 2009, did find that private electricity companies were more likely to cut jobs, and so show productivity gains from this source. However, the study found no evidence of any benefits for the service in terms of higher investment, and indeed there was evidence both of higher prices and of

¹⁷ Del Bo, Chiara F. 2013. ‘Productivity in Electricity Generation: The Role of Firm Ownership and Regional Institutional Quality’. *International Review of Applied Economics* 27 (2): 237–64. doi:10.1080/02692171.2012.734792
<http://www.tandfonline.com/eprint/MAEDpA3HFhfRpDR5M7cP/full#.U295Jnbzdva>

¹⁸ Steiner, Faye. 2000. ‘Regulation, Industry Structure and Performance in the Electricity Supply Industry’. Economics Department Working Papers No. 238, OECD, www.oecd-ilibrary.org/docserver/download/5lgsihvi83nx.pdf?expires=1399823367&id=id&accname=guest&checksum=D49C9B874F1FFFD5DB8D44EB9EE84014; Dee, Philippa. 2010. ‘Quantifying the Benefits from Structural Reforms in Electricity and Gas Markets in APEC Economies’. Contribution to the project ‘The Impacts and Benefits of Structural Reforms in Transport, Energy and Telecommunications Sectors’, commissioned by the APEC Policy Support Unit.
<http://economics.adelaide.edu.au/downloads/services-workshop/Quantifying-The-Benefits-From-Structural-Reforms-In-Electricity.pdf>; Florio, Carlo V., and Massimo Florio. 2013. ‘Electricity Prices and Public Ownership: Evidence from the EU15 over Thirty Years’. *Energy Economics* 39 (September): 222–32. doi:10.1016/j.eneco.2013.05.005.

<http://www.sciencedirect.com/science/article/pii/S0140988313000911>; Nagayama, Hiroaki. 2007. ‘Effects of Regulatory Reforms in the Electricity Supply Industry on Electricity Prices in Developing Countries’. *Energy Policy* 35 (6): 3440–62. doi:10.1016/j.enpol.2006.12.018. <http://www.sciencedirect.com/science/article/pii/S0301421506005246>

¹⁹ Estache A. Tovar B., Trujillo L. 2008 How efficient are African electricity companies? Evidence from the Southern African countries. *Energy Policy* 36 (2008) 1969–1979; Zhang, Y.-F., Parker, D. and C. Kirkpatrick, 2002, ‘Electricity Sector Reform in Developing Countries: An Econometric Assessment of the Effects of Privatisation, Competition and Regulation’, Working Paper No.31, Centre on Regulation and Competition, Institute for Development Policy and Management, University of Manchester.



actual reductions in numbers of household connections. Any productivity gains were thus distributed to owners as increased returns on capital.²⁰

In electricity, the process of unbundling loses the economies of vertical integration. A study in 2012 found that this alone leads to a fall in efficiency of the sector as a whole, of between 2-8% in Europe and 20% in the USA.²¹

Healthcare

The international evidence, and evidence from individual countries, strongly suggests that public providers have higher levels of technical efficiency than the private sector in healthcare. Public provision of healthcare is also far more effective than private provision in delivering better health, including longer life and lower infant mortality rates.

Healthcare systems based on public sector provision are far more efficient and effective than systems relying on private provision, partly because they aim to provide universal coverage and so gain from economies of scale. The inefficiency and ineffectiveness of private healthcare spending can be seen by comparing the performance of the USA with that of Belgium and Cuba. In all cases, public spending on healthcare is at similar levels: the USA however also spends over 9% of GDP on private healthcare. This huge extra spending however delivers no benefit at all – the health outcomes are in fact significantly worse than in either Belgium or Cuba.

	Public spending on healthcare (% of GDP)	Private spending on healthcare (% of GDP)	Life expectancy at birth (2010)	Infant mortality rate (2011)	GNI per capita US\$(2011)
USA	8.29	9.10	78.2	6.4	48450
Belgium	8.17	2.71	79.9	3.5	46160
Cuba	9.72	0.91	79.0	4.5	5460 (2008)

Sources: OECD, World Bank

The wastefulness of private-based healthcare comes not just from its selectivity but from its administrative overheads and use of unnecessary treatments. A report by the Institute of Medicine on healthcare in the USA found that:

“30 cents of every medical dollar goes to unnecessary health care, deceitful paperwork, fraud and other waste. The \$750 billion in annual waste is more than the Pentagon budget and more than enough to care for every American who lacks health insurance....Most of the waste came from unnecessary services (\$210 billion annually), excess administrative costs (\$190 billion) and inefficient delivery of care (\$130 billion).

²⁰ Estache A., Perelman S., Trujillo L. 2005 Infrastructure performance and reform in developing and transition economies: evidence from a survey of productivity measures. World Bank Policy Research Working Paper 3514, February 2005.

<http://go.worldbank.org/919KQKSPSO> ; Gassner K., Popov A. and Pushak N. 2009 Does private sector participation improve performance in electricity and water distribution? PPIAF <http://www.ppiaf.org/ppiaf/sites/ppiaf.org/files/publication/ebook-Trends%20Policy%20Options-6-PSP%20water%20electricity%20-%20Kassner%20A-Popov%20N-Pushak.pdf>

²¹ Meyer, Roland. 2012. 'Vertical Economies and the Costs of Separating Electricity Supply--A Review of Theoretical and Empirical Literature'. The Energy Journal 33 (4). doi:10.5547/01956574.33.4.8. <http://www.iaee.org/en/publications/ejarticle.aspx?id=2500>

Repeating colonoscopies, early imaging for back pain, and brain scans for patients who just recently had them or didn't need them are examples of wasteful care."²²

Higher *public* spending on healthcare produces better health outcomes for everyone. But higher *private* spending on healthcare has the opposite effect – because it makes healthcare less affordable. A recent analysis of 163 countries found that higher public spending on healthcare is significantly correlated with a lower infant mortality rate, but higher levels of private spending are associated with higher infant mortality rates.²³

A report in 2010 for the World Health Organisation (WHO) surveyed the global evidence on the comparative technical efficiency of public and private providers of healthcare. The largest study was a systematic overview of 317 papers, which concluded that:

“public provision may be potentially more efficient than private..... Summary statistics showed average for-profit hospital efficiency levels at 80.1%, not-for-profit at 82.5%, and public at 88.1%.”²⁴

A 2012 review of the efficiency of healthcare delivery in developing countries looked at a range of research studies, including case studies, meta-analysis, reviews, case control analyses and NGO reports from countries in South Asia, East Asia, Pacific, Sub-Saharan Africa and Latin America. It found that there was no evidence to show that the private healthcare sector is more technically efficient or effective than public providers:

“Studies evaluated in this systematic review do not support the claim that the private sector is usually more efficient, accountable, or medically effective than the public sector”.²⁵



A review of 33 studies of NHS services in the UK examined evidence on outsourcing of cleaning, facilities management, ‘out of hours’ medical services, treatment centres, clinical services, and IT. It found negative impacts of outsourcing on service quality in 18 cases and positive impacts in 4 cases. The study concluded that:

“much of the evidence demonstrates either the negative aspects of introducing competition into the provision of health care services or inconclusive results...overall, there is a lack of evidence to show that outsourcing leads to improved quality of patient care”.²⁶

²² IOM 2012 Best Care at Lower Cost: The Path to Continuously Learning Health Care in America

<http://www.iom.edu/Reports/2012/Best-Care-at-Lower-Cost-The-Path-to-Continuously-Learning-Health-Care-in-America.aspx>

²³ Tacke, Tilman, and Robert Waldmann. 2011. ‘The Relative Efficiency of Public and Private Health Care’. CEIS Tor Vergata

RESEARCH PAPER SERIES Vol. 9, Issue 8, No. 202 – July 2011 SSRN eLibrary

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1879136

²⁴ Hollingsworth, Bruce. 2008. ‘The Measurement of Efficiency and Productivity of Health Care Delivery’. Health Economics 17 (10):

1107–28. doi:10.1002/hecl.1391. <http://onlinelibrary.wiley.com/doi/10.1002/hecl.1391/abstract> ; Hsu, Justine. 2010. ‘The Relative

Efficiency of Public and Private Service Delivery’. World Health Report Background Paper 39: 1–9.

http://www.who.int/entity/healthsystems/topics/financing/healthreport/P-P_HSUNo39.pdf

²⁵ Basu S, Andrews J, Kishore S, Panjabi R, Stuckler D (2012) Comparative Performance of Private and Public Healthcare Systems in

Low- and Middle-Income Countries: A Systematic Review. PLoS Med 9(6): e1001244. doi:10.1371/journal.pmed.1001244

<http://dx.doi.org/10.1371/journal.pmed.1001244>

²⁶ ‘Broken Promises The Impact of Outsourcing on NHS Services | Public Services International Research Unit’. 2014. Accessed May

7. <http://www.psiu.org/reports/broken-promises-impact-outsourcing-nhs-services>

'New public management' (NPM) techniques, including outsourcing, have not delivered greater efficiency in Spain. A recent study of NPM in Madrid hospitals looked at the number of hospital beds, doctors and nurses as inputs, and hospital discharges and outpatient visits as outputs (and also deaths in hospital and patient readmissions as undesirable or negative outputs). It concluded: "We do not find evidence that NPM hospitals are more efficient than traditionally managed ones.... there is no difference in terms of technical efficiency between traditionally managed hospitals and those adopting new management formulas".²⁷

A comprehensive study of the impact of privatisation on all forms of social services in Sweden could find no evidence of improvements in efficiency or quality. The study covered all major welfare areas: preschool, school, individual and family care, health and medical care, labour market policy and care of the elderly and disabled. It concluded that: "there is a remarkable lack of knowledge of the effects of competition in the Swedish welfare sector. On the basis of existing research, it is not possible to find any proof that the reform of the public sector has entailed the large quality and efficiency gains that were desired."²⁸

Ports and airports

A review article published in *Transport Policy* at the end of 2012 found that the empirical studies do not support the widespread policy assumption that ports and airports will be operated more efficiently as a result of privatisation:

"The resultsof the airport and seaport industries do not provide clear patterns of superior performance associated with particular forms of ownership or organization..... A main conclusion of our paper is that there is not yet enough empirical evidence to enable a reliable assessment of the extent of success or failure of airport and seaport privatization programs. . Until then, a healthy dose of scepticism is recommended when considering any proposed privatization program proposed on the grounds of (mere) potential efficiency gains."²⁹

The majority of the studies reviewed have concluded that there is no empirical evidence of superior private sector efficiency. Similar results appear across time and across different types of country.

A 1999 study of the performance of the UK airport operator BAA, covering the years before and after its privatisation, concluded that "privatisation had no noticeable impact on technical efficiency".³⁰ Comparative studies of the largest container ports in the world, published in 2000 and 2001, found that public or private ownership did not seem to have any significant influence on efficiency.³¹

²⁷ José M. Alonso, Judith Clifton, Daniel Diaz Fuentes, and -. 2014. 'COCOPS_workingpaper_No12.pdf'. Accessed March 14.

http://www.cocops.eu/wp-content/uploads/2013/10/COCOPS_workingpaper_No12.pdf#page=1&zoom=auto,0,842

²⁸ Hartman, Laura ed. 2011 Konkurensens konsekvenser. Vad händer med svensk välfärd? [The Consequences of Competition. What is happening to Swedish Welfare?] SNS - Centre for Business and Policy Studies <http://www.sns.se/artikel/consequences-competition-what-happening-swedish-welfare>

²⁹ Gong, Stephen X.H., Kevin Cullinane, and Michael Firth. 'The Impact of Airport and Seaport Privatization on Efficiency and Performance: A Review of the International Evidence and Implications for Developing Countries'. *Transport Policy* 24 (November 2012): 37–47 <http://www.sciencedirect.com/science/article/pii/S0967070X1200114X>

³⁰ Parker D. 1999 The performance of BAA before and after privatisation: a DEA study. *Journal of Transport Economics and Policy*, 33 (1999), pp. 133–146

³¹ Notteboom, T. Coeck, C., van den Broeck J. 2000 Measuring and explaining the relative efficiency of container terminals by means of bayesian stochastic frontier models *International Journal of Maritime Economics*, 2 (2000), pp. 83–106; Valentine, V.F.,

Studies of over 100 of the largest airports in the world, published in 2006 and 2008, found significantly better performance by private airports in general, but that public sector airports in the USA were just as efficient as their counterparts; and also found that airports with private majority ownership derive a much higher proportion of their total revenue from non-aviation services³²

A 2005 study of container ports found that privatisation had a variable effect on efficiency, and that port size was the most significant factor.³³

Comparative studies of public and private Chinese airports published in 2008, found that the form of ownership had no statistically significant effect on productivity growth.³⁴

Prisons

A 2009 review of 12 studies on the comparative efficiency of public and private prisons, found that half showed private prisons as cheaper, a quarter showed public as cheaper, and the rest showed no difference: the average was that private prisons were 2.2% cheaper. On quality, the results for 45 different indicators were almost exactly split between public and private superior performance. The differences emerging from all studies were so small that they could not justify one choice or another:

“Results suggest privately managed prisons provide no clear benefit or detriment. Cost savings from privatizing prisons are not guaranteed and appear minimal. Quality of confinement is similar across privately and publicly managed systems, with publicly managed prisons delivering slightly better skills training and having slightly fewer inmate grievances.”³⁵



Gray, R., 2001. The measurement of port efficiency using data envelopment analysis. Proceedings of the 9th World Conference on Transport Research, 22–27 July, Seoul, South Korea.

³² Oum, T.H., Adler, N., Yu, C., 2006. Privatization, corporatization, ownership forms and their effects on the performance of the world's major airports. *Journal of Air Transport Management* 12, 109–121; Oum, T.H., Waters, B., Yu, C., 1999. Survey of productivity and efficiency measurement in rail transport. *Journal of Transport Economics and Policy* 33, 9–42; Oum, T.H., Yan, J., Yu, C., 2008. Ownership forms matter for airport efficiency: a stochastic frontier investigation of worldwide airports. *Journal of Urban Economics* 64, 422–435

³³ Tongzon, Jose, and Wu Heng. 'Port Privatization, Efficiency and Competitiveness: Some Empirical Evidence from Container Ports (terminals)'. *Transportation Research Part A: Policy and Practice* 39, no. 5 (June 2005): 405–424.

<http://www.sciencedirect.com/science/article/pii/S096585640500025X>

³⁴ Fung, M.K.Y., Wan, K.K.H., Hui, Y.V., Law, J.S., 2008. Productivity changes in Chinese airports 1995–2004. *Transportation Research E* 44 (3), 521–542.; Zhang, A., Yuen, A., 2008. Airport policy and performance in Mainland China and Hong Kong. In: Winston, C., de Rus, G. (Eds.), *Aviation Infrastructure Performance: A Study in Comparative Political Economy*. Brookings Institution Press, Washington, D.C., pp. 159–192.

³⁵ Lundahl, Brad W., Chelsea Kunz, Cyndi Brownell, Norma Harris, and Russ Van Vleet. 'Prison Privatization'. *Research on Social Work Practice* 19, no. 4 (July 1, 2009): 383–394. <http://rsw.sagepub.com/content/19/4/383.abstract>

Rail

Privatisation has occurred, with or without liberalisation, in a number of countries, including the UK, and Mexico; in some countries, including New Zealand, Guatemala and Estonia, privatised railways were subsequently renationalised; privatisation plans have been repeatedly postponed in other countries, including Germany and Nigeria. Public and private operators co-exist in some countries, for example Japan, Switzerland, and to a lesser extent countries many European countries through operating concessions. Railways have been unbundled and liberalised in most European countries, to varying degrees, but in the USA, China, and India the systems remain vertically integrated: China decided against unbundling and liberalisation³⁶.

A recent report surveying international evidence on factors affecting railway efficiency summarises the evidence on the effect of privatisation itself as 'mixed':

"Privatization efforts in the past two decades have shown mixed results. In some cases, privatization has resulted in improved performance and higher cost efficiency. In other examples, privatization of railways has resulted in the neglect of rail assets to achieve short term financial improvements, higher refinancing costs and (increased) equity yield rates..... Significant drawbacks can result from privatization, but Mexico has seen strong growth as a result of privatization in the 1990s."³⁷

In the UK, prior to privatisation, British Rail (BR) achieved substantial productivity gains by sectoral reorganisation in the 1980s. In some international comparisons, BR appeared as amongst the most efficient operators. However, the initial productivity improvements under the private sector were not so good:

"Gains made in the early period of private sector management... are not as high as those made in the later period of public sector management."³⁸

After the unbundling and privatisation of UK railways in 1996, the productivity of train operating companies initially rose, principally as a result of reductions in staffing levels. But it then deteriorated, and by 2006 was worse than at the start:

"a given set of passenger rail services in 2006 cost 12% more in real terms than it did at privatisation".

Costs fell again after 2006, but still remained higher than at privatisation and:

"it remains the case that passenger rail franchising in Britain has failed to reduce costs in the way experienced in many other industries and in rail elsewhere in other European countries."³⁹

Government subsidies declined in the early years, but increased again, at the same time as productivity fell. The quality of service was also affected, most brutally in the lower standards

³⁶ Beck A., Bente H., Schilling M.. 2013 Railway Efficiency. OECD/ International Transport Forum Discussion Paper 2013-12 <http://www.internationaltransportforum.org/jtrc/DiscussionPapers/DP201312.pdf>

³⁷ Beck A., Bente H., Schilling M.. 2013 Railway Efficiency. OECD/ International Transport Forum Discussion Paper 2013-12 <http://www.internationaltransportforum.org/jtrc/DiscussionPapers/DP201312.pdf>

³⁸ Cowie, J. 2010 Subsidy and Productivity in the Privatised British Passenger Railway. Institute of Transport and Logistics Studies. Faculty of Economics and Business. The University of Sydney. <http://hdl.handle.net/2123/6388>

³⁹ Smith, Andrew S.J., Phill E. Wheat, and Chris A. Nash. 2010. 'Exploring the Effects of Passenger Rail Franchising in Britain: Evidence from the First Two Rounds of Franchising (1997–2008)'. *Research in Transportation Economics* 29 (1): 72–79. doi:10.1016/j.retrec.2010.07.010. <http://www.sciencedirect.com/science/article/pii/S0739885910000405>



of track maintenance which led to a number of major accidents, but also in higher levels of train cancellations.⁴⁰

Telecoms

There have been great advances in telecoms in the last 25 years – but international studies show that in this sector, too, efficiency gains are not due to privatisation.

The most recent global study comparing private and public companies found the opposite. It analysed the operating efficiency of countries which had privatized between 1990 and 2000 and countries whose telecom sectors remained public, as measured by line connections per 1000 employees. It looked at the long-run performance before and after privatisation compared with the long-run record of companies which remained public, and found that, although both privatised and public companies improved efficiency: “privatized sectors perform significantly worse” than companies which continued to be state-owned.⁴¹

A study of 31 telecommunication operators from countries in all regions of the world between 1981 and 1998 found that privatisation had no significant effect on output per employee – and that competition had a significantly *negative* effect – whereas higher salaries had a significant positive effect on efficiency.⁴²

A study of long-distance, international and mobile telephony in 23 OECD countries between 1991 and 1997 found no connection between performance – in terms of lines, mobile subscribers and international calls per 100 employees – and privatisation: “no clear evidence could be found concerning the effects on performance of the ownership structure of the industry”. It did however find evidence that “productivity levels are negatively influenced” by the prospect of privatisation; and competition, and the prospect of it, were linked to productivity improvements – though not to price reductions. Factors specific to each country had a much greater effect on both price and quality than all the impact of privatisation and liberalisation combined.⁴³

A cross-country study of the impact on consumer prices of European telecoms liberalisation and privatisation found that the price of international and national phone calls were significantly reduced by an increase in the number of mobile phone users, and by higher levels of investment – but liberalisation and privatisation themselves made no difference. The authors conclude:

“The findings suggest that ownership change, from public to private, plays no role or a very limited one in explaining prices of international, national, local calls, and connec-

⁴⁰ Cowie, Jonathan. 2009. ‘The British Passenger Rail Privatisation: Conclusions on Subsidy and Efficiency from the First Round of Franchises’. *Journal of Transport Economics and Policy* 43 (1) (January 1): 85–104. doi:10.2307/20466769.

<http://www.istor.org/stable/20466769>

⁴¹ Knyazeva, Anzhela, Diana Knyazeva, and Joseph E. Stiglitz. ‘Ownership Change, Institutional Development and Performance’. *Journal of Banking & Finance* 37, no. 7 (July 2013): 2605–2627.

<http://www.sciencedirect.com/science/article/pii/S0378426613001052>

⁴² Bortolotti B., J. D'Souza, M. Fantini, W.L. Megginson 2002 Privatization and the sources of performance improvement in the global telecommunications industry *Telecommunications Policy*, 26 (5–6) (2002), pp. 243–268

<http://www.sciencedirect.com/science/article/pii/S0308596102000137>

⁴³ O. Boylaud, G. Nicoletti (2001) Regulation, market structure and performance in telecommunications Economics department working paper no. 237). OECD Economic Studies No. 32, 2001/1, Paris <http://www1.oecd.org/regreform/reform/2736298.pdf>

tion charges.... Overall, it seems that technology and demand factors... have much more explanatory power”.⁴⁴

A comparison of the performance of all major European telecoms operators between 1978 and 1998, measuring both in terms of profit margins and labour and total factor productivity, found that growth rates in both labour productivity and total factor productivity were generally worse after liberalisation was introduced around 1995, and so concluded that it was “difficult to find a consistent pattern of performance improvement linked to either privatisation or the anticipation of market liberalisation”.⁴⁵

Waste management

Both international and national studies of waste management have concluded that there is no significant difference between the costs of public and private provision in comparable circumstances.

An international review analysis of 27 empirical studies on comparative efficiency in waste management (and water) in various countries concluded that “private production of local services is not systematically less costly than that of public production”⁴⁶

Studies in individual countries have come to similar conclusions.

A 2013 study of waste collection in Wallonia, the French-speaking region of Belgium concluded simply: “public operators perform no worse than private operators” (“Nos résultats montrent que, dans le cas de la collecte des ordures ménagères brutes, la production publique n’est pas moins performante que la production privée.”). It found that direct provision was cheaper than private contractors for both inter-municipal services, and for services in a single municipality.⁴⁷

In Spain, studies published in 2008 and 2013 found that public provision is cheaper or the same as private provision. An analysis of costs of street cleaning and waste collection services in Spanish municipalities with a population over 50000 found that:

“There is no difference between the inefficiencies observed in municipalities managed directly by town councils and those which have been transferred to private companies.”⁴⁸

A further study of small and medium local authorities found that:

“public service provision via a provincial or local public company is the management form presenting lowest levels of waste collection costs...even direct management by the local authority produces lower costs than those associated with contract.”⁴⁹

⁴⁴ Bacchiocchi, E., Massimo Florio, and Marco Gambaro. ‘Telecom Reforms in the EU: Prices and Consumers’ Satisfaction’. *Telecommunications Policy* 35, no. 4 (May 2011): 382–396. <http://www.sciencedirect.com/science/article/pii/S0308596111000309>

⁴⁵ Dassler T., Parker D. and Saal D. (2002) Economic Performance in European Telecommunications, 1978-1998: a Comparative Study. *European Business Review* 14: 194–209. <http://www.emeraldinsight.com/journals.htm?articleid=868826&show=abstract>

⁴⁶ Bel, Germà, Xavier Fageda, and Mildred E. Warner. 2010. ‘Is Private Production of Public Services Cheaper than Public Production? A Meta-Regression Analysis of Solid Waste and Water Services’. *Journal of Policy Analysis and Management* 29 (3): 553–77. doi:10.1002/pam.20509. <http://onlinelibrary.wiley.com/doi/10.1002/pam.20509/abstract>

⁴⁷ Gautier A. and Reginster S. 2013. ‘La Collecte Des Déchets En Wallonie : Organisation et Performances’. Numéro 106. *Regards Economiques*. IRES / UCL. http://www.regards-economiques.be/index.php?option=com_reco&view=article&cid=135

⁴⁸ García-Sánchez, I. M. 2008. ‘The Performance of Spanish Solid Waste Collection’. *Waste Management & Research* 26 (4) (January 8): 327–336 doi:10.1177/0734242X07081486 <http://wmr.sagepub.com/content/26/4/327>

In Italy, a major study published in 2009 examined comparative costs between direct municipal service, municipal corporations, PPPs, and private contractors, and found that costs were affected by different systems (separated or non-separated waste), and size of the area serviced, but there were only slight variations between public and private:

“no significant correlation can be found among the categories. This leads us to exclude any dependence of costs on management type, or on the introduction of private capital into the service companies”.⁵⁰

In the Netherlands, a large study based on data from all municipalities between 1998 and 2010, concluded that the apparent lower cost of private provision disappeared when other factors were taken into account:

“the cost advantage for private companies, becomes substantially smaller and non-significant if municipal fixed effects are included.”⁵¹

In Sweden, government data appeared to show that the cost of private refuse collection was 25% lower than the costs of public collection. But after adjusting for selectivity by firms and municipalities, and easier collection environments: “public production, on average, was 6 per cent cheaper than private production”. The only advantage of the private contractors was that they were better at shopping, so paid 10-15% less for their vehicles.⁵²



In the UK, the most recent data on costs in 2010 shows that the average net total cost of waste collection is slightly lower (by about 3%) for municipalities which operate an in-house service. This data takes account of transaction costs, capital expenditure and income. Municipalities which outsource appear to have lower current expenditure, but they:

- still employ staff costing over 5% of the contract value, to monitor the service;
- still pay for much investment, so capital costs are only halved, not fully transferred to contractors; and
- lose income worth more than 7% of the cost of the service.⁵³

In Japan, raw data showed, in terms of waste volume per truck and per worker, public operators are far more productive than private sector operators. But this was largely due to the fact

⁴⁹ Zafrá-Gómez, Jose Luis, Diego Prior, Ana Maria Plata Díaz, and Antonio M. López-Hernández. 2013. ‘Reducing Costs in Times of Crisis: Delivery Forms in Small and Medium Sized Local Governments’ Waste Management Services’. *Public Administration* 91 (1): 51–68. doi:10.1111/j.1467-9299.2011.02012.x. <http://onlinelibrary.wiley.com/doi/10.1111/j.1467-9299.2011.02012.x/abstract>

⁵⁰ Lombrano, Alessandro. ‘Cost Efficiency in the Management of Solid Urban Waste’. *Resources, Conservation and Recycling* 53, no. 11 (September 2009): 601–611. <http://www.sciencedirect.com/science/article/pii/S092134490900072X>.

⁵¹ Dijkgraaf, E., and R. H. J. M. Gradus. 2013 ‘Cost Advantage Cooperations Larger Than Private Waste Collectors’. *Applied Economics Letters* 20, no. 7 (2013): 702–705. <http://www.tandfonline.com/doi/abs/10.1080/13504851.2012.732682>

⁵² Ohlsson, Henry. ‘Ownership and Production Costs: Choosing Between Public Production and Contracting-Out in the Case of Swedish Refuse Collection’. *Fiscal Studies* 24, no. 4 (2003): 451–476. <http://onlinelibrary.wiley.com/doi/10.1111/j.1475-5890.2003.tb00091.x/abstract>

⁵³ Ekosgen 2011 *From Waste Management to Resource Recovery: A Developing Sector*.

<http://www.bis.gov.uk/assets/biscore/business-sectors/docs/f/11-1088-from-waste-management-to-resource-recovery>

that contractors were mainly used on small islands, rather than the large cities. After adjustment for these factors, differences were not significant.⁵⁴

The apparent cheapness of waste management contractors' costs is frequently due to the low pay of private companies. In Germany in 2011, some contractors paid such poor pay and conditions that their workers claimed benefits. (The German employers and trade union Ver.di have now agreed a minimum wage for the sector that has been declared generally binding, to prevent such cut throat competition).⁵⁵

Water

In the water sector, a stream of empirical studies and reviews provide strong confirmation of the view that there is no significant difference in technical efficiency between private and public sector operators. These include both international and national studies.

A systematic review in 2008 of the global literature on all aspects of efficiency in water supply concluded simply that:

“there is no hard evidence which points to a causal relation between management ownership and efficiency”.⁵⁶

Another international review, published in 2010, which analysed 27 empirical studies on comparative efficiency in water (and waste management) in various countries, concluded that:

“private production of local services is not systematically less costly than that of public production.”⁵⁷

A comprehensive study of water supply services in France, where about three-quarters of the service is delivered by the private sector through concessions or lease contracts, found that in 2004, after making allowance for all other factors, the price of water provided by private companies is 16.6% higher than in places where municipalities provide the service.⁵⁸

A series of studies in the UK has found that there has not been any significant improvement in productivity performance since privatisation; a 2007 report concluded that:

“after privatization, productivity growth did not improve ... average efficiency levels were actually moderately lower in 2000 than they had been at privatization [in 1989].”⁵⁹

⁵⁴ Ic hinose, Daisuke, Masashi Yamamoto, and Yuichiro Yoshida. 'Productive Efficiency of Public and Private Solid Waste Logistics and Its Implications for Waste Management Policy'. IATSS Research 36, no. 2 (March 2013): 98–105.

<http://www.sciencedirect.com/science/article/pii/S0386111213000046>

⁵⁵ In- und Outsourcing in der kommunalen Abfallwirtschaft

⁵⁶ González-Gómez, Francisco, and Miguel A. García-Rubio. 2008. 'Efficiency in the Management of Urban Water Services. What Have We Learned after Four Decades of Research'. Hacienda Pública Española/Revista de Economía Pública 185 (2): 39–67.

<http://dialnet.unirioja.es/servlet/articulo?codigo=2870250&orden=188091&info=link>

⁵⁷ Bel, Germà, Xavier Fageda, and Mildred E. Warner. 2010. 'Is Private Production of Public Services Cheaper than Public Production? A Meta-Regression Analysis of Solid Waste and Water Services'. Journal of Policy Analysis and Management 29 (3): 553–77. doi:10.1002/pam.20509. <http://onlinelibrary.wiley.com/doi/10.1002/pam.20509/abstract>

⁵⁸ Eshien Chong, Freddy Huet, Stephane Saussier and Faye Steiner 2006 Public-Private Partnerships and Prices: Evidence from Water Distribution in France Review of Industrial Organization Vol 29, Numbers 1-2, 149-169 <http://link.springer.com/article/10.1007%2Fs11151-006-9106-8>

⁵⁹ Saal D., Parker D., and Weyman-Jones T. (2007) Determining the contribution of technical change, efficiency change and scale change to productivity growth in the privatized English and Welsh water and sewerage industry: 1985–2000. J Prod Anal (2007) 28:127–139 DOI 10.1007/s11123-007-0040-z

The evidence for developing countries shows the same picture. A World Bank paper in 2005, reviewing studies on the water industry, worldwide, concluded that “the econometric evidence on the relevance of ownership suggests that in general, there is no statistically significant difference between the efficiency performance of public and private operators in this sector”.⁶⁰ In Africa, a 2004 study by Kirkpatrick et al, covering 110 African water utilities, including 14 private, found no significant difference between public and private operators in terms of cost.

In Latin America, a 2004 study of about 4000 sanitation operations in Brazil found that there is no significant difference between public and private operators in terms of the total variation in productivity; a further study in Brazil, published in 2007, also concluded that “that there is no evidence that private firms and public firms are significantly different in terms of efficiency measurements”. A paper published by the Brookings Institute in 2004 also studied the growth in water and sanitation connections in cities in Argentina, Bolivia and Brazil, and concluded that “while connections appear to have generally increased following privatization, the increases appear to be about the same as in cities that retained public ownership of their water systems”.



In 2004 an Asian Development Bank survey of 18 cities in Asia included two cities with private sector concessions – Manila and Jakarta. These were performing significantly worse than most public sector operators on four indicators of coverage, investment, and leakage: on six indicators (unit production costs, percentage of expenses covered by revenue, cost to consumers of constant level of usage per month, 24 hour supply, tariff level, connection fee) their performance is middling, not outstanding; the private cities perform relatively well on two indicators: revenue collection efficiency, and minimizing the number of staff per 1000 connections.⁶¹

Selected ADB water indicators for 18 Asian cities

		Manila (private)	Jakarta (private)	Average of 18 public cities
Water Coverage	(%)	58	51	79
Sewerage Access	(%)	7	2	51
Non-revenue Water (leakage)	(%)	62	51	34
Capital Expend/Connection	(US\$)	18	47	88

Source: ADB 2004.

⁶⁰ Infrastructure performance and reform in developing and transition economies: evidence from a survey of productivity measures. A. Estache, S. Perelman, L. Trujillo World Bank Policy Research Working Paper 3514, February 2005. http://wdsbeta.worldbank.org/external/default/WDSContentServer/IW3P/IB/2005/03/06/000090341_20050306101429/Rendared/PDF/wps3514.pdf

⁶¹ Kirkpatrick, Colin, David Parker, and Yin-Fang Zhang. 2006. ‘An Empirical Analysis of State and Private-Sector Provision of Water Services in Africa’. The World Bank Economic Review 20 (1): 143–63. doi:10.1093/wber/lhj001. <http://wber.oxfordjournals.org/content/20/1/143> ; [Has private participation in water and sewerage improved coverage?: empirical evidence from Latin America](#). G Clarke, K Kosec, SJ Wallsten Working paper 04-02 AEI-Brookings Joint Centre for Regulatory Studies January 2004 <http://www.aei-brookings.com/admin/authorpdfs/page.php?id=325> ; R. Seroa da Motta and A.R. Moreira (2004) Efficiency and Regulation in the Sanitation Sector in Brazil. IPEA Discussion Paper No. 1059. http://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID651884_code347008.pdf?abstractid=651884&mirid=3 ; Water Services in Chile: Comparing Private and Public Performance Gabriel A. Bitrán and Eduardo P. Valenzuela. Public Policy for the Private Sector. No 255 March 2003 <http://rru.worldbank.org/PapersLinks/Open.aspx?id=1998> ; Water in Asian Cities - Utilities Performance and Civil Society Views. ADB, www.adb.org/Documents/Books/Water_for_All_Series/Water_Asian_Cities/regional_profiles.pdf



Outsourcing – examples from manufacturing

Many multinational companies outsource much of their work, and this has been an important element in globalisation, and the creation of 'global supply chains'. So it is often assumed that private companies always improve their efficiency by outsourcing, and so public service providers should do the same.

But empirical studies of outsourcing by manufacturing firms, including the outsourcing of IT functions, have found:

“an outsourcing productivity paradox.... In the short-run, outsourcing firms are able to reduce costs. In the long-run, firms that engage in outsourcing suffer lower productivity growth than firms that do not engage in outsourcing.”⁶²

Outsourcing depends on 'decomposing' work into standardised activities that can be repeated with minimal variation, but this inhibits experimentation and adaptation to changing circumstances:

“adaptability gets compromised when firms outsource. This is because solving adaptability problems benefits from a common organizational language.”⁶³

The evidence includes:

- a study of 43,000 German manufacturing firms found that firms which outsourced more work had significantly worse performance in terms of productivity;⁶⁴
- a study of 256 large and medium-sized firms in Sweden, where outsourcing delivered short-term reductions in labour costs but higher administrative overheads and worse logistical performance;⁶⁵
- a study of consumer electronic multinationals found that firms “cut costs by increasing outsourcing ...[but] their technology base was weakened by excessive reliance on their outside suppliers over time.”⁶⁶
- the efficiency gains of outsourcing internet banking services in the USA decline and reverse as outsourcing becomes more extensive: “outsourcing has a negative, linear effect on adaptability. Adaptability problems seem to be best performed in-house”⁶⁷

⁶² Windrum P., Reinstaller A., Bull C. 2009 The outsourcing productivity paradox: total outsourcing, organisational innovation, and long run productivity growth *J Evol Econ* (2009) 19:197–229 DOI 10.1007/s00191-008-0122-8 <http://www.springerlink.com/content/j760q618g555873g/fulltext.pdf>

⁶³ Weigelt, Carmen, and Mb Sarkar. 2012. 'Performance Implications of Outsourcing for Technological Innovations: Managing the Efficiency and Adaptability Trade-off'. *Strategic Management Journal* 33 (2): 189–216. doi:10.1002/smj.951. <http://onlinelibrary.wiley.com/doi/10.1002/smj.951/abstract>

⁶⁴ Görzig B, Stephan A (2002) Outsourcing and firm-level performance. German institute for economic research discussion paper 309, www.econstor.eu/bitstream/10419/18045/1/dp309.pdf

⁶⁵ Bengtsson, Lars. 2008. 'Outsourcing Manufacturing and Its Effect on Engineering Firm Performance'. *International Journal of Technology Management* 44 (3/4): 373. doi:10.1504/IJTM.2008.021045, www.inderscience.com/info/inarticle.php?artid=21045

⁶⁶ Kotabe, M., Mol, M. J., & Ketkar, S. (2008). An evolutionary stage theory of outsourcing and competence destruction: a triad comparison of the consumer electronics industry. *Management International Review*, 48, 65–93

⁶⁷ Weigelt, Carmen, and Mb Sarkar. 2012. 'Performance Implications of Outsourcing for Technological Innovations: Managing the Efficiency and Adaptability Trade-off'. *Strategic Management Journal* 33 (2): 189–216. doi:10.1002/smj.951. <http://onlinelibrary.wiley.com/doi/10.1002/smj.951/abstract>



- a study of Dutch and Brazilian firms found that extensive outsourcing has a long-term negative effect on the market share of companies. Beyond a certain point: “market share actually decreases as a consequence of further outsourcing”.⁶⁸

Boeing’s nightmare: the 70% outsourced Dreamliner

The Boeing 787, known as the Dreamliner, illustrates the problems of excessive outsourcing. More than 70% of the production process was outsourced – twice the usual proportion – with the intention of reducing production costs. As part of this, Boeing dismantled its division in charge of designing electronic controls and managing suppliers: over 1200 engineers were dispersed. Instead, overall coordination and design were also outsourced.

This system broke down. The contractors were unable to coordinate or design effectively, failed to deliver what was required, and made the system more complex still by outsourcing part of their work to sub-contractors. The first plane was delivered 3 years late – and costs grew to three times the budgeted amount of \$5billion – about \$10billion over budget. And since they started flying, 787s have experienced a number of battery fires.

To solve the problem, Boeing had to bring huge amounts of work back in-house, by taking over the software and design contractors, at a cost of \$2.4 billion: “Boeing had to take over the control of the design so that they can really continue the development process.”⁶⁹

Zara: flexibility through in-house production and design

The Spanish multinational clothing company Zara deliberately keeps all its design and distribution functions in-house, and half of its production in its own factories in its home country, Spain. The company gains much greater flexibility and responsiveness, and higher quality and productivity offset the higher labour costs:

“Unlike so many of its peers in retail clothing that rush to outsource, Zara keeps almost half of its production in-house. ... Instead of relying on outside partners, the company manages all design, warehousing, distribution, and logistics functions itself.”⁷⁰

“Zara works a lot harder. Their design functions are fully integrated vertically, keeping everything in house rather than outsourcing.”⁷¹

⁶⁸ Kotabe, Masaaki, Michael J. Mol, Janet Y. Murray, and Ronaldo Parente. 2012. ‘Outsourcing and Its Implications for Market Success: Negative Curvilinearity, Firm Resources, and Competition’. *Journal of the Academy of Marketing Science* 40 (2) (March 1): 329–346. doi:10.1007/s11747-011-0276-z. <http://link.springer.com/article/10.1007/s11747-011-0276-z>

⁶⁹ Cherry S. 26 Feb 2013 Are Boeing’s Battery Difficulties Part of a Much Bigger Problem? <http://spectrum.ieee.org/podcast/at-work/innovation/are-boeings-battery-difficulties-part-of-a-much-bigger-problem>

⁷⁰ Harvard Business Review 2004 <http://hbr.org/2004/11/rapid-fire-fulfillment/ar/1>

⁷¹ Zara and Lean Retail July 2005 Fashion-Incubator http://www.fashion-incubator.com/archive/zara_and_lean_retail/

Conclusion

Effectiveness, efficiency and democracy

This review of evidence has shown that the rhetorical claims of greater private sector efficiency are not supported by any evidence.

It is of fundamental importance to organise public services so that they deliver their public objectives effectively. Unlike the private sector, public service systems cannot be blindly guided by the financial performance of individual organisations. These public objectives also need to be achieved as efficiently as possible, and so technical efficiency remains important.

Public services need to include structures which ensure that the public objectives are constantly reinforced and monitored by democratic mechanisms of accountability and involvement of the public. Such mechanisms include formal accountability to elected public bodies, such as municipalities or governments; structures for public participation in decision-making, including full transparency of information; and active involvement of representative organisations, such as community associations.

The achievement of public objectives is weakened where the private sector is involved. A study of local government in the UK, for example, found that use of private companies: “is consistently associated with worse perceptions of local service performance”.⁷² Technical efficiency is also undermined by outsourcing, because it requires the long-term capacity for re-organisation and re-invention of processes and inputs to achieve the desired objectives in response to changing requirements – and this process is weakened by outsourcing because: “outsourced activities are no longer available for splitting and recombining with other activities into new, more effective organisational modules.”⁷³ The same problem arises with liberalisation and unbundling of systems: the organisational knowledge of institutions is embedded in its workforce, but liberalisation, undermines this capacity because of: “the loss of critical capabilities or the split-up of complementary capabilities”.⁷⁴

Improvement of the effectiveness and efficiency of public services therefore benefits from both a capable workforce of public employees and an active system of democratic accountability. Studies of public sector innovation have found that it is driven both through the formal political institutions by the process of policy formation and the managerial structures (‘top-down’); and also through public participation, especially at local level, which encourages public employees to develop and improve services “due to the coercive power of greater transparency” (‘bottom-up’).⁷⁵

⁷² Andrews, Rhys, and Steven Van de Walle. 2013. ‘New Public Management and Citizens’ Perceptions of Local Service Efficiency, Responsiveness, Equity and Effectiveness’. *Public Management Review* 15 (5): 762–83. <http://www.tandfonline.com/doi/abs/10.1080/14719037.2012.725757>

⁷³ Windrum P., Reinstaller A., Bull C. 2009 The outsourcing productivity paradox: total outsourcing, organisational innovation, and long run productivity growth *J Evol Econ* (2009) 19:197–229 DOI 10.1007/s00191-008-0122-8 <http://www.springerlink.com/content/j760q618g555873g/fulltext.pdf>

⁷⁴ Worch, Hagen, Bernhard Truffer, Mundia Kabinga, Anton Eberhard, and Jochen Markard. ‘A Capability Perspective on Performance Deficiencies in Utility Firms’, *Utilities Policy* 25, June 2013: 1–9, www.sciencedirect.com/science/article/pii/S0957178712000720

⁷⁵ ICEG European Center 2012 Policies Supporting Innovation in Public Service Provision INNO-Grips Policy Brief No. 5 Nov 2012 http://www.icegec.hu/index.php?option=com_publications&Itemid=57&publicationId=616



The potential gains from such processes are shown in the cases of Paris and London in the following section.

Efficiency and effectiveness gains from re-municipalisation

The experience of re-municipalisation in two major capital cities demonstrates that the public sector can dramatically improve the efficiency and effectiveness of a service that was previously privatised. In both cases, since the ending of major privatisations, the effectiveness and efficiency of services have improved, there is greater public accountability and transparency, and billions of euros/pounds have been saved.

Since water services in Paris were re-municipalised in 2010, Eau de Paris, has been able to make efficiency savings by reducing the cost of sub-contracts, by rationalisation and merger of previously separate functions, by eliminating the profit margins of the private companies, and by overall improvements in coordination and planning – for example, the call-centres have also been brought in-house, at a saving of €2million per year. These efficiency savings have been used to finance investments and a sustainable wages bill, as well as reducing the price of water by 8%. The city has also created a set of mechanisms to ensure it is constantly responsive to its public objectives, including a long-term ‘contract of objectives’ with the city council, an independent observatory for public participation in debates, and a consultative committee for representative bodies.⁷⁶

Transport for London (TfL) has been able to make similar large efficiency gains since remunicipalising its PPPs for the London underground metro system. The business was re-financed by TfL through issuing bonds, which reduced the cost of interest payments, but in addition, the workforce became directly employed and managed by TfL. Through the remunicipalisation of the Metronet contract alone, TfL achieved efficiency savings of £2.5 billion by removing duplication and improving back office services (£1.2bn.), competitively tendering sub-contracts which Metronet and Tubelines had awarded to themselves (£0.5 bn), and improving planning and scheduling (£0.8bn.).⁷⁷

⁷⁶ Anne Le Strat. 2013. ‘L’eau À Paris - Retour Vers Le Public’. Eau de Paris, www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf

⁷⁷ House of Commons Library. 2012. London Underground after the PPP, 2007 Briefing Paper SN01746 www.parliament.uk/briefing-papers/SN01746



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