The Royal Automobile Club Foundation for Motoring Ltd is a transport policy and research organisation which explores the economic, mobility, safety and environmental issues relating to roads and their users. The Foundation publishes independent and authoritative research with which it promotes informed debate and advocates policy in the interest of the responsible motorist.

RAC Foundation
89–91 Pall Mall
London
SW1Y 5HS

Tel no: 020 7747 3445
www.racfoundation.org

Registered Charity No. 1002705
April 2020 © Copyright Royal Automobile Club Foundation for Motoring Ltd
Land Transport in Great Britain –
Public Expenditure, Taxes and Subsidies

David Bayliss
April 2020
About the Author

David Bayliss is a chartered engineer and town planner. He started his career with Manchester Corporation and then moved to the Greater London Council, where he became Chief Transport Planner. Subsequently, as Director of Planning for London Transport, he was involved in planning the Docklands Light Railway, the Jubilee Line Extension and Croydon Tramlink. On retirement from London Transport in 1999, he was a director of Halcrow Consulting for the following ten years. During his career he has been involved in almost all aspects of domestic transport and has been an advisor to a number of international organisations and overseas governments. He has written and lectured widely and is currently a trustee of the RAC Foundation and visiting professor at Imperial College London.

Disclaimer

This report has been prepared for the RAC Foundation by David Bayliss. The report content reflects the views of the author and not necessarily those of the RAC Foundation.
Contents

Foreword ........................................................................................................................................... v
1 Introduction .................................................................................................................................... 1
2 The Overall Public Expenditure Picture .................................................................................. 3
   2.1 All public expenditure on land transport .............................................................................. 3
   2.2 Roads expenditure .................................................................................................................. 4
   2.3 Rail expenditure ................................................................................................................... 5
   2.4 Local public transport expenditure .................................................................................... 8
3 Transport Taxes ....................................................................................................................... 11
   3.1 Direct road user taxes ......................................................................................................... 11
   3.2 Direct rail taxes ................................................................................................................... 14
   3.3 Value Added Tax (VAT) ......................................................................................................... 14
   3.4 Insurance premium taxes .................................................................................................... 15
4 Financial Support .................................................................................................................. 17
   4.1 Road transport ..................................................................................................................... 17
   4.2 Local buses and community transport .............................................................................. 18
   4.3 Railways ................................................................................................................................ 19
   4.4 Freight .................................................................................................................................. 19
5 Taxation and Support Rates ................................................................................................. 20
   5.1 Car travel ............................................................................................................................. 20
   5.2 Goods vehicle travel ............................................................................................................ 21
   5.3 Local bus travel ..................................................................................................................... 22
   5.4 Other bus and coach travel ............................................................................................... 24
   5.5 National Rail travel ............................................................................................................ 25
   5.6 Other railways ...................................................................................................................... 27
   5.7 Freight .................................................................................................................................. 29
6 Conclusions ............................................................................................................................. 30
   6.1 Expenditure ........................................................................................................................ 30
   6.2 Taxation ............................................................................................................................. 31
   6.3 Financial support ............................................................................................................... 32
   6.4 Taxation and subsidy rates ............................................................................................... 33
References ........................................................................................................................................... 36
List of Figures

Figure 2.1: All public expenditure on land transport, 2008/9–2018/19 (2018/19 prices) ..... 4
Figure 2.2: Public expenditure on roads, 2008/9–2018/19 (2018/19 prices) ......................... 5
Figure 2.3: Public expenditure on rail, 2008/9–2018/19 (2018/19 prices) ............................. 6
Figure 2.4: Detailed public expenditure (by type of grant/loan) on National Rail, 2008/9–2018/19 (2018/19 prices) .................................................................................................... 7
Figure 2.5: Financial assistance to Transport for London’s rail systems, 2008/9–2018/19 (2018/19 prices) .................................................................................................................. 8
Figure 2.6: Public expenditure on local public transport, 2008/9–2018/19 (2018/19 prices) .................................................................................................................. 9
Figure 2.7: Bus expenditure by type of support, 2008/9–2018/19 (2018/19 prices) ............. 10
Figure 3.1: Fuel duty and VED receipts, 2008/9–2018/19 (2018/19 prices) .................. 12
Figure 3.2: Fuel duty + VED receipts by vehicle type, 2008/9–2018/19 (2018/19 prices) ... 13
Figure 3.3: VAT on fuel duty by vehicle type, 2008/9–2018/19 (2018/19 prices) ............... 15
Figure 3.4: Motor Insurance Premium Tax receipts, 2008/9–2018/19 (2018/19 prices) ...... 16
Figure 5.1: Gross and net car travel taxation rates, 2008/9–2018/19 (2018/19 prices) ....... 21
Figure 5.2: Gross and net goods vehicle travel taxation rates, 2008/9–2018/19 (2018/19 prices) .................................................................................................................. 22
Figure 5.3: Local bus travel support rates, 2008/9–2018/19 (2018/19 prices) .................... 23
Figure 5.4: Other bus and coach taxation rates, 2008/9–2018/19 (2018/19 prices) .......... 24
Figure 5.5: National Rail support rates, 2008/9–2018/19 (2018/19 prices) ......................... 25
Figure 5.6a: Train operating company support rates (high subsidy), 2008/9–2018/19 (2018/19 prices) .................................................................................................................. 26
Figure 5.6b: Train operating company support/premium rates (low or no subsidy), 2008/9–2018/19 (2018/19 prices) .................................................................................................. 26
Figure 5.7: London Underground support/surplus rates, 2008/9–2018/19 (2018/19 prices) .................................................................................................................. 27
Figure 5.8: Support rates for other London railways, 2008/9–2018/19 (2018/19 prices) .......... 28
Figure 6.1: Trends in passenger travel gross support rates by mode, 2008/9–2018/19 (2018/19 prices) .................................................................................................................. 34
### List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEIS</td>
<td>Department for Business, Energy &amp; Industrial Strategy</td>
</tr>
<tr>
<td>BSOG</td>
<td>Bus Service Operators Grant</td>
</tr>
<tr>
<td>BSSG</td>
<td>Bus Services Support Grant</td>
</tr>
<tr>
<td>CPI</td>
<td>Consumer Prices Index</td>
</tr>
<tr>
<td>DfT</td>
<td>Department for Transport</td>
</tr>
<tr>
<td>DLR</td>
<td>Docklands Light Railway</td>
</tr>
<tr>
<td>HGV</td>
<td>heavy goods vehicle</td>
</tr>
<tr>
<td>HS2</td>
<td>High Speed 2</td>
</tr>
<tr>
<td>IPT</td>
<td>Insurance Premium Tax</td>
</tr>
<tr>
<td>PCU</td>
<td>Passenger Car Unit</td>
</tr>
<tr>
<td>PIP</td>
<td>Personal Independence Payment</td>
</tr>
<tr>
<td>pkm</td>
<td>passenger-kilometre(s)</td>
</tr>
<tr>
<td>PTE</td>
<td>Passenger Transport Executive</td>
</tr>
<tr>
<td>RPI</td>
<td>Retail Prices Index</td>
</tr>
<tr>
<td>TfL</td>
<td>Transport for London</td>
</tr>
<tr>
<td>tkm</td>
<td>tonne-kilometre(s)</td>
</tr>
<tr>
<td>TOC</td>
<td>train operating company</td>
</tr>
<tr>
<td>ULEV</td>
<td>ultra-low-emission vehicle</td>
</tr>
<tr>
<td>VED</td>
<td>Vehicle Excise Duty</td>
</tr>
<tr>
<td>vkm</td>
<td>vehicle-kilometre(s)</td>
</tr>
</tbody>
</table>

---

www.racfoundation.org  iv
Foreword

In an era where politicians routinely make policy announcements that come with price tags of billions – and in this time of Covid-19 even trillions – of pounds it is easy to become blasé about what to most of us are eye-wateringly large levels of public spending.

If the second Road Investment Strategy proceeds as planned then billions of pounds are headed towards Highways England, to maintain, operate and enhance the strategic road network.

But it is sums in the millions and tens of millions that are the lifeblood of local highway authorities, fighting a seemingly endless war against potholes, operating our traffic signals and powering our streetlights.

Even those with a keen eye for these things might find it hard to tell where truly ‘new’ money is being brought to bear, and what is simply restating previous commitments.

That is why David Bayliss’s latest paper for the Foundation – an update of his earlier work on transport taxes and expenditure in Great Britain – is so valuable, because it pulls together data from a wide variety of sources and portrays it in a systematic and, where possible, comparable way.

We live in a data rich, data driven society. This report underlines how important it is to methodically collect, collate and store that data if we are to have any chance of using it to make sound, well informed decisions.

David’s report paints a picture of fluctuating spend, of what must to some seem to be rather arcane accounting conventions, and in conclusion, the prospect that in the absence of a root-and-branch overhaul of transport taxes and with the prospect of hefty increases in investment in the national railways, and to a lesser extent trunk roads, there is a real prospect that public spending on land transport could come to exceed transport tax receipts. It remains to be seen whether the measures being taken to respond to the coronavirus pandemic and subsequently to help the economy recover will indeed take us down this path.

Steve Gooding

Director, RAC Foundation
1. Introduction

This think piece updates an earlier think piece by the RAC Foundation entitled *Public Expenditure, Taxes and Subsidies: Land transport in Great Britain* (Bayliss, 2014). It brings together information on the public finances of land transport in Great Britain. It draws on published material (mainly but not exclusively from central government sources) and identifies the monetary flows between users of transport and the government (and its agents). It has not always been possible to present comprehensive and/or consistent data, and in some instances, estimates have had to be made. Where this has been done, the bases of the estimates are explained; moreover, sources have been identified throughout. The issue of what should be the correct levels of taxation and subsidy is also very important – but this is not dealt with in this think piece. Where possible, data is provided for the 11-year period that has elapsed since the last recession, which had major implications for public expenditure.

Not all expenditure is included, as some spending – for example, that on new local roads in private developments, and investment in public transport infrastructure and rolling stock – is funded by revenue from commercial developers and fares rather than from government coffers. Unless stated otherwise, all prices are reported at 2018/19 levels.

Expenditure from the public purse is only a small part of total spending on transport. Households spent about £127 billion on transport in 2018/19,¹ and

---

¹ Based on ONS (2018; 2020a), Table A1.
if financial services are excluded, businesses had a turnover of almost £1.3 trillion, of which £185 billion was spent on transport and storage (ONS, 2019a; 2020d). If half of this were on transport, then along with the £32 billion public expenditure (DfT, 2019a), total transport spending would amount to almost a quarter of a trillion pounds sterling per year, or 12% of GDP (ONS, 2020a).
2. The Overall Public Expenditure Picture

2.1 All public expenditure on land transport

Comparisons of total sums expended over the period have to be made with care, as some accounting conventions were changed, for example as a result of Network Rail being classified in September 2014 as a central government body (rather than a private company) (DfT, 2013a). This resulted in a sharp increase in reported spending on rail capital and current expenditure between 2014/15 and 2015/16, which carries through to the central government total expenditures.

In 2018/19, public expenditure on transport amounted to 4.3% of the national total; however, capital spending on transport formed 26% of the national total (HM Treasury, 2019). At the beginning of the period, public spending on land transport was growing; but this reversed in 2009/10 as a result of the recession. This reduction continued until 2013/14, since when there has been growth, although not to the extent implied by Figure 2.1, which depicts all public expenditure on land transport for the period, as this includes the reclassification

---

2 Unless otherwise stated all financial figures are at 2018/19 price levels using the CPI price adjuster (ONS, 2020c).
3 This excludes ‘other transport’ (mainly maritime, ports, piers, aviation and security), ‘spending outside the UK’ (mainly railways) and ‘expenditure not identifiable by country’ (mainly on aviation and security).
of Network Rail spending. Of particular note is the more than halving of current spending by local government and the large increase in central government capital expenditure. More details of the individual components are given in the following paragraphs.

Figure 2.1: All public expenditure\(^4\) on land transport, 2008/9–2018/19 (2018/19 prices)

Source: DfT (2019a).

2.2 Roads expenditure

Over the last period shown the average annual public expenditure on roads amounted to £9.57 billion, falling from £10.59 billion in 2008/9 to £7.99 billion in 2012/13 (although 2009/10 represented a significant increase on the previous year), then recovering to £9.78 billion in 2018/19 (see Figure 2.2). After a reduction lasting a few years following the 2008/9 recession, there has been strong growth in capital spending on local and (especially) national roads since 2012/13. Current spending on national roads has been fairly flat over the past seven years, but there has been a severe and sustained contraction in current spending on local roads since 2009/10, amounting to a remarkable drop of 71%.

Roads expenditure takes a variety of forms and, over the last few years, there has been increased expenditure specifically on walking and cycling. How much this amounts to is not known precisely, but Government plans envisage spending £1.18 billion between 2016/17 and 2020/21 inclusive on cycling and walking projects – an average of £235 million a year.

\(^4\) Capital expenditure includes expenditure on capital grants and spending on assets such as the acquisition of land, buildings, vehicles and machinery. For transport this includes the cost of building a road, or new rail lines together with some maintenance work. Current expenditure covers recurring spending on items such as pay, benefits and the purchase of goods and services. For transport this includes services such as concessionary fares and revenue support to public transport.
With £6 per head being spent on cycling in England in 2016/17, it is evident that most of this is being allocated to cycling (DfT, 2017a).

Transport Scotland has doubled the level of its investment in walking and cycling from £39.2 million in 2017/18 to £80 million in 2018/19 (Transport Scotland, 2019a), with the Welsh Government budgeting £6.65 million for sustainable travel and walking and cycling projects in 2018/19 (Welsh Government, 2017, line 347). Transport for London (TfL) spent £90 million on a range of cycling schemes in 2017/18 (Mayor of London, 2018). It may safely be concluded that expenditure on walking and cycling across the whole of Britain amounts to at least £200 million a year.5

**Figure 2.2: Public expenditure on roads, 2008/9–2018/19 (2018/19 prices)**

Source: DfT (2019a).

### 2.3 Rail expenditure6

Over the period, spending on (all) rail has more than doubled from £8.33 billion a year to £17.84 billion a year (see Figure 2.3). This covers both National Rail and the London Underground. It also includes those companies considered to be in public ownership, such as London & Continental Railways and GNER and, from 2015/16, Network Rail.

---

5 These figures are estimates at outturn prices.

6 The railway category covers both National Rail and the London Underground. It also includes those companies considered to be in public ownership, such as London and Continental Railways and GNER and Network Rail from 2015/16.
Whilst these components are not identified separately in the Transport Statistics Great Britain (TSGB) tables, spending on London Underground, Crossrail and High Speed 2 (HS2) is shown in Figures 2.4 and 2.5 (the latter focusing on London). The reclassification of Network Rail makes the analysis of trends back beyond 2014/15 difficult. Loans to Network Rail have averaged £6.4 billion annually between 2014/15 and 2018/19 (at 2018/19 prices), and there have been high levels of expenditure on Crossrail since 2012 when tunnelling began, and more recent growth in expenditure on HS2 mean that capital expenditure on rail has increased substantially over the last few years. From an annual spend of £54m in 2011/12 HS2 expenditure grew to roundly £2.6bn in 2018/19 and totalled £7bn by April 2019 (ORR, 2019a).

The more detailed breakdown of expenditure illustrated in Figure 2.4 shows that, as a whole, franchise payments, with the exception of 2013/14, were negative between 2010/11 and 2017/18 but went back into the red in 2018/19, with just ten out of the 20 train operating companies (TOCs) paying the Department for Transport (DfT) to operate their services (ORR, 2019b). This has been possible because, since 2001/2, the cost of providing Network Rail’s infrastructure has been covered directly by DfT grants. Prior to that the TOCs had to pay track access charges to Railtrack/Network Rail. In addition to receiving grants and loans from the DfT, Network Rail had net debts of £54.1 billion at the end of 2018/19, which incurred an annual financing cost of £2.2 billion, of which around £10 billion was due within ten years (Network Rail, 2019a). The reduction in grants to the Passenger Transport Executives (PTEs) in 2016/17 is a result of subsidies for local rail services in their area being paid directly by central government to the TOCs, rather than through the PTEs. Over the

---

Note: The diagram in Figure 2.3 shows public expenditure on rail, 2008/9–2018/19 (2018/19 prices), with separate lines for central and local capital and current expenditure, as well as public corps capital. The source is DfT (2019a).
period overall direct support for operations has fallen from approximately £5.57 billion at 2018/19 prices to £4.28 billion. Loans to Network Rail apart, the upturn in expenditure between 2016/17 and 2018/19 was due almost entirely to spending on HS2. Passengers paid £10.3 billion in fares revenue in 2018/19 (ORR, 2019c).

Figure 2.4: Detailed public expenditure (by type of grant/loan) on National Rail, 2008/9–2018/19 (2018/19 prices)

![Figure 2.4: Detailed public expenditure (by type of grant/loan) on National Rail, 2008/9–2018/19 (2018/19 prices)](image)

Source: ORR (2019a).

After the national railway system, London’s locally controlled railways form the other main component of public rail expenditure. Financial support for these is illustrated in Figure 2.5. The 2011/12 spike in support for London Underground (LUL in the graph) is the result of a cash injection associated with the winding up of Tube Lines Limited (the vestigial remains of the London Underground public–private partnership) through the repayment of debts, and purchase of shares from the private stakeholders.8 The 2012/13 spike in Docklands Light Railway (DLR) support was from exceptional charges incurred as a result of winding up a Private Finance Initiative scheme and the peaking of expenditure associated with the London Olympic Games.9

The expenditure on Crossrail does not include the £5.8 billion (ORR 2019a) (at 2018/19 prices) direct support from central government or the £4.1 billion proceeds from the Crossrail Business Rate Supplement (GLA, 2018). With the exception of 2010/11, London’s railways have reduced their need for financial subsidies over the period by 55%. Of particular note is that the London Underground required approximately £0.7 billion operating subsidy

---

8 Correspondence from TfL finance department.
9 Ibid.
in 2008/9, but converted this into a surplus of £0.44 billion in 2018/19. Over the same period, capital expenditure fell from £1.9 billion in 2008/9 to just £0.3 billion in 2018/19.

Figure 2.5: Financial assistance to Transport for London's rail systems, 2008/9–2018/19 (2018/19 prices)


2.4 Local public transport expenditure

Annual public spending on local public transport has reduced by almost £1.79 billion a year over the period, with capital expenditure – almost all of it by local authorities – reducing by 90% by 2018/19 from its peak in 2009/10 (see Figure 2.6). Current spending by central government reduced by 44%, while local government’s current spending has fallen by 33%.

Public expenditure on local buses is shown in Figure 2.7. Concessionary fares payments, however, are not are operator subsidies – rather, they are compensation for the provision of reduced and free fares for groups such as pensioners and disabled people. They are usually designed to leave the transport operator neither worse nor better off than if the concessions did not exist (DfT, 2018a). To a large extent, the amount of these subsidies is determined by commercial fare levels, the amount of travel by concessionaires, and the statutory framework determining the subsidy regime. This means that the amounts paid to operators

---

10 Local public transport includes Bus Service Operators Grant (BSOG) paid by central government, as well as local authority spending, and refers mainly to road transport.

11 A local bus service is defined under the provisions of the Transport Act 1985 as a registered bus service using public service vehicles to carry passengers who pay separate fares over short distances, on which passengers can get off within 15 miles (measured in a straight line) of where they got on.
are subject to less volatility than grants made entirely at the discretion of central and local governments. Consequently, the change over the period has been a reduction of just 12%.

Figure 2.6: Public expenditure on local public transport, 2008/9–2018/19 (2018/19 prices)

Source: DfT (2019a).

In England and Scotland, operator support takes two forms – Bus Service Operators Grant (BSOG) and direct payments for what are defined as “socially necessary” services. BSOG was established by the Transport Act 2000 as a more efficient replacement of the local bus service Fuel Duty Rebate. The compensation rate is less than the full fuel duty rate and is available to local bus and community transport operators (DfT, 2012) to help keep fares down and enable operators to run services that might otherwise be unprofitable. BSOG is no longer paid to operators in Wales (DfT, 2013b) – a single Bus Services Support Grant (BSSG) takes the place of both direct support and BSOG. As can be seen from Figure 2.7, the amounts paid under these schemes has almost halved in real terms (reducing by 49%) between 2008/9 and 2018/19.

Again, it is evident from Figure 2.7 that direct support for socially necessary services has also been under pressure over recent years, with real reductions in spending of 35% between 2008/9 and 2018/19.
Figure 2.7: Bus expenditure by type of support, 2008/9–2018/19 (2018/19 prices)

Source: DfT (2019b), Transport Scotland (2019b) and StatsWales (2019).
3. Transport Taxes

3.1 Direct road user taxes

Transport users pay taxes on a range of transport goods and services, and road transport is the most highly taxed mode. Direct motoring taxes comprise fuel duty and Vehicle Excise Duty (VED) – Figure 3.1 sets out receipts from these for 2008/9–2018/19. These produce approximately 5% of all taxes and duties collected in the UK (HMRC, 2019a). Since 1936 motoring taxes have not been earmarked for roads funding, although this has recently been altered and, from 2020/21, all revenue raised from VED in England will be allocated to a new National Roads Fund and invested directly back into the major road network (DfT, 2016a). Whilst the real proceeds of road user taxes were increasing until 2010/11, they have since reduced, and in 2018/19 stood at £3.5 billion less than in the peak year of 2010/11. This has come about as a result of the dip in road traffic following the 2008/9 recession, the reworking of the VED tariff structure, the shift towards vehicles emitting less carbon, a reduction in rates of fuel consumption, and the freezing of fuel duty in cash terms since March 2011 (when it was reduced by 1p/litre). Over the period road traffic fell from 502.7 billion vehicle-kilometres (vkm) in 2008/9, to 487.3 billion vkm in 2012/13 (~3%), then recovering to 527.1 billion vkm (+5%) in 2018/19 (DfT, 2019c).
Between 2008 and 2018 the proportion of the more fuel-efficient–diesel cars increased from 25% to 39% (DfT, 2019e) and that of electric and hybrids from 0.2% to 1.9%. The average fuel efficiency of new cars increased by 22% (DfT, 2019f). As a consequence, petroleum fuels burnt by road transport fell by 4% over the period (BEIS, 2019) despite the 5% increase in traffic. In real terms, annual fuel duty receipts fell by £1.7 billion over the period; if fuel duty had been index-linked to the Consumer Prices Index (CPI) from March 2011, when it was last changed (Seeley, 2019), the 2018/19 level would have been 67p/litre, resulting in an additional £3 billion (approximately) a year.

This recent decline in fuel duty receipts stands in marked contrast to the trend in the 1990s when, as a result of the fuel duty escalator, in the seven years between March 1993 and March 2000 (Seeley, 2019), duty on unleaded petrol increased from 25.76p/litre to 48.82p/litre (+90%) and diesel from 25.14p/litre to 51.82p/litre (+106%) (Morgan, 2008) against an increase in the RPI (Retail Prices Index) of 21% (ONS, 2020b) and the CPI of just 13% (ONS, 2020c), resulting in a real increase in fuel duty receipts of 47% (HMRC, 2005).

VED receipts changed little over the period, despite a 13% increase in (non-exempt) vehicle numbers (DfT, 2019f), with a shift of the VED burden from households to businesses – whose share rose from 23% in 2008/9 to 35% in 2018/19. The increasing proportion of Light Goods Vehicles (LGVs) and greater responsiveness of households to the reduced VED rates for low CO₂ emission were probably important factors in this switch.
Figure 3.2 shows fuel duty and VED receipts over the period, and is based on estimates of the shares of these two taxes by the main types of road vehicle. Over the period, van taxes increased by 14% whilst heavy goods vehicle (HGV) taxes barely changed. This reflected stable numbers of HGVs and a sharp (24%) increase in van numbers, the rise in tax take of the latter being partly offset by lower tax rates.

Cars’ and buses’ taxes fell by 8% and 32% respectively, with both benefiting from reduced fuel duty rates and, in the case of buses, a 26% reduction in fuel consumed. Payments for two-wheeled motor vehicles (TWMVs) fell by just under 6%.

Motoring taxes apart, the public road system is generally free to use, with a few exceptions. In London (TfL, 2020a) and Durham (Durham County Council, 2019), congestion charges are levied – and in 2018/19 these raised approximately £230 million (Durham County Council, 2019; TfL, 2019a), almost entirely from the London charge. In Nottingham, a Workplace Parking Levy raised £10 million in 2018/19 (Nottingham City Council, 2019). In 2018/19 tolls were payable on 19 sections of British roads, of which all, bar one, were river crossings (GOV.UK, 2020). The number of toll roads has reduced significantly in recent years, so that there are now no longer any in Scotland, Wales or Northern Ireland. The annual receipts from these tolled facilities is about £370 million.\(^{15}\)

---

\(^{14}\) Buses includes private hire vehicles and coaches.

\(^{15}\) Author’s estimate.
3.2 Direct rail taxes

Rail operators pay duty on the fuel oil they burn, but this is levied at a lower rate (11.14p/litre) than that which applies to most forms of road transport (HMRC, 2014). Passenger railways used 469 million litres of diesel in 2018/19, and this has fallen slightly over the period (ORR, 2019d). This implies annual fuel duty revenue from passenger rail of about £52 million. For rail freight the corresponding figure is £17 million. As the duty rate has not changed since March 2011 (HMRC, 2019a), the real value of receipts has fallen from £83 million in 2008/9 to £79 million in 2017/18.

The Climate Change Levy applies to most industrial electricity consumption; however, electricity used by trains is exempt (HMRC, 2019b, para 3.3) and, with the Levy standing at 0.583p per kilowatt-hour (HMRC, 2016), with the railways using 4,052 million kilowatt-hours in 2018/19 (ORR, 2019e) this was worth of the order of £23.6 million. Electricity consumption by National Rail for passenger and freight operations increased by 35% between 2008/9 and 2018/19, while TfL’s Underground and rail operations use just over a third as much electricity on top of National Rail’s usage (TfL, 2017b), thus benefiting from this exemption to the tune of about £8 million a year.

3.3 Value Added Tax (VAT)

In addition to specific road user taxes, some transport expenditure is liable to VAT.

For private households, expenditure on purchasing and running motor vehicles in Great Britain amounted to about £84 billion in 2018/19, including VAT. With households spending £34.3 billion on vehicle purchases, the VAT paid would amount to £5.7 billion. Figure 3.3 shows the proceeds of VAT on fuel duty (i.e. an enhancement of a direct motoring tax) paid by all road users, which amounted to £5.4 billion in 2018/19 having grown by 13% in real terms since 2008/9; this increase was the result of the increase in the VAT from 17.5% to 20%.

In addition to purchasing vehicles and fuel, road users also buy other motoring-related goods and services worth £16.5 billion a year, adding £2.7 billion to make up the total of £12 billion VAT derived from motorists buying, running and using their vehicles.

16 Based on ONS (2018; 2020a), Table A1 excluding motor insurance premiums.
Business expenditure on transport is not known, but with transport and storage having an annual turnover of approximately £194 billion in 2018 (ONS, 2020b),17 net VAT receipts from this would run into the billions of pounds sterling annually.

Public passenger transport is generally zero-rated for VAT (HMRC, 2009), which was estimated to cost the Exchequer £4.75 billion in 2015/16 (Pope & Waters, 2016). Zero-rated goods or services pay VAT at 0%, and providers can generally reclaim VAT on any purchases that relate to those sales. This is in contrast to exempt goods or services, where the provider cannot normally reclaim VAT on purchases they make in connection with their sales.

### 3.4 Insurance premium taxes

VAT is not paid on insurance premiums, as there is a separate Insurance Premium Tax (IPT). The standard rate of IPT has been progressively increased from 5% in 2010 to 12% from June 2017 (HMRC, 2017). Motor insurance premiums generated almost £1.2 billion in 2018/19 – double the amount raised in 2009/10 (see Figure 3.4) (ABI, 2019). The sharp increase from 2015/16 was caused mainly by the increases in the rate of IPT, and the levelling off in 2018/19 was a consequence of the stabilisation of the IPT rate in June 2017.

---

17 Excluding financial services.
Figure 3.4: Motor Insurance Premium Tax receipts, 2008/9–2018/19 (2018/19 prices)

Source: Author’s estimate based on ABI (2019) & HMRC (2017), adjusted from UK to GB
4. Financial Support

4.1 Road transport

Private road transport does not receive general financial support. However, there are several classes of vehicles that are exempt from VED: vehicles used by a disabled person, disabled passenger vehicles, mobility scooters, powered wheelchairs and invalid carriages, historic vehicles, electric vehicles, steam vehicles, mowing machines and vehicles used only for agriculture, horticulture and forestry. In 2017 there were 2.28 million crown and exempt vehicles – 6% of all motorised road vehicles (DfT, 2019h).

Other than those supporting local bus operations, direct subsidies for road transport are confined to a few welfare purposes including the Personal Independence Payment (PIP) component of the Disability Benefits, community transport operations and the London Taxicard scheme. The PIP component of the Disability Living Allowance was forecast to be £10.23 billion in 2018/19 (DWP, 2018).

Employer provision of a range of cycling equipment is tax-exempt (DfT, 2011b). It is not known what the value of this exemption amounts to, but it is probably quite small in relation to other transport taxes and subsidies.

Over recent years there have been a number of grants to encourage the purchase of low-emission vehicles. Currently this is for plug-in electric...
vehicles (OLEV, 2020) and will pay for 35% of the purchase price for these vehicles, up to a maximum of £3,000 for vehicles costing no more than £50,000. This, and an earlier scheme (OLEV, 2018) that provided grants for a wider range of low-emission vehicles, has helped increase the number of ultra-low-emission vehicles (ULEVs)\(^{18}\) from around 11,000 at the beginning of 2010 to over 250,000 by the end of 2019 (DfT, 2019i). In addition, VED rates are substantially lower for electric and ULEVs. For the first year of registration this can be of the order of £200 less than for an average internal-combustion family saloon, and in subsequent years up to £145 less (DVLA, 2019a). These VED rate differentials are reflected in the VED receipts for the relevant year.

Through the Office for Low Emission Vehicles, support is being provided for:

- the Electric Vehicle Homecharge Scheme;
- the Workplace Charging Scheme;
- the On-street Residential Chargepoint Scheme (ORCS); and
- The Ultra-Low Emission Taxi Infrastructure Scheme.

Spending to date includes:

- over £700 million in vehicle grant support for ULEV cars;
- over £300 million in grants via Innovate UK channelled into ultra-low-emission technologies; and
- £130 million invested through the Green Bus Fund and the Ultra-Low Emission Bus Scheme.

Collectively, these mean that the Government is investing nearly £1.5 billion between April 2015 and March 2021 to support the uptake of low-emission vehicles.\(^{19}\)

### 4.2 Local buses and community transport

Support for local bus services is described in section 2.4 and illustrated in Figure 2.7. Whilst this has reduced over recent years, it still amounted to almost £2.5 billion in 2018/19.

The DfT announced a fund of £25 million for community transport in 2014, and the Scottish Government a grant of £0.15 million in 2016 (Scottish Government, 2016). In Wales support for community transport is provided by a share of the BSSG along with grants to the Community Transport Association UK (£0.175 million in 2017/18), and by the Rural Community Development Fund (£0.105 million in 2017/18) (Welsh Government, 2018). TfL provided £10.1 million to the London Boroughs to help fund the costs of the London Taxicard scheme (TfL, 2019a) in 2018/19. Older and disabled Londoners also benefit from a Freedom Pass scheme (TfL, 2020c) and individual Borough Community Transport schemes (TfL, 2020b), for which the costs are not available.

\(^{18}\) All vehicles with full electric power or tailpipe emissions less than 75 gCO\(_2\)/km.

\(^{19}\) Communication from the Office for Low Emission Vehicles.
4.3 Railways

Public support for all railways is set out in Figure 2.3 and amounted to £17.8 billion in 2018/19, the recent increase reflecting the high levels of capital spending on HS2 and monies paid as loans to Network Rail (see Figure 2.4). The other large rail subsidies were in respect of TfL’s operations (see Figure 2.5), which have more than halved over the period, falling from £2.79 billion to £1.26 billion.

4.4 Freight

Freight transport is generally operated on a commercial basis, free from public support. There are some limited exceptions, amongst which are the freight grant schemes designed to encourage the use of rail or water transport instead of road. These are the Mode Shift Revenue Support grant scheme and the Waterborne Freight Grant (DfT, 2019j) for England and Wales. A similar scheme is run by Transport Scotland, which has averaged £2.3 million a year over the period, again reducing from £6 million at the outset to £1 million in 2017/18 (Transport Scotland, 2019b). In recent years, virtually all the grants made have been to rail operations (DfT, 2019k) and these have averaged £22 million a year over the period, decreasing from £26 million at the beginning to £17 million in 2018/19 (ORR, 2019a).

Some vans are used for the carriage of goods and so their freight carriage may benefit from ULEV grants. However, vans make up less than 5% of eligible vehicles (DfT, 2019i), and only 30% of van travel is for the collection and/or delivery of goods (Clarke et al., 2014), meaning that the amounts involved will be quite small.
In this section the rates of ‘taxation’ or ‘support’ are estimated for the different modes of travel. As far as possible these take into account the taxes paid, the public financial support received, and the benefits to that mode from public expenditure on supporting infrastructure and services.

5.1 Car travel

Car travel pays substantially more in taxes than the amount by which it benefits from public expenditure on the road system. Figure 5.1 shows the net and gross revenues per kilometre that have been generated from car travel over the period. The gross figure is simply the sum of VED and fuel duty (at 2018/19 prices) divided by the vehicle-kilometres and occupant-kilometres by car. The net figures deduct from this an allowance for the amount of public expenditure (both current and capital) on the road network. This is the total spend factored by the proportion of traffic represented by cars and taking into account the relative ‘traffic weight’ (Passenger Car Units) of the different vehicle types (see TfL, 2010b) (e.g. cars and vans = 1, buses and coaches = 2 and HGVs = 2.3). This is an indicative value, not a scientifically based estimate, as some expenditure on roads is unrelated
to motorised traffic flows (e.g. that from environmental degradation and facilities for pedestrians and cyclists etc.), and should thus be treated with caution. Moreover, the higher level of spending on trunk roads means that the net taxation rate for lorries is low, as lorry traffic is concentrated on the major road network where spending levels are much higher than on the rest of the road system.

**Figure 5.1: Gross and net car travel taxation rates, 2008/9–2018/19 (2018/19 prices)**

Both gross and net taxation rates have fallen by around 10% over the period (3.9p/pkm to 3.5p/pkm, and 2.6p/pkm to 2.4p/pkm), owing mainly to a combination of falling tax revenues (−8%) and traffic growth (−3%).

### 5.2 Goods vehicle travel

Figure 5.2 shows the equivalent revenues per vkm generated by goods vehicles. Tax rates for vans have also fallen, but, at about −6% (from 6.7p/vkm to 6.2p/vkm gross and from 4.7p/vkm to 4.5p/vkm net), less so than for cars, as fuel consumption has not improved to the same extent, with the van parc switch to diesel being much less than for cars – as most van traffic was already by means of diesel-powered vehicles in 2008/9 (BEIS, 2019). Lorries did not experience an increase in diesellisation and their average weights increased by 15% over the period; consequently, despite slower than average traffic growth, their share of fuel duty grew by 11%, and their gross tax rates increased from 16.9p/(vkm) to 17.6p/vkm (+4%) and net rates from 12.6p/vkm to 13.7p/vkm (+9%).

20 92.5% of fuel burned.
21 Author’s estimate based on DfT (2019).
Local bus travel

Figure 5.3 shows trends in gross and net support rate for local buses, per passenger-kilometre (pkm). There are two sets of data: one for all support (including concessionary fares), and the other for operator support (simply direct support plus BSOG/BSSG). Since in the case of buses we are dealing with public support, rather than taxation, the definitions of gross and net are the other way round to those in the previous sections. The gross figures include both grants and a share of the public expenditure on roads, whilst the net figures deduct the sums paid back to government in fuel duty and VED. The production of Figures 5.3 and 5.4 has involved a fair degree of estimation, as there is no published data on a number of factors, such as distance travelled by different sizes of buses and ridership of non-local buses; the precise numbers should therefore be treated with some caution, although the trends shown are robust.

All indicators show a downward trend over the period, with operator subsidies falling more rapidly (by about a third) than total support (about a fifth) as a result of concessionary grants holding up better than direct support – particularly so in the case of BSOG/BSSG, which almost halved over the period. Net trends were also influenced by the significant reduction in fuel duty payments resulting from the freeze in the rate since March 2011 and the reduction in fuel consumed over the period resulting from less bus travel (bus kilometres 24% down) (DfT, 2019o). Gross support fell from 11.8p/pkm to 9.3p/pkm (21%) and net support from
8.2p/km to 6.7p/km (19%). It should be recognised that most local bus services (86% of services outside Greater London in 2017/18 (DfT, 2019p)) are operated without direct support, so the subsidy rate for supported services will be substantially higher than that shown in Figure 5.3.

**Figure 5.3: Local bus travel support rates, 2008/9–2018/19 (2018/19 prices)**

![Figure 5.3: Local bus travel support rates, 2008/9–2018/19 (2018/19 prices)](image)

Source: Author’s estimate based on figures 2.7 & 3.2, DfT (2019o,p,q,r,s), DVLA (2019a) and TfL (2010b).
5.4 Other bus and coach travel

**Figure 5.4: Other bus and coach taxation rates, 2008/9–2018/19 (2018/19 prices)**

Source: Author’s estimate based on figures 2.7 & 3.2, DfT (2019o,p,q,r,s), DVLA (2019a) and TfL (2010b).

Other (non-local) bus operations are generally carried out on a commercial basis, with the exception of grants for community bus services – which often benefit also from voluntary support (Community Transport Association, 2019). As there is no comprehensive data on financial support for community bus services in Britain, the trends shown in Figure 5.4, which shows the revenues per pkm generated by other bus and coach services, exclude this support and thus to some extent overestimate the net revenue from other kinds of bus and coach operations.

The tax rates on non-local bus travel have fallen slightly over the period, (from 3.3p/pkm to 2.9p/pkm gross and from 2.8p/pkm to 2.6p/pkm net, also the absolute amounts paid have fallen, which reflects reductions in the volume of passenger and vehicle travel. It is worth noting that some of the scheduled coach travel on these services is similar in character to intercity rail travel, but produces tax revenues; this stands in contrast to much rail travel, which receives subsidies.

---

22 A comparison of DfT (2019t,u) suggests a two fifths reduction between 2008/09 and 2018/19, but this is probably an overestimate.
5.5 National Rail travel

Figure 5.5: National Rail support rates, 2008/9–2018/19 (2018/19 prices)

![Graph showing the trend of National Rail support rates from 2008/9 to 2018/19.]

Source: ORR (2019a,c,d) and HMRC (2019b).

Figure 5.5 shows the downward trend in National Rail passenger support rates during the period, with a 42% reduction in direct operating support over the period from 10.9p/pkm to 6.3p/pkm. This is based on central and local government support to franchised operators and direct payments to Network Rail, less the flow of fuel duty payments back to government. ‘Total’ support includes expenditure on Crossrail, HS2 and miscellaneous items such as the British Transport Police and Transport Focus. These total support rates also fell, but by only 11% over the period from 11.7p/pkm to 10.5p/pkm as a result of high levels of spending on HS2 since 2016/17. If loans to Network Rail in the years from 2014/15 were to be included, this would almost double the support rate (from 9.5p/pkm to 18.9p/pkm) over the five-year period from 2013/14 to 2018/19, and give an increase of 61% over the ‘total’ support rate in 2008/9.
Figure 5.6a: Train operating company support rates (high subsidy), 2008/9–2018/19 (2018/19 prices)

Source: ORR (2019b).

Figure 5.6b: Train operating company support/premium rates (low or no subsidy), 2008/9–2018/19 (2018/19 prices)

Source: ORR (2019b).
Figures 5.6a (high subsidy) and 5.6b (low/no subsidy) illustrate the wide variations in support/premium rates between the different passenger rail franchises, with the Welsh, Scottish and northern services generally requiring higher subsidies than those focused on London and the South East, and intercity services. These subsidy rates are based on franchise payments and a share of the benefits of the direct grants made towards the national rail infrastructure. Though not a central rail franchise, Merseyrail is also shown in Figure 5.6a. All franchises have seen a reduction/elimination in/of financial support rates or, in the case of East Coast an increase in its rate of surplus. The overall picture is of a reduction of just under 40% with C2C turning a 7p/pkm loss into a 1.4p/pkm surplus and South West, West Coast, Anglia, Chiltern, TransPennine and Cross Country seeing a 60%+ reduction and Wales, Northern, Merseyrail, Southeastern and ScotRail experiencing less than a 40% improvement. These improvements in financial performance reflect the fact that rail fares grew more than twice as fast as the CPI over this period (DfT, 2019v), while average train loadings increased by 23% (DfT, 2019w).

5.6 Other railways

Figure 5.7: London Underground support/surplus rates, 2008/9–2018/19 (2018/19 prices)


In addition to the national railways, there are several other passenger systems comprising the London and Glasgow underground railways, nine light rail systems, several open-access operators (including Heathrow Express and Eurostar), various private rail tour operators

23 The term “national” is meant as including both franchised and public concession operations.
and dozens of heritage railways. Most of these trade as commercial operations, but the underground railways and light rail/tram systems receive public financial support. London dominates these, with 99%+ of underground travel (DfT, 2019v,z) and 43% of light rail/tram travel (DfT, 2019v). Information on all light rail finances is not readily available, but these undoubtedly require support – Croydon Tramlink, which is the most densely trafficked tram system, required almost £30 million of financial assistance in 2018/19 (TfL, 2019a).

Figure 5.7 illustrates how the finances of London Underground have moved over the period. Day-to-day operating losses at the beginning of the period have been turned into a significant operating surplus. This peaked at 5p/pkm in 2012/13, fell back to 0.7p/pkm in 2017/18, and then recovered to 3.6p/pkm in 2018/19. If capital spending is taken into account, then the operation ran at a loss for the whole of the period, albeit a much smaller one by the end than at the outset. Excepting a pronounced spike in financial assistance in 2011/12, subsidies have steadily reduced over the period, from 21.5p/pkm to 7.1p/pkm.

Figure 5.8: Support rates for other London railways, 2008/9–2018/19 (2018/19 prices)


TfL is also responsible for the DLR, the Croydon Tramlink and London Overground, which operates six surface rail services (TfL, 2019b). Figure 5.8 shows how support rates to these have changed over the period. The dramatic fall from an average of 92p/pkm in 2008/09 to 19p/pkm by 2018/19 in rail subsidy rates reflects a large (2.8-fold (TfL, 2019c, figure 11.9)) increase in ridership, outweighing reductions in support – although this fell by almost a half over the period. DLR subsidy rates also fell dramatically during the period (apart from a spike in 2012/13) from 81p/pkm in 2008/09 to 5.8p/pkm in 2018/19, as a consequence of
a doubling in ridership more than offsetting a fall in financial assistance following the winding down of a major programme of capital works.

On the other hand, tram subsidy rates rose significantly (from 7.7p/pkm to 19.2p/pkm) over the period following only limited increases in ridership and increases in the level of capital spending (Mayor of London, 2012), which allowed for a 50% increase in services over the period (DfT, 2019y).

5.7 Freight

Rail freight pays fuel duty (Rail Freight Group, 2017), which has amounted to a total of between £22 million and £25 million annually over the period (HMRC, 2019b; ORR, 2019e). It also receives Mode Shift Revenue Support grants in recognition of its abstraction of lorry traffic from congested roads. Rail freight grants ranged from £17 million to £26 million a year; this meant that the financial balance was close to neutral (ORR, 2019a). Whilst rail freight pays track access charges for some bulk commodities, this is at a marginal rate and means that there is a measure of public subsidy, but how much is difficult to establish. In 2018/19 Network Rail received £70 million from freight operations (Network Rail, 2019b), which carried 17.4 billion tonne-kilometres (tkms) of freight (ORR, 2019f). This amounts to an average charge rate of just 0.4p/tkm.

Road freight taxes exceeded their share of spending on the road network to the extent of 2.5p/tkm in 2018/19 – a slight fall of 3% since 2008/9.
6. Conclusions

6.1 Expenditure

Transport taxes and expenditure have important economic, social and environmental implications. Most land transport infrastructure is publicly provided and operated; and transport taxes are the fifth largest source of national tax receipts. The last ten years has seen marked shifts in patterns of public spending on transport and a reversal in a long-established trend of increases in transport taxes.

Public expenditure on domestic transport has grown by 30% in real terms over the period 2008/9–2018/19 (but not on a like-for-like basis), initially falling away with the introduction of a period of austerity following the 2008/9 recession, then growing by almost a half between 2012/13 and 2017/18. However, this growth has not been uniform across the different levels of government, or the several modes of transport. Spending by central government (including its agencies) has grown strongly (by 64%), especially since 2014/15, whilst local government spending has fallen by 13%. Hardest hit has been routine spending by local government, which more than halved over the period.

Despite this overall growth, spending on roads and local public transport fell by 8% and 43% respectively – this being more than offset by a doubling of public expenditure on rail. However, not all this growth amounts to a real increase
in spending on rail. The reclassification of Network Rail’s spending as ‘public’ rather than ‘private’ in late 2014 burdened the public accounts with an additional £6 billion a year or so. If allowance is made for this, spending on rail grew by just a fifth, and overall ‘public’ expenditure on transport was about 7% greater at the end of the period as at the beginning.

Whilst capital spending on roads increased at both central and local levels (especially central), current spending reduced substantially with the central capital/current balance changing from 46/54 at the beginning of the period to 72/28 at the end. For local spending the change was even more marked – from 60/40 to 85/15 meaning that current spending on local roads fell by 71%.

Reclassification of Network Rail expenditure apart, much of the growth in public expenditure on national railways was a result of government financial support for Crossrail and (HS2). Whilst Crossrail support peaked in 2012/13–2015/16, HS2 expenditure had built up from £0.49 billion in 2015/16 to £2.6 billion a year in 2018/19 – exceeding all expenditure on local bus services. Spending on core national rail operations reduced by about a fifth as the balance of costs of running the railways was shifted from taxpayers to users.

London’s railways are also a major beneficiary of public expenditure, and this spending also fell, dropping by 55% during the period. The lion’s share of this (two thirds) was in respect of the London Underground, and over the period £3.2 billion pertained to TfL’s share of Crossrail expenditure. By 2018/19 the London Underground was making a respectable operating surplus.

The greatest reduction in spending on local public transport was on capital projects, collapsing from a high of £1.2 billion at its peak in 2009/10 to little more than a tenth of that figure in 2018/19. Current spending fell by rather less (36%), much of this taking the form of reduced support for local bus operations and, to a lesser extent, concessionary fares. Bus operations support and procurement of socially necessary services) was also reduced by 39% over the period, whilst support for concessionary travel, which is driven largely by concessionaire demand levels, fell by just 12%.

### 6.2 Taxation

Direct transport taxes (fuel duty and Vehicle Excise Duty (VED)) currently yield approximately £33.6 billion a year – 5% of all central tax and National Insurance contributions, and about a £1.9 billion a year more than public expenditure on all forms of domestic transport. Of this, cars pay approximately £22 billion, vans paid £5.1 billion, lorries £4.8 billion, buses £0.8 billion and rail £0.08 billion. In addition, road users pay VAT on fuel duty amounting to a further £5.4 billion as well as households spending about £9 billion a year on buying and maintaining their vehicles and an unknown sum by businesses.

Road use tax receipts fell by 5% between 2008/9 and 2018/19 despite a 13% increase in eligible vehicle numbers and a 6% increase in road traffic. The freezing of fuel duty prices in March 2011, along with improving vehicle fuel economy, reduced fuel duty receipts by £1.7 billion over the period, whereas they would have instead risen by around £1.3 billion (a
£3 billion difference) had fuel duty been raised in line with inflation. The restructuring of VED rates, combined with a higher proportion of vehicles emitting lower levels of CO₂, resulted in a reduction in real VED rates of 14%, and a consequent 3% reduction in receipts, despite the increase in the road vehicle parc.

Rail operations pay about £75 million in duty on fuel oils, but are excused the Climate Change Levy on electricity used by trains (HMRC, 2019c). Fuel oil consumption fell by 9% over the 11-year period, but electricity consumption increased by 35%.

### 6.3 Financial support

Support for private road transport is quite selective. There is financial support to help personal mobility for disabled people, the Personal Independence Payment component of the Disability Living Allowance being £10.2 billion in 2018/19. Further, vehicles providing transport for disabled people, as well as emergency, crown, historic, agricultural and some specialist road vehicles, are all exempt for VED. Support to promote the uptake of ultra-low-emission vehicles (ULEVs) has been reduced recently, but has been running at of the order of £0.25 billion a year. Goods transport by road receives no subsidies, with the exception of grants to promote the take up of ULEV vans – but as these formed just 3% of grant-eligible vehicles in 2018, the total LGV grants since 2012 will have totalled less than £20 million.

Local bus services receive support through Bus Service Operators Grant (BSOG) and, in Wales, the Bus Services Support Grant (BSSG), and through funding for the procurement of socially necessary services not provided on a commercial basis. Elderly and disabled people benefit from concessions through a statutory national scheme in England, with similar schemes in place in Scotland and Wales; some local authorities also top up these national schemes. In 2018/19, BSOG/BSSG support amounted to just under £0.3 billion, direct support stood at £0.93 billion, and the cost of concessions was £1.25 billion. These subsidies have reduced significantly over the period – by 28% overall, with BSOG/BSSG and service subsidies being particularly badly hit, seeing reductions of 49% and 35% respectively. There is also government support for local community transport, including the London Taxicard scheme, but the sums involved are relatively small compared to support for local bus services.

The largest amount of public subsidy goes to the railways (including London Underground): this has doubled over the period to £17.8 billion in 2017/18. However, this includes Network Rail loans since December 2013 (£5.6 billion in 2018/19) and expenditure on Crossrail and HS2 (the latter standing at £2.6 billion in 2018/19). Support of National Rail operations fell from approximately £5.57 billion to £4.28 billion over the period as the share of costs paid by passengers was increased. London’s railways also saw a reduction in annual financial assistance – of about £1.5 billion (55%) over the period, although again some rearrangements of financing created spikes in support for London Underground in 2011/12 and for the Docklands Light Railway in 2012/13.
6.4 Taxation and subsidy rates

Taxation and subsidy rates have changed significantly over the period. Taxes paid for car travel have fallen from 3.9p/passenger-kilometre (pkm) to 3.5p/pkm (9%), and, if public spending on roads is taken into account, the fall in net tax take is from 2.6p/pkm to 2.4p/pkm (9%). For heavy goods vehicles (HGVs), gross tax rates increased from 16.9p/vehicle-kilometre (vkm) to 17.6p/vkm (4%) and net rates from 12.6p/vkm to 13.7p/vkm (9%). Vans, on the other hand, saw a small reduction – from 6.7p/vkm to 6.2p/vkm (7%) gross and from 4.7p/vkm to 4.5p/vkm (5%) net.

Overall local bus support rates also fell during the period, with the large reduction in operator subsidies being partly offset by reductions in fuel duty payments. As a result, gross support fell from 11.8p/pkm to 9.3p/pkm (21%) and net support from 8.2p/pkm to 6.7p/pkm (19%). Other bus and coach services receive limited (unquantified) government support for community transport, but also contribute VED and fuel duty, which fell from 3.3p/pkm to 2.9p/pkm (12%) gross and from 2.8p/pkm to 2.6p/pkm (8%) net.

The estimation of rail support/taxation rates is rather more complex because of the range of types of operations in existence, and how certain elements of expenditure should be treated. If all public expenditure is allocated to contemporary traffic levels, support rates averaged 16.4p/pkm over the period, ranging from a minimum of 13p/pkm in 2014/15 to a maximum of 22p/pkm in 2018/19, this recent surge reflecting the reclassification of Network Rail’s loans and the build-up of HS2 spending. A more meaningful treatment of National Rail’s passenger travel support rates is the direct subsidy rates shown in Figure 5.5. These fell over the period from 10.9p/pkm to 6.3p/pkm (42%); when other costs (but not Network Rail loans) are included, the drop is rather less, from 11.7p/pkm to 10.5p/pkm (11%), reflecting the fact that savings in routine operations are being offset by higher rates of investment.

London’s Underground has also seen a reduction in support rates; indeed, day-to-day operations moved from being loss-making in 2009/10 to making a significant surplus in 2011/12, which subsequently reduced but has now recovered part of that drop. The result over the period was a that an 8.2p/pkm subsidy was turned into a 3.6p/pkm surplus. If other costs are included, the London Underground continued to need financial support, but at a rate reducing from 21.5p/pkm to 7.1p/pkm (−67%) – see Figure 6.1. TfL’s other rail operations also dramatically improved their overall financial performance over the period, from an average of 92p/pkm to 19p/pkm (−80%). Amongst others, a reduction in DLR investment and a trebling in surface rail traffic were important factors in these improvements.
Figure 6.1 illustrates the trends in support and tax rates for passenger travel. These are based simply on taxes paid and subsidies received, with no netting off of the benefits from roads expenditure. Positive values represent flows from the public purse, and negative values flows to the public purse. Some of the estimates are approximate (notably for ‘Other buses’) and so should be treated with caution. Private road transport contributes to the Exchequer, and this has been reducing slightly over the period. On the other hand, rail and local bus services require taxpayer support, but again this has been declining. In particular London’s rail systems (the 2011/12 spike apart) have improved their financial performance substantially.

On this basis Local Buses and National Rail rates have followed similar gradually downward trajectories over most of the period with London Rail joining them from 2012/13 onwards. However, the recent growth in capital spending has caused a recent increase in National Rail rates even discounting the cost of loans to Network Rail. In 2018/19 passengers paid £10.3 billion towards the cost of the national railways, whilst public expenditure on direct operations amounted to £4.3 billion, with a further £8.4 billion spent on other forms of support, including investment in HS2 and loans to Network Rail.

Rail freight subsidies are largely offset by fuel duty paid, so direct rail freight subsidy rates are negligible; however, exemption from the Climate Change Levy and favourable track access charges means that there is some indirect subsidy – but exactly how much is difficult to estimate. Road freight by HGV pays net taxes at a rate of 2.5p/tonne-kilometre (tkm) (3.2p/ tkm gross), a figure that has changed little over the period.
Over the period the excess of transport direct tax receipts over public expenditure has shrunk, at constant prices, from almost £11 billion/year to roundly £2 billion/year. This has been driven on the one hand by real reductions in motoring taxes and one the other by a doubling of public expenditure on the railways. In the absence of an overhaul of transport taxes and with the prospect of hefty increases in investment in the national railways, and to a lesser extent trunk roads, there is a real prospect that public spending on land transport will exceed tax receipts in the not too distant future.
References


HMRC (HM Revenue & Customs) (2005). Outturn and Net Receipts from Former HM Revenue and Customs, Table 1.2a. Accessed 23 February 2020 from https://old.datahub.io/dataset/0905501e-1d3a-4cad-b21b-d36cdb930c73/resource/465b5a9f-a156-48fa-bdf3-34472473e5cf


The Royal Automobile Club Foundation for Motoring Ltd is a transport policy and research organisation which explores the economic, mobility, safety and environmental issues relating to roads and their users. The Foundation publishes independent and authoritative research with which it promotes informed debate and advocates policy in the interest of the responsible motorist.

RAC Foundation
89–91 Pall Mall
London
SW1Y 5HS

Tel no: 020 7747 3445
www.racfoundation.org

Registered Charity No. 1002705
April 2020 © Copyright Royal Automobile Club Foundation for Motoring Ltd