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How competition and choice can
improve public service delivery in
the UK

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Contents

1	Introduction and summary	4
	Structure of report	10
2	Private sector involvement in context	11
2.1	Evolution of outsourcing in the United Kingdom	12
2.2	Current outsourcing market overview	14
2.3	The potential benefit of increased outsourcing	16
3	Prisons	18
3.1	Overview of the prison estate	19
3.2	Value for money	21
3.3	Performance	26
3.4	Drivers of performance	30
3.5	Summary	33
4	Healthcare (soft facilities management)	34
4.1	Overview of facilities management services in healthcare	35
4.2	Value for money	37
4.3	Performance	40
4.4	Drivers of performance	43
4.5	Summary	46
5	Air traffic services	47
5.1	Overview of international air traffic services	48
5.2	Value for money	49
5.3	Performance	52
5.4	Drivers of performance	55
5.5	Summary	56

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1. INTRODUCTION AND SUMMARY



Introduction and summary

In this report, our objective is to assess the relative performance of public services that are delivered by external private sector contractors to those delivered ‘in-house’ by the public sector in terms of cost and service quality.

Private sector involvement in the delivery of public services is often seen as a contentious issue. There are ideological opponents and supporters, concerns about public services being incentivised by profit and misconceptions about the role that outsourcing plays and how it relates to privatisation. The focus should be on ensuring that the best possible services are delivered at the best value for the taxpayer.

The government uses outsourcing to help deliver a wide variety of services, ranging from the operation of call centres to cleaning hospitals, running prisons and undertaking large-scale construction projects. Over the past decade there have been some high-profile failures in private sector delivery, including the collapse of Carillion and the failure of HMP Birmingham which has now been taken back into public control. However, there have been similar problems in publicly run services, such as HMP Bedford and Liverpool. Meanwhile, there have been well run services delivered by the private and public sector alike.

We use available evidence and industry expertise to understand the differences in performance between the private and public sector in terms of service quality and cost efficiencies, and the reason for those differences. We have analysed publicly available statistics and literature, as well conducting a series of in-depth interviews with industry experts, for three case study areas of outsourcing: prisons; soft facilities management in healthcare; and air traffic services. Although these three areas alone do not provide full coverage and representation of outsourcing activity, there are sound reasons to believe they provide good and more broadly applicable insight. (See Box 1.)

Due to the availability of data, and more importantly, to ensure a more accurate representation of the data being analysed, this report focuses the period prior to the onset of Covid-19 restrictions in the sectors analysed. The unique nature of the ‘pandemic period’ would require its own conceptual and analytical framework. As such, this report should be considered as an examination the relative performance of private sector and ‘in-house’ delivered public services in ‘normal’ times.

Box 1: Reasons for choice of case study areas

Prisons, soft facilities management in healthcare and air traffic services were chosen as case studies because they represent:

- Activities which are outsourced at scale in the United Kingdom or internationally
- Sectors for which there are diverse range of contracts rather than just one large supplier/contract which may distort findings
- Activities with clear public sector comparators
- A mix of lower and higher complexity activities delivered in the United Kingdom and internationally

Source: Capital Economics.

Outsourcing can deliver savings for the taxpayer

Our case studies demonstrate the cost savings that are achievable through private sector delivery.

Between 2016/17 and 2018/19, prisons run by private providers on a management contract basis were cheaper in every instance than all of their relevant comparator prisons; some studies have found savings of between ten and 15 per cent when comparing privately run prisons with their most comparable public facilities. Without accounting for prison characteristics, prisons managed by private providers are around 45 per cent cheaper to run on average.

Introducing a competitive market for soft facilities management in healthcare can have an initial impact of reducing costs to the tune of between 15 and 30 per cent. Even if later generations of contracts cannot deliver the same magnitude of absolute savings, deploying a competitive bidding process remains a key element of delivering value for money in the provision of public services.

In the United States, privately run air traffic control towers are up to 75 per cent cheaper to run than comparable state-owned FAA towers. Evidence from a handful of European countries estimate savings from introducing competition of between 20 and 50 per cent.

More generally, there are a number of reasons outsourcing enables the government to deliver services at a lower cost.

There are numerous factors which can drive lower costs in outsourced providers. First, private providers have the incentive to pursue **efficiencies** and push costs down. An efficient market with commercially driven suppliers provides an imperative to find more cost efficient working practices that is not as strong in the public sector.

Second, introducing a **competitive market** for government services naturally encourages both private providers and the public sector to find cost savings.

Third, there is a greater incentive for **innovation**. Outsourced providers have a financial incentive to realise greater efficiencies which encourages innovation. What's more, greater financial flexibility and access to capital means they are more likely to be able to invest in innovations that will generate savings at a later date. Public sector providers face more restrictions to meet current annual budgets.

Fourth, the private sector is generally better **at leveraging its economies of scale**. Although government is large, it is not always able to leverage its scale to achieve the economies of scale possible with a private sector provider. A private provider is likely to procure at scale to fulfil requirements across its portfolio of contracts, which often extends across international markets.

The quality of services is not damaged by private sector providers

Our case studies demonstrate that the private sector typically delivers services to the same standard or better than the public sector.

On average, in 2019/20, prisons operated under PFI arrangements achieved a higher score than 78 per cent of their public sector comparator prisons according to the Ministry of Justice scoring system, while those outsourced on a management contract basis prisons were awarded a higher score than 71 per cent of theirs.

Metrics assessing the quality of soft facilities management services in healthcare facilities paint a mixed picture; there are examples of good performance and under performance from services delivered in-house and by the private sector alike. In aggregate, the averages do not show any systematic difference in quality between the two.

International evidence comparing air traffic control services with similar characteristics shows that private (or part private) providers tend to score well on performance measures of delays and safety incidents. For example, reported rates of delays and runway incursion safety incidents are lower in privately run control towers in the United States.

More generally there are good reasons that, under the right conditions, outsourcing can lead to better quality services. Higher spending does not necessarily result in higher quality services; there are many factors which affect the quality of services that are delivered.

First, private providers have **more accountability** for delivering the required services to a high standard because of the need to build client relationships as well as to meet payment terms that are often set against specific deliverables. Private providers are incentivised to deliver against targets in order to build trust with customers and remain attractive for future contracts. In addition, many outsourcing contracts involve a financial punishment if certain key performance targets are not met. For example, in many private sector prison contracts there are penalty clauses for underperformance against defined key performance indicators, which can result in a payment to the government. Such sanctions rarely exist in public provision.

Second, the private sector generally has more **flexible operating practices**. Regulations and standard practices within the public sector can restrict their ability to meet changing requirements. One example of this is the ability for privately run prisons to relocate staff to particular areas where there is an immediate need or to adjust hours and roles of staff, while staff in public prisons are typically only permitted to work within their specific area.

Third, private sector providers are more likely to capitalise on **innovation** and intellectual property for the further benefit of the United Kingdom economy. A private enterprise that has built up skills and expertise in producing a new product is more likely to deploy those skills for other opportunities such as seeking out new export markets in which to sell the product.

Fourth, external contractors can utilise their **specialisms** in certain fields, drawing on experience from delivering similar services day in and day out as their core business, including in international markets, which can inform best practice. This can have benefits including access to skills that are more difficult to retain in-house.

Understanding drivers of performance can help unlock benefits of outsourcing

A competitive market including private providers can deliver benefits in terms of both value to the taxpayer and the quality of services. However, there are large variations in the success of different contracts. We have identified a number of underling drivers which can determine the success of an outsourcing contract.

First, it is important to have a **realistic and well-defined contract specification**. When problems arise in the fulfilment of outsourced contracts, the issue can often be traced back to the procurement process and the specification of the contract. Problems in the past have been caused by a ‘race to the bottom’. Government procurement has at times prioritised cost over quality, which has encouraged providers to try to undercut each other with unsustainable bids. Those drawing up contracts should be cognisant of the generation of the contract. First and second generation contracts can expect to see greater efficiency gains than those in the third or fourth iteration. Skills and experience of the procurement process are required on both sides, as is good data and a transparent process with dialogue between parties. Competitive dialogue bids allow for this dialogue as opposed to a restricted bid process.

Second, a key component of a successful outsourcing contract is a **constructive working relationship between the government contractor and the provider**. It is essential that there is a mutual understanding of the pressures and issues faced by both parties so that they can work flexibly and pragmatically to ensure the best possible delivery outcomes.

Third, **effective leadership** needs to be in place. Some of the underperformance (or outright failures) in outsourcing contracts can be attributed to inadequate leadership in delivering services. Ensuring a committed and competent leadership is in place will have a big impact on the chances of success.

Fourth, there needs to be **sensible allocation of risk**. Risks should sit with the party best able to manage them in a cost-efficient manner. Too many outsourcing contracts have transferred high or unlimited levels of risk to the supplier, or have under-priced the risk transferred. This has caused particular problems in large PFI contracts which involve the design, build and operation of large capital projects. The Cabinet Office’s Outsourcing Playbook emphasises that proposals for risk allocation should be subject to extensive scrutiny prior to going to market and that suppliers should not be asked to take on unlimited liabilities. Appropriate allocation of risk would help to mitigate external factors and lead to fewer performance and commercial issues during the life of the contract.

Fifth, **more comprehensive and transparent data** informs more appropriate contracts and better assessment of performance. Contracts that are based on transparent, comprehensive and detailed data have a better chance of accounting for the nuances of the particular services to be delivered. Good data allows the customer and supplier to fully understand the impact of factors such as the nature and condition of physical structures, demographics, range of services offered and current performance levels.

Extending competition could reap benefits for the government

While introducing competitive markets across all government spending is unlikely to be appropriate, the evidence from areas that have been subject to competition suggests that it is possible to deliver services more cost-efficiently without damaging service quality.

The capacity for cost savings and performance improvements on individual services/contracts varies widely. However, our analysis on prisons, soft facilities management in healthcare and air traffic control suggests that potential average savings to the government of between five and 15-per cent from introducing competitive markets is a relatively conservative estimate.

In 2019/20, 35 per cent of the United Kingdom's government expenditure was spent on procurement from external contractors. Procurement spending in the United Kingdom is around the average for countries in the OECD.¹ If the government were to match the share of spending on procurement to a country at the higher end of the range, such as the Netherlands at 45 per cent, they could benefit from savings to the tune of £5 to £15 billion per annum.

Total government expenditure in 2019/20 was £881 billion, of which £306 billion was spent on procurement. Achieving efficiencies of between five and 15 per cent on all government services that aren't subject to competitive markets would deliver savings of between £29 and £86 billion.

¹ Based on most recent data from 2015

Structure of report

The report is structured as follows:

- Section two of the report outlines the background to the involvement of the private sector in the delivery of public services, the current state of the market and potential future benefits;
- Section three assesses evidence on the performance of private prisons in the United Kingdom;
- Section four assesses evidence on the performance of private provision of soft facilities management in healthcare facilities in the United Kingdom; and
- Section five assesses evidence on the performance of privately run air traffic control services internationally.

2. PRIVATE SECTOR INVOLVEMENT IN CONTEXT

In this section, we outline the background to the involvement of the private sector in the delivery of public services, the current state of the market and potential future benefits of outsourcing.



2.1 Evolution of outsourcing in the United Kingdom

The government has outsourced services for over 40 years.

The concept of outsourcing can be found as far back as Roman times, where it was said that tax collection was outsourced.² In the United Kingdom, the use of outsourcing in a meaningful way dates back to the late 1970s, where cleaning services were contracted out at a small number of hospitals. In 1980, compulsory competitive tendering (CCT) was first introduced, which required local authorities to open up some in-house services to private competition.

Initially, this covered local authority construction, maintenance and highways work under the Local Government, Planning and Land Act of 1980. In 1983, parts of the National Health Service (NHS) were brought within the compulsory competitive tendering regime; the government legislated that the NHS would have to market-test its cleaning, catering and laundry and linen services (also known as hotel services).

Outsourcing has been expanded by successive governments.

Having been re-elected in 1987, the Conservative government introduced the Local Government Act of 1988 which expanded upon the services within the compulsory competitive tendering regime to include services such as building cleaning, street cleaning, refuse collection, education and welfare catering, other catering, grounds maintenance and vehicle maintenance. Further minor additions were made in the 1989 Act.

At a similar time, the Home Affairs Select Committee in 1987 recommended inviting private sector firms to bid to run remand prisons on an experimental basis. The 1990 Strangeways riot in Manchester which lasted for 25 days brought about the Woolf Report in 1991, which described the prison conditions before the riot as ‘intolerable’ and recommended a wide range of reforms across the prison estate.³ Later in the year, the contract to run the first private prison was awarded.

Under John Major, compulsory competitive tendering was extended further for local government services. By 1995, professional services including housing management, legal, construction and property services, alongside information technology, finance and personnel services became subject to market testing.⁴

The arrival of a Labour government in 1997 saw a promise to replace compulsory competitive tendering with a ‘best value’ approach. The ‘best value’ approach aimed to improve local services in both quality and cost terms, placing ‘value’ above pure price competition. During this period private sector involvement expanded to new areas of public services.

2 Andrew Kakabadse and Nada Kakabadse, Outsourcing: Current and Future Trends, *Thunderbird International Business Review*, Vol. 47 (2), pp. 183-204, 2005.

3 HC Deb (25 February 1991) vol. 186 col. 659-73, (House of Commons, London), 1991.

4 Patterson and Pinch, Public sector restructuring and regional development: the impact of compulsory competitive tendering in the UK, *Regional Studies*, Vol. 34 (3), pp. 265-275, 2000.

The use of private finance initiatives grew quickly in the mid-late 90s.

In the mid-90s a new type of outsourcing was introduced, which expanded the role of private firms in public infrastructure projects. Rather than being contracted to manage or run a service for a given period of time, private finance initiative contracts typically involved the public sector commissioning an external provider to design, finance, build, operate and maintain a new facility, such as a school, prison or bridge. Under these schemes, ownership of the asset was transferred to the private sector for the contract period which generally lasted for 25 to 30 years.

Using PFI contracts allowed the government to avoid large up-front capital payments and kept the debt to finance new projects off the government's balance sheet. Instead, it has to repay what is known as a 'unitary charge' payment, an all-in-one annual payment that encompasses the total costs of private sector involvement, including financing costs. Additionally, it often transferred the responsibility of maintenance and protection of the asset to the private sector over the lifetime of the contract.

The principle of private sector involvement in the financing, constructing and operating of public projects first emerged in 1992 under the Conservative government. Although the first PFI-funded infrastructure, the Skye Bridge in Scotland, opened in 1995, the use of PFI contracts began to become commonplace after Labour came into power in 1997. Between 1997 and 2010, an average of 55 PFI contracts were signed each year.⁵

After some high-profile failures and criticism regarding the inappropriate level of risk being transferred to the private sector, the government introduced PF2 in 2012. PF2 was intended to address the fundamental concerns associated with PFI.⁶ Some changes were made, including increasing the government's equity stake in projects, alongside the publication of equity returns, but analysis found that PF2 was largely similar to PFI.⁷

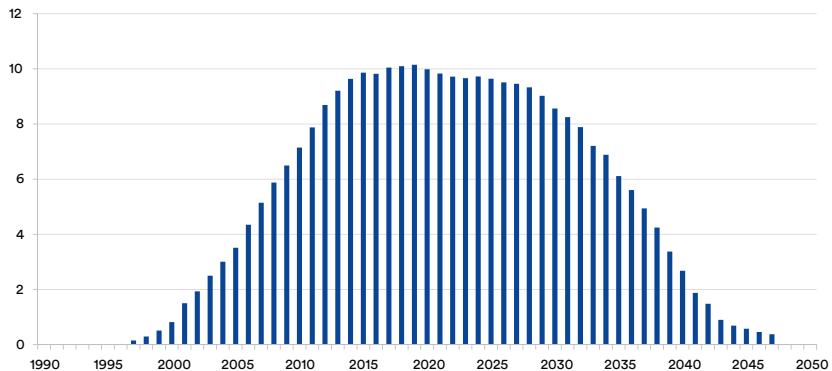
The use of PFI contracts waned after the global financial crisis and, in 2018, then Conservative chancellor Philip Hammond announced an end to new PFI projects. As of March 2018, there were over 700 PFI and PF2 projects either in operation or under construction, with expected repayments over the next 30 years estimated at circa £188 billion. (See Figure 1.)

5 HM Treasury, Private Finance Initiative and Private Finance 2 projects: 2018 summary data, (HM Treasury, London), 2019.

6 HM Treasury, A New Approach to Public-Private Partnerships, (HM Treasury, London), 2012.

7 National Audit Office, PFI and PF2, (National Audit Office, London), 2018.

Figure 1: Private Finance Initiative (PFI) completed and future ‘unitary charge payments’, £ billions, values as of 2019, current prices



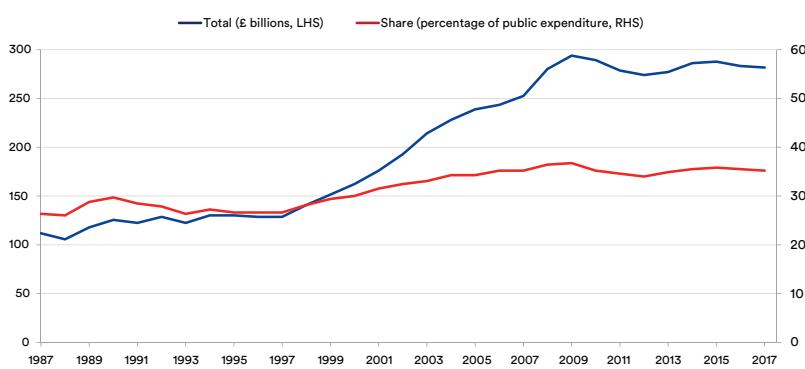
Source: HM Treasury.

2.2 Current outsourcing market overview

The United Kingdom government spends around 35 per cent of its budget on procuring goods and services.

In 2019/20, the government spent £306 billion on external procurement, representing 35 per cent of its total budget. Between 1997 and 2017, procurement as a share of government expenditure increased from 27 per cent to 36 per cent. Since the global financial crisis and subsequent austerity programme, spending on external contractors has been broadly flat. (See Figure 2.)

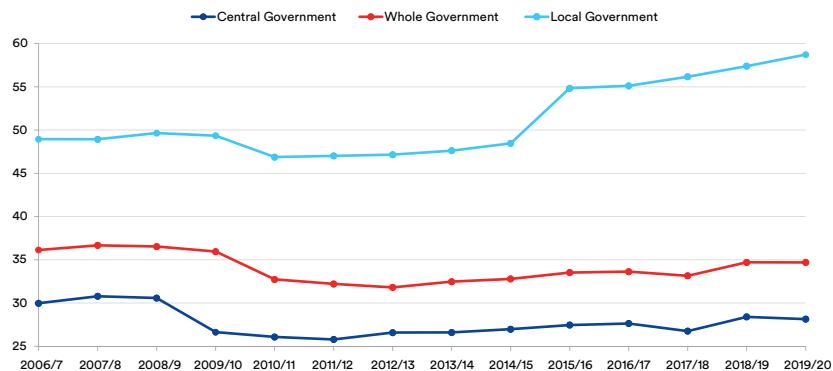
Figure 2: Public sector procurement spending, United Kingdom



Source: Institute for Government.

Procurement makes up a larger share of local government spending. In 2019/20, procurement accounted for 59 per cent of local government expenditure compared to 28 per cent of central government expenditure. (See Figure 3.)

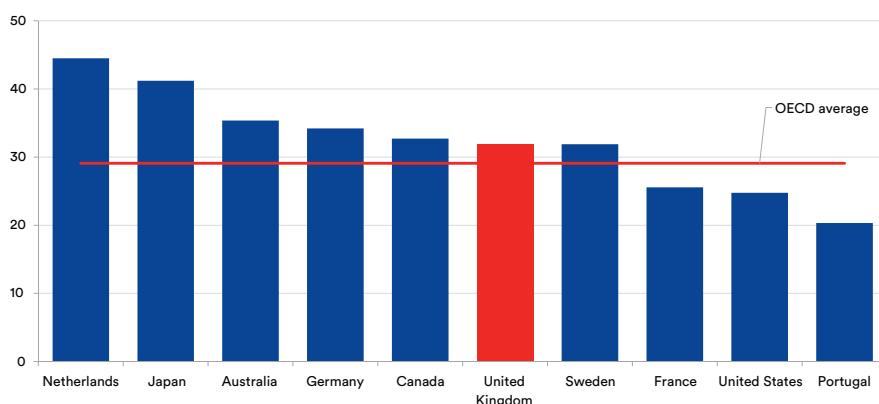
Figure 3: Procurement as a percentage of total expenditure, United Kingdom



Source: Capital Economics' analysis of Public Expenditure Statistical Analyses. Note 2019/20 local government figures are plans, not outturns.

The scale of outsourcing in the United Kingdom is around the average for countries within the Organisation for Economic Cooperation and Development (OECD). Countries such as Germany, Japan and the Netherlands all spend a larger share of their budget on procurement than the United Kingdom. (See Figure 4.)

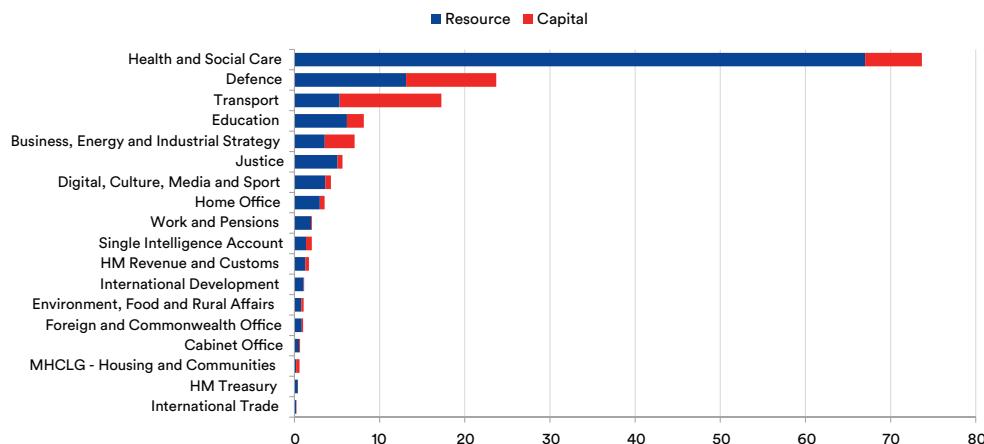
Figure 4: General government procurement as a share of total general government expenditure, 2015



Source: Institute for Government.

Spending on procurement is split unevenly between central government departments. The largest area of procurement spending is Health and Social Care, which accounts for nearly £74 billion. The departments with the next largest spend are Defence, Transport and Education which account for £24, £17 and £8 billion respectively. (See Figure 5.)

Figure 5: Procurement spend by central government department, 2019/20, £ billions

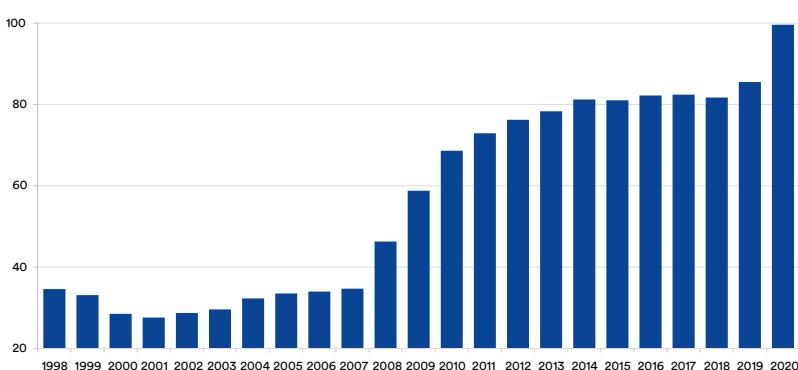


Source: Capital Economics' analysis of Public Expenditure Statistical Analysis.

2.3 The potential benefit of increased outsourcing

In the decade leading up to 2007 public sector debt remained low at less than 40 per cent of gross domestic product. The onset of the global financial crisis then put intense pressure on public finances, causing a spike in the budget deficit and more than doubling national public debt as a share of output from 35 per cent in 2007 to 81 per cent in 2014. The government response to the onset of the pandemic in March 2020 pushed debt levels even higher, to roughly the size of the United Kingdom economy. (See Figure 6.)

Figure 6: United Kingdom public debt as a percentage of gross domestic product, as of end-June 2020



Sources: Office for National Statistics. Note: excludes public sector banks.

Rising levels of government debt combined with a large budget deficit, at over ten per cent of output in 2009, led to the implementation of an austerity programme in 2010. Prior to the coronavirus crisis, this had pushed the budget deficit down to circa two per cent of gross domestic product in 2019.

However, government finances have been under intense pressure given the need to tackle the Coronavirus pandemic and with government debt reaching over 100 per cent of output, the government needs to ensure more than ever that in the future the best possible services are delivered at the best value for the taxpayer.

Measuring the potential benefits of introducing competition to the market for public services is not an exact science, but we can derive indicative estimates of savings that could be realised by opening up more public sector expenditure to the outsourcing market.

A 2012 report for the Confederation of British Industry assessed the potential benefits of outsourcing in 20 government services, representing around four per cent of total government spending. Through surveys and analysis of existing literature they found that the cost saving generated by the competitive pressure on providers operating these services in an open market was around 11 per cent. This translates to around £2.2 billion of potential savings in today's prices.⁸

While introducing competitive markets across all government spending is unlikely to be appropriate, the evidence from areas that have been subject to competition suggests that it is possible to deliver services more cost efficiently without damaging service quality.

Our analysis on prisons, healthcare (soft facilities management) and air traffic services suggests that potential average savings to government from introducing competitive markets of around five to 15 per cent is a relatively conservative estimate. Although there are examples where this hasn't been the case for a variety of reasons, there is evidence that average savings realised could be significantly larger. (See Sections 3, 4 and 5.)

In 2019/20, 35 per cent of the United Kingdom's government expenditure was spent on procurement from external contractors. Procurement spending in the United Kingdom is around the average for countries in the OECD.⁹ If the government were to match the share of spending on procurement to a country at the higher end of the range, such as the Netherlands at 45 per cent, they could benefit from savings to the tune of £5 to £15 billion annually, somewhere in the region of one to three times the resource budget for the Department of Work and Pensions.¹⁰

Total government expenditure in 2019/20 was £881 billion, of which £306 billion was spent on procurement. Achieving efficiencies of between five and fifteen per cent on all government services that aren't subject to competitive markets would deliver savings of between £29 and £86 billion annually.

⁸ Confederation of British Industry, Open Access: Delivering quality and value in our public services, (Confederation of British Industry, London) 2012

⁹ Based on most recent data from 2015

¹⁰ HM Treasury, Public Expenditure Spend Analyses 2019, (HM Treasury, London), 2019.

3. PRISONS

In this section, we assess the relative performance of privately run and publicly run prisons and the underlying drivers of differences between the two.

The key findings are:

- Between 2016/17 and 2018/19, prisons run by private providers on a management contract basis were cheaper in every instance than all of their relevant comparator prisons; some studies have found savings of between ten and fifteen per cent when comparing privately run prisons with their most comparable public facilities
- On average, in 2019/20, prisons operated under PFI arrangements achieved a higher score than 78 per cent of their public sector comparator prisons according to the Ministry of Justice scoring system, while those outsourced on a management contract basis prisons were awarded a higher score than 71 per cent of theirs
- Improvements are needed across all prisons, while there are examples of good and underperformance in the private and public sectors alike



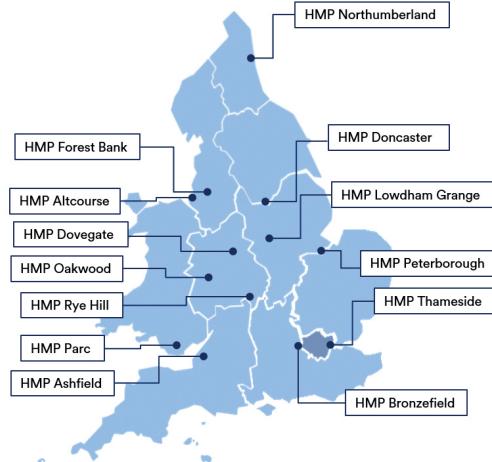
3.1 Overview of the prison estate

In England and Wales there were 118 prisons holding a total population of 83,000 prisoners in 2019, of which 13 facilities are privately run.

The 13 privately run prisons held around 15,000 inmates; they represent eleven per cent of the number of prisons and eighteen per cent of the total prisoner population. The private establishments are split between three providers: G4S, Serco and Sodexo. Ten of these prisons are run under Private Finance Initiative (PFI) contracts, which include both the construction and operation of the prison. Most of these contracts will come to an end over the next decade at which point they will revert to public sector ownership. The other three privately run prisons are outsourced on a management contract basis, handing control of running the prisons to an external provider for a specified period without changing its ownership structure. (See Figure 7 and Figure 8.)

Figure 7: Locations of privately run prisons and opening dates in England and Wales, 2019

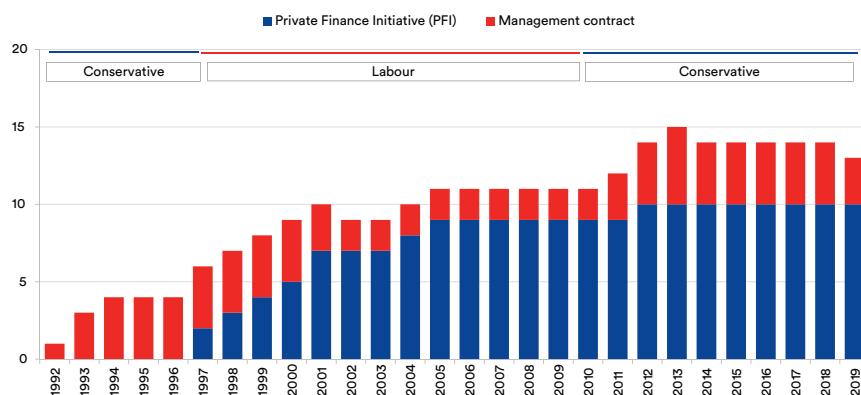
Prison	Type	Operator
HMP Altcourse	PFI	G4S, since 1997
HMP Ashfield	PFI	Serco, since 1999
HMP Bronzefield	PFI	Sodexo, since 2004
HMP Doncaster	Management Contract	Serco, since 1994
HMP Dovegate	PFI	Serco, since 2001
HMP Forest Bank	PFI	Serco, since 2000
HMP Lowdham Grange	PFI	Serco, since 1998
HMP Oakwood	Management Contract	G4S, since 2012
HMP Parc	PFI	G4S, since 1997
HMP Peterborough	PFI	Sodexo, since 2005
HMP Rye Hill	PFI	G4S, since 2001
HMP Thameside	PFI	Serco, since 2012
HMP Northumberland	Management Contract	Sodexo, since 2013



Source: Capital Economics and Her Majesty's Prison and Probation Service.

Figure 8: Number of private prisons by contract type and political party in power at time, England and Wales

In 2016, the government published a white paper outlining its intention to build up to 10,000 new prison places.



Sources: Financial Times and Capital Economics.

In 2016, the government published a white paper outlining its intention to build up to 10,000 new prison places.¹¹ Since then one new public prison, HMP Berwyn, has opened. Meanwhile, a new house block opened at HMP Stocken, and construction of new prisons at Wellingborough and Glen Parva is underway. In 2020, the government announced that it would build four new prisons in England over the next six years.¹² All of the new prisons will be constructed using public funds but then contracted out to the private sector to manage, using a public sector prison benchmark in the bid process.¹³

At this stage it seems that the public sector (Her Majesty's Prison and Probation service) will not be invited to bid for these prisons. In July 2020 it was reported that G4S had been awarded the contract to run the new Wellingborough prison.¹⁴

There are problems to be addressed in the current prison system. In 2019, 37 per cent of prisons were given ratings that fell below 'acceptable', with one in seven rated as having performance of 'serious concern', the highest proportion since those ratings began.¹⁵

This performance is set against the context of increasing budget constraints. The Ministry of Justice was not exempt from the austerity programme implemented in 2010. Between the 2008/9 and 2019/20 fiscal years, spending at the Ministry of Justice fell by nearly 30 per cent in real terms, whilst prisons have seen their funding fall by over 20 per cent in the same period. Spending by the Ministry of Justice reached a low of £7.8 billion in 2015/16 before increasing to £8.4 billion in 2019/20. (See Figure 9.)

¹¹ Elizabeth Truss (Ministry of Justice), Prison Safety and Reform, (Ministry of Justice, London), 2016.

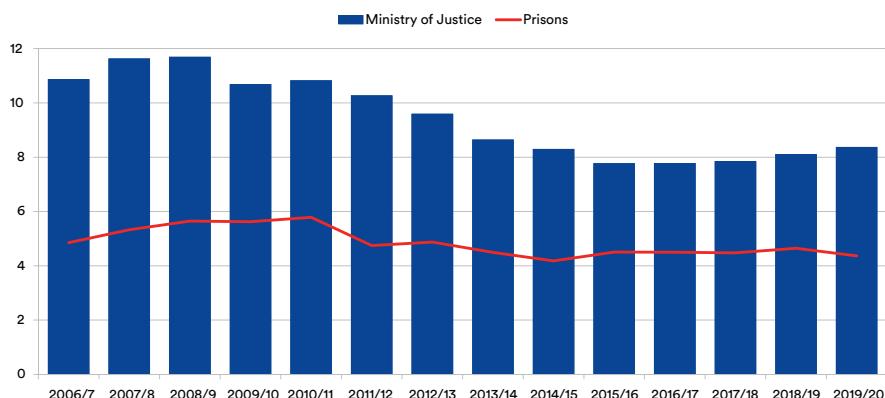
¹² Gov.uk (Ministry of Justice), Four new prisons boost rehabilitation and support economy. Available at: <https://www.gov.uk/news> (Accessed 28 July 2020)

¹³ Rory Stewart (Ministry of Justice), HCWS1123 (29 November 2018), (House of Commons, London), 2018.

¹⁴ BBC News, G4S selected to run Wellingborough 'mega prison'. Available at: <https://www.bbc.co.uk/news> (Accessed 28 July 2020)

¹⁵ Ministry of Justice, Annual Prison Performance Ratings statistical bulletin 2018 to 2019, (Ministry of Justice, London), 2019.

Figure 9: Ministry of Justice and prisons expenditure in the United Kingdom, £ billions (2019/20 prices)



Sources: Office for National Statistics and Ministry of Justice.

The challenge for the government is to determine the best way to improve the standard of prisons, whilst pursuing best value for the taxpayer.

3.2 Value for money

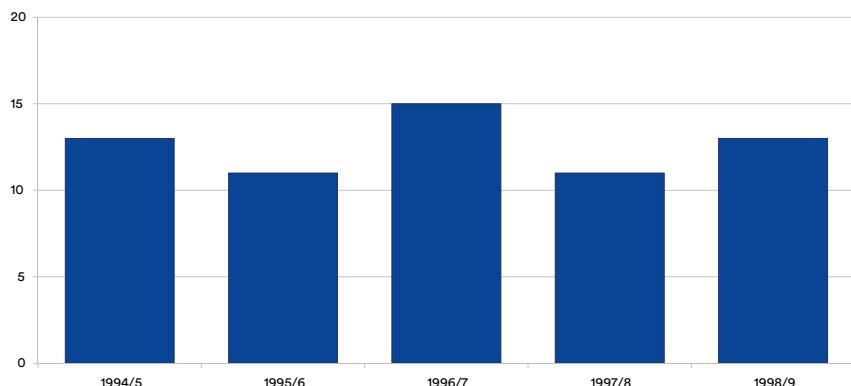
The existing literature is limited but does suggest that cost savings can be achieved through the use of private providers.

There have been few previous attempts to assess the differences in cost efficiency between prisons, while historical data are hard to come by. However, in 2000, the Home Office published a study reviewing the financial performance of a selection of private and public sector prisons. For each private prison they identified a group of the most similar prisons in the public estate in order to compare annual costs.

They found that on average private prisons demonstrated a 13 per cent cost saving compared to comparator public prisons on a cost per prisoner basis.¹⁶ This was relatively consistent over the five years that they examined between 1995 and 1999. (See Figure 10.)

¹⁶ Isabelle Park (Home Office), Review of comparative costs and performance of privately and publicly operated prisons 1998-99, (Home Office, London), 2000.

Figure 10: Average operating cost saving of private prisons relative to comparator prisons, England and Wales, per cent



Source: Home Office. Note: This study also included analysis on cost savings 'per prisoner place' which we have not included because of a likely change in methodology for calculation of this metric during the period assessed.

A recent study by the Institute for Government found that on balance private sector prisons were cheaper to run but did not determine the reasons for this.¹⁷ There are also studies on prisons in other countries that suggest a cost saving through using private providers. In Australia, for example, the Victorian Auditor-General found that private prisons cost the state up to 20 per cent less than a similar publicly run prison.¹⁸

Measuring and comparing the relative cost efficiency of prisons under the control of private and public management is not straightforward.

Each prison has unique challenges to address which may make it more or less difficult to deliver the services required for a given budget. Factors affecting the cost of delivery include the size and location of the prison, the layout and age of the facility, the role it has to perform, the security category of the prison and the mix of prisoners.

Headline official statistics from Her Majesty's Prison and Probation Service and the Ministry of Justice suggest that prisons that are managed by a private sector provider tend to deliver their service at a lower cost than the public sector. In 2018/19, prisoners in facilities managed by the private sector cost an average of £21,800 each, whilst those in the public sector cost £42,600, and those in PFI prisons £42,100. (See Figure 11.)

However, these data do not reflect differences in the cost base for each category. For example, the costs for PFI contracts include interest payments on debt taken out to finance construction as well as 'unitary charge' payments from the government which spread construction costs over time. Data on the size of the capital repayments in each contract aren't readily available but one study suggests that capital expenditure accounts for 22 per cent of total PFI financial commitments

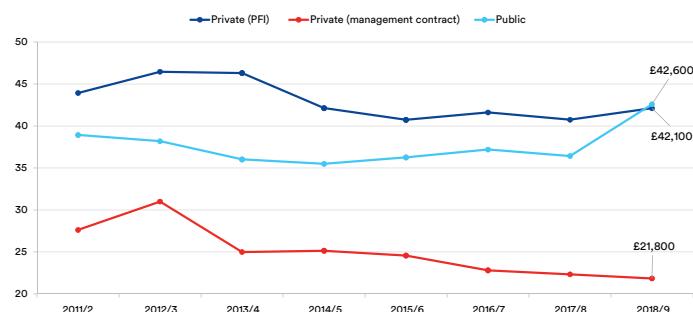
¹⁷ Institute for Government, *Government outsourcing: What has worked and what needs reform?*, (Institute for Government, London), 2019
¹⁸ Andrew Greaves (Victorian Auditor-General's Office), *Safety and Cost Effectiveness of Private Prisons*, (Victorian Auditor-General's Office, Melbourne), 2018.

in the criminal justice system and other sectors.¹⁹ In addition, pension costs are treated differently in the public sector costings, leading to an underestimate of the total cost.²⁰

On the other hand, arguably public sector contract management costs should be included as part of the cost of private sector prisons. There are no data on the extent of these costs, but it was suggested that they could be anywhere between three and 15 per cent of the total cost.

On balance these factors suggest that, typically, both PFI and contracted prisons are likely to be better value for money compared to public prisons than the headline data suggest, although there will be individual prisons where this is not true.

Figure 11: Total annual resource expenditure per prisoner, England and Wales, £ thousands (2018/19 prices)



Source: Capital Economics' analysis of Ministry of Justice data.

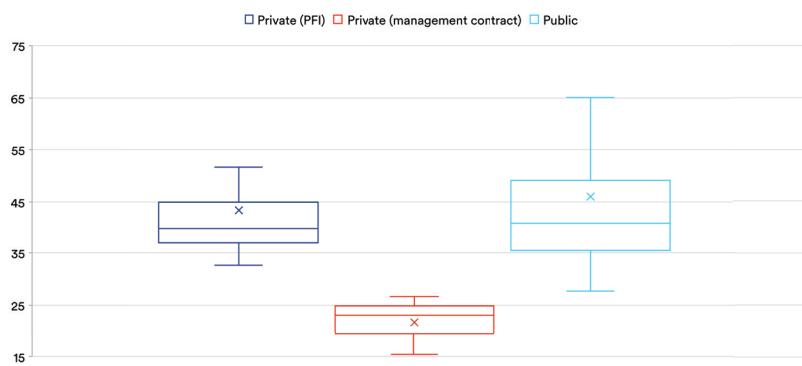
New in-depth analysis of available data provides a better understanding of the comparative costs and shows that on average privately run prisons on a management contract basis are run more cost-efficiently.

Average costs do not account for differences in the nature of the individual prisons. Figure 12 shows that there is a wide variation in the cost of running prisons across the estate. The cost per prisoner of a public sector prison ranges from £27,600 to over £137,000. Seven public prisons, equivalent to roughly seven per cent of the public estate, cost over £75,000 per prisoner. For prisons managed by the private sector the most expensive was £26,700 and for PFIs it was £71,700.

¹⁹ Centre for Public Services, Privatising Justice: the impact of the Private Finance Initiative in the Criminal Justice System, (Centre for Public Services, London), 2002.

²⁰ Discussions with industry experts.

Figure 12: Box and whisker plot of total resource expenditure per prisoner, England and Wales, £ thousands, 2018/19



Source: Capital Economics' analysis of Ministry of Justice data. Note: the plot does not include outliers, but from top to bottom consists of the maximum value (excluding outliers), upper quartile, mean (indicated by an X), median, lower quartile and minimum value (excluding outliers).

The Ministry of Justice recognises the difficulties in comparing the costs of prisons on a like for like basis. For example, since the PFI estate is largely new-build and high in prisoner capacity, it would not be appropriate to compare it to public sector Victorian-era prisons. To attempt to address this they have identified a list of up to eight ‘comparator’ prisons which have characteristics that most closely resemble any given prison in the estate. These are updated on an annual basis.

We have used the comparator sets of prisons to assess the relative cost of privately run prisons. Figure 13 sets out an example for HMP Peterborough, which is a PFI prison. In this example, HMP Peterborough has eight public sector comparators and is cheaper than five of those.

Figure 13: Example of comparator prisons and cost per prisoner, 2018/19

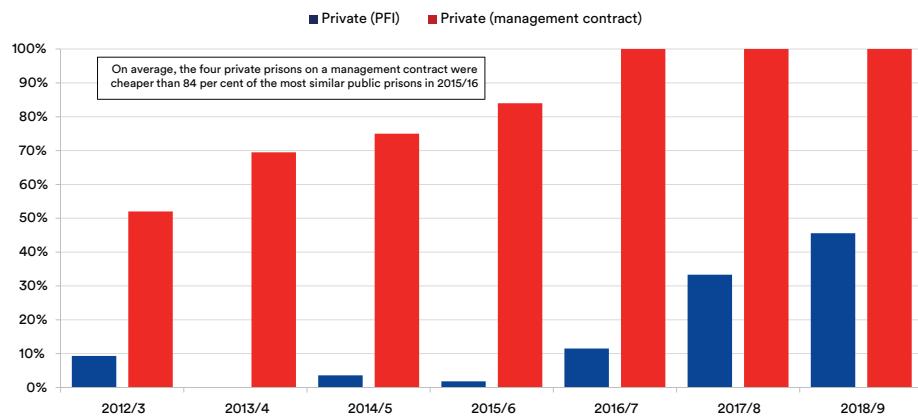
Comparator Number	1	2	3	4	5	6	7	8
HMP Peterborough (Male)	HMP Chelmsford	HMP Bedford	HMP Swansea	HMP Leicester	HMP Winchester	HMP Exeter	HMP Lewes	HMP Cardiff
£42,364	£44,074	£52,772	£45,123	£47,339	£47,760	£41,110	£42,237	£38,541
Cheaper in 63 percent of cases	HMP Peterborough Cheaper	HMP Peterborough Costier	HMP Peterborough Costier	HMP Peterborough Costier				

Source: Capital Economics' analysis of Ministry of Justice data.

Analysing the rest of the private estate in this way shows that privately managed prisons are delivering facilities at a lower cost to the taxpayer. Between 2016/17 and 2018/19, prisons run by private providers on a management contract basis were cheaper in every instance than all of their relevant comparator prisons. The relative cost efficiency of contracted prisons also improved over the last six years. (See Figure 14.)

The data on PFI-funded prisons show a similar improvement, albeit from a lower base. In 2018/19, on average PFI prisons had higher costs per prisoner than 55 per cent of their public sector comparators. (See Figure 14.) However, this is likely to largely reflect the additional construction costs and interest payments that are included in the PFI costs data.

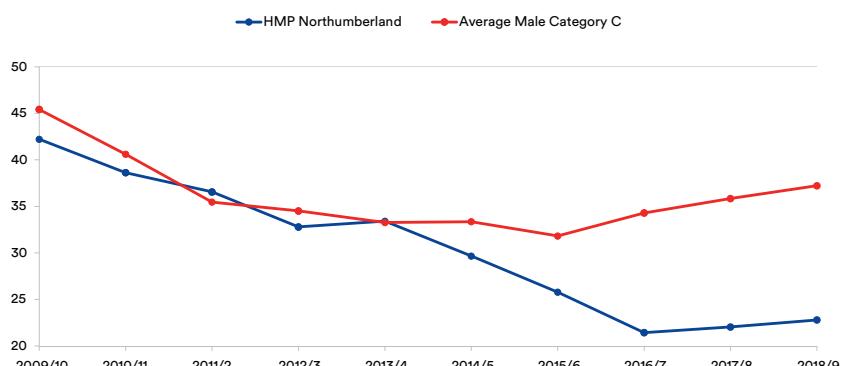
Figure 14: Average share of comparator public prisons that are more costly per prisoner than private prisons, England and Wales



Sources: Capital Economics' analysis of Ministry of Justice data.

There are only two prisons that have changed from public to private ownership. One was HMP Birmingham which has had significant problems while in both public and private ownership. The other is HMP Northumberland, run by Sodexo since 2013, having previously been two separate public sector prisons. In real terms, costs have been cut by 32 per cent from £33,400 in 2013/14 to £22,800 in 2018/19 since it has been run by a private provider. (See Figure 15.)

Figure 15: Cost per prisoner place, £ thousands (2018/9 prices)



Source: Capital Economics' analysis of Ministry of Justice data. Note: Before 2011 we present a weighted average of Castington and Acklington public prisons which were merged in 2011 to form HMP Northumberland.

3.3 Performance

Comparing the ‘performance’ of prisons is not an exact science.

Assessing the comparative performance of prisons presents similar difficulties to comparing costs, given the unique challenges faced by different prisons. For example, prisons with a population of violent Category A offenders are likely to score differently on certain metrics than a prison containing mainly Category C inmates, but this doesn’t necessarily reflect how well the prison is being managed.

However, data are released on an annual basis to evaluate prisons on their overall performance by scoring prisons against a set of metrics. Since 2018/19, the Prison Performance Tool (PPT) has provided data covering six domains: safety, security, rehabilitation and release planning, respect, purposeful activity and organisational effectiveness. This has been expanded from three domains in 2017/18 and four domains in the eight years before that.²¹ (See Figure 16.)

Figure 16: Overview of prison performance scoring metrics since 2009/10

Year	Prisons performance scoring metrics
2009/10 to 2016/17	Prison Rating System (PRS) based on four domains: 1. Public Protection 2. Reducing Reoffending 3. Decency 4. Resource Management and Operational Effectiveness
2017/18	Custodial Performance Tool (CPT) based on three Domains: 1. Public Protection 2. Safety and Order 3. Offender Reform
Since 2018/19	Prison Performance Tool (PPT) based on six domains: 1. Safety 2. Security 3. Rehabilitation and Release Planning 4. Respect 5. Purposeful Activity 6. Organisational Effectiveness

Sources: Ministry of Justice and Her Majesty’s Prison and Probation Service. Note: A score from one to four, one being the worst and four being the best, is awarded for each domain, which is then combined into an overall score. The overall score may be moderated upwards or downwards in some special circumstances, such as a prisoner escape.

These data are far from perfect. There are a wide range of metrics that can indicate performance of a prison, some of which, such as re-offending rates, are not currently available on a prison by prison basis. Equally, different contracts set out different performance targets. Some prisons may be hitting their targets but come out below others that aren’t because they were set at varying levels. However, the data do provide us with a broad indication of how well the system is functioning.

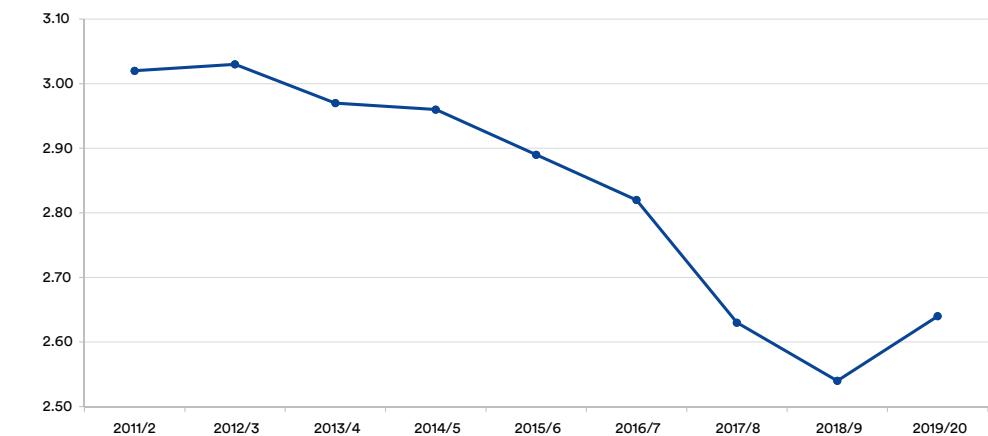
²¹ HM Chief Inspector of Prisons Peter Clarke (HM Inspectorate of Prisons), HM Chief Inspector of Prisons Annual Report 2019-20, (HM Inspectorate of Prisons, London), 2019.

Overall performance has been on a downward trend over the past five years.

The changes in measures over the years means caution needs to be applied when looking at trends. But it does seem that there has been a decline in the prison performance in all types of prisons since 2012/13, although it improved slightly in 2019/20. (See Figure 17.)

Based on overall average scores which are measured between 1 (worst) and 4 (best), the best performing prisons are privately run PFI facilities, while public sector prisons and contracted prisons score similarly. However, it is not possible to draw meaningful conclusions from the aggregate scores as they do not account for differences in the characteristics of different types of prisons. For example, it is not appropriate to compare a large prison with a population of high-risk inmates such as Wormwood Scrubs to a smaller prison with mainly low-risk inmates such as Spring Hill.

Figure 17: Average prison performance rating in England and Wales



Source: Capital Economics' analysis of Ministry of Justice data.

Comparing prisons with their most similar comparators does suggest that, on average, privately run prisons receive higher performance ratings.

To account for differences in the nature of prisons, the Ministry of Justice identifies a set of up to eight ‘comparator’ prisons for each prison in the estate, which is updated on an annual basis. We have used the comparator sets of prisons to assess the relative performance of privately run prisons. Figure 18 sets out an example for HMP Peterborough, which is a PFI prison. In this example, HMP Peterborough has eight public sector comparators and scores higher than seven of those. This translates to a measure of 88 per cent; it scores higher than 88 per cent of its comparators in terms of service delivery.

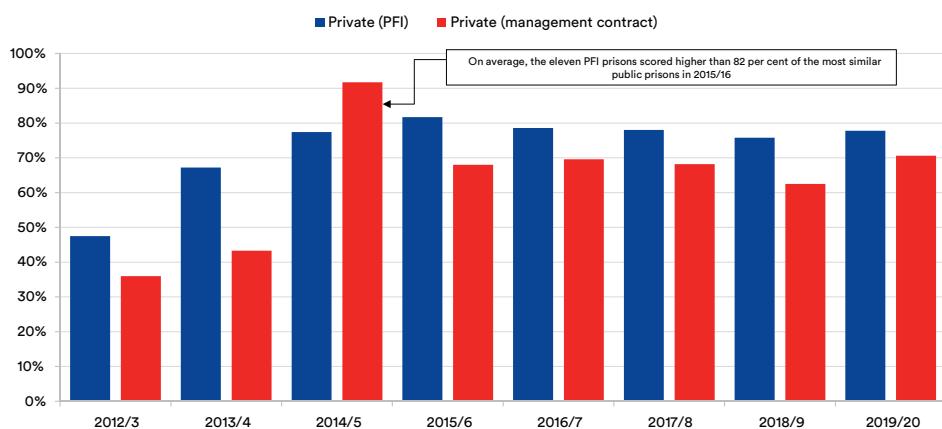
Figure 18: Example of comparator prisons and overall scores, 2019/20

Comparator Number	1	2	3	4	5	6	7	8
HMP Peterborough (Male)	HMP Bedford	HMP Lewes	HMP Winchester	HMP Chelmsford	HMP Leicester	HMP Exeter	HMP Swansea	HMP Cardiff
2.78	1.76	1.90	2.05	2.24	2.36	2.37	2.69	2.93
Better in seven out of eight cases	HMP Peterborough Better	HMP Peterborough Worse						

Source: Capital Economics' analysis of Ministry of Justice data. Note: Scores calculated by multiplying domain weights with relevant domain scores.

Analysing the rest of the private prison estate in this way shows that in recent years both PFI and privately contracted prisons have outperformed their public sector comparators. On average, in 2019/20, PFI prisons achieved a higher score than 78 per cent of their public sector comparators and contracted prisons 71 per cent of theirs. (See Figure 19.)

Figure 19: Average share of comparator public prisons that score lower than private prisons, England and Wales



Source: Capital Economics' analysis of Ministry of Justice data.

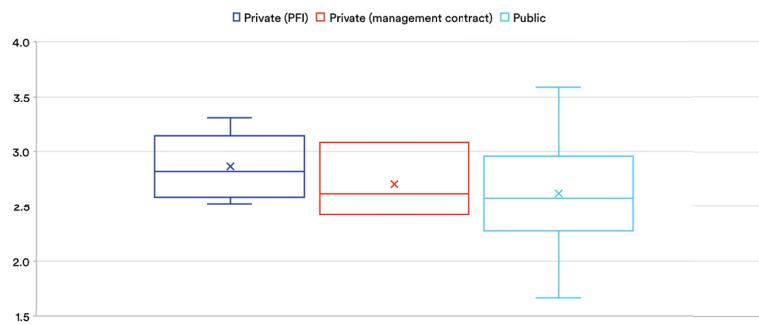
There are not many existing studies that compare the performance of private and public prisons. One study in 2003 by the National Audit Office combined qualitative and quantitative data to summarise that PFI prisons were performing well relative to comparable public prisons.²²

There are examples of good performance and under performance in both the public and private sector.

Figure 20 shows that there is a wide variation in performance scores across the prison estate. Scores range from 1.60 to 3.59 for the public sector, with smaller ranges for the management only contracts and PFI estate. The worst performing contracted prison scores 2.42, whilst for the PFI estate it is 2.53.

22 National Audit Office, The Operational Performance of PFI Prisons, (National Audit Office, London), 2003.

Figure 20: Box and whisker plot of prison performance scores by type of prison, England and Wales, 2019/20

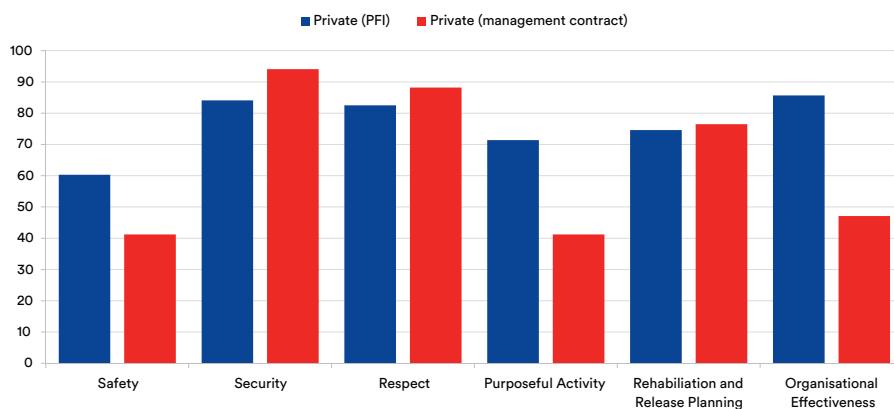


Sources: Capital Economics' analysis of the Ministry of Justice's Prison Performance Tool (PPT). Note: the plot does not include outliers, but from top to bottom consists of the maximum value (excluding outliers), upper quartile, mean (indicated by an X), median, lower quartile and minimum value (excluding outliers). Note: The private (management contract) category includes only three prisons.

The latest 'domain' performance data from the Prison Performance Tool from 2019/20 show that both PFI and management only contracted private prisons generally have higher scores than over 50 per cent of their comparator prisons. The notable exceptions are 'purposeful activity' and 'safety' for management only contracted prisons. (See Figure 21.)

Overall, the available data suggest that, on average, performance based on the Ministry of Justice's statistics is better in privately run prisons when comparing to similar public facilities. However, the overall averages mask a wide variation in individual prisons across the estate.

Figure 21: Average share of comparator prisons that score lower than private prisons, England and Wales, 2019/20



Source: Capital Economics' analysis of the Ministry of Justice's Prison Performance Tool (PPT).

3.4 Drivers of performance

Although there are examples of good performance and underperformance in both sectors, there are good reasons to expect that privately run prisons provide benefits over the public sector.

Sections 3.2 and 3.3 suggest that overall privately run prisons in the United Kingdom are generally cheaper to run and, on average, deliver broadly equivalent or better service quality. Under the right conditions, prisons run under private management have, and can continue to, benefit from:

- **Greater incentive to reduce costs.** A competitive market with commercially driven providers creates an imperative to find more cost-efficient working practices. As an example, the contract undertaken by Sodexo for HMP Northumberland in 2013 (the merger of two public sector prisons) has delivered savings of over £10,000 per prisoner place in real terms per year (32 per cent) since it took over in 2013/14. It specifies savings to the tune of nearly £130 million over the course of the 15-year contract.²³
- **Greater operational efficiency.** The ability for private prisons to use staff more flexibly is an advantage they enjoy over most public prisons. Many private sector operators allow for staff to be cross-deployed across different prison areas when a specific need arises.²⁴ This flexibility also applies to the prison directors (or governors in public prisons), who have more discretion than public sector governors, including control over decisions on their spending, management and resource allocation.^{25 26}
- **Greater incentive to deliver innovation which can feed into public sector.** For example, the majority of privately run prisons have introduced in-cell telephones, many of which have been installed for over a decade. In the public sector, in-cell phones were only present in twenty prisons (as of the end of 2018) which is equivalent to less than 20 per cent of public prisons.²⁷ Further innovations introduced by private providers include in-cell services and electronic property cards. In many cases, innovations in the private sector are then adopted more widely. For example, the use of body-worn video cameras for staff, was introduced in certain private prisons in 2015; in 2017 the public sector rolled out something similar across England and Wales.²⁸
- **Greater accountability.** In private contracts, there is a financial penalty for not meeting Key Performance Indicators as set out in the contract. Penalty clauses in the contract allow the government to withhold part, or all, of the payment if performance does not meet the required level of service.²⁹

²³ Gill Plimmer (Financial Times), Sodexo wins £250m contract to run state-run prison in UK, 2013. Available at: <https://www.ft.com> (Accessed 8 October 2019)

²⁴ Discussions with industry experts

²⁵ House of Commons Justice Committee, Prison reform: governor empowerment and prison performance, Twelfth Report of the Session 2016-17, (House of Commons, London), 2017.

²⁶ Discussions with industry experts

²⁷ Ministry of Justice, In-cell phones for more prisons in drive to cut crime, 2018. Available at: <https://www.gov.uk/government/news/in-cell-phones-for-more-prisons-in-drive-to-cut-crime> (Accessed 8 October 2019)

²⁸ Press Association (The Guardian), Prison officers to get body-worn cameras in £3m jail safety boost, 2017. Available at: <https://www.theguardian.com> (Accessed 8 October 2019)

²⁹ National Audit Office, Wolds Remand Prison, (National Audit Office, London), 1994.

Problems have been prevalent in both publicly and privately run prisons.

There have been a number of high-profile problems with prisons in the United Kingdom over the last decade.

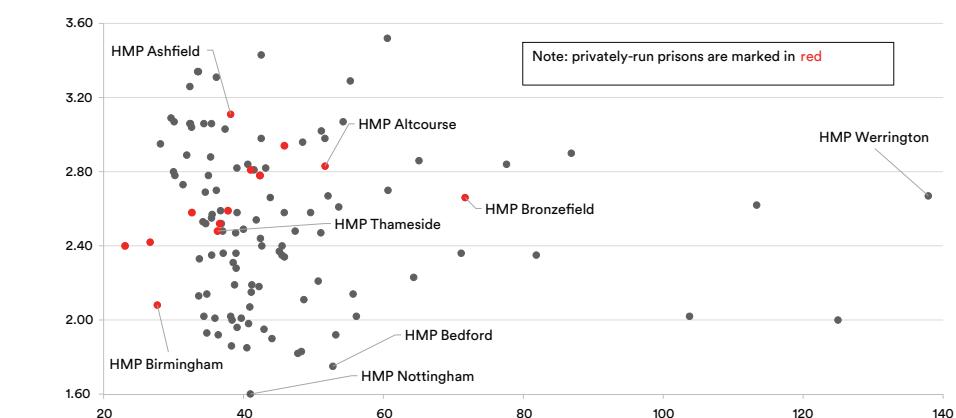
Both HMP Birmingham (privately run) and HMP Bedford (publicly run) were given ‘urgent notifications’ in August and September 2018, respectively; this process allows HM Chief Inspector of Prisons to directly alert the Lord Chancellor and Secretary of State for Justice if he has an urgent and significant concern about the performance of a prison.

From 2018 to mid-2020 a total of six urgent notifications were issued: five related to public sector institutions and one in the private sector. The one private sector notification, HMP Birmingham, had previously been run by the public sector up until 2011 before being handed over to G4S management. In a Select Committee on HMP Birmingham in late 2018, the then Minister for Prisons Rory Stewart commented that ‘It may be that the lesson is not private against public, but that a very old, troubled prison built in the 1840s, which had significant problems, even under the public sector, may be a tough thing for the private sector to take on board’.³⁰

Large variations across the estate suggest that the key drivers of under performance are not inherently related to whether they are run by the public sector or private providers.

There is a large variation between individual prisons regardless of public or private management. Figure 22 shows the distribution of all prisons in the United Kingdom based on the cost to run per prisoner and the overall performance score. There are examples in both the private and public sector of more expensive prisons scoring worse on performance metrics and vice versa.

Figure 22: Individual prison performance score (vertical) versus real spend per prisoner (£ thousands, horizontal), 2018/9



Source: Ministry of Justice and Capital Economics. Note: prison scores are calculated by multiplying domain weights with relevant domain scores, and as such are not banded. HMP Birmingham is officially marked as privately-run but was taken over in August 2018 by HMPPS.

³⁰ Justice Select Committee, Oral evidence: HMP Birmingham, HC1647, (House of Commons, London), 2018.

Based on prison inspection reports, existing literature and our interviews with industry experts, we have identified a number of other factors that affect how prisons perform.

First, the layout and age of the prison impacts the ease in which a prison can be managed. For example, HMP Birmingham and HMP Bedford are both Victorian-era prisons and have suffered serious problems of violence, disorder and drugs. HMP Birmingham was transferred to private sector management in 2011, whilst Bedford remained in the public sector. Between 2013/14 and 2018/19, both prisons have scored similarly in the annual prison ratings. For the last three years of that period, both recorded a score in Band 1, the lowest of the four bands, suggesting they were performing poorly.

Second, the demographics of the inmates affects the likelihood of violence and other problems which will have performance and cost implications. For example, Category C sexual offenders tend to exhibit lower levels of violence. HMP Ashfield near Bristol, a category C prison for men convicted of sexual offences, scores well in inspections with the latest inspection report noting that ‘levels of violence were very low.³¹ Other prisons with a similar type of inmate structure also score well on performance measures compared to the average prison. Meanwhile, HMP Bronzefield is in large part expensive to run due to its all Category A female prisoner population. Other female prisons also tend to be more expensive. At nearly £138,000 per prisoner, the most expensive prison in the estate to run is HMP Werrington, which is a juvenile male prison.

Third, the location of the prison impacts performance. HMP Thameside, which scores lower than other privately run prisons, has additional challenges by virtue of its London location which comes with higher rates of gang-related inmates.

Fourth, for privately operated prisons, the specification of a contract and transfer of risk affects the outcome of a contract. Some prisons have underperformed because the government has contracted on unsustainable terms in its bid to save money for the taxpayer, while private providers have been willing accept these terms. When government departments have focussed too heavily on the lowest price for projects, it has led to problems in delivery.³² Meanwhile, some senior staff in both private and public prisons felt staffing levels have been set too low in past bids.³³ Contracts are more likely to be successful when bidders are engaged in the early stages of negotiations and it is drawn up in a way that is cognisant of the specific challenges of the prison and the risks to delivery.³⁴

The general perception from those that we interviewed was that these practices have become less common in recent years. The Cabinet Office’s Outsourcing Playbook shows intent to improve outsourcing contracts, although there is still much to be done to ensure their recommendations are adopted across the industry.

Fifth, effective leadership at individual prisons. The role of the prison directors is a crucial one and can often be a key factor in how well the prison performs in terms of value for money and prison performance. Leadership is often cited in HM Chief Inspector of Prisons reports as a key factor in improving or declining outcomes in the prison, whether in the private or public sector.³⁵

³¹ HM Chief Inspector of Prisons Peter Clarke (HM Inspectorate of Prisons), Report on unannounced inspection of HMP Ashfield, (HM Inspectorate of Prisons, London), 2019.

³² National Audit Office, Yarl's Wood Immigration Removal Centre, (National Audit Office, London), 2016.

³³ National Audit Office, The Operational Performance of PFI Prisons, (National Audit Office, London), 2003.

³⁴ Discussions with industry experts.

³⁵ HM Chief Inspector of Prisons Peter Clarke (HM Inspectorate of Prisons), Report on an unannounced inspection of Young Person's Unit at HMP/YOI Parc, 2017 and Report on an unannounced inspection of HMP Liverpool, (HM Inspectorate of Prisons, London), 2017.

3.5 Summary

Overall there is evidence that private sector provision of prisons can deliver cost savings without compromising the performance of prison services; private companies have demonstrated their ability to run successful prisons in the United Kingdom. Of course, there are examples which demonstrate how things can go wrong, such as in the case of HMP Birmingham, but these problems have been evident in publicly run prisons as well.

There is a wide variation of performance across the entire prison estate and many areas for improvement. Although the available data are not perfect, they suggest that privately operated prisons are typically run at a lower cost than the most comparable public prisons and they tend to score higher on measures of performance. Privately operated prisons that are based on sensible contracts and an effective working relationship between the operator and the client can deliver benefits to the government and the public.

4. HEALTHCARE (SOFT FACILITIES MANAGEMENT)

In this section, we assess the relative performance of soft facilities management services in the healthcare sector, such as cleaning, catering and laundry. We compare outsourced and in-house provision and assess the underlying drivers of differences between the two.

The key findings are:

- Competitive tendering for soft facilities management services in healthcare has historically delivered significant savings to the taxpayer, with private providers tending to generate larger savings
- Recent evidence from services being taken back in-house has shown that it is generally accompanied by a significant increase in costs
- Whether the services are delivered in-house or by an external contractor doesn't determine the quality of the services delivered; there are good and bad examples of performance in both sectors
- The key to cost-efficient and high-quality services is ensuring a competitive market underpinned by sensible and well-informed contracting, constructive relationships between suppliers and clients, and clearly defined and appropriate deliverables set against measurable targets

4.1 Overview of facilities management services in healthcare

Outsourcing on a national level in the NHS dates back 40 years.

The use of outsourcing to provide services in the National Health Service (NHS) dates back to 1979, when health authorities were encouraged by the Conservative government at the time to use private contractors to provide ancillary services such as laundry and cleaning. By 1983, the government had legislated that the NHS would have to market-test its cleaning, catering and laundry and linen services, also known as hotel services. In the modern day, this is referred to as soft facilities management.

The Labour government of 1997 continued to outsource services, albeit under a ‘best value approach’ to tendering. The ‘best value’ approach aimed to improve services in both quality and cost terms, placing ‘value’ above solely price, which had often been prioritised under compulsory competitive tendering.³⁶

There is an element of private sector involvement in NHS buildings.

NHS sites in England are organised into trusts across the country to provide healthcare services to the public. Decisions surrounding outsourcing facilities management are normally taken at a trust level. Some trusts will have facilities with under Private Finance Initiative (PFI) contracts, whereby private providers design, build, finance and often run the building in question, in exchange for annual payments from the government. From 1997 to 2010, 132 hospital-related projects were opened with a capital value just shy of £11 billion. Between 2010 and 2018, 16 further projects were completed.³⁷

Nearly half of the total facilities management provision in the NHS in England is outsourced.

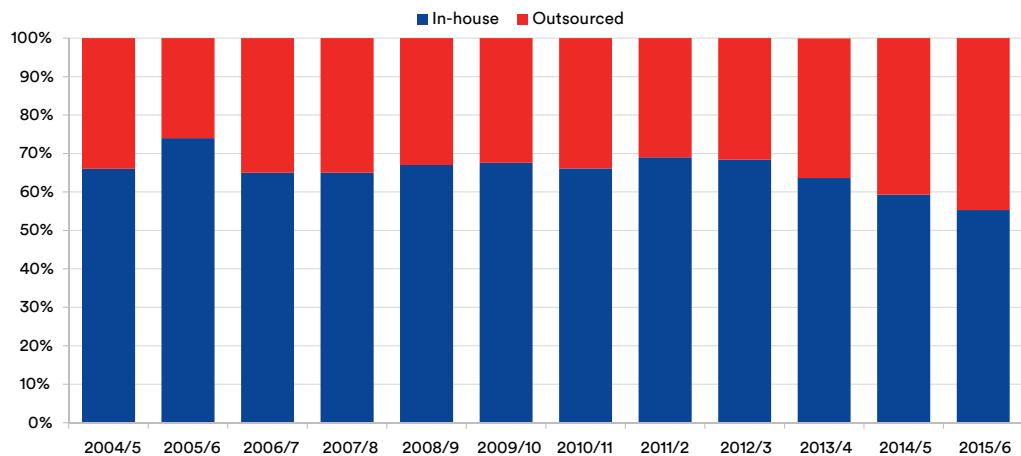
Figure 23 shows the latest government figures available up to 2015/16, suggesting that 45 per cent of all facilities management services were outsourced in the NHS in England. This includes both soft and hard facilities management. Hard facilities management refers to the maintenance of the building fabric, such as lighting and building maintenance, whilst soft facilities management refers to the non-building fabric related items, such as cleaning and catering. Our estimates for outsourcing in soft facilities management, based on a sample of separate data from 2017/18, suggest that around 50 per cent of catering and 60 per cent of cleaning is outsourced to a third-party provider. For linen and laundry, the proportion is close to 80 per cent.³⁸

³⁶ Christopher Bovis, Replacing CCT with ‘best value’, *Amicus Curiae*, Vol. 15, pp. 4-7, 1999.

³⁷ HM Treasury, PFI Current Projects as at 31 March 2018, (HM Treasury, London), 2019.

³⁸ Capital Economics’ analysis of Estates Return Information Collection 2017/18, 2018, National Health Service

Figure 23: Share of spend at NHS facilities by type of provider of facilities management, England

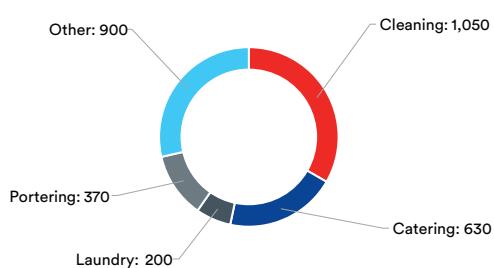


Source: Capital Economics' analysis of National Health Service Estates Return Information Collection data.

We focus on the soft facilities management element of NHS sites.

In the 2018/19 financial year, the NHS spent approximately £9.5 billion on its sites, of which soft facilities management accounted for £3.2 billion. Cleaning made up nearly a third of this total, at over £1 billion, with catering at over £600 million and linen and laundry at £200 million. (See Figure 24.)

Figure 24: Breakdown of soft facilities management expenditure by category, England, £ millions, 2018/19



Source: Estates Return Information Collection.

4.2 Value for money

Older studies have demonstrated significant first-generation cost savings through outsourcing soft facilities management services.

Although recent evidence is sparse, the impact of introducing a competitive market for facilities management services in the healthcare sector has been assessed in a number of studies over the years. A study looking at its initial impact in the mid-1980s found that introducing a competitive tendering process led to savings, regardless of whether the contract was awarded to external private providers or in-house teams. The savings were larger when the contracts were awarded to private providers; the overall average savings on support services between 1984 and 1986 in the NHS amounted to 28 per cent for private providers, compared to 17 per cent when awarded to in-house providers. For contracts awarded to external contractors, the cost of domestic services (predominantly cleaning) fell by an average of 32 per cent, whilst catering and laundry saved 14 and 15 per cent respectively.³⁹

A study on cleaning and catering contracts in Scotland between 1985 and 1998 found that cleaning services in hospitals saw cost reductions of around 30 per cent in first round contracts when awarded to external contractors. When awarded to the in-house team, savings peaked at around 17 per cent before declining over the life of the contract.⁴⁰

Analysis of more contemporary data also points to lower costs with the provision of outsourced cleaning in hospitals. A recent study comparing costs in trusts that had in-house and outsourced cleaning provisions found cost savings in the region of 7.5 per cent for the latter.⁴¹

Differences in costs are smaller for catering.

More recent evidence and data on catering is less clear than for cleaning services. Some studies point to a slight cost advantage for outsourced catering in certain years, whilst not in others.⁴² Other studies report that the in-house provision of catering benefits from cheaper purchase prices for basic staples such as milk and bread.⁴³

It is unrealistic to expect savings of the same magnitude as contracts reach later generations of outsourcing.

It is not surprising that the magnitude of cost savings often falls when the specific contracts are in the later generations of competitive procurement. Providers that have already cut costs by 20 to 30 per cent cannot be expected to do the same every few years. In a study of Scottish hospitals between 1985 and 1998 second round

39 National Audit Office, Competitive tendering for support services in the National Health Service, (National Audit Office, London), 1987.
40 Luis Angeles and Robin G. Milne, Competitive provision of public services: cost savings over successive rounds of tendering, *Applied Economics Letters*, Vol. 23 (9), pp. 627-632, 2016.

41 Veronica Toffolutti et al, Outsourcing cleaning services increases MRSA incidence: evidenced from 126 English acute trusts, *Social Science & Medicine*, Vol. 174, pp. 64-69, 2017.

42 National Audit Office, The performance and management of hospital PFI contracts, (National Audit Office, London), 2010.

43 National Audit Office, Smarter food procurement in the public sector, (National Audit Office, London), 2006

catering contracts saw smaller cost savings compared to the first iteration of market testing.⁴⁴

There is some evidence that in certain cases second round outsourcing can generate larger cost reductions than the first stage. A recent study found that second round cleaning contracts in Scotland yielded larger savings than the first round of contracting out.⁴⁵ In part, this is likely due to the increased experience of the procurers and contractors who benefit from better working relationships and are able to specify a more robust contract.

Even without large absolute savings in third or fourth generation contracts, competition is important to keep costs down.

Even if later generations of contracts cannot deliver the same magnitude of absolute savings, deploying a competitive bidding process remains a key element of delivering value for money in the provision of public services.

A 2016 study found that re-tendering soft facilities management contracts had a positive impact in terms of cost efficiencies where the initial savings had diminished. A positive relationship between the number of bids and cost savings was observed; each additional bid reduced costs by between 2.5 and 3.0 per cent for the entire life of the contract.⁴⁶

Competitive pressures improve efficiency in both private and public providers. On average, from 1983 to 1986, successful in-house bids for catering, laundry and domestic services saved an average of 17 per cent compared to the existing service provision. Whilst this was lower than the 28 per cent saving achieved by contractors, it does demonstrate benefits from competitive pressure.⁴⁷

Data on current costs indicate that there isn't much difference between in-house and external providers, but data need to be treated with caution.

Since the 1999/00 fiscal year, the National Health Service has produced data on costs and performance covering cleaning, catering and laundry for individual NHS sites. Using these data, for only those sites where we can identify the type of provider, we have compared the cost efficiency in cleaning, catering and laundry services.

In aggregate, the data suggest that private providers deliver both cleaning and laundry services more cheaply than when it is done in-house. Meanwhile, there is little difference in costs for catering services. (See Figure 25, Figure 26 and Figure 27.)

However, these results do need to be treated with caution. The data is a compilation of self-reported costs from NHS trusts across England and there are likely to be discrepancies which make it difficult to make like-for-like comparisons.

For example, there are likely differences in the extent of services included in the

44 Luis Angeles and Robin G. Milne, Tracking cost savings from competitive tendering in the short and long run, Working Papers, 2015.

45 Luis Angeles and Robin G. Milne, Competitive provision of public services: cost savings over successive rounds of tendering, Applied Economics Letters, Vol. 23 (9), pp. 627-632, 2016.

46 Luis Angeles and Robin G. Milne, Competitive provision of public services: cost savings over successive rounds of tendering, Applied Economics Letters, Vol. 23 (9), pp. 627-632, 2016.

47 National Audit Office, Competitive tendering for support services in the National Health Service, (National Audit Office), 1987.

cost, with some including the cost of service to patients and some just the food preparation. In addition, the food requirements vary by site, with differences in the type of preparation (fresh vs frozen), number of menu choices and special dietary requirements.

Although we can't draw strong conclusions from this data, industry experts suggest that the costs for private providers would be relatively lower compared to in-house services if compared on a true like-for-like basis. Meanwhile, there is evidence that costs tend to increase when services are moved back in-house after an outsourced contract ends. (See section 4.3.)

Figure 25: Box and whisker plot of sample costs of providing one inpatient meal, England, £, 2018/19

Sources: Capital Economics' analysis of National Health Service and Capital Economics. Note: Based on a sample of 420 NHS sites. The plot does not include outliers, but from top to bottom consists of the maximum value (excluding outliers), upper quartile, mean (indicated by an X), median, lower quartile and minimum value (excluding outliers).

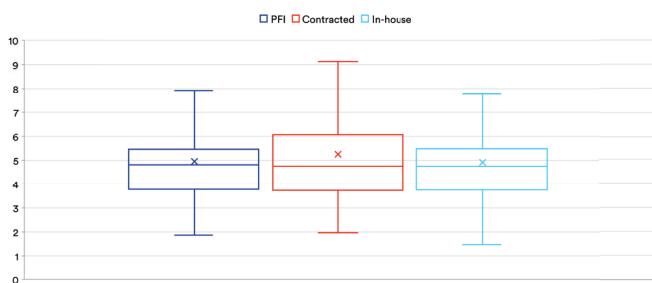


Figure 26: Box and whisker plot of sample costs of cleaning one in-use square metre of NHS floorspace, England, £, 2018/19

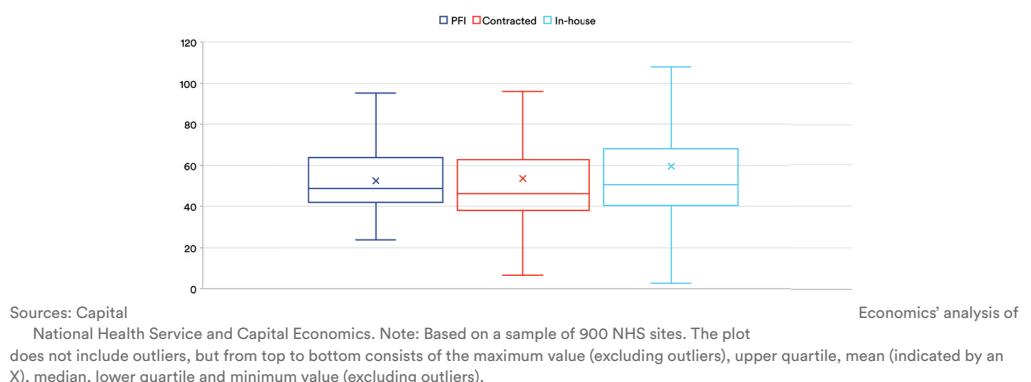
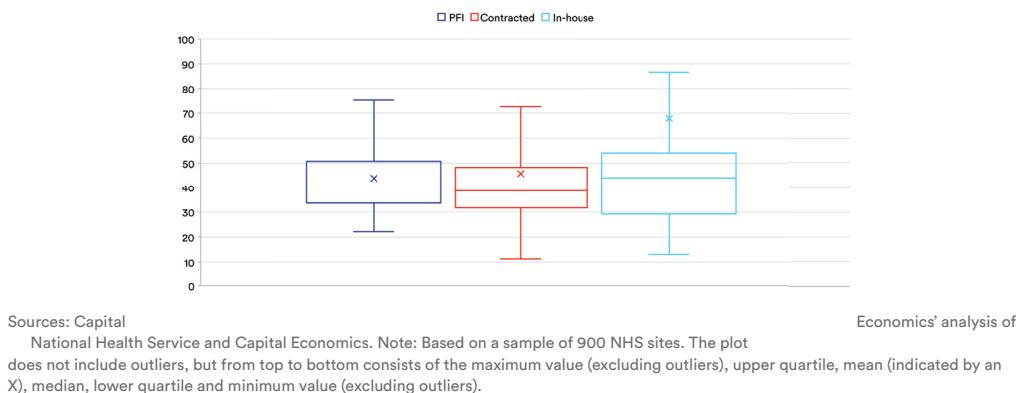


Figure 27: Box and whisker plot of sample costs of laundering one item, England,



4.3 Performance

Assessing the quality of facilities management services presents challenges.

Comparing measures of service quality in facilities management across different NHS sites is not straightforward and there have been few previous attempts to do this. Obtaining metrics that compare like for like is difficult because each facility has specific challenges which will impact outcomes. For example, there are four risk categories of cleaning hospitals; a hospital with a higher proportion of 'high-risk' floorspace will find it more challenging to score well if the metrics do not account for this. Additionally, a direct comparison of performance between different contracts does not account for the varying requirements specified in different contracts.

Two main performance metrics paint a mixed picture.

There are two measures that assess the standards of cleaning and catering in NHS hospitals. The Patient Led Assessment of the Care Environment (PLACE), led by NHS Digital, involves local people going into hospitals as part of an inspection team to assess how the hospital environment supports the provision of care. Criteria such as privacy, food, cleanliness and general building maintenance are assessed at an individual site level. The assessment focuses exclusively on the environment in which care is delivered in, and as such, does not cover clinical care provision, nor how well staff are doing their job.

The other measure we can use is the Care Quality Commission's (CQC) Adult Inpatient Survey. This assesses the hospital experience of adult inpatients discharged during July each year and presents results at a trust level. To qualify, patients must have had at least one overnight stay. (See Figure 28.)

Figure 28: Overview of main scoring metrics used in analysis

	Adult Inpatient Survey	Place
Level of detail available	Trust Level (Public)	Individual site level (public)
Scoring Scale	One to Ten	0 to 100 percent
Assessment Panel	Individual Adult Inpatients	Patient-led assessment team
Response Rate	45 per cent of adults contacted	100 per cent of NHS trusts

Source: Capital Economics.

At an aggregate level the PLACE scores suggest that hospitals with private provision of facilities management are similar in terms of both cleanliness and food quality when compared to those that deliver in-house.

The results from the **Adult Inpatient Survey** are a little less granular. In any case, the differences between hospitals with private providers and those where these services are delivered in-house are relatively small. (See Figure 29, Figure 30, Figure 31 and Figure 32.)

Figure 29: Patient-Led Assessment of the Care Environment (PLACE) average scores for food, England

Sources: Capital Economics' analysis of National Health Service and Capital Economics. Note: Based on a sample of 400 NHS sites.

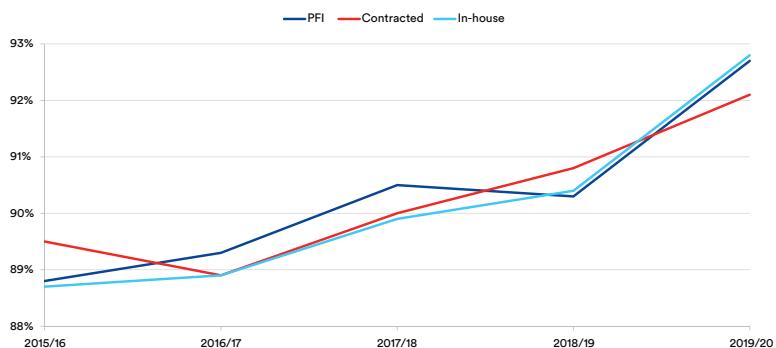
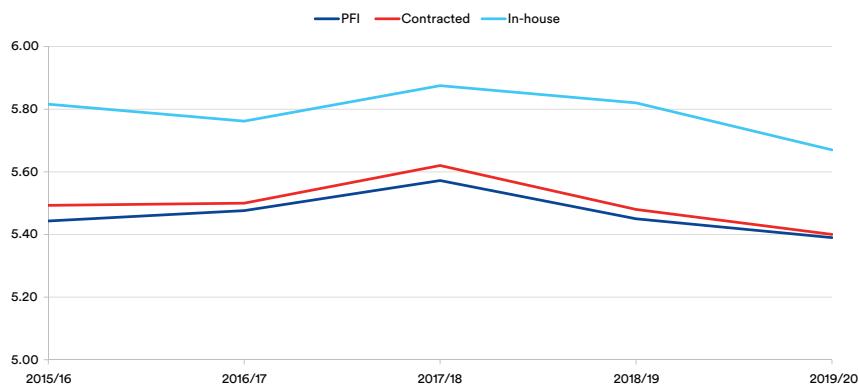
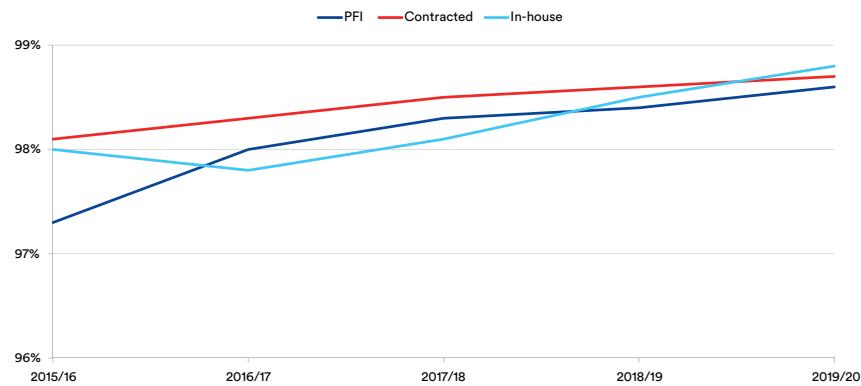


Figure 30: Inpatient Survey (Care Quality Commission) average scores for quality of food, England



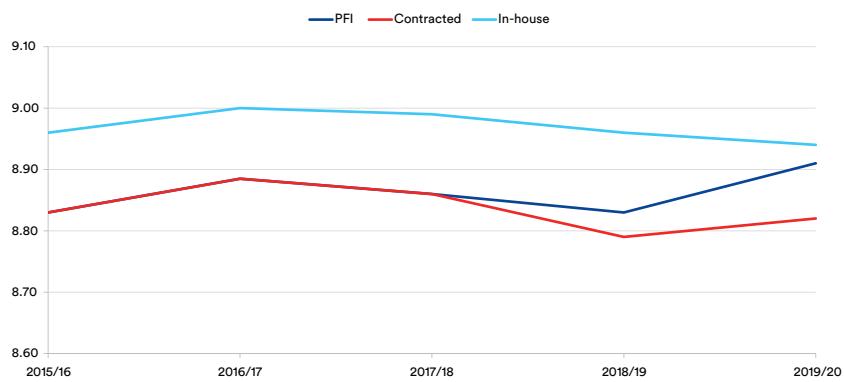
Sources: Capital Economics' analysis of National Health Service and Capital Economics. Note: Based on a sample of 210 NHS sites.

Figure 31: Patient-Led Assessment of the Care Environment(PLACE) average scores for cleanliness, England



Sources: Capital Economics' analysis of National Health Service and Capital Economics. Note: Based on a sample of 370 NHS sites.

Figure 32: Inpatient Survey (Care Quality Commission) average scores for cleanliness, England



Sources: Capital Economics' analysis of National Health Service and Capital Economics. Note: Based on a sample of 175 NHS sites.

There is much variation between individual sites, with examples of improving and declining performance scores in both private and public provision.

The public statistics on performance don't account for differences in characteristics between sites which means that we can't draw definitive conclusions about the relative performance of public and private sector providers. They do suggest that any differences on an aggregate level are minimal and it is unlikely there is a systemic under or over-performance by public or private providers.

Moving services back in-house generally is accompanied by a significant increase in costs.

In some cases, we can isolate sites that have either been outsourced for the first time, or that have returned to public sector provision over the past five years. In a sample of nearly 20 such sites over a five year period from 2012/13 to 2017/18 where data was largely comparable, we observed that NHS sites returning to public sector provision generally incurred a significant increase in costs, without a comparable increase in quality. This was particularly the case for cleaning. (See Figure 33 and Figure 34.)

Figure 33: Changes in catering costs per patient day and food scores for facilities after returning to in-house provision, 2012/13 to 2017/18 sample

Score	Cost	Fell by at least 10 per cent	Fell by 0 to 10 per cent	Rose by 0 to 10 per cent	Rose by at least 10 per cent
Fell by at least 10 per cent					
Fell by 0 to 10 per cent		1			3
Rose by 0 to 10 per cent					3
Rose by at least 10 per cent		1	1	1	

Source: Capital Economics' analysis of National Health Service and other data.

Figure 34: Changes in cleaning costs per in-use square metre and cleanliness scores for facilities after returning to in-house provision, 2012/13 to 2017/18 sample

Score	Cost	Fell by at least 10 per cent	Fell by 0 to 10 per cent	Rose by 0 to 10 per cent	Rose by at least 10 per cent
Fell by at least 10 per cent					
Fell by 0 to 10 per cent					3
Rose by 0 to 10 per cent			2		5
Rose by at least 10 per cent					

Source: Capital Economics' analysis of National Health Service and other data.

4.4 Drivers of performance

Although there are examples of good and bad in both sectors, sections 4.2 and 4.3 suggest that soft facilities management services such as cleaning delivered by private contractors tend to generate greater cost savings while there is little difference in the overall quality of the services delivered.

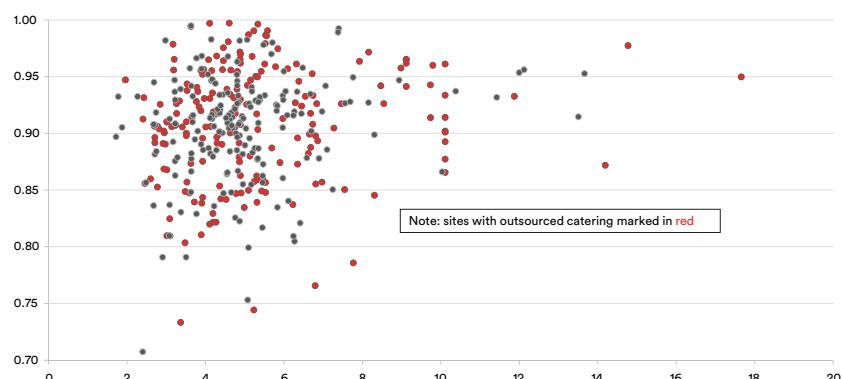
Under the right conditions, NHS trusts that competitively tender their soft facilities management services to private providers have, and can continue to, benefit from:

- **Greater incentive to reduce costs and innovative**, which can feed into the public sector. A competitive market with commercially driven providers creates an imperative to find more cost-efficient working practices.
- **Greater operational efficiency**. Private providers often benefit from the ability for staff to be employed more flexibly and cross-deployed across different hospital wards, whilst in the public sector this is often not the case.
- **Greater accountability**. In private contracts, there is a financial penalty for not meeting key performance indicators as set out in the contract, such as levels of food wastage. Penalty clauses in the contract allow the government or hospital trust to withhold part, or all, of the payment if performance does not meet the required level of service. In addition, there is an incentive for the provider to establish a good reputation with the client in order to help future bids.

Large variations across both privately and publicly delivered facilities management services at NHS sites suggest that the key drivers of under-performance are not inherently related to whether they are run by the public sector or private providers.

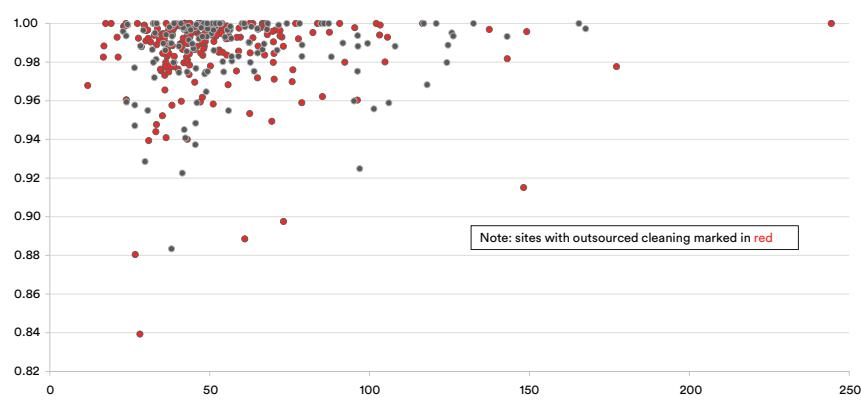
There is a large variation between individual sites regardless of public or private provision. Figure 35 and Figure 36 show the PLACE score for food and catering respectively against spending per patient day in all NHS sites where we have been able to identify the provider of soft facilities management services. There are examples in both the private and public sector of more expensive services scoring worse on performance metrics and vice versa.

Figure 35: Individual NHS site catering scores (PLACE, vertical) versus spend per patient day (horizontal), England, £, 2018/9



Sources: Capital Economics' analysis of National Health Service and Capital Economics. Note: Based on a sample of 390 NHS sites.

Figure 36: Individual NHS site sample cleaning score (PLACE, vertical) versus spend per in-use square metre (horizontal), England, £, 2018/9



Sources: Capital Economics' analysis of National Health Service and Capital Economics. Note: Based on a sample of 345 NHS sites.

There is no meaningful relationship between levels of spending and performance ratings. Some of the highest scoring NHS sites have the cheapest cleaning and catering services whether delivered in-house or by external contractors, and vice versa.

Based on a review of existing literature and a set of interviews with industry experts, we have identified a number of other factors that affect how contracted soft facilities management services deliver in terms of cost and quality.

The procurement and contract bidding process is crucial in underpinning successful outsourcing. There are hundreds of NHS trusts across the country and, since contracts are typically procured at a trust level, there can be a great deal of variation in contract terms and service requirements. In the past there have been examples in which contracts have been signed on the basis of unsustainable terms, sometimes expecting real-term cost reductions to the tune of seven or eight per cent every year. For example, the Brighton and Sussex University NHS trust, which outsourced its soft facilities management in 2013, had its contract ended early in 2015 with sources referring to the ‘costing of the contract’ as one of the key factors.⁴⁷

Successful contracts are based on:

- **Good and transparent data.** Specifying fair and sustainable terms of a facilities management contract works best when there are comprehensive data on incumbent costs, demand and site-specific challenges. Currently, the data used are often not sufficient to fully reflect the contract opportunity. The National Audit Office found that in 2013/14 just 31 per cent of contracts by number and 57 per cent by value had open book accounting clauses, which allow for scrutiny of specific costs and profits on a given contract.⁴⁹
- **Minimum quality provisions.** Specific problems have arisen when bidding processes have become a ‘race to the bottom’, with government seeking the lowest cost and bidders willing to undercut each other to unsustainable levels. Successful contracts have considered the sustainability of delivery at given costs and also placed more weight on value in other areas. For example, some bidders now refuse to bid on contracts that do not account for staff being paid the London living wage.⁵⁰
- **Consideration of specific characteristics that will affect cost and quality.** For cleaning, each site has floorspace which is a mix of different ‘risk categories’ which affects the resources needed to clean effectively.⁵¹ Meanwhile, the requirements for the number of menu options varies by NHS site, often driven by the dietary needs of the local demographics. Contracts work well when these characteristics are fully understood in the contracting process.
- **Good working relationship between client and supplier.** Although difficult to measure, flexibility, transparency and engagement between the supplier and the client is important to ensure the effective delivery of services.⁵²
- **Appropriate transfer of risk.** As in other areas of outsourcing, it is more successful when the level of risk that is transferred to the provider is not excessive. While an integral benefit of outsourcing is to move risks to the private sector to manage, it is not appropriate to transfer unlimited liability. Some risks are best managed by the government, such as future policy changes, alongside demand-side changes, or legal changes.⁵³

48 BBC News, Sussex hospitals’ cleaning contract cancelled, 2015. Available at: <https://www.bbc.co.uk/news> (Accessed 8 October 2019)

49 National Audit Office, Open-book accounting and supply-chain assurance, (National Audit Office, London), 2015.

50 Discussions with industry experts.

51 National Patient Safety Agency (National Health Service), The national specifications for cleanliness in the NHS: a framework for setting and measuring performance outcomes, (National Patient Safety Agency, London), 2007.

52 Discussions with industry experts.

53 Institute for Government, Government outsourcing: what has worked and what needs reform?, (Institute for Government, London), 2019.

4.5 Summary

Overall there is evidence that private sector provision of facilities management services in the healthcare sector can deliver cost savings without compromising the quality of service. Assessing the available evidence demonstrates that there are examples where it has worked well in the past alongside examples where it has not, as there are in the public sector. The drivers of high-quality services delivered at good value to the public are not whether the public or private sector is in charge, but whether there is a competitive market that is underpinned by sensible and well informed contracting, constructive relationships between suppliers and clients, and clearly defined and appropriate deliverables set against measurable targets.

5. AIR TRAFFIC SERVICES

In this section, we assess the differences between private and public provision of air traffic services (ATS) from an international perspective.

The key findings are:

- There is evidence to suggest that private sector involvement in air traffic services has brought significant cost savings where it has been introduced internationally; in the United States, privately run air traffic control towers are up to 75 per cent cheaper to run than comparable state-owned FAA towers. Evidence from a handful of European countries estimate savings from introducing competition of between 20 and 50 per cent
- The data do not suggest that private providers have any worse performance in terms of delays and safety, while there is some evidence that suggests they perform better



5.1 Overview of international air traffic services

Private provision of air traffic control services is limited worldwide.

The three main areas comprising air traffic services are en-route, approach and aerodrome. En-route services involve the control of aircraft from completion of the initial climb, through the cruise altitude and controlled descent (to approximately 40 miles from the airport in the United Kingdom). Approach services manage the aircraft to the point of landing (up to ten miles from airport) before handing over to aerodrome services from the air traffic control tower which oversees take-offs, landings and on-ground movements.

Air traffic services have historically been run by governments or wholly government owned not for profit entities. This remains the case for the majority of services around the world but there are a growing number of examples of external contractors delivering services including aerodrome control, approach control, recruitment and **remote control** tower services.

In the United Kingdom, the biggest air navigation service provider (ANSP) is the National Air Traffic Services (NATS). This used to be a public entity but in 2001 the government partially privatised air traffic control. NATS is a public-private partnership between the government and a consortium of seven airlines, alongside its staff and airport operator BAA. The government holds 49 per cent and a golden share, whilst the Airline Group (the consortium of seven airlines) holds 42 per cent. NATS staff hold five per cent and BAA hold four per cent.⁵⁴

NATS is responsible for 75 per cent of all air traffic services in the United Kingdom.⁵⁵ However, there are other providers, mainly in small regional airports but also managing the operation of air traffic services at Gatwick and Edinburgh airports. DFS, the German state-owned air navigation service provider, won the contract to run Gatwick in 2014, replacing NATS, through a newly established company called Air Navigation Solutions.⁵⁶

Canada is another example of a large nation with the main air navigation services provider not wholly owned by the government. In 1996, a private company called Nav Canada purchased Canada's Air Navigation System, taking full charge and operating Canada's civil air traffic control.⁵⁷

In the United States, the Federal Aviation Administration (FAA) is a government body which is the largest air navigation service provider. However, they have subcontracted some air traffic services as far back as the 1980s, when they piloted contracted control towers in response to the Professional Air Traffic Controllers Organisation strike of 1981.⁵⁸

⁵⁴ Louise Butcher (House of Commons Library), Aviation: National Air Traffic Services (NATS), (House of Commons Library, London) 2012.

⁵⁵ NATS, Airports, date unknown. Available at: <https://www.nats.aero/services/airports/> (Accessed 8 October 2019)

⁵⁶ BBC News, Gatwick Airport air traffic control deal goes to Germany's DFS, 2014. Available at: <https://www.bbc.co.uk/news> (Accessed 8 October 2019)

⁵⁷ NAV Canada, The Test of Time, (NAV Canada, Ottawa), date unknown.

⁵⁸ Hearing before the Subcommittee on Aviation, A Review of the FAA's Contract Tower Program (112-93), (Congress, Washington D.C.), 2012.

By 1993, 27 control towers were sub-contracted to private providers and this continued to rise after Congress approved funding for a multi-year conversion program for lower-activity towers in 1994. As of 2019, there are 256 contract towers in operation in the United States out of a total of over 500 towers. Three companies run the contract towers: Serco, Robinson Aviation (RVA) and Midwest Air Traffic Control Services.⁵⁹

Elsewhere, there are small number of countries that have introduced some level of competition in the air traffic control market including Sweden, Norway, Spain, the United Arab Emirates, Iraq, Bahrain and Hong Kong.

5.2 Value for money

There are opportunities to increase cost efficiency by opening up air traffic control services to private external contractors.

Given that private sector involvement in air traffic control services is limited globally, the evidence on the relative performance of private and public sector provision is sporadic. However, the available evidence suggests that privately operated services are delivered at a lower cost than their publicly operated counterparts.

In the United States, a 2012 study assessed 240 contracted control towers compared to a sample of 92 public FAA towers that most closely resembled contract towers, based on air traffic levels and the number of operations (flights). In a smaller sample, the report matched 30 public and 30 contracted towers together, based on their traffic levels, and analysed their average costs over the 2010 fiscal year. Contract towers of a similar traffic level were nearly 75 per cent cheaper than the FAA equivalent. Most of the difference can be attributed to lower levels of staffing at contract towers, combined with marginally lower salaries.⁶⁰

Figure 37: Comparison of 30 FAA and 30 contract towers by costs, personnel and traffic, United States

	Average Air Traffic Density	Average FY 2010 Cost	Average Number of Air Traffic Personnel
FAA Tower	15.55	\$2,025,104	16.23
Contract Tower	15.34	\$536,911	6.03

Source: Office of Inspector General's analysis of FAA data. Note the towers were matched by traffic density.

The FAA approves staffing levels for contract towers whilst also requiring contract tower controllers to meet the same certification requirements as public sector controllers, and to be certified by them.⁶¹

In order for contract towers to be approved, they must undergo a benefit-cost analysis, where net present benefits on a 15-year time horizon are calculated.

59 FAA, About the FAA Contract Tower Program, date unknown. Available at: <https://www.faa.gov> (Accessed 8 October 2019)

60 Department of Transportation, Office of Inspector General Audit Report, (Office of Inspector General, Department for Transportation, Washington, D.C.), 2012.

61 Department of Transportation, Office of Inspector General Audit Report, (Office of Inspector General, Department for Transportation, Washington, D.C.), 2012.

Benefits include prevented aircraft collisions and reduced flying time, whilst costs include staffing, equipment and facilities. If the ratio of benefits to costs exceeds one, then the benefit-cost portion is approved.⁶²

In Europe, there is some evidence that the introduction of a competitive market has led to significant cost savings. Since 2010, both Sweden and Spain allowed airports to contract out services to certified air navigation service providers, leading to estimated cost savings of 27 and 47 per cent respectively. Meanwhile Torp Airport, in Norway, reported savings of 37 per cent since it tendered a contract for terminal air navigation services in 2016.⁶³

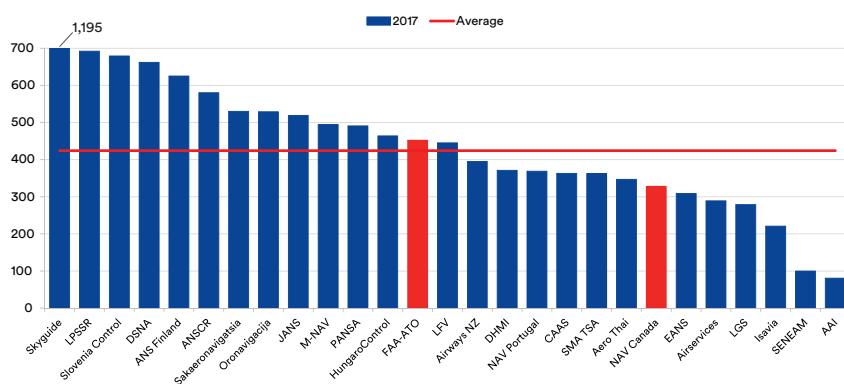
Meanwhile, a recent study by the European Commission found cost savings of 30 to 40 per cent as a result of having competition in the market for air navigation service providers.⁶⁴

Evidence suggests private involvement in national air navigation service providers reduces costs.

Although differences in costs across the air navigation service providers cannot be entirely attributed to the ownership structure, they do provide an indication of the potential efficiencies generated by the private sector. Statistics from a regular industry-led survey of global air navigation service providers in 2018 showed that NAV Canada, which is the only privately owned entity, is one of the cheapest cost per ‘instrument flight rules (IFR)’ hour; it is 28 per cent cheaper per hour than its nearest neighbour, the United States. (See Figure 38.)

Unlike the FAA which is vulnerable to budget cuts from Congress and cannot borrow to invest in new technology, Nav Canada is an independent company which can borrow. For example, NAV Canada has replaced paper strips with digital ones and has been able to license that technology to other control systems around the world.⁶⁵

Figure 38: Cost per IFR flight hour, US dollars (PPP adjusted), 2017 (private entities in red)



Source: CANSO Air Navigation Services Performance Report, 2018. Note that Africa and Papua New Guinea are excluded from the original data.

⁶² AOPA, Criteria For Establishing Air Traffic Control Towers and the Contract Tower Program, 2005. Available at: <https://www.aopa.org> (Accessed 8 October 2019)

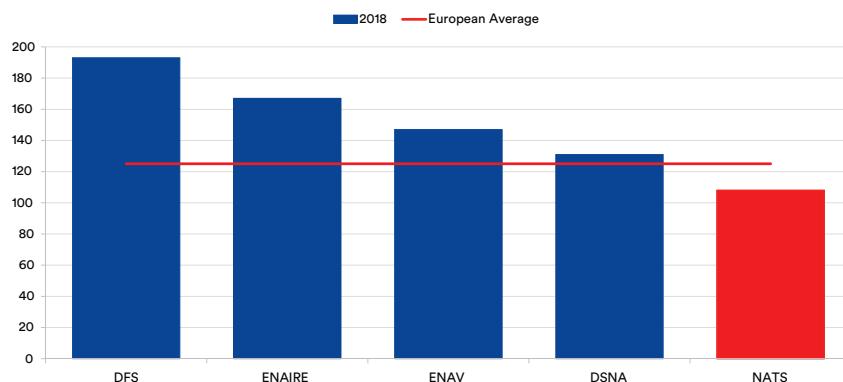
⁶³ Copenhagen Economics, Reducing costs of Air Traffic Control, (Copenhagen Economics, Copenhagen) 2019.

⁶⁴ Martin Hawley et al, Support study to the evaluation of cost allocation to marketable terminal air navigation services (European Commission, Brussels), 2019.

⁶⁵ The Economist, Air-traffic control is a mess, 2019. Available at: <https://www.economist.com> (Accessed 8 October 2019)

Meanwhile, in Europe, the only national air navigation service provider providing en-route services that is not a wholly owned government entity is NATS in the United Kingdom, which has been a public-private partnership since 2001. A 2019 study by Eurocontrol showed that employment costs for air traffic controllers per flight hour were lower for NATS in the United Kingdom than the other four largest air traffic control operators in Europe with similar economic and operational environments. These were namely DFS in Germany, ENAV in Italy, DSNA in France and Enaire in Spain. (See Figure 39.)

Figure 39: Air traffic controller employment costs per composite flight hour, 2018



Source: Eurocontrol. Note: composite flight hour is a composite measure which combines en-route flight-hours controlled and airport movements controlled.

Employment costs might be higher when there is public sector involvement. In 2010, at least ten Spanish air traffic controllers were paid over €810,000 a year. In 2019, the average Spanish air traffic controller earns over €200,000 a year, seven times the average national salary and higher than the equivalent pilot salary.⁶⁶

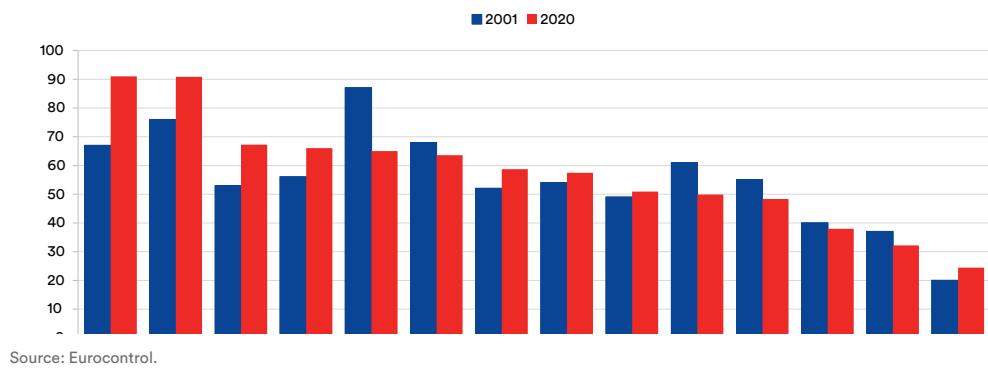
NATS has managed to reduce unit rate charges faster than many of its European counterparts since 2001.

Measures of cost differ depending on the type of service. Unit rate charges apply to en-route services provided by air navigation service providers, while terminal navigation charges relate to approach services and landing charges to aerodrome services.

Prior to the public-private partnership at NATS in 2001, NATS had some of the highest unit rate charges in Europe. The most comparable countries, Germany, Italy, France and Spain were all significantly cheaper. (See Figure 40.) By 2019, the United Kingdom managed to reduce their unit rate charges faster than all of its most comparable counterparts, as well as most countries in Eurocontrol. (See Figure 41.)

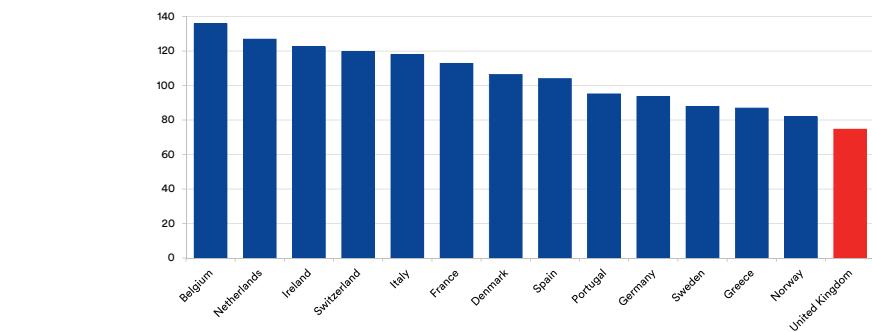
⁶⁶ The Economist, Air-traffic control is a mess, 2019. Available at: <https://www.economist.com> (Accessed 8 October 2019)

Figure 40: Unit rate charges, 2001 and January 2020, Euros



Source: Eurocontrol.

Figure 41: Unit rate charges in January 2020 as a percentage of 2001 costs



Source: Eurocontrol. Note 2001 equals 100 per cent.

5.3 Performance

Previous studies have shown private sector involvement is linked with better safety and productivity outcomes.

Service quality in the air traffic control sector is not measured by any sole indicator. CANSO, the Civil Air Navigation Services Organisation whose members support over 85 per cent of world air traffic, specifies 21 operational Key Performance Indicators, including capacity, cost, efficiency and safety.⁶⁷

In North America, historical analysis of American air traffic control data in 2012 showed significantly lower levels of operational errors, operational deviations and runway incursions at contract towers, compared to comparable public towers.⁶⁸

⁶⁷ CANSO, Recommended Key Performance Indicators for Measuring ANSP Operational Performance, (CANSO, Amsterdam), 2015

⁶⁸ Department of Transportation, Office of Inspector General Audit Report, (Office of Inspector General, Department for Transportation, Washington, D.C.), 2012.

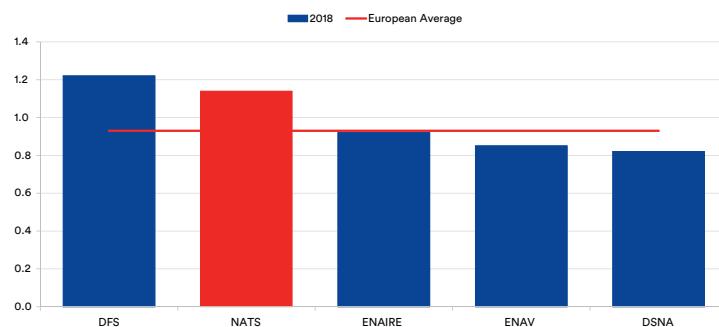
Figure 42: Number and rate of FY 2010 safety incidents at comparable contract and FAA air traffic control towers

Towers	Operational error rate	Operational deviation rate	Runaway inclusion rate
240 Contract	1.24	0.83	11.55
92 FAA	4.54	3.06	24.01

Source: Office of Inspector General's analysis of FAA data.

In Europe, meanwhile, other studies have also compared productivity between air navigation service providers. Eurocontrol's 2019 study found that NATS in the United Kingdom had above average productivity for all its services, when compared to its European counterparts and was ranked second out of the five largest providers. (See Figure 43.)

Figure 43: ATCO-hour productivity (gate-to-gate), composite flights hours per ATCO-hour, 2018



Source: Eurocontrol.

Contracted towers display lower rates of safety incidents and attributable delays in the United States.

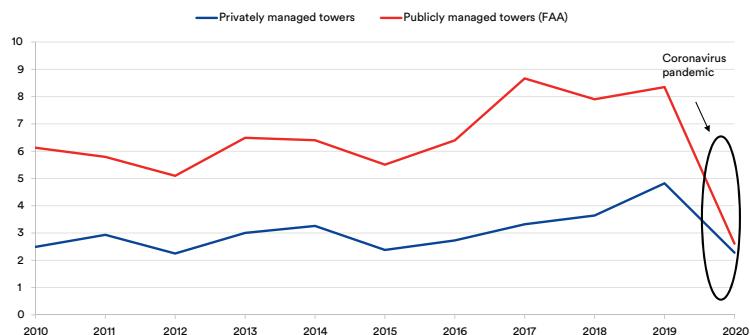
In the United States, public data are available at a control tower level. In order to benchmark current performance using public data in the United States, we look at two widely available indicators; average delays per operation in order to gauge performance and average safety incidents per million operations in order to measure safety.

Figure 44 shows the time series of delays due to traffic management initiatives in the United States since 2010, split by contract towers and 92 comparable public sector FAA towers. On average, the rate of delays is significantly lower at contract towers than comparable FAA towers. Even adjusting for towers with similar levels of operations (flights) does not change the picture. Admittedly, the gap narrowed significantly, but this is likely due to the sharp fall in air travel reducing congestion as a result of the coronavirus pandemic.

There was a difference in the methodology of reporting safety incidents at FAA-staffed towers, compared to contract towers. FAA-staffed towers at the time used a voluntary, non-punitive reporting system, which may have led to more incidents being reported.⁶⁹

⁶⁹ Department of Transportation, Office of Inspector General Audit Report, (Office of Inspector General, Department for Transportation, Washington, D.C.), 2012.

Figure 44: Average delays due to traffic management initiatives, seconds per operation (flight), United States



Source: Capital Economics' analysis of FAA data. Note: privately managed towers are compared to the 92 most similar public towers, as per the 2012 Office of Inspector General Audit Report. 2020 data is to end-June.

The rate of runway incursions from the same dataset, as one example of safety measurements, shows that contract towers experience a lower rate of incidents per million operations. Since 2011, the gap between the two runway incursion rates has increased. (See Figure 45.)

Figure 45: Average rate of runway incursion safety incidents per million operations, United States



Source: Capital Economics' analysis of FAA data. Note: privately managed towers are compared to the 92 most similar public towers, as per the 2012 Office of Inspector General Audit Report.*2015 and 2018 have been scaled to one year, as partial data. ^2019 is to mid-December.

Since 2001, air traffic delays have reduced across the board in Europe, but especially in the United Kingdom.

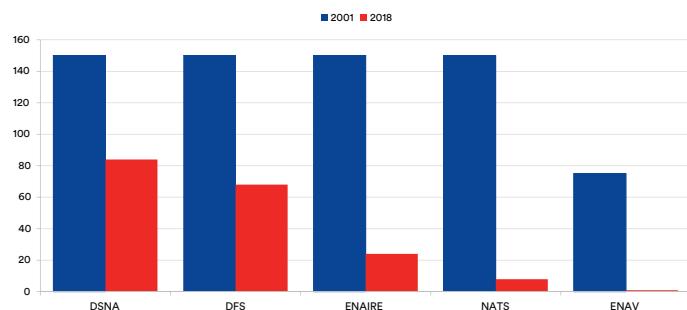
In the United Kingdom, en-route delays attributable to air traffic control have dropped dramatically since NATS became a public-private partnership in 2001. In 2001, delays attributable to air traffic control were largely uniform across the major European ANSPs, at between 120 and 180 seconds per flight, with Italy slightly lower at 60 to 90 seconds per flight.⁷⁰

By 2018, this picture was less uniform. Eurocontrol data suggests that delays due to air traffic control have dropped radically in the United Kingdom, Spain and Italy, but have remained (relatively) high in France and Germany. (See Figure 46.)

⁷⁰ National Audit Office, The Public Private Partnership for National Air Traffic Services Ltd, (National Audit Office, London), 2002.

Although there is a clear difference between the countries, the average delay time in Europe for 2018 was 1.73 minutes, or 104 seconds, well above Eurocontrol's target of 30 seconds. The delay figure was up over 100 per cent since 2017.⁷¹

Figure 46: Average en-route delays per flight due to air traffic control, seconds per flight



Source: Eurocontrol.

5.4 Drivers of performance

Sections 5.2 and 5.3 suggest that private sector involvement in the provision of air traffic control has brought both cost and quality benefits, both domestically and abroad.

Under the right conditions, private providers of air traffic control services have, and can continue to, benefit from:

- **Greater incentive to innovate, which can feed into the public sector.** A competitive market with commercially driven providers creates an imperative to find more innovative working practices. For example, NAV Canada has replaced paper strips with digital ones and has been able to license that technology to other control systems around the world; the remotely operated tower is a product of this.⁷²
- **Greater operational efficiency.** Private providers often benefit from the ability for staff to be employed more flexibly. For example, in American contract towers, managers and supervisors may be used to control traffic, whereas at the public FAA towers, they may not.⁷³ This in turn allows for more flexible staffing arrangements. The European countries that have outsourced air traffic services have seen benefits in terms of more flexible and modern terms of employment.

⁷¹ CANSO, Airspace Q2 2019 – A time for action, 2019. Available at: <https://www.canso.org> (Accessed 8 October 2019)

⁷² The Economist, Air-traffic control is a mess, 2019. Available at: <https://www.economist.com> (Accessed 8 October 2019)

⁷³ Hearing before the Subcommittee on Aviation, A Review of the FAA's Contract Tower Program (112-93), (Congress, Washington D.C.), 2012.

- **Greater accountability.** The contract tower program in the United States was born as a result of strike action in 1981. Between 2014 and 2016, French air traffic controllers spent the equivalent of almost nine months on strike.⁷⁴ In 2018, 19 per cent of en-route delays were attributable to air traffic control industrial action in France. NATS in the United Kingdom, on the other hand, had zero per cent.⁷⁵
- **Greater cost-related efficiencies.** For contract towers in the United States to be approved, a benefit-cost analysis must be completed. Contract towers, on average, have over 60 per cent fewer staff than a comparable FAA tower. These staffing levels are also approved by the FAA.⁷⁶ In a recent study by the European Commission, cost savings of between 30 and 40 per cent were identified for services that had been outsourced.⁷⁷

5.5 Summary

Overall there is evidence that competition involving private operators in the provision of air traffic control services reduces costs without compromising performance or safety.

Privatisation of en-route services is unlikely to happen. One of the reasons for this is that the use of en-route airspace involves national security and military operations. In the United Kingdom, NATS, the largest air navigation service provider and one of the few to have private sector involvement, has performed well since it was part privatised on cost and performance metrics compared to European counterparts.

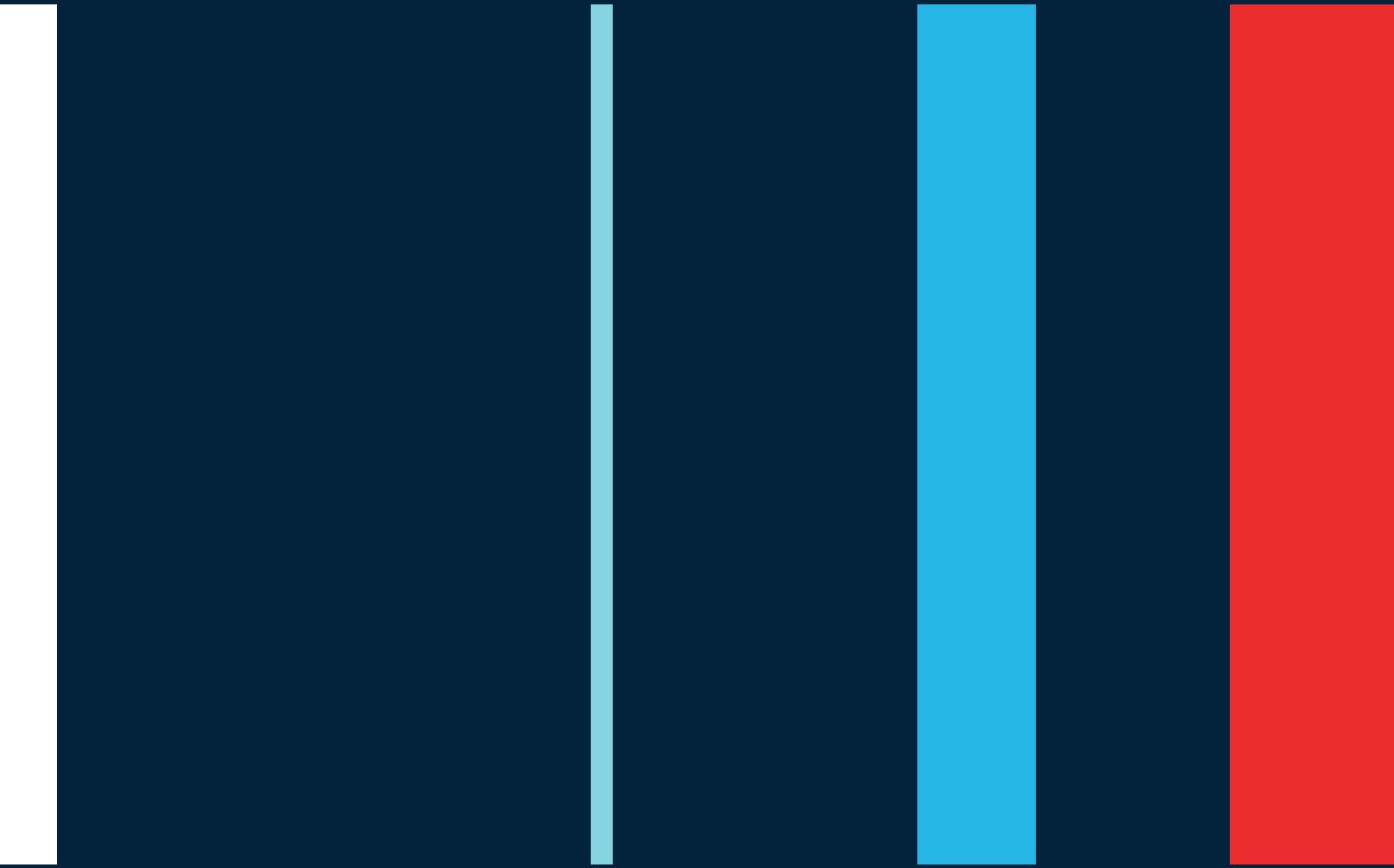
Meanwhile, there are an increasing number of approach and aerodrome services being subject to competition globally. Evidence from the United States shows that outsourced control towers are run at a lower cost than those run by the government while performing comparatively well on measures of delays and safety. The potential for cost savings is supported by evidence from a number of countries including Spain, Sweden and Norway.

⁷⁴ The Economist, Air-traffic control is a mess, 2019. Available at: <https://www.economist.com> (Accessed 8 October 2019)

⁷⁵ Capital Economics' analysis of Eurocontrol data

⁷⁶ Department of Transportation, Office of Inspector General Audit Report, (Office of Inspector General, Department for Transportation, Washington, D.C.), 2012.

⁷⁷ Martin Hawley et al, Support study to the evaluation of cost allocation to marketable terminal air navigation services (European Commission, Brussels), 2019.



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