Oxera

Local Government Association

securing best value and outcomes

for taxpayer subsidy of bus services

contents

preface

In our submission to the Department for Transport's (DfT) consultation on options for bus subsidy reform, (LGA, June 2008)[1] the Local Government Association (LGA) expressed the view that current subsidy mechanisms for the bus industry did not represent good value for money or allow a focus on outcomes and improved services.

We believe there is a need for a fundamental review of the bus subsidy system to look into how better value for money and better outcomes could be secured from continued public sector investment in bus services.

To inform this debate, the LGA commissioned Oxera Consulting Ltd to produce an independent report, which would:

- examine how efficient existing subsidies are in meeting public policy objectives and delivering improved bus services in England (outside London) and Wales,

- make recommendations of how value for money could be improved.

The following report: *"Subsidising buses: How to get the best from taxpayers' money"* presents the views of it authors and does not necessarily represent the views of the LGA. The LGA's initial response to the report is set out in the first section of this paper.

The LGA would like to thank Oxera and those local authorities and colleagues who collaborated in the production of this report.

[1] LGA response to local bus service support – options for reform (June 2008) http://www.lga.gov.uk/lga/core/page.do?pageId=47736&path=18370.18281.13892&activeId=681013

LGA response to Oxera report: *Subsidising buses: How to get the best from taxpayers' money*

Tax payers are bankrolling the bus industry in England. Subsidy has risen by half in ten years, to £2 ½ billion in 2007/08, amounting to over half the turnover of the industry. The bus is the main form of local public transport outside London and has an important contribution to make to tackling climate change and congestion, improving accessibility and mobility providing access to jobs, services and facilities. There is therefore a strong case for investing public money in improving the quality, frequency and coverage of local bus services.

But what are we getting for our money? That enormous public subsidy is not buying higher passenger number, a greener transport system, or even stopping fares from going up. Passenger numbers outside London, and a handful of medium-sized, stand-alone towns, stay flat or continue to decline. Bus fares have increased 60 per cent in the last ten years. And a large proportion of the subsidy is a fuel duty rebate, an incentive directly opposed to Government's climate change objectives. Nor is it related to tackling congestion, driving up patronage, improved performance, better quality services or improved accessibility. Recent changes to the grant, designed to promote more fuel efficient services are complicated and focused on the short term to make the sort of impact on carbon emissions that we need.

We need to make sure that we are achieving optimum benefits for money invested in our buses. This is ever more important as we face the certainty of a squeeze on public spending and tough choices about where the savings are to be made. We simply can't afford the spiralling cost of subsidy for buses that have happened over the last decade. We will need to make what we've got go further if we are to avoid decrease in service levels and higher fares that will lead to falling passenger numbers.

The Government identified in its Bus Policy Paper of 2006, that the current system will not deliver the bus services that passengers rightly expect and warned of a spiral of decline:

"After 2010, on current trends, bus patronage, particularly outside London, is likely to resume its long-term decline. This will put further pressure on supported services and local authority expenditure. There is a risk of an on-going spiral of declining services and rising subsidy taking hold in more of our local communities."[2]

[2] Putting Passengers First - The Government's proposals for a modernised national framework for bus services, DfT December 2006

This points to the need for fundamental review of the bus subsidy system, based on a clear vision of what we are trying to achieve through investing in the bus industry and how those objectives can be most effectively achieved. Any reform of the system should start with the question of whether the tax payer, both national and local, is getting value for money. Are we really meeting policy objectives in return for the extremely high level of subsidy?

It is for that reason the LGA commissioned a study to explore how efficient existing subsidies are in meeting public policy objectives and delivering bus services that people want, and to make recommendations of how value for money could be improved.

The scope of the study was limited by the financial data on the bus industry that is currently available in the public domain. It was also beyond the scope of this study to conduct detailed new economic analysis of the impact different options for reform. Nevertheless, the independent study reached some striking conclusions:

- there are currently seven separate forms of subsidy to the bus industry;
- spending on subsidy has gone up by over £1bn in the last five years;
- most subsidy is paid without bus companies giving any guarantees in terms of what service they will provide in return;
- subsidy is badly targeted to under-served, or highly congested areas or where there are particularly low passenger numbers;
- the overall subsidy package is of questionable value for money.

Strikingly, the report found that it is not possible to determine how much of the bus industry's profits – on average, bus companies earn a 30% return on their investors' capital – can be linked to subsidy payments. This is an area that merits further work.

The report set out a series of recommendations:

Devolving funding

The report finds that better value for money would be obtained by removing BSOG and directing the funding towards enhancing local bus services that target local congestion, pollution and social priorities and incentivise bus schemes that generate a reduction in carbon emissions. This would involve devolving most of the funding to local authorities to spend on commissioning specific bus improvements in places where they are needed.

The LGA welcomes this recommendation which is consistent with government policy of supporting stronger partnerships between local authorities and bus operators. We recognise that not all councils may want to elect immediately for devolved funding. Further work is required to understand the type of intervention that would deliver maximum benefits at the local level and transition to a new system would need to be managed carefully to ensure that bus services, standards and fares where not adversely affected by the change. Equally, further work is needed to explore how funding should be distributed equitably to different areas of the country.

Better targeting of free travel

The report finds that better outcomes from funding directed towards supporting free travel for the elderly and disabled if it were more closely targeted at locally prioritised concessions.

This recommendation is problematic as it could suggest an end to the current national concession, which is a popular policy that benefits millions of people and is highly valued by councils and their communities. Means testing for concessionary fares is not the solution. Take up of the scheme would fall drastically, the benefits it delivers greatly reduced and administrative burdens significantly increased. Nevertheless, the findings raise some challenges about the long term affordability of the current scheme; and whether there are other sections of society who would benefit from reduced-cost travel and how they might be paid for through reform to the current scheme. The LGA will discuss this proposal further with councils to inform our thinking about the long term future of concessionary fares policy.

Coordination of subsidy

We welcome the recommendation to consolidate different streams of support for bus subsidy into a single local pot. This would reduce duplication, avoid perverse effects where different subsidy streams cancel out each others' impacts and bring substantial efficiencies by increasing flexibility for councils to join up funding around local priorities for improving bus services and achieving policy objectives.

More efficient tendering

As the report demonstrates, a number of local authorities have achieved efficiency gains, higher standards and better integration of local services by combining tenders for secured and social bus services.

We recognise a role here for the LGA Group in supporting wider take up of this practice and will look for opportunities to share experiences from areas of the country where this has been successful. The report's recommendation to raise the de minimis level would be helpful in encouraging more authorities to undertake more efficient tendering practices.

Conclusion

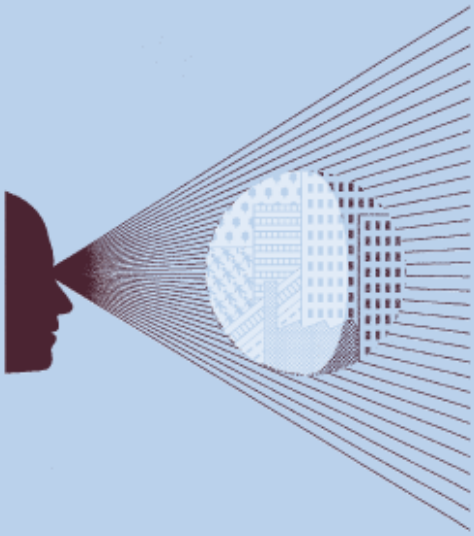
Oxera's report raises some challenging questions and puts forward arguments for change. It also highlights the need for further, more detailed analysis to understand the impact on services, patronage, fares and company profits of existing subsidies and different options for change. We look forward to engaging with Government and with the bus industry to develop a solution for more sustainable investment in bus services for the long term.

Oxera

Subsidising buses:
How to get the best from taxpayers' money

Report prepared for Local Government Association

June 25th 2009



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Executive summary

In today's unfavourable economic conditions, it is increasingly important to be able to demonstrate value for money for public spending. Although public spending in the bus sector has risen considerably in recent years, the greater demands from all departments on government finances mean that there is no guarantee that this level of spending will continue. Given these factors, the bus sector needs to be reviewed with, if necessary, recommendations put forward for improving the value for money to support the case for funding.

In this context, the Local Government Association commissioned Oxera to conduct a study on the value for money of the existing bus subsidy in England (outside London) and Wales, and to determine whether better outcomes in the bus sector could be achieved by changing the structure of this support. This study reviews the existing package of support, assesses whether it represents value for money, and makes recommendations for achieving better value for money.

Current package and degree of support

Bus services in England and Wales receive considerable financial support, with around £2.5 billion provided in England (including London) in 2007/08, a figure that has increased above real terms in 2008/09. Indeed, over the period 1997/98 to 2008/09, support has almost doubled in real terms in England outside London. However, there is relatively little service specification to accompany this amount of subsidy, as would be expected in many other sectors of the economy. In addition, recent trends show that increases in support to the bus sector have not been accompanied by large increases in patronage or service levels; instead, without the subsidy, it is expected that patronage and service levels would have fallen over this period.

The existing package of support comprises subsidy via government schemes, local authority capital investment, and locally tendered services; fuel duty rebates under the Bus Service Operators Grant (BSOG) scheme; and reimbursement payments for concessionary fares schemes under a 'no better, no worse-off' arrangement. The table below details expenditure on financial support to bus services for 2007/2008:

Public expenditure on buses in England

Source of funding	Amount, 2007/08 (£m))	%
Concessionary fares (including London)	725	29
London funding	650	26
BSOG (including London)	413	17
Local authority secured services (estimated)	330	13
Rural Bus Subsidy Grant	56	2
Challenge and Kickstart	11	<1
Total (revenue)	**2,185**	**88**
Capital spending via local authorities	300	12
Total spending	**2,485**	**100**

Source: Department for Transport (2008), 'Local Bus Service Support: Options for Reform', Consultation Paper, March.

As part of the analysis presented in this report, Oxera has reviewed the relationship between profitability and subsidy, as there have been concerns that operators are making high rates of return. However, this review shows that the data on bus operators' profitability and subsidy available in the public domain is insufficiently robust to draw meaningful conclusions on this relationship. A more detailed study, which is beyond the scope of this report, would be necessary to reach any firm conclusions with regards to the relationship.

Defining value for money and assessing the current package

In the context of this study, there are two strands to defining value for money. First, the package of support has to meet public policy objectives, which could include reducing carbon, congestion and local pollution, assisting disadvantaged people, and improving access to local labour and product markets. Second, the support has to meet these objectives efficiently, delivering the intended outcomes at low cost, while minimising any unintended or undesirable spillover effects requiring policy action.

The current package of support is therefore assessed against this definition. The study finds that BSOG has led to increased bus patronage, but does not deliver best value for money. On the one hand, it removes the incentives present in the fuel duty system for fuel efficiency, and as such is at odds with public policy objectives on reducing carbon. On the other hand, it lowers fares with the aim of creating modal shift to buses in a way that does not take into account local needs. The National Concessionary Fares Scheme also appears not to offer best value for money, with some policy objectives met, but at a high administrative cost, and with many benefiting who do not need to. Furthermore, there would seem to be several ways in which the current system does not facilitate coordinated action. This concern applies to a number of subsidy streams (Kickstart, the Rural Bus Subsidy Grant, Rural Bus Challenge and secured services), which on their own seem to offer good value for money, but in combination appear to be serving a similar purpose, and to systems of multiple tendering for small contracts, where combined tendering would be expected to attract higher-quality operators and offer efficiency savings.

Reforming support for bus services

The five recommendations for change on the basis of the analysis in this study focus on areas where the report has demonstrated that value for money could be improved.

1) Better value for money would be achieved by removing the fuel duty rebate for bus services (BSOG). A proportion of the additional duty collected would be devolved to local authorities to provide and support enhanced local bus services, thereby addressing local congestion, pollution and social priorities. This would provide the funding support to accompany the partnership arrangements envisaged in the Local Transport Act 2008.

2) Under this framework the remainder of BSOG would be allocated to local authorities proposing bus schemes or other measures that can generate measureable (and therefore auditable) reductions in transport carbon emissions. This reflects the fact that the social cost of carbon is the same regardless of where it is emitted, but that local stakeholders can propose the best solutions in their area, and that funding allocations need to support these principles.

3) The National Concessionary Fares Scheme is an inefficient and high-cost way of delivering public policy objectives. Better targeting at the scheme's intended beneficiaries would generate savings which could be made available to local authorities to support lower-cost travel for locally prioritised, additional concessions.

4) There are currently several subsidy streams aimed at improving accessibility. Value for money would be improved if these were combined into a single fund, with local authorities having flexibility over the expenditure, albeit with statutory safeguards to

ensure that minimum standards (for example, with regard to the engine standards) are met.

5) Efficiency savings could be made by improving tendering practices. This includes raising the de minimis level for secured services in England to match that required by European legislation, and combining the procurement of secured services with that for education and social services.[1] These measures could encourage operators offering higher quality to bid for contracts.

There are some caveats to these recommendations, although none of these is insurmountable. European state aid rules—introduced when the UK joined the European Union and after fuel duty rebate was first provided—are likely to require services supported by devolved BSOG payments to be tendered. This may in turn make market entry more difficult, with tendering (for larger contracts) and access to partnership arrangements with local authorities required as prerequisites. Furthermore, moving to a situation where bus operators face the full extent of fuel duty will need careful handling to avoid loss of services. Finally, it needs to be recognised that national coordination will be required to ensure that the buses of the future reflect the desire for lower carbon and local pollutant emissions, as operators and local authorities on their own are unlikely to be able to change a market which is largely driven by the needs of HGV operators.[2]

Nevertheless, the analysis in this report indicates that there is a clear need for action to improve the value for money of the financial support package for bus services in order to place the sector on a sustainable footing given current circumstances. The recommendations of this report go a long way towards achieving this.

[1] Secured services refer to services which are tendered out by local authorities and which would not be commercially viable for bus operators to undertake otherwise.

[2] Engines tend to be developed specifically for heavy goods vehicles, and then adapted to fit buses.

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1 Introduction

1.1 Background and objectives of the study

Bus subsidy is changing. The Department for Transport (DfT) recently announced reductions in the fuel duty rebate that bus operators in England can claim through the Bus Service Operators Grant (BSOG), and that future rebates will be subject to fuel efficiency and other criteria.[3] This is in the context of increasing public financial support to the bus sector over recent years, which has slowed down falls in passenger numbers against a backdrop of increasing costs. However, the recession, cost pressures on bus operators, and, in particular, the continuing uncertainty surrounding government finances make it clear that it is important to review and, if necessary, improve the value for money of this support. In light of these factors, the Local Government Association (LGA) commissioned Oxera to conduct a study on the value for money of the existing bus subsidy streams in England (outside London) and Wales, and to determine whether better outcomes could be achieved by changing the structure of this support.

The bus industry currently receives subsidy through a number of channels, including contracts with local transport and education authorities, and funds such as Kickstart. Furthermore, concessionary travel schemes offer free travel to older and disabled passengers, for which operators are able to claim reimbursement for lost revenue (and increased costs), as well as receiving substantial fuel duty rebates through the BSOG arrangements. In addition, local authorities often invest significant sums in bus sector infrastructure, including bus stations, bus priority lanes and bus shelters. In 2007/08, subsidy payments in England totalled £2.5 billion, and are expected to have increased further in 2008/09.[4]

Given the increasing cost to the public of bus subsidy and the current and forthcoming changes to the subsidy regime (ie, BSOG), it is important to understand whether the existing package offers the best outcomes in relation to achieving transport and wider public policy objectives, and, if not, whether the regime can be revised to deliver these objectives more effectively. A particular concern highlighted in LGA's response to the DfT consultation on BSOG is whether current national schemes, such as BSOG and concessionary fares, are able to meet the needs of local communities given the blanket' approach of these schemes to reimbursing bus operators.[5]

The aim of this study is therefore to define value for money with regard to bus subsidy, to examine the evidence on the effectiveness of the current subsidy streams in light of this definition, and finally to provide recommendations on how the structure of government support could be improved to deliver better value for money to the taxpayer.

[3] Secretary of State for Transport (2008), 'Changes to Bus Service Operators Grant', December 16th, available at http://www.dft.gov.uk/press/speechesstatements/statements/busserviceoperatorsgroup

[4] DfT (2008), 'Local Bus Service Support: Options for Reform', Consultation Paper, March.

[5] LGA (2008), 'LGA response to local bus service support – options for reform', June 5th.

1.2 Structure of the report

– Section 2 examines the extent of public support provided to the bus sector in the form of subsidies and other support in the context of the recent developments in the bus sector.

– Section 3 defines value for money and uses this definition to assess the effectiveness of the current subsidy package with reference to transport and wider public policy objectives.

– Section 4 sets out recommendations for possible improvements to the current subsidy structure, and concludes.

2 Current bus sector support and industry trends

The context for assessing the effectiveness of the current support package for the bus sector is considered below. Following an introduction of the subsidy streams and examination of the evolution of public sector expenditure on buses over time, the wider context of recent trends in the bus sector is set out, which, in turn, is influenced by developments in the wider economy.

In terms of geographical coverage, the study focuses on England (outside London). However, lessons from the experience in Scotland and Wales are also taken into account.

2.1 Bus sector and subsidy

Due to the recognition of the importance of buses in encouraging local and national economic growth, as well as addressing social exclusion and reducing congestion and environmental pollution, the bus sector in Great Britain has a long history of receiving public support. Concessionary fares were the first formal subsidy to be introduced, in the 1960s.[6] These were followed by the fuel duty rebate, with the purpose of protecting bus operators from rising fuel taxation and limiting increases in fares.[7] Further support for the bus sector was introduced under the Transport Act 1968, which made provisions for revenue support for specific services, targeted at the provision of rural services. From 1974, councils were placed under the statutory duty to make plans and policies for local transport.

In light of the rising cost of public funding of buses, the Transport Act 1985 limited the subsidy that local authorities outside London could pay to bus operators to the following three categories:[8]

– payment for secured local bus services;
– reimbursement for revenue loss from participation in concessionary fare schemes;
– expenditure to improve bus access for disabled persons.

Currently, in addition to these categories, bus operators receive the BSOG, which replaced the fuel duty rebate following the passing of the Transport Act 2000.

2.2 Existing subsidy streams and other forms of support

In its March 2008 consultation paper, 'Local Bus Service Support: Options for Reform', the DfT estimated public sector funding of the bus sector in England to be £2.5 billion in 2007/08, which is equivalent to 40% of the bus industry's total income.[9] In the consultation paper, total public sector expenditure is divided into seven broad categories:

– **concessionary fares**—subsidised local bus travel for disabled people and people aged over 60;
– **London funding**—an indirect subsidy paid to operators providing a service under contract to Transport for London (TfL). The budget is controlled by the London Mayor, subject to oversight by the Greater London Authority (GLA);

[6] Local authorities were given powers rather than an obligation to provide concessionary fares. Therefore, before the Transport Act 2000, not all local authorities had the scheme in place. After the passing of this Act, the scheme was implemented universally. See TAS (2007), 'Bus Industry Monitor'.

[7] TAS (2007), 'Bus Industry Monitor'.

[8] TAS (2007), 'Bus Industry Monitor'.

[9] DfT (2008), 'Local Bus Service Support: Options for Reform', Consultation Paper, March.

- **BSOG**—payment from the DfT to bus operators that offsets a high proportion of the fuel duty payable;
- **local authority secured services**—local authorities tender routes out that would not be commercially viable and would not operate unless publicly funded. A subsidy is paid to the operator, normally under the terms of a net cost contract where the operator takes revenue risk;
- **Rural Bus Subsidy Grant**—the grant is paid to local authorities to help support the provision of non-commercial rural services, and is targeted to support accessibility in rural areas;
- **Rural Bus Challenge and Kickstart**—grant schemes designed to help local authorities and operators introduce new and innovative services;
- **capital spending**—bus services also benefit from capital investment in bus stations, bus priority lanes and bus shelters funded by local authorities, which receive support through either the DfT block grant or major schemes funding.

Table 2.1 shows the amount of support in England in 2007/08 for each of the above. It is notable that concessionary fares spend and BSOG account for nearly half of the total public spend. Concessionary fares and BSOG figures in the table include London funding.[10]

Table 2.1 Public expenditure on buses in England

Source of funding	Amount, 2007/08 (£m)	%
Concessionary fares (including London)	725	29
London funding	650	26
BSOG (including London)	413	17
Local authority secured services (estimated)	330	13
Rural Bus Subsidy Grant	56	2
Rural Bus Challenge and Kickstart	11	<1
Total (revenue)	**2,185**	**88**
Capital spending via local authorities	300	12
Total spending	**2,485**	**100**

Source: DfT (2008), 'Local Bus Service Support: Options for Reform', Consultation Paper, March.

The DfT is expecting public spending on buses in England to increase further in 2008/09, with BSOG increasing to around £439m[11] from £413m in 2007/08 and the concessionary fares budget increasing to around £995m[12] from £725m.

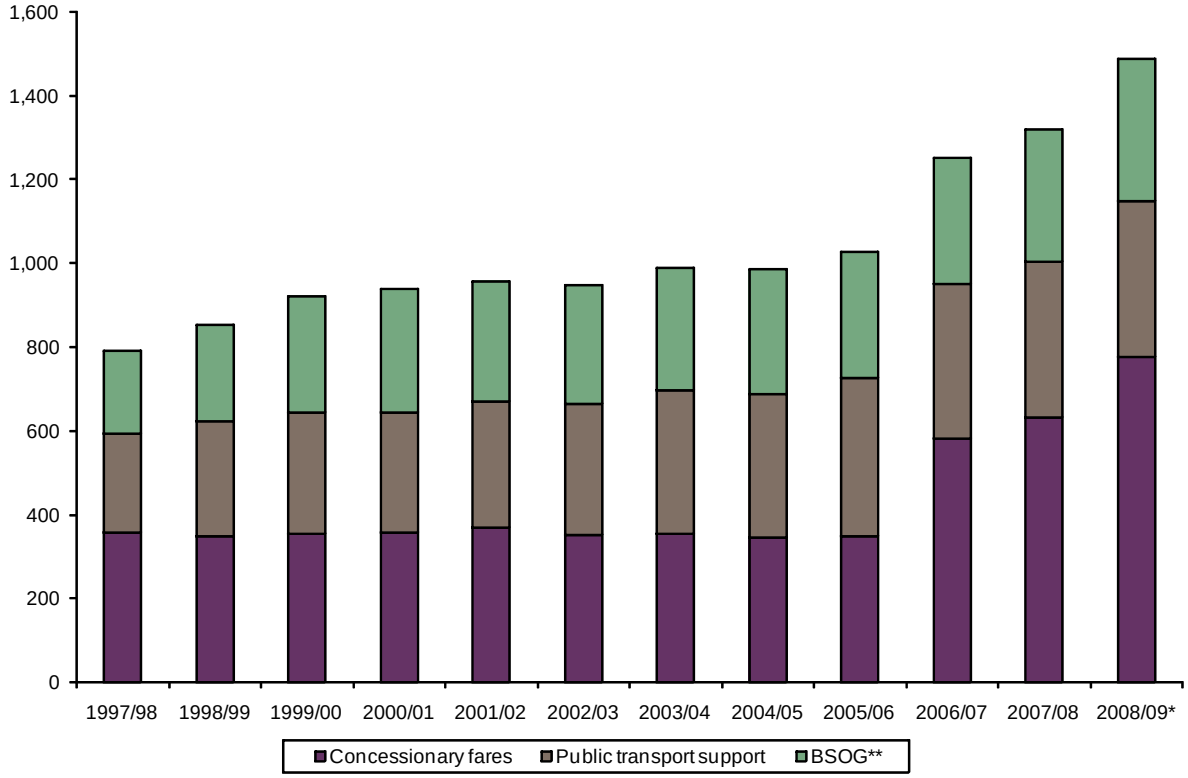
The trends in concessionary fares reimbursement, public transport support (which includes administrative costs, Rural Bus Subsidy Grant, and Rural Bus Challenge funding) and BSOG in England outside London are illustrated in Figure 2.1. As can be seen, over the last ten years, public transport support increased by more than 50% and spending on concessionary fares and BSOG more than doubled.

[10] According to the latest statistics from the DfT, concessionary fares reimbursement in England for 2007/08 was £819m, of which London concessionary fares reimbursement accounted for £186m (23%). See DfT (2009), 'Transport Statistics Bulletin. Bus and Light Rail Statistics GB: Q4 2008', March. London BSOG can be approximated using the latest DfT data on local bus vehicle kilometres. London accounts for 21% (475m) of 2,286m local bus kilometres in England. See DfT (2008), 'Transport Statistics Great Britain 2008 Edition', November.

[11] Email communication from the DfT in response to an information request from Oxera, June 2009.

[12] Office of National Statistics (2008), 'Updated Local Authority Revenue Expenditure and Financing England 2008-2009 Budget', Statistical Release, October 30th. The estimates include London spending.

Figure 2.1 Public sector expenditure on bus services in England outside London (£m), 2007/08 prices



Note: * Figures estimated using the budget concessionary fares reimbursement for 2008/09 and BSOG 2008/09 information provided by the DfT to Oxera in June 2009. For public transport support, it was assumed that expenditure in 2008/09 would be the same as in 2007/08. ** BSOG data from the DfT is available for Great Britain only, and was allocated to England outside London on the basis of local bus kilometres.
Source: DfT (2009), 'Transport Statistics Bulletin. Bus and Light Rail Statistics GB: Q4 2008', March. DfT (2008), 'Transport Statistics Great Britain 2008 Edition', November.

For illustration purposes only, comparison with subsidy in other public service sectors, as a proportion of their revenue, shows that subsidy to the bus industry is relatively high, although not as high as to Network Rail or Post Office Limited (see Table 2.2). It is noteworthy that, in each of the other sectors in receipt of subsidy, there are tight service specification associated with the subsidy. This compares with the bus sector, where a substantial amount of subsidy is granted with considerably less stringent service specifications.

Table 2.2 Turnover and subsidies for selected UK industries

	Subsidy (£m)	Turnover/revenue (£m)	Subsidy as % of industry turnover
Network Rail	3,283	5,960	55
Post Office Ltd	463	761	61
Train operating companies	1,286	5,555	19
Buses	1,507*	4,215	36

Note: The most recent data available for each industry is presented. 2007/08 data is presented for Network Rail, Post Office Limited and Train Operating Companies. 2006/2007 data is presented for buses, adjusted to 2007/08 values using the inflation rate for 2007/08 (the original values are £1,445m for subsidy and £4,042m for turnover).
* This figure does not include concessionary fares, as these are compensated under a 'no better, no worse-off' arrangement.
Source: Network Rail (2008), 'Network Rail Limited—Preliminary Financial Results for the year to 31 March 2008'; Office of Rail Regulation (2008), 'National Rail Trends 2007-2008 Yearbook'; TAS (2007), 'Bus Industry Monitor'.

2.3 Trends in the bus sector

The overview of bus subsidy streams shows that public sector support for buses has increased substantially over the last ten years. However, these figures need to be considered in the context of bus sector, as well as economy-wide, trends rather than in the abstract. The evolution of bus patronage and costs is examined below to provide such a context.

2.3.1 Bus patronage

The market for bus services in GB has seen a long period of decline since 1950; over 16bn passenger journeys were taken in 1950, but this number gradually decreased to around 5bn in 2006/2007. More recently (over the last ten years), passenger numbers have seen a recovery, with bus patronage rising by 14% since 1999/2000.[13] However, as the DfT commented in its consultation paper, the growth in bus patronage mainly occurred in London, with areas outside London experiencing a steady reduction in patronage.[14]

The main reason for this decline seems to be increasing competitive pressure from the car due to falling costs and increasing availability. This is demonstrated by the car ownership figures: car ownership per 1,000 of population in England has increased by almost 50%[15] since 1984 and by over 60% in Wales as at 2007/2008.[16]

Figure 2.2 shows trends in bus patronage for England excluding London, bus services supply as approximated by bus kilometres, passenger fares and bus subsidy since 1996/97. The following observations can be drawn from review of these figures.

– There is a decline in patronage over time, although there appears to be a slight recovery starting in 2006/2007 and coinciding with the introduction of free off-peak travel for older and disabled people.

– There is a corresponding reduction in bus services. However, bus service supply declines at a lower rate than passenger numbers, which may lead to an increase in the costs of providing bus services per passenger due to there being fewer passengers per service.

– Therefore a possible explanation for the increase in average fares and bus subsidy (albeit including concessionary fares reimbursement) is the increasing per-passenger costs of providing bus services.

Section 2.3.2 also examines other potential drivers of costs, such as fuel and labour, to determine whether they can explain the increase in average fares and subsidy.

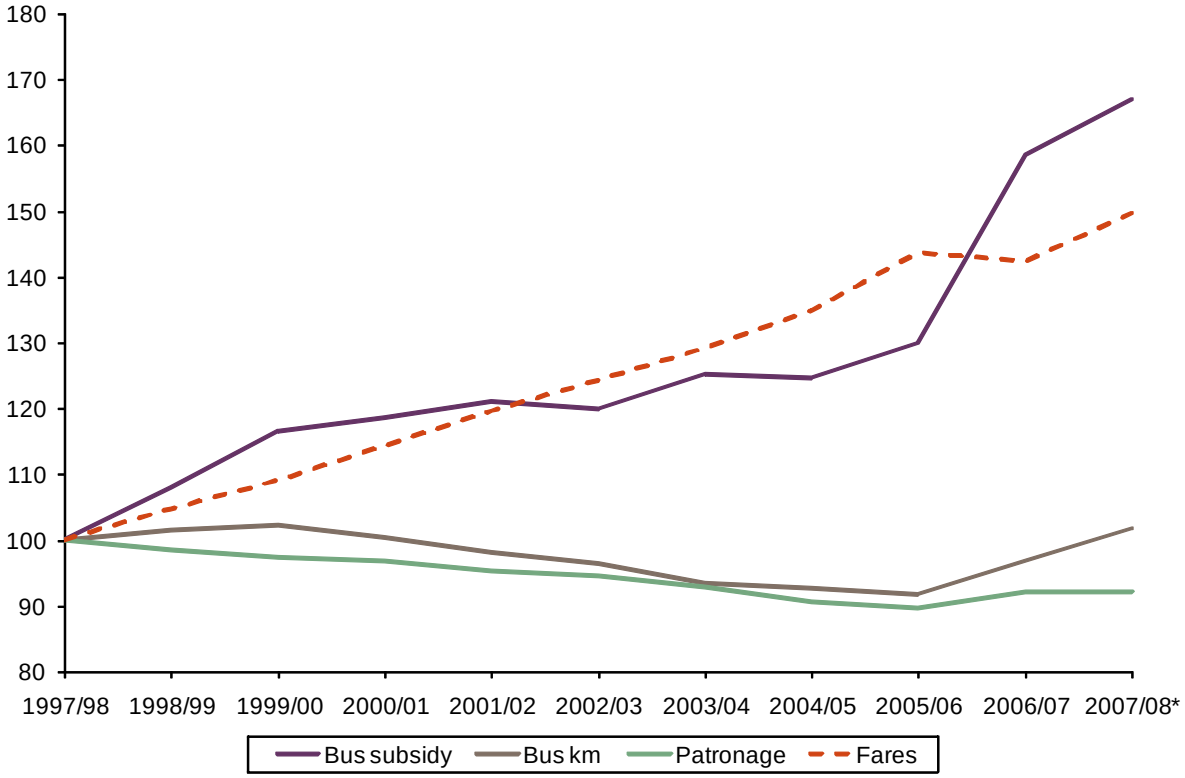
[13] DfT (2008), 'Options for reform', consultation paper.

[14] Although there are some signs of recovery from 2005/06, which coincides with the introduction of the National Concessionary Fare Scheme.

[15] Average car ownership is higher if the effect of London is removed, car ownership per 1,000 of population in London increased by 10% since 1984.

[16] See TAS (2007), 'Bus Industry Monitor'.

Figure 2.2 Bus patronage, bus kilometre, fare and bus subsidy indices (rebased, 1997/98 = 100), 2007/08 prices



Note: The patronage figure for 2007/08 was not available, and was assumed to be equal to the 2006/07 value. Patronage, bus subsidy and bus kilometre are for England excluding London. Bus fares are for Great Britain excluding London due to the unavailability of fares for England excluding London. Bus subsidy includes concessionary fares reimbursement, BSOG and public transport expenditure (which comprises administrative costs, Rural Bus Subsidy Grant, and Rural Bus Challenge funding).
Source: TAS (2007), 'Bus Industry Monitor'. DfT (2008), 'Transport Statistics Great Britain 2008 Edition', November. DfT (2009), 'Transport Statistics Bulletin. Bus and Light Rail Statistics GB: Q4 2008', March.

Although Figure 2.2 shows a downward trend in bus patronage, it does not provide sufficient information to draw conclusions about whether subsidy has been effective or otherwise in increasing bus patronage. This is because, in Figure 2.2, patronage is a result of current levels of subsidy. It is not clear what would have happened to passenger numbers without that subsidy—ie, whether it would have been the same or lower than the current levels.

The DfT's paper, 'Putting passengers first' predicts a further decline in patronage outside London as a result of a vicious cycle whereby 'falling patronage leads to fewer services being commercial which reduces service levels and induces further falls in patronage.' The paper highlights that the challenge is to 'halt the decline and, in the longer term, increase patronage' through 'joint action by local authorities and bus operators involving increase bus investment, more bus prioritisation, a renewed emphasis on network benefits and demand management.'[17]

2.3.2 Bus costs and future subsidy requirements

The review of bus industry trends above suggests that the increase in operating costs may be the reason for the increasing fare levels and bus subsidy. A recent report for Commission for Integrated Transport (CfIT) found that the real costs in the UK bus industry increase at 2% or higher than the inflation rate.[18] The increasing costs seem attributable to a

[17] DfT (2006), 'Putting Passengers First. The Government's Proposals for a Modernised National Framework for Bus Services', December.
[18] See TAS (2007), 'Bus Industry Monitor'.

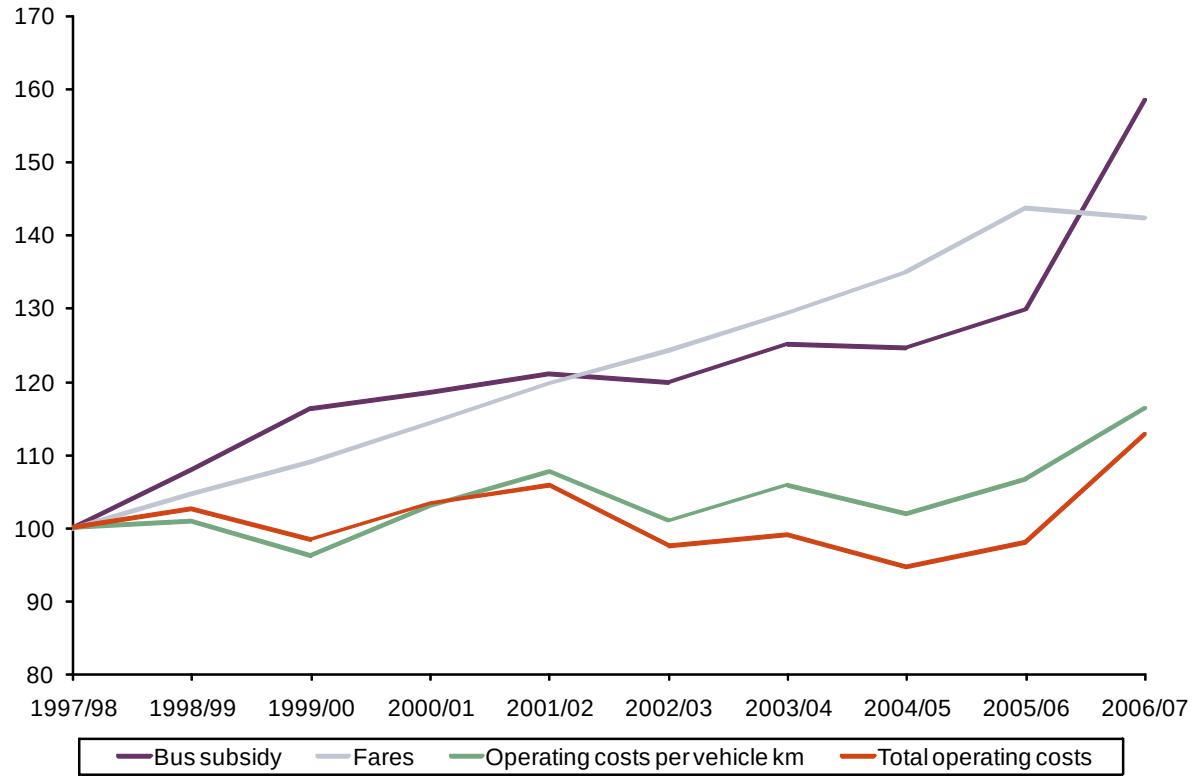
combination of labour costs (the greatest element of costs) rising slightly more than average earnings in the UK, and other factors. The report identifies the following components of the operating costs, which might be responsible for the increase:[19]

– labour costs, which form around 60% of bus operators' costs and rise above the general inflation level. The report shows that the average weekly earnings in real terms for bus drivers increased by 18% between 1997 and 2005 compared with the average weekly earnings for all occupations, which rose by 14% over the same period;
– the price of fuel, which rose sharply in 2005 and 2007/2008, but fell to lower levels in late 2008;
– fuel costs due to the increasing weight and complexity of buses mandated by accessibility and emissions legislation;
– fuel duty—buses are not 100% exempt from fuel duty and thus have to meet some of the fuel duty increases.

The report predicts that these costs will rise in the future, leading to higher operating costs for bus operators and therefore the need for higher bus fares and more subsidy in the future.

Figure 2.3, which plots operating costs per vehicle kilometre and total operating cost for England outside London, shows that operating costs are on an upward trend. However, the costs are increasing at a lower rate than bus subsidy and fares, which would imply that there may be a positive relationship between profitability and subsidy (see further section 2.3.3.)

Figure 2.3 Operating costs per vehicle km index (rebased 2007/2008 = 100), 2007/08 prices



Note: Operating costs per vehicle kilometre relate to Great Britain excluding London due to the unavailability of the data for England excluding London. Total operating costs were calculated by multiplying operating costs per vehicle kilometre by local bus kilometre for England excluding London.
Source: DfT (2009), 'Transport Statistics Bulletin. Bus and Light Rail Statistics GB: Q4 2008', March.

[19] See TAS (2007), 'Bus Industry Monitor'.

2.3.3 Profitability and subsidy

Given the substantial amount of subsidy received by bus operators, a potential branch of investigation would be to look at whether subsidy is related to the bus operator's profitability level. However, given that a full sectoral profitability analysis is outside the scope of this study, Oxera undertook a feasibility study to show what analysis would be possible using the available data.

The analysis derived correlations between total subsidy per passenger journey and profitability, measured by the return on capital employed (ROCE), as presented in company accounts in the 'Bus Industry Monitor'. The figures were obtained at a regional level, the highest level of disaggregation at which consistent data could be obtained from public sources. The analysis and results are presented in the appendix.

The aim of the exercise was to establish whether there were strong patterns in the data to indicate the existence of a relationship and to assess whether further, more in-depth analysis could be beneficial. The underlying hypothesis is that, in a competitive bus market, there should be no relationship between subsidy and profitability. This is because the bus operators would take the subsidy into account when setting prices such that the sum of the per-unit subsidy and the bus fare is equal to marginal costs.[20]

The initial analysis showed that it was difficult to reach any conclusions about the relationship due to the quality of subsidy and profitability data that was available and the relatively high level of aggregation for which data is available.

One important conclusion is that it is impossible to draw meaningful inference about the level of bus operator profitability on the basis of the available data. Data presented in the 'Bus Industry Monitor' on margins and returns does not represent true economic profitability. Across operators, owing to the different ways in which operating divisions' financial data is presented in statutory accounts, data on margins and returns in the 'Bus Industry Monitor' is broadly not comparable. Similarly, the measures of profitability presented would need to be adjusted to reflect the true economic profitability of bus operators. However, the data available in the public domain is not sufficient to make these adjustments.

Therefore, to obtain more conclusive results from the analysis, access to more detailed data (this relates to the level of disaggregation and the quality of data), a more detailed model (such as a regression model which takes into account other factors that affect profitability) as well as greater resources would be necessary.

2.3.4 Legislative developments

Two important pieces of legislation provide the final component for this study.

The **Local Transport Act 2008** provides for three types of local agreement between operators and local authorities on levels of service.

– Quality Partnership Scheme (QPS): whereby a local transport authority (LTA) agrees to invest in improved facilities at specific locations along bus routes (such as bus stops or bus lanes) and operators wishing to use the facilities undertake to provide services of a particular standard (including new buses, or driver training standards). Only operators prepared to provide services to the standards specified in the scheme can use the facilities.[21] The Local Transport Act 2008 allows a LTA to specify frequencies, timings or maximum fares on these services, as well quality standards. Operators are, however,

[20] If there are fixed costs of entry, the prices may be set to cover average costs.

[21] Other operators are not prevented from operating in the area, but are not allowed to use the facilities.

allowed to make 'admissible objections' to ensure that unrealistic conditions are not imposed on them.[22]

– Voluntary Partnership Agreements: a voluntary agreement between a LTA and bus operators under which the LTA undertakes to provide certain facilities, or to do anything else for the purpose of bringing benefits to persons using local services, within the whole or part of their area, or combined area, and one or more operators of local services undertakes to provide services of a particular standard.[23] Unlike in the QPS, bus operators not participating in the scheme are not prevented from using the improved facilities.

– Quality Contract—the LTA determines what local services should be provided in the area to which the scheme relates, the standards to which they should be provided (including the routes, the timetable and the fares) and any additional facilities or services which should be provided in that area. The LTA then lets the contracts to bus operators, granting them exclusive rights to provide services to the LTA's specification.[24] The Local Transport Act 2008 specifies the amended criteria under which quality contracts can be introduced, including that the contract must increase the use of local bus services, and bring benefits to people using them through higher-quality service. The scheme must contribute to the implementation of the authority's local transport policies, rather than just those policies set out in the authority's bus strategy.[25]

The Local Transport Act 2008 anticipates that these agreements will lead to much closer cooperation between local authorities and operators in relation to service levels and the facilities required to support them (what might be termed a 'shared incentives' approach). However, at present local authorities have to fund enhanced facilities as part of such agreements from resources currently devoted to their other areas of responsibility. Bus subsidy is typically decided at a national, as opposed to local level, giving local authorities relatively little flexibility to target resources to match the new legislative framework.

Regulation 1370/2007 sets out the European rules under which public transport operators are able to receive compensation for providing commercially unviable services, or for operating services under 'general rules', such as maximum fares.[26] While the tendering of secured services by local authorities and the deregulated market outside London mean that the Regulation is less relevant to the situation in Great Britain, it does still have some important implications for the market in Great Britain. For example, it requires municipal operators to have a transparent contract in place with their owner, and that they are making a rate of return equivalent to the private sector benchmark. In addition, it provides an important counterpoint to the Local Transport Act, effectively ensuring that operators participating in agreements with a local authority are entitled to a fair rate of return. Finally, it may mean that more devolution of bus subsidy needs to be accompanied by more tendered services.[27]

Having described the context for this study, section 3 discusses the effectiveness of current subsidy streams with reference to transport and wider policy objectives.

[22] DfT (2009), 'Local Transport Act 2008. Quality Partnership Schemes: Statutory guidance to English local authorities and metropolitan district councils', March.

[23] DfT (2009), 'Local Transport Act 2008. Improving local bus services: Guidance on voluntary partnership agreements', February.

[24] Louise Butcher (2009), 'Buses: Quality Contracts and Quality Partnerships', House of Commons, Standard Note SN/BT/624, 16th March, available at http://www.parliament.uk/commons/lib/research/briefings/snbt-00624.pdf

[25] Local Government Association (2009), 'The Local Transport Act and What It Means For Local Authorities', Local Transport Act Briefing, available at http://www.lga.gov.uk/lga/aio/1653688

[26] European Parliament and European Council (2007), 'Regulation (EC) No 1370/2007 on public passenger transport services by road and rail', published December 3rd.

[27] For further discussion, see Oxera (2008), 'Funding public transport services: in need of standard regulation tools?', *Agenda*, June, available at http://www.oxera.com/main.aspx?id=7526

3 Evidence on value for money of the existing package

In light of the factors highlighted in the previous section—strong growth in subsidy, pressure on government finances, the recession, and cost increases being faced by operators—it is now important to consider the evidence on whether the current package of financial support to the bus sector demonstrates value for money.

This section proceeds as follows. First, an economic definition of value for money in this context is developed. This definition is then used to test whether the current package of financial support is offering value for money. Conclusions are then drawn on the areas in which the current package might be developed in order to deliver better value for money.

3.1 Defining value for money

There are two strands to assessing the value for money of the existing package of support to the bus sector.

– **Meeting public policy objectives**—government (in its widest sense) is intervening in the bus market through regulation, tax rebates and subsidy in order to deliver its objectives. Therefore, one key aspect of the value for money assessment is the extent to which the current package is delivering against these objectives.

– **Efficient delivery of outcomes**—while ensuring that public policy objectives are met, a subsidy package that is operationally efficient and well targeted, in order to maximise benefits at lowest cost, is also required. The level (be it local, national, or both) at which incentives are set in order to deliver the outcomes most efficiently will depend on the type of objective under consideration.

This definition of value for money is consistent with the Eddington Transport Study,[28] which stressed the need to concentrate spending on transport projects delivering the highest returns, allowing for both economic and wider social/environmental impacts, and hence also on the local areas where these returns are available. For example:

> There is a strong case for targeting existing bus subsidy more effectively[29]

and:

> ensure funds are allocated to the policies which most cost effectively contribute to [DfT's] objectives[30]

While the study was written from the perspective of improving central government policy-making and financial support across the modes of transport, the same principles apply to government as a whole, and hence also to the transport and wider policy objectives of local government.

3.1.1 Public policy objectives

There are three different types of issue that transport policy must address.

[28] HM Treasury and DfT (2006), 'The Eddington Transport Study', December.
[29] HM Treasury and DfT (2006), 'The Eddington Transport Study', December, Volume 4, p. 295.
[30] HM Treasury and DfT (2006), 'The Eddington Transport Study', December, Volume 4, p. 239.

– Those where the social costs being addressed by public policy vary by location (eg, congestion and local pollution), and the most appropriate treatment is best decided locally, where it is logical for subsidy to be targeted by local authorities.

– Those where the social cost is nationally (or internationally) determined (eg, climate change or minimum social standards), but where the response to incentives and resources provided centrally will be determined locally.

– Supplier markets that go wider than individual local authorities (eg, vehicle and fuel design and manufacturers), for which a common approach is most efficient.

Across all three of these, local authorities have a clear responsibility to respond efficiently to the incentives available, given their own circumstances and priorities. However, they also need the budgets and powers required to do so efficiently, and a key aim of the next sub-section is to understand whether this is the case in view of the current support package.

It is difficult to generalise about the nature of public policy objectives as these may vary from place to place; however, they are likely to include the following.

– **Congestion**—bus services can reduce congestion by attracting passengers out of their cars and on to buses through faster and more reliable journey times. There are clear links between reducing congestion and increasing productivity.

– **Climate change**—shifting people from cars to buses is likely to reduce carbon emissions, particularly in urban areas. However, it is important that buses operate with high fuel efficiency and high load factors, using low-carbon technology where possible.

– **Access to local markets**—enabling people to connect with local jobs and facilities is a key public service aspect of bus operations.

– **Assisting vulnerable groups**—those on low incomes, the disabled, and those living in deprived areas may benefit from low-cost, reliable bus transport.

– **Local pollution**— shifting people from cars to buses offers opportunities to reduce the numbers of vehicles in areas where local emissions are especially problematic, but it is important that buses use clean technologies and fuels in order to limit polluting emissions.

3.1.2 Efficient delivery

To be economically efficient, the package of bus subsidies must provide incentives and funding that are as closely related to the objectives of policy and the social costs they are intended to address. Overall, economic efficiency requires this to be so for all policies, with a level playing field across different transport modes, for example, after allowing for their varying social costs. In this report, however, Oxera takes the overall level of tax and subsidy to different sectors as given; altering the treatment of different sectors—for example, by introducing road pricing for cars—would have implications for the economically efficient level of bus subsidy, which Oxera does not consider here.

In the simplest model of subsidy, a separate subsidy could be designed to meet each individual policy objective. However, as the following sections show, existing subsidies address multiple objectives, and so there is scope in principle for having fewer subsidies than there are objectives. The current subsidy package, on the other hand, appears to have a number of subsidies (such as the Rural Bus Subsidy Grant, tendered services, and the Kickstart and Rural Bus Challenge initiatives) aimed primarily at achieving the same objective—accessibility—and this is unlikely to be economically efficient.

Finally, some objectives, such as limiting climate change, are addressed inadequately in the present system. Economic efficiency requires that all objectives are effectively targeted with

appropriate incentives and funding. The precise way in which this is done will vary by objective, and the optimal balance between local and central government measures may differ. All subsidies, however, need to be operationally efficient, delivering the intended outcomes as efficiently as possible, at low cost, while minimising any unintended or undesirable spillover effects requiring policy action.

In principle, the current subsidy package could meet all of its objectives but still not demonstrate value for money, because it costs too much to administer, confers benefits over and above those intended (and does so at a cost), or leads to unintended consequences (through interaction with other policy measures or the incentives it provides) that are undesirable.

To be demonstrably economically efficient, the subsidy package will need to avoid all these pitfalls as far as possible.

3.2 Current package

In light of the above definition of value for money, each aspect of the support package is now assessed in turn, considering which objectives it contributes to, and whether it does so in an efficient manner.

3.2.1 BSOG

BSOG is a payment made by the DfT to registered bus operators, related to fuel consumption and designed to offset a high proportion (around 80%) of the duty paid on fuel consumed. It is differentiated by fuel type, but only so far as to reflect differential duty rates. The services eligible for the BSOG are those registered with the Traffic Commissioner and that meet the strict criteria and rules of the scheme—eg, the services must be available to the general public, operate according to a timetable, and stop at fixed stopping places.[31]

The evidence suggests that, through 'blanket' support for bus services, BSOG delivers benefits in excess of costs. A study for CfIT in 2005 suggested that the £274m of BSOG support generated between 3.5% and 10.8% in passenger uplift, reduced fares by up to 32% and increased service frequency by up to 19%.[32] In its consultation paper on BSOG, the DfT commented that BSOG, in its current form, offered good value for money. It estimated that bus patronage is around 6.7% higher, services are 7.1% higher and fares are 6.5% lower than if BSOG were withdrawn completely.

The increase in patronage is an indirect effect of the scheme which arises through lower fares and/or higher levels of bus operations. The subsidy does not provide operators with a direct incentive to increase passenger numbers, but merely subsidises bus provision and reduces the incentive to minimise costs. Thus, it could benefit from focusing more directly on patronage growth to achieve this outcome more effectively. For example, a study that provided analysis for CfIT's recent report on an incentive per passenger (IPP) scheme found that such an approach would deliver a higher cost–benefit ratio than the status quo.[33]

There are two further ways in which BSOG is not well targeted at present:

– because it is based directly on fuel consumption and rebates almost all fuel duty, it provides little or no incentive for fuel efficiency and reduction of carbon emissions. As described above, the DfT has recently introduced changes to BSOG which aim to increase the incentive for fuel efficiency through a tiered rate, as well as providing additional incentives for low-carbon buses. However, this is an imperfect mechanism, in

[31] DfT (2004), 'Conditions of Eligibility (PSV360) for Bus Service Operators Grant', last updated October 16th 2008.
[32] LEK (2007), 'Assistance to CfIT in Consultation Response to the Government Policy Paper "Putting Passengers First"', Final Report, July 27th.
[33] CfIT (2009), 'Public Subsidy for the Bus Industry: The Case for Incentives per Passenger', March.

that it fails to ensure that bus operators face the same incentives as faced by other transport modes to economise on fuel;

– because it operates by reducing fares with the aim of inducing shift from cars to buses irrespective of local needs. In practice, the requirement to induce such a shift is affected significantly by the need to alleviate local congestion and pollution, yet the rate of BSOG is set nationally with no local discretion to vary it. Insofar as lower fares are necessary to increase local accessibility and social inclusion, they are best handled by offering concessionary fares, for which there is a degree of, unfunded, local discretion.

Although BSOG does result in an increase in patronage, it seems to do so inefficiently and in an untargeted manner. There is no evidence available on whether the increase in patronage is an optimal outcome in individual areas. An alternative which would address these shortcomings would be to devolve BSOG in part to local authorities which could choose the most appropriate measure to address congestion and pollution in their areas, with the remainder targeted towards local schemes offering the most carbon savings per unit of expenditure. This would have the added benefit of removing the present fuel subsidy, thereby ensuring that bus operators face the same incentives as other road users to minimise costs and increase fuel efficiency.

3.2.2 Concessionary fares

The concessionary bus travel scheme provides for free off-peak travel on local buses anywhere in England for older and disabled people.[34] The bus operators are reimbursed by local authorities, passenger transport executives (PTEs) and other travel concession authorities under a 'no better, no worse-off' arrangement. These bodies are in turn reimbursed by central government. The reimbursement includes compensation for concessionary revenue as well as any net additional costs resulting from the concession, such as administration and implementation costs, revenue forgone from non-concessionary passengers displaced from the bus service, and the extra costs of carrying the pass holders who otherwise would not have travelled on the bus.[35]

This is a demand-side subsidy with the aim of improving accessibility for older and disabled persons by providing them with an incentive to use local bus services more. Studies such as Baker and White (2008), O'Neill (2007) and Rye and Mykura (2008) show that the scheme gives rise to a significant number of additional journeys undertaken by the eligible population.[36] Examining the changes in trip rates in Salisbury District Council for concessionary fare pass holders with ('old') and without passes ('new') before April 2006, Baker and White (2008) find that 'new' pass holders represented a large part of the net growth in concessionary travel. O'Neill considers the effects of the introduction of the nationwide off-peak scheme using a case study of Emsworth, Hampshire, and finds a significant increase in concessionary ridership almost immediately after the scheme was introduced. Rye and Mykura (2008) use survey data from 114 respondents in Scotland and from Scottish Executive surveys of 850 respondents. 65% of the 114 respondents indicate that they made extra bus journeys as a result of the improved concessionary fare in Scotland.

Despite the evidence of significant use of the concessionary fares scheme, concerns have been raised about whether it represents value for money. Although the scheme has helped to improve social inclusion, there is also evidence that the scheme is targeted too widely, benefiting many people on higher incomes and with access to cars (ie, those not affected by social exclusion and accessibility issues before the introduction of the scheme). For example,

[34] Concessionary Bus Travel Act 2007.

[35] DfT (2009), 'Concessionary Travel for Older and Disabled People: Guidance on Reimbursing Bus Operators', January 13th.

[36] Baker, S and White, P (2008), 'Impacts of Free Concessionary Travel in English Rural Regions', April 2006 Sixth Transport Practitioners' Meeting, Reading, July. O'Neill, J. (2007), 'The 'Free Bus Pass: Changing Geographies of Travel', BA Human Geography Thesis, May 2nd. Rye, T. and Mykura, W. (2008), 'Concessionary Bus Fares for Older People in Scotland – are they achieving their objective?', *Journal of Transport Geography*, pp. 1–6.

in Scotland, Rye and Mykura (2008) find that, 43% of non-car-owning respondents and 53% of car-owning respondents reported making more trips by bus after the free concessionary travel was introduced. There is also evidence from Baker and White (2008) that new pass holders are younger, better off and more likely to be car owners.[37] Furthermore, although local authorities are free to grant concessionary fares to other groups according to local priorities, they must do so from their own resources.

3.2.3 Secured services

Local authorities may choose to secure the provision of bus services on routes which would not be commercially viable and would not operate without local government funding. These services are often secured through competitive tenders, with the exception for contracts that are below a minimum threshold. An Atkins report estimated that 20% of the total local bus service operations in England outside London were supported by local authorities.[38] These services are contracted for social accessibility reasons, to ensure that there is access to the transport system for people without a car who would otherwise have a limited public transport service. The cost of subsidised services is met by local authorities, principally through the Revenue Support Grant provided by central government and monies raised from council taxation.

It may be a concern of local authorities that this 'safety net' operates in only one direction: as margins fall for operators, perhaps as costs increase or patronage falls, there is the possibility of giving up services, which the local authority will subsequently tender out. However, operators realise that de-registering services that the local authority is likely to reinstate as part of a tendered package of routes could lead to other operators entering the local market. In addition, operators may choose to maintain an unprofitable service to the extent that it feeds a more profitable route. Thus, operators are likely to give up routes as a last resort only.

In general, secured services are well targeted, although there seems to be some uncertainty about whether the efficiency of the tendering process could be improved. For example, the Office of Fair Trading has criticised the practice of 'packaging' tenders together as being anti-competitive,[39] although it does say that 'cost savings achieved by bundling services might be used' to justify the practice. Nevertheless, the uncertainty this creates often means that local authorities are reluctant to do this, even where there would seem to be clear benefits to consumers.

In addition, the experience of some local authorities, such as Devon and Essex, demonstrates that combining tenders for secured services with those for school and social transport can be successful. In Essex, for example, the local council undertakes area reviews where both local and home-to-school services are reviewed in a defined geographical area to assess what economies can be made to maximise joint planning opportunities and improve the overall provision of bus services in the area. The council describes its experience as positive, because some of the economies were reinvested into additional local bus services, and some home-to-school contract services were converted to local buses, opening them up to other fare-paying passengers. The council also finds that its general reorganisation of school transport has produced some significant savings, and feels that the area review process will offer further efficiency opportunities as well as quality improvements. In addition, the council in Essex has introduced 'one school, one operator' (OSOO) contracts. Under these, in addition to individual tenders for each route servicing a school, the council combines the tenders into a single package and asks for improved quality (in terms of relationships with the school, CCTV and student behaviour). Some of the operators running

[37] Baker, S and White, P (2008), 'Impacts of Free Concessionary Travel in English Rural Regions', April 2006 Sixth Transport Practitioners' Meeting, Reading, July.

[38] Atkins (2005), 'Monitoring Local Bus Service Tenders in England', Final Report, May 13th.

[39] Office of Fair Trading (2003), 'The Transport Act 2000 and The Transport (Scotland) Act 2001: Guidance on the Competition Test', October, available at http://www.oft.gov.uk/shared_oft/reports/transport/oft393.pdf

OSOO contracts have added extra benefits, such as free after-school-club transport and rover tickets, which enable students to travel outside school times.

The approach taken by the Devon County Council has been to coordinate and integrate passenger transport where possible. This includes coordinating education special needs transport with adult social services transport, and with community sector transport-operated Ring & Ride services for the elderly and the disabled. The council finds that this has produced significant cumulative savings: the costs of home-to-school and public transport have been contained to align them more closely to increases in RSG than transport inflation, which has been significantly higher than annual RSG increases. Increased complexity in the demand for home-to-school transport has therefore been largely absorbed.

Given these positive experiences, it would be seem logical to ascertain whether there are scale economies and network benefits available from this type of approach, particularly if larger tenders attract higher-quality operators to bid for this work.

3.2.4 Rural Bus Subsidy Grant, Rural Bus Challenge and Kickstart

The RBSG is paid to local authorities to help support the provision of non-commercial rural services, and is targeted to support accessibility in rural areas. Since April 2008, this grant has formed part of pooled area-based funding for local authorities. It is allocated to English local authorities on the basis of the size of their rural population, and decisions on which services to support are essentially made by the local authority.[40]

The objective of the subsidy is to support new and enhanced bus services to rural communities, thereby increasing accessibility and helping vulnerable groups without access to cars. The DfT's evaluation of the RBSG in 2004 showed that the majority of the subsidy was used to introduce new rural bus services, with the remainder being used to extend existing bus services. [41] The report found that the scheme brought benefits to the residents of rural areas by addressing social exclusion. However, it was difficult to determine whether the benefit presented value for money, as the traditional measures of success—such as cost reduction and/or increases in passengers per journey—would not be appropriate given that these services were not expected to increase patronage radically owing to the sparse rural population.[42]

Rural Bus Challenge is an annual competition in which local authorities bid for funding for schemes aimed at stimulating innovation in the provision and promotion of rural public transport, improving quality and choice across the country. The grant can be spent in more than one year up to the total amount awarded. Unlike the RBSG, Rural Bus Challenge funding is awarded for schemes scheduled to cover more than one financial year, with no stipulations as to the precise spending schedule.[43]

The government has also introduced the Urban Bus Challenge, which is an equivalent competition scheme for urban areas. The overall aim is to contribute to regeneration of deprived urban areas by improving transport provision, and to target support in areas of economic or social deprivation. Bids can be made for support for specific schemes, with DfT funding awarded to the best schemes submitted.[44]

The Urban Bus Challenge targets vulnerable groups specifically by providing greater access to affordable public transport, while promoting innovation. By comparison with the RBSG, it is more likely to have local pollution and congestion benefits, by incentivising the use of public transport rather than cars in urban areas, where these problems are more acute, and may be

[40] DfT (2008),' Local Bus Service Support: Options for Reform', Consultation Paper, March.
[41] DfT (2005), 'Evaluation of Rural Bus Subsidy Grant and Rural Bus Challenge', October 27th.
[42] DfT (2005), op. cit.
[43] DfT (2005), 'Introduction to Bus Grants', March 23rd.
[44] DfT (2005), 'Introduction to Bus Grants', March 23rd.

less likely to have adverse effects on carbon emissions because patronage rates may be higher.

Kickstart was incorporated within the Bus Challenge programme, with an emphasis on social inclusion. Schemes funded under Kickstart should represent partnerships between local authorities and bus operators, and should aim to be commercially viable or to have a guarantee of local authority revenue support, if required, at the end of the Kickstart funding period.[45] The aim of the Kickstart programme is to inject government support to allow participating services enough patronage to make the service commercially viable. The scheme has a twin objective of encouraging modal shift and increasing patronage on bus services.

The incentives and impacts are likely to be similar to those of the rural and urban subsidy grants and competitions. Schemes funded under Kickstart should be expected to achieve greater success in terms of patronage given the objective of providing a commercially viable service. A review of the Kickstart scheme by Bristow et al. (2008) demonstrates that the scheme has been successful in creating additional patronage in the context of an overall declining market, some of which was achieved through modal shift.[46] A recent statement by the Secretary of State for Transport announced the re-launch of the scheme.[47]

There is evidence to suggest that most of these forms of support are well targeted and therefore worth continuing; however, the emphasis of most of them—namely, accessibility—is the same. As there is considerable risk of duplication of effort, administration and subsidy, there may be a case for combining some or all of these elements into a single form of support. This is considered in more detail below.

3.2.5 Capital grants

Bus services also benefit from local authority capital investment in, for example, bus stations and bus lanes, park-and-ride schemes, the introduction of bus priority measures and real-time passenger information systems. These are funded by local authorities, which receive support through DfT block grants or grants for major schemes.

It is difficult to generalise about the incentives generated by and impacts of capital grants, as they will tend to be case-specific. However, they have the capacity to provide generalised benefits to bus policy objectives. They could, for example, deliver considerable reductions in congestion and emissions via bus priority measures. In local areas suffering from transport congestion, bus priority is an effective way of reducing road congestion, while improving environmental performance by encouraging people to shift from car to bus, thereby improving bus fuel efficiency. For example, a CfIT report quotes the results of research undertaken in Dublin, which showed that, for every minute saving in bus journey time, 1.22% of car users transferred from car to bus (derived from before-and-after surveys on bus corridors).[48] Even in towns and cities with extensive bus priority already, improvements are possible, albeit often politically challenging to deliver.

Furthermore, capital grants may assist in obtaining modal shift and greater patronage by providing better information at bus stops and improving security at bus stops and on buses.

3.2.6 Interactions

Given that there are several different subsidy streams, the impact of a particular subsidy should not be considered in isolation; the interaction between them should also be examined.

[45] Bristow, A., Enoch, M., Zhang, L., Greensmith, C., James, N. and Potter, S. (2007), 'Public Transport Research: Monitoring Kickstart Schemes', Transport Studies Group, Loughborough University, STAR Independent Consultants Ltd, and Open University.

[46] Bristow, A.L., Enoch, M.P. Zhang, L., Greensmith, C., James, N. and Potter, S. (2008), 'Kickstarting Growth in Bus Patronage: Targeting Support at the Margins', *Journal of Transport Geography*, **16**:6, pp. 408–18.

[47] See http://www.dft.gov.uk/press/speechesstatements/statements/kickstartbusfunding

[48] http://www.cfit.gov.uk/docs/2004/busindustry/pdf/busindustry.pdf

The review of individual subsidies demonstrates that a single policy objective might be addressed through different subsidy streams. Furthermore, most subsidies are likely to affect more than a single policy objective, and the effects of individual subsidies may depend on the existence and scale of other subsidies. These interactions might create some tension in the system, such that the subsidies may provide conflicting incentives to the bus operators with regard to the policy objectives (and even, in principle, cancel each other out with little or no improvement in the overall outcome). Alternatively, they may mean that the overall impact of a package of different subsidies may differ (in either direction) from the sum of their individual effects. On the other hand, the effects might be complementary and independent, and could enhance the delivery of all policy objectives.

In light of the importance of these interactions, it could be reasonable to expect to find a large amount of literature on the topic. However, Oxera has not come across any research on this, which indicates an evidence gap. As a result, the discussion below of interactions is qualitative in nature rather than quantitative, as no empirical evidence on these interactions is available.

There are at least three types of interaction where the effects of particular subsidies depend on other subsidies in place. In some cases the interactions may be unhelpful, suggesting a need for design or other changes.

- **Amplification of effects**—if there are several subsidies that increase bus services, the interaction between them could lead to larger effects than the sum of the individual subsidies in isolation. An example is the interaction between schemes such as RBSG, Challenge and Kickstart, tendered services and BSOG, all of which in combination serve to increase service levels. This might lead to either more beneficiaries than expected, or to objectives being met at higher cost.

- **Duplication of effects**—where a number of subsidies are aimed at achieving the same policy objective, duplication or overlap could lead to an outcome where the total effect of the subsidies is smaller than the sum of the effects of individual subsidies. For example, RBSG, Challenge, Kickstart and tendered services have the common objective of addressing social exclusion for people with limited car access who live on routes that would not be commercially viable for bus operators. If the various subsidies are not coordinated properly, the overall cost of delivering any given service improvement might be increased.

- **Unintended consequences**—while some subsidies may achieve their primary objective, they may provide perverse incentives or have 'side' effects which may undermine the incentives provided by other initiatives. Structural design or other changes might be necessary to address these. Examples include the following.

    - **BSOG and concessionary fares**: as discussed in section 3.2.1, the effect of BSOG is to lower the fares on routes that are commercially viable. The lower fares attract additional patronage through modal shift or additional journeys. However, if BSOG is used together with concessionary fares, this effect might be reduced for non-concessionary users because concessionary fares may provide bus operators with an incentive to raise the non-concessionary fares.

    - **BSOG and fuel efficiency**: the DfT has criticised BSOG for providing little incentive to bus operators to introduce measures to increase fuel efficiency. This weakens the incentive provided by fuel duty to increase fuel efficiency, as noted above. To address this effect, additional incentives to achieve greater fuel efficiency may need to be introduced, either within BSOG (as the DfT intends), or by removing the fuel subsidy via BSOG and replacing it with a different form of subsidy.

    - **Frequency of services and punctuality**: a number of subsidies are provided to increase service coverage and/or frequency. However, as services become more

frequent, the emphasis on punctuality may diminish. For example, if there is a regular service running every 5 minutes, many users will not be concerned if some services are delayed as the waiting time for the next bus is fairly short. To address this issue, tighter rules in relation to punctuality might be necessary.

– **Incentives per passenger and integration of services**: as highlighted in the CfIT report on IPP, the scheme may give bus operators an incentive to break down their services into shorter journeys to increase their IPP reimbursement, which would contravene the objective of integration. This might be addressed by providing operators with guidelines on how long a minimum journey should be, or waiting until the subsidy can be related to passenger kilometres rather than passenger numbers.

Table 3.2 summarises these interactions.

Table 3.2 Interactions between subsidy streams

	Concessionary fares	BSOG	RBSG	Challenge and Kickstart	Local authority secured services	Capital grants
Concessionary fares	n/a	May raise non-concessionary fares	Encourages greater use of rural service by those eligible for concessionary fares	Encourages greater use of rural service by those eligible for concessionary fares	Encourage greater use of secured services by those eligible for concessionary fares	Investment in facilities for older and disabled passengers to enable use of concessionary fare provisions
BSOG		n/a	BSOG supports additional services	BSOG supports additional services	BSOG supports additional services	
Rural bus subsidy			n/a	Possible duplication of services. Alternatively, Challenge and Kickstart offer complementary spending	Possible duplication of support	Investment in facilities to complement use of rural bus services
Challenge and Kickstart				n/a	Possible duplication of support	Possible duplication of spend if capital investment is granted for Challenge
Local authority secured services					n/a	Investment in facilities to complement the use of tendered services
Capital grants						n/a

Note: Red highlight = duplication of effects; green = amplification of effects; amber = unintended consequences, no highlight = no interaction.
Source: Oxera analysis.

3.3 Findings

This section provides a definition of value for money and applies it to the current package of financial support to the bus sector. While the current package of support is delivering benefits, it often does so in an inefficient way that does not provide a clear link between funding, incentives and desired outcomes. In particular, BSOG and the National Concessionary Fares Scheme are not well targeted, with some policy objectives (such as local priorities for congestion and pollution, and national climate change objectives) either not being met at all, or in a way that is not cost-efficient. In the latter case, this is because multiple subsidies are being aimed at one objective, because benefits are being provided to those who do not need them, or because of unintended consequences for other objectives.

The possibility that the current funding package does not demonstrate best value for money is a source of concern in the context of the uncertainty surrounding government finances and the recession. The next section develops principles for reforming bus subsidy to improve value for money, and outlines recommendations reflecting these principles.

4 How might the current support package be improved?

4.1 Principles for reform

The previous section defined value for money in the context of financial support to the bus sector, focusing on both meeting public policy objectives and providing efficient (least-cost) support through targeting. It described the various elements of the support package, drawing together evidence on the extent to which the elements, alone and in combination, were meeting this definition.

The analysis in the previous section suggests that the existing pattern of subsidy is not well targeted.

– It does not address efficiently the key objective of reducing carbon emissions. This is an objective which is priced at the national level because carbon emissions are equally damaging wherever they occur. However, the main subsidy streams do little to reduce emissions directly, and there is no mechanism for local authorities to identify and resource the best local schemes for reducing emissions from buses.

– Access problems, deprivation, poor air quality and congestion are phenomena that are highly location-specific, yet the subsidies that purport to address them—especially BSOG—are largely determined at the national level.

– Although local authorities do have some discretion to grant additional concessionary fares to meet local priorities, this has to be funded from their own resources. The national scheme is not well targeted, using criteria which bear little relation to need in the context of either national or local priorities.

These difficulties imply that public policy objectives are not being met at minimum cost.

How, then, might the current package of support be altered to improve its value for money? Oxera proposes that the following principles could underlie reform.

– **Incentives and patterns of support to be set locally where the scale and importance of the policy issues are location-specific**. Accessibility, deprivation, local pollution and congestion all fall into this category, and it is economically more efficient to devolve funding to local authorities to allocate according to local priorities.

– **The framework for subsidies and the scale of incentives designed to target (inter)national issues to be set (inter)nationally, but the response prioritised locally**. Climate change and support for particular disadvantaged social groups are objectives which fall into this category. However, local stakeholders (be they bus operators, local authorities or other stakeholders) should be able to determine the optimal response to those incentives and to identify how national priorities can best be met through local action. This needs to be accompanied with the means for them to do so.

– **Where there are scale economies, national interventions may support localised action**. It is unlikely that a single local authority or bus operator can influence European engine emissions standards, or provide strong incentives for engine or bus manufacturers to reduce the carbon emissions associated with their products. Therefore, it will be sensible for there to be national measures to accompany local prioritisation of schemes or service support in order to reduce the impact of transport on the environment, perhaps through regulation or the tax system.

– **Coordination of financial support is likely to be more economically efficient**. This applies mostly to the case where two subsidies are currently focused on one objective, although it may also possible to reduce the administrative costs of tendering for secured services, for example through longer, packaged contracts,.

4.2 Recommendations for change

The recommendations below take account not only of the principles above, but also of the context of the report as set out in section 2. This includes the 'shared incentives' model of the Local Transport Act 2008, which allows local priorities to be reflected in agreements between local authorities and bus operators; the ongoing recession and its impact on bus patronage and operator revenues; and the state of government finances. Specifically, the recommendations are consistent with the Act, envisaging longer-term and larger contracts for operators on a firmer financial footing, and the same scale of financial support from the public sector.

Devolved funding for localised issues

The Eddington Transport Study is clear in its criticism of BSOG, and this is echoed in what Oxera has described in section 3:

> It is not clear that the current system of funding to operators…creates the right incentives…. First of all, it sits oddly with the Government's environmental objectives by providing little incentive for fuel efficiency; secondly it offers few incentives for operators to improve services and expand patronage while limiting congestion on the road network.[49]

The DfT is continuing at present with BSOG as a relatively inexpensive form of financial support to the sector, and it is clear that it has a positive benefit to cost ratio from the modelling evidence produced by CfIT. However, in order to achieve public policy objectives in a way that delivers demonstrably better value for money, there also appears to be a need for a fundamental reform of BSOG.

In particular, there is currently limited funding support to match the legislative framework provided by the Local Transport Act. In order for local authorities to propose measures that match local priorities outlined (and signed off by the Secretary of State for Transport) in Local Transport Plans, there seems to be a case for removing duty rebates provided under BSOG. The funds this makes available could then be partly devolved to local authorities to finance service enhancements according to these priorities. This element of funding would be focused on issues, such as congestion, local pollution and deprivation, where the social cost and appropriate treatments vary from place to place, requiring local prioritisation and solutions. To avoid unnecessary transitional costs and disruption of services, this change may need to be phased in gradually.

This is in line with the findings of the Eddington study, which states that[50]

> It is clear, that reforming and better targeting of existing bus study can help deliver improved outcomes. In addition, devolving bus expenditure to the appropriate sub-national body can create the financial capacity for such bodies to negotiate outcomes with us operators on the basis of local circumstances, as well as providing fiscal incentives for securing sustained public expenditure on buses in the long term.

While this proposes a radical change to bus subsidy, it would lead to the sector being able to demonstrate better value for money for its financial support, linking local priorities to financial support and outcomes, in the context of the Local Transport Act. This, in turn, should

[49] HM Treasury and DfT (2006), 'The Eddington Transport Study', December. p. 294.
[50] HM Treasury and DfT (2006), 'The Eddington Transport Study', December. p. 294.

contribute towards safeguarding the financial support to the sector over time, and lead to less uncertainty about operators' costs.

Oxera is intentionally not being prescriptive about the way in which this revised support is provided to operators. It could be provided indirectly, through the provision of bus lanes by local authorities, or directly by subsidising services. In the latter case, local authorities might choose to use an IPP-based approach to service support, although this would depend on whether the benefits outweigh the technology and other costs in each area.

Oxera is also mindful of the need for central government to play a continuing role in influencing European engine standards in particular, where individual local authorities are unlikely to have a sufficiently strong voice to change policy.

It may also be necessary for central government to influence the types of vehicles being manufactured through the tax system, an approach adopted for the private car through the Vehicle Excise Duty (VED) system.

Recommendation 1: Better value for money would be obtained by removing the fuel duty rebate—BSOG. A proportion of the increased duty collected would be devolved to local authorities to provide additional funding to support enhanced local bus services that meet local congestion, pollution and social priorities. Subsidy to bus operators to support services in this manner could be paid in a number of ways, including on an IPP basis, were it desirable to ensure that incentives for increased patronage are retained, but not by reference to fuel use. To support the achievement of local objectives, it may be desirable for central government to work with local authorities to influence European policy or vehicle manufacturers. The changes may need to be introduced gradually to avoid the disruption of services.

Local solutions to national problems

The above recommendation envisages a proportion of BSOG funding being devolved to local authorities to enable local priorities to be reflected in bus subsidy. However, certain issues—notably climate change, but perhaps also minimum social standards—have social costs that are the same regardless of the location of incidence, and may be nationally, or even internationally determined. Nevertheless, crucially, local stakeholders—be they local government, bus operators, or the local population—may be able to identify solutions that offer the best local response to these national issues. Therefore, some mechanism is required to encourage them, through suitable funding and incentives, to implement the most suitable local solutions.

DfT guidance makes clear the need to reflect the latest advice on the social cost of carbon in appraisals, and it is standard practice for this to be included when determining the costs and benefits of local schemes. Local Transport Plans should therefore reflect the social cost of carbon in the bus schemes or service changes they propose, although there is no financial incentive for them to implement the most effective carbon-saving measures. This could be remedied by giving local authorities access to the remainder of the BSOG monies, at a given national rate, for measureable (and therefore auditable) carbon reductions expected to arise from local bus schemes or measures.

Overall, this would lead to the social cost of carbon being reflected better in local decisions, with financial support for reducing carbon emissions via the bus sector being targeted at those local areas able to identify the most carbon savings per unit of expenditure.

Recommendation 2: Under this framework, the remainder of BSOG—a proportion which reflects the scope for local schemes to reduce carbon emissions—would be made available to individual local authorities to incentivise (at a standard rate) bus schemes or measures that generate measureable (and therefore auditable) reductions in transport carbon emissions.

Better targeting of free travel

As identified in section 3, the National Concessionary Fares Scheme does not offer the best value for money and is not well targeted. Ensuring accessibility to local job markets and facilities for those who are disadvantaged or have no alternative is not necessarily being achieved, in part because local authorities have to use their own resources to expand local concessionary schemes. In addition, the cost of scheme is high, partly because of the nature of administrative arrangements, but mainly because many beneficiaries have alternative travel arrangements available and/or have sufficient income to ensure that free travel is not necessary. Furthermore, while some modal shift is being achieved by the scheme, this is limited to off-peak times when congestion is lower, and additional journeys are likely to be generated.

To underpin the case for continuing financial support for the bus sector, it may prove necessary to increase the number of exemptions associated with the national scheme. These might reflect the evidence suggesting many beneficiaries of free travel have a car available, can access the facilities they need, or are not deprived. Savings from these changes could then be recycled to provide better-targeted free travel according to local priorities.

An additional issue identified by studies into the use of concessionary fares is that many disabled and elderly people are unable to take advantage of the scheme (even though they could benefit from it) due to poor facilities at bus stops and on buses. Thus, to improve the take-up of the scheme by people who could benefit from it, additional investment is needed on the supply side—to improve bus stops and buses—to complement subsidy on the demand side. The savings identified above could be used to improve facilities at bus stops, allocated to local authorities to deliver a statutory obligation in this area to be specified along the lines of the Disability Discrimination Act.

The final issue with concessionary fares is the reimbursement mechanism. As highlighted in section 3, this has led to tensions between local authorities, central government and bus operators. It is important to deliver a fair approach to reimbursement, costing less to administer, and to repair working relationships affected by recent or ongoing disputes.

Recommendation 3: The national concessionary fare scheme needs to be better targeted at those who require support, generating savings which should be made available to local authorities to support reduced-cost travel for other, locally prioritised concessions.

Coordination of subsidy

As highlighted in section 3, a number of subsidies are targeted at achieving very similar objectives (mainly accessibility), with the result that there may be a certain amount of duplication. Thus, better coordination between different types of services might be desirable.

Given that local authorities are better informed than central government about local area characteristics and needs, it might be appropriate for them to have more flexibility over what measures should be implemented in their areas to achieve accessibility. One reform may therefore be to combine elements of the present subsidy package—including the RSBG, the Urban Bus Challenge and Rural Bus Challenge, and Kickstart—into a single ‘pot’ which each local authority can use to promote transport accessibility as it sees fit. Alternatively, these subsidies could be amalgamated with the devolved BSOG envisaged in Recommendation 1 to form a larger pot for supporting local bus policies more generally.

Although a devolved, ‘single pot’ approach along these lines has the potential to deliver coordination benefits and to avoid duplication, a key issue is how far any subsidy should be ring-fenced for particular local purposes. To ensure the delivery of certain services—for example, where the affected population is relatively small and thus perhaps not particularly well represented—certain statutory obligations might need to be imposed on local authorities to ensure the delivery of key services. However, this does not require the retention of separate subsidy streams.

Recommendation 4: Value for money would be improved by consolidating into a single fund subsidies primarily targeting accessibility—RSBG, secured services, Challenge and Kickstart—, with local authorities having flexibility over the expenditure. The fund would need to be safeguarded by statutory obligations to ensure that the monies are used to meet the accessibility objective.

More efficient tendering

At present, local authorities tender out separate contracts covering travel for secured, education and social services. Because of the small-scale operations, bus operators might not be able to realise the full efficiency gains that they would have done from larger contracts. This often leads to lower-quality vehicles being offered for such services, weakening users' perception of buses (especially the users of tomorrow on school services), and worse performance on local and carbon emissions.

It would seem worth exploring whether combining tenders for social, schools and secured services could save on procurement costs for the local authority, obtain better buses for such services and higher-quality operators, and integrate the services provided. Such an approach could offer either lower subsidy for similar levels of service or considerable service improvements in terms of quality and environmental performance for the same amount of support.

To make such consolidation of tendering possible, the de minimis rules for public service tendering in England might be adjusted. The de minimis rules in England limit expenditure by local authorities with forecast bus subsidy of less than £600,000 a year to expenditure per contract of less than £30,000 a year.[51] To ensure consistency with European legislation, the de minimis threshold could be raised to the €1,000,000 specified by Regulation 1370/2007.

Recommendation 5: It may be advisable to raise the de minimis level for secured services in England to match those required by Regulation 1370/2007 and to consider whether local authorities should be encouraged to let one single contract covering travel for secured, education and social services, in order to secure efficiency gains and attracting high-quality operators.

4.3 Important caveats

The recommendations highlighted above face a number of potential barriers. These might include the following.

– **State aid rules**: the DfT's consultation document on BSOG notes that measures that 'retain the grant's essential form of a rebate on fuel duty which was introduced before the UK acceded to the EU (and therefore not requiring specific state aid clearance) are unlikely to require state aid clearance. But changes that modify the nature of the grant may need clearance.' Devolving some or all of BSOG in order to reflect the recommendations made above would need to be accompanied by increased tendering by local authorities to reflect the compensation being paid for the services being provided by operators. This is clear from European Regulation 1370/2007, which describes how operators facing public service obligations should be compensated in order to avoid state aid concerns.

– **Technology**: for an IPP approach to be implemented effectively, investment is necessary into the smartcard technology required to support it, as well as storage and processing of the resulting data. National or local authorities would be required to fund and run the smartcard systems in order to avoid the fixed costs of the technology being paid by smaller, as well as larger operators. In addition, to ensure interoperability of the

[51] DfT, 'Guidance on New De Minimis Rules for Bus Subsidy Contracts', available at http://www.dft.gov.uk/pgr/regional/buses/gen/guidanceonnewdeminimisrulesf3568

systems, there may need to be some form of central government coordination; otherwise, along with the cost pressures being faced by smaller operators, as alluded to in section 2, they might be forced to leave the market. This may have a negative impact on the competition within the bus sector.

– **Ability to move the supplier market**: the combined pressure arising from decisions by individual local authorities and bus operators in England and Wales in relation to improving the carbon and local emissions performance of buses is unlikely to be the most efficient way to change the technology available to bus operators. The bus engine market is a small proportion of the overall diesel engine market in Europe, with technology generally being developed for lorries. While pressure can be brought to bear on vehicle manufacturers in relation to exhaust treatment systems and vehicle weight, for example, it is likely that the sector will remain a 'technology-taker', and policy measures will need to reflect this.

– **Nature of the market***:* the proposed recommendations are likely to need to take into account two important factors. First, entry into the market may become harder, requiring participation in agreements with local authorities and in tenders for larger packages of services. Second, there are likely to be costs associated with transition to the new arrangements, including renegotiation of existing secured services contracts, and timing issues between falling rebates and equivalent monies being provided to local authorities to enhance service support.

4.4 Conclusions

This report comes at an important time for the bus industry. The recession is affecting revenues, and government finances are likely to mean that, whoever wins the next general election, there will be a line-by-line review of departmental budgets. Already, bus operators are paying more fuel duty as a result of changes to the rebate mechanism introduced by the DfT. In addition, costs are rising to meet the vehicle standards required of today's consumers—be they air conditioning, exhaust treatment systems, or compliance with disability discrimination legislation.

The report has also demonstrated that, despite financial support to the sector increasing considerably over recent years, it is not demonstrably being provided in a way that offers best value for money—meeting public policy objectives in the most economically efficient manner. Improving value for money would not only improve the delivery of public policy objectives, but would also reduce the risk that financial support to the sector is diverted elsewhere to fund policies where value for money might be thought higher.

The legislative framework of the Local Transport Act 2008 provides a suitable mechanism for reform. It establishes 'shared incentive' models whereby local authorities improve facilities on behalf of operators, reflecting local priorities, in return for longer-term service commitments. While the financial support is not currently set up to follow the arrangements envisaged under the Act—except in the case of Quality Contracts, where licences are removed from operators and all services tendered in an area—the recommendations set out above should improve matters, subject to the caveats.

The recommendations focus on areas where the report has demonstrated that the current system may not be delivering best value for money, including a lack of coordination of subsidy that leads to waste; no or limited resources available at a local level to deal with issues where both the social costs and appropriate responses vary by location; and a failure to reflect the national social cost of carbon and policies towards disadvantaged social groups in either the price system (eg, fuel duty across modes) or the means of identifying and resourcing local responses that demonstrate the best value for money.

A1 Profitability of the bus sector

A previous study commissioned by LGA indicated that bus operators might be experiencing a significantly higher return on capital investment than in other subsidised industries.[52] Data provided in the 'Bus Industry Monitor' and a study by NERA also appears to indicate that profitability in the bus sector is relatively high.[53] According to the 'Bus Industry Monitor', average profitability as measured by the ROCE exceeds 30%.[54] The NERA study of the profitability of bus companies operating in PTE areas concludes that profits are likely to be excessive.[55] Also based on ROCE, it suggests that profitability ranges from 12% to 20%.[56] In this appendix Oxera examines whether subsidy could be a driver of higher profitability in this sector.

First, the conceptual relationship that would be expected to exist between subsidy and profitability is discussed and the results of preliminary empirical analysis presented. It is important to highlight that the results are likely to be strongly influenced by two factors: completeness and accuracy of the underlying data on subsidy; and the lack of a universally accepted measure of profitability for the bus industry. The methodology adopted to overcome these issues is set out below, together with the caveats to the analysis that need to be borne in mind when interpreting the results.

A1.1 Conceptual relationship between profitability and subsidy

As discussed in section 3.1, there are two ways in which subsidy can be introduced:

– a lump-sum subsidy—such as local authorities' secured services, the RBSG and Challenge and Kickstart initiatives;
– a subsidy which reduces the operator's unit costs—such as the BSOG.

In general, if the influence of all other factors on profitability is taken into account, one would expect to observe no relationship between a lump-sum subsidy and profitability in a competitive bus sector. Due to competitive pressures, a bus operator would just cover its costs and earn the minimum or 'normal' profit to allow it to remain in the sector—higher subsidy should have zero net impact on operators' profitability. However, if the market were less competitive, there is a possibility that bus operators might be overcompensated for the provision of services, resulting in the operator earning higher profits. Indeed, higher profits provide one reason why operators would increase the supply of services to meet higher demand.

Similarly, when a per-unit subsidy is introduced, in a competitive market, the bus operators would account for the subsidy in their pricing decision such that the savings are passed on to the final consumers. As a result, it would be reasonable to expect to observe no relationship between the per-unit subsidy and profitability. In a market that is less competitive, bus operators will be expected to pass on some of the subsidy, but not the entire amount, which may result in the operators earning higher profits.

[52] LGA (2008), 'Are Bus Company Profits Too High to Justify Current Regulation and Subsidy Arrangements?', report prepared by CEBR, April. NERA (2006), 'The Decline in Bus Services in English PTE Areas: The Quest for a Solution', August.
[53] See, for example, TAS (2007), 'Bus Industry Monitor'.
[54] The ROCE of above 30% is calculated as a simple average across 'Bus Industry Monitor' profitability estimates at the regional level over the period from 2002 to 2007.
[55] NERA (2006), 'The Decline in Bus Services in English PTE Areas: The Quest for a Solution', August.
[56] NERA reports two ranges: 15–20% when all bus operators are included, and 12–16% when TWM is excluded due to abnormal ROCE estimates of 21–35%.

Thus, depending on the characteristics of the bus market, the relationship between subsidy and profitability of bus operators is expected to be zero or positive. However, the relationship between profitability and subsidy should not be considered in isolation. Other drivers of profitability should be examined; otherwise a change in profitability could be wrongly assigned to the change in subsidy when in fact a different factor caused the change. Factors that may affect the profitability of a bus operator include the following.

– **Cost factors**. The changes in the underlying costs in the absence of corresponding changes in revenue would impact the bus operators' profitability. The extent to which profitability is affected would depend on the bus operators' ability to pass the increase in costs on to bus passengers.

– **Number of competitors on bus routes**. The more competitors there are, and the more intense the competition between them, the lower the profitability of the bus operator would be expected to be.

– **Barriers to entry**. In a situation where barriers to entry are low, bus operators would be expected to charge a price below the price which induces entry.

– **Population density**. Higher patronage and higher revenues are expected in areas with high population density.

– **Socio-demographics**. Socio-demographics often provide a good indicator of car ownership. An area with a large proportion of A and B groups would be more likely to own cars and not rely heavily on public transport.

– **Local authority initiatives**. Initiatives encouraging public transport use such as distribution of free bus passes could play an important role in increasing bus patronage. On the other hand, other initiatives such as availability of parking and cycle lanes may encourage the use of alternative modes of transport.

A further point to note is that focusing on averages rather than individual services may obscure the true relationship. For example, a general increase in subsidy may raise profitability for some services which were previously economically viable, but allow the introduction of relatively low profit services which would previously have been unviable. How average profitability across all services would change in these circumstances is unclear.

An initial analysis of the relationship between profitability and subsidy is presented in this report. One of its objectives is to examine the feasibility of conducting the analysis using publicly available data and to establish whether there are any strong patterns in the data which would indicate the need for conducting further study. Consequently, examining other factors such as the competitiveness of the bus sector is beyond of the scope of this initial analysis.

A1.2 Measuring profitability in the bus sector

To conduct the analysis, it is important to ensure that the measure of profitability used for the study is conceptually correct—ie, it generates insight into economic profitability that can be used to draw inferences on the functioning of the market. A paper by Oxera, published by the Office of Fair Trading in 2003, sets out the approaches to measuring economic profitability.[57] According to finance theory, the conceptually correct measures of profitability of an activity are the net present value (NPV)—which is the total present value of all cash flows over the lifetime of a project—and the internal rate of return (IRR). The IRR is the discount rate that makes the NPV of a discounted series of cash flows from a given business activity equal to zero.

[57] Office of Fair Trading (2003), 'Assessing Profitability in Competition Policy Analysis', report prepared by Oxera, July.

Given that these approaches are data-intensive, the relevant data is often not publically available (ie, not even in public financial statements). In such circumstances, proxy (accounting) measures such as the ROCE, the return on sales (ROS), or the return on equity (ROE) might be used, provided that they are correctly interpreted. A brief summary of proxy measures is provided below:

Profitability measures that can proxy the IRR and NPV	
Gross margin	= (revenue – direct costs)/revenue
Return on sales (ROS)	= EBIT/revenue
Cost mark-up	= EBIT/costs
Return on assets (ROA)	= EBIT/total assets
Return on capital employed (ROCE)	= EBIT/capital employed
(Pre-tax) return on equity (ROE)	= pre-tax profits/equity

Note: EBIT, earnings before interest and tax.

In principle, the use of accounting measures of profitability does not invalidate the analysis per se; however, it is subject to a number of prerequisites. In particular, the ROCE can be made to correspond to the IRR measures, where the following important conditions are met:[58]

– the value-to-owner principle is used for valuing assets;
– all changes in the book value of assets are reflected in the profit and loss account.

In general, the main difficulties that might affect the measurement of the ROCE are the following.

– The measurement of operating profits (ie, the numerator) depends on the timing of recognition of revenues and expenses.

– The standards used for measuring asset values (ie, the denominator) vary considerably across bus companies' accounts, and not all valuation standards are relevant in the competition context.

– While asset valuation issues affect all profitability measures. However, the impact may be more significant in a ROCE analysis—particularly when the asset values are subject to substantial fluctuations over the period in question.

– ROCE estimates are sensitive to the time period chosen. A single year's estimate cannot be relied on since it may be driven by factors specific to that year.[59] Moreover, simple averaging of the ROCE estimates over time is unlikely to eliminate potential biases. A more economically meaningful approach would be to consider the returns over a period of time measured against the appropriate opening and closing asset values.

– Finally, when accounting measures are used to estimate returns in the bus sector, biases might occur due to assumptions about depreciation profiles over asset lives, accruals, off-balance sheet forms of financing and potentially significant differences between accounting and economic asset values. The results might therefore be difficult

[58] Office of Fair Trading (2003), 'Assessing Profitability in Competition Policy Analysis', report prepared by Oxera, July.
[59] The ROCE is sensitive to the lumpy nature of capital investment. In years with a relatively intensive capital programme, ROCE values tend to be low, whereas in periods with relatively low CAPEX, the ROCE tends to be high.

to interpret in absolute terms since the asset base is unlikely to be appropriate for the measurement of profitability.

Due to the limited scope of the current study, the publicly available data on profitability, namely ROCE, was used. The ROCE figures have not been adjusted to bring the measure in line with the conceptually correct measure of profitability for bus operators. As a result, it is likely that the ROCEs used in the study do not provide an accurate representation of the profitability of the bus operators, which may impact the results of the analysis. Further analysis would be necessary to transform these figures into profitability measures which are conceptually correct.

A1.3 Data currently available

The subsidy and profitability data obtained from public sources are described below.

A1.3.1 Subsidy

The availability of subsidy data in the public domain is limited. The most comprehensive public source for subsidy data appears to be the 'Bus Industry Monitor', which is published annually. The publication presents the subsidy data disaggregated to local authority level (English Shires, English Unitary Authorities and PTEs). Due to the lack of availability of profitability data at this level of disaggregation, the subsidy data was aggregated up to English regions data for eight English regions outside London, in order to present analysis comparing subsidy and profitability.[60]

The total amount of subsidy for each region was not available and was therefore calculated by adding together planned public transport spending on secured bus services, park-and-ride, concessionary fares, administration and support, capital spending on bus and park-and-ride and the BSOG. As BSOG data was not available at the regional level, total BSOG was allocated to regions on the basis of the ratio of passenger journeys in the region to total passenger journeys in England.[61]

Tables A1.1 and A1.2 show the total subsidy and subsidy per passenger journey for eight of the English regions outside of London for the period 2003–07. The data demonstrates an increase in public total and per-journey expenditure for all regions.

Table A1.1 Total subsidy by region, 2003–07, nominal terms (£m)

Region	2003	2004	2005	2006	2007
East Midlands	60.1	70.9	77.5	71.4	87.1
North East	101.9	97.2	101.2	86.5	98.0
North West	271.1	484.0	341.4	327.7	366.8
South East	101.9	101.0	103.8	112.2	147.2
South West	62.4	75.4	68.9	72.4	86.9
West Midlands	169.5	186.6	255.3	216.1	246.4
Yorkshire	161.7	180.6	189.9	190.2	217.4
East of England	63.1	70.1	68.9	83.9	100.3
Total	**991.6**	**1,265.8**	**1,206.8**	**1,160.3**	**1,350.1**

Source: Bus Industry Monitor and Oxera analysis.

[60] East Midlands, North East, North West, South East, South West, West Midlands, Yorkshire, East of England. This methodology implicitly assumes the same fuel use per passenger across regions, irrespective of journey length, load factors, vehicle types, etc.

[61] Ideally, total bus-kilometres would have been used for the allocation. However, this data was not readily available from public sources.

Table A1.2 Total subsidy per passenger journey by region, 2003–07, nominal terms (£)

Region	2003	2004	2005	2006	2007
East Midlands	0.28	0.34	0.39	0.35	0.41
North East	0.42	0.43	0.47	0.42	0.48
North West	0.53	0.94	0.67	0.65	0.74
South East	0.35	0.35	0.36	0.38	0.48
South West	0.34	0.41	0.37	0.40	0.45
West Midlands	0.39	0.44	0.62	0.53	0.61
Yorkshire	0.42	0.48	0.52	0.52	0.58
East of England	0.36	0.41	0.41	0.52	0.55
Average	0.39	0.47	0.48	0.47	0.54

Source: Bus Industry Monitor and Oxera analysis.

A1.3.2 Profitability

As highlighted above, ideally an IRR, NPV or an adjusted ROCE measure would have been used as an indication of bus operators' profitability. However, due to the time and study scope constraints, Oxera used ROCE data from the 'Bus Industry Monitor' for the analysis in this section. As a result, it is important to keep in mind that the data may not accurately represent the actual profitability of the bus operators when interpreting the results of the analysis.

Table A1.3 presents bus sector ROCE aggregated to the level of the eight English regions outside London for the period 2003–07. As can be seen from the data, ROCEs appear to vary considerably between regions.

Table A1.3 ROCE for bus operators by region, 2003–07 (%)

Region	2003	2004	2005	2006	2007
East Midlands	20.8	21.4	20.6	15.8	17.00
North East	38.2	43.4	35.9	23.9	50.00
North West	34.4	42.3	42.4	33.9	30.80
South East	39.9	38.9	32.6	20.5	41.50
South West	32.2	30.6	21.7	10.5	1,159.90[1]
West Midlands	87.1	113.2	69.9	142.8	190.80
Yorkshire	30.8	32.7	40.4	30.0	31.10
East of England	n/a	n/a	n/a	n/a	n/a

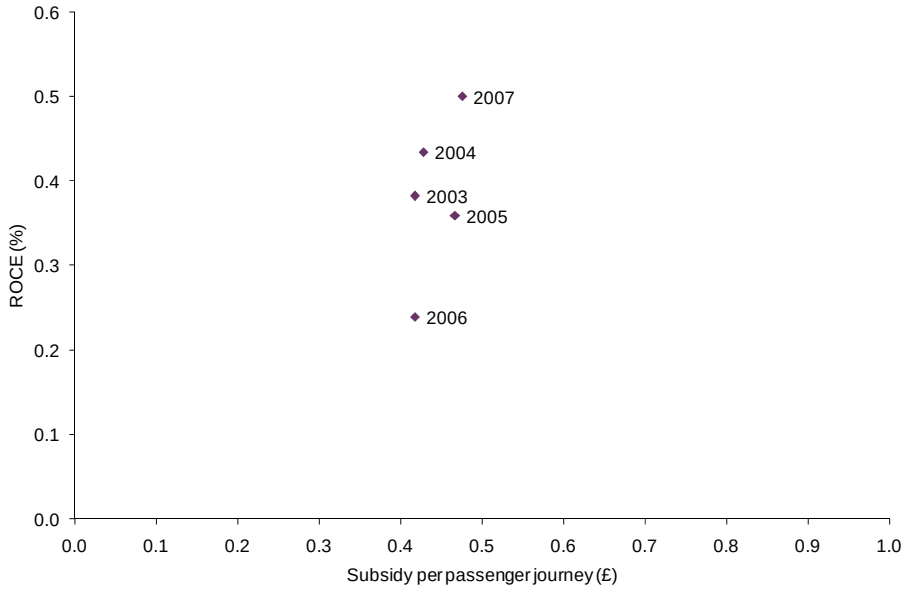
Note: [1]This figure was obtained from Bus Industry Monitor 2007. Oxera was not able to obtain the underlying data to verify this calculation.
Source: Bus Industry Monitor and Oxera analysis.

A1.4 Relationship between profitability and subsidy

A1.4.1 Empirical evidence

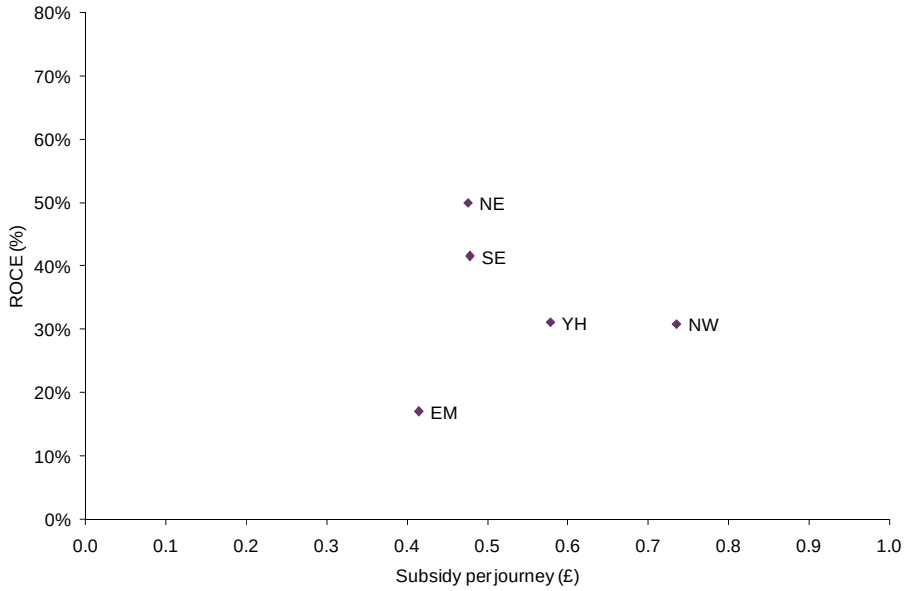
The correlation between subsidy and profitability per passenger journey has been examined using scatter diagrams and correlation coefficients. The diagrams were plotted for each region over time and in cross-section for each year from 2003 to 2007.[62] The examples of diagrams are provided for illustration purposes below.

Figure A1.1 ROCE and subsidy per passenger journey: North East



Source: Bus Industry Monitor and Oxera analysis.

Figure A1.2 ROCE and subsidy per passenger journey by region, 2007



Note: NE=North East, NW=North West, SE=South East, SW=South West, EM=East Midlands, WM=West Midlands, YH=Yorkshire and the Humber.

[62] Due to the lack of availability of profitability data for East of England, the result of the analysis for this region is not presented.

Source: Bus Industry Monitor and Oxera analysis.

The time-series data shows mixed evidence on the relationship—for example, if anything there is an inverse relationship between subsidy per journey and ROCE for East Midlands and the North West. This could be consistent with the increase in subsidy as fuel duty has risen and subsidy for concessionary travel has increased substantially, together with falling profitability for operators as underlying costs have risen. The data for North East and West Midlands, on the other hand, suggests that the relationship is positive. Finally, there appears to be no evidence of a relationship between the two variables in the remaining four regions—the ROCE levels vary over time despite insignificant changes in the amount of subsidy per passenger journey for each of the regions. Similarly, the review of cross-sectional data provides no consistent evidence to support a relationship between profitability and subsidy, although the relationship does seem to be positive in some years (2005 and 2006).

That this analysis is inconclusive is supported by figures presented in Tables A1.4 and A1.5 which set out the correlation between subsidy and profitability across regions and over time.[63] The correlation coefficients vary significantly, with some showing a strong positive relationship (South West and North East), a strong negative relationship (East Midlands) and weak positive relationship (Yorkshire and the Humber and South East).

Table A1.4 Correlation between subsidy and profitability over time, by region

Region	Correlation coefficient
East Midlands	–0.47
North East	0.57
North West	0.47
South East	0.22
South West	0.75
West Midlands	0.36
Yorkshire	0.16

Source: Bus Industry Monitor and Oxera analysis.

Table A1.5 Correlation between subsidy and profitability across regions, 2003–07

Year	Correlation coefficient
2003	0.11
2004	0.04
2005	0.76
2006	0.42
2007	–0.31

Source: Bus Industry Monitor and Oxera analysis.

A1.4.2 Interpretation of results

The review of the available data shows that there is no strong and consistent evidence on the existence of a relationship between subsidy and profitability. However, similarly, there is no consistent evidence that the relationship does not exist. The results must be interpreted with the caveats of the analysis in mind.

[63] Correlation coefficients indicate the direction and the strength of a linear relationship between two variables. They range between 1 (perfectly correlated) and –1 (perfectly negatively correlated); a correlation coefficient of zero means that there is no correlation.

It is important to remember that this analysis presents initial results, which are aimed to determine whether a further study into the relationship between subsidy and profitability is warranted. A further study would need to account for the following considerations.

– **Quality of data**. The highest level of disaggregation at which consistent public data for subsidy and profitability is available is the regional level, which means that there is a limited number of observations on which the current analysis can rely. To improve the accuracy of results of the study it would be necessary to increase the level of disaggregation to bus operators' subsidy and profitability data at the local markets level, which would require access to the bus operators' data.

– **Measure of profitability**. As set out above, the unadjusted accounting ROCE used for the initial analysis may not accurately measure the profitability of bus operators. A detailed analysis and access to the bus operators' data would be necessary to calculate a conceptually correct measure of profitability.

– **Other factors that influence profitability**. The initial analysis examined the relationship between subsidy and profitability in isolation. A more detailed analysis such as regression analysis will be needed to account for the influence on profitability of other factors listed in section A1.1.

In light of these findings, it appears that a further analysis that is based on more detailed data (which is not currently in the public domain) is necessary to reach a more concrete conclusion on the relationship between subsidy and profitability in the bus sector.

Local Government Association

The Local Government Association is the national voice for more than 400 local authorities in England and Wales. The LGA group comprises the LGA and five partner organisations which work together to support, promote and improve local government.

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