



## Taxes, Subsidies and Investment



**Royal Automobile Club Foundation**

**Motoring Towards 2050 – Roads and Reality  
Background Paper No.8**

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February 2009**

In December 2007 the RAC Foundation published its report on 'Roads and Reality' along with a supporting Technical Report. As part of this exercise a series of background papers was produced and these are to be published during the course of 2008/09. This is the eighth of the series.

The Royal Automobile Club Foundation for Motoring Limited is a charity established to promote the environment, economic, mobility and safety issues relating to the use of motor vehicles.

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## Introduction

Substantial sums of money change hands between the operators of the several components of the transport system and government. These have significant implications for public expenditure and also the prices charged to users. This paper looks at the more important of these flows and considers their likely effects.

## Taxes Paid By Transport Users

Transport users pay some direct taxes on transport activities and pay 'non transport specific' taxes that arise from transport use as well as general taxes such as income tax and corporation tax. Transport taxes comprise Fuel Duty and Vehicle Excise Duty (VED). Other tax revenues generated directly by transport activity include Value Added Tax (VAT), Company Car Tax and Motor Insurance Premium tax.

<b>Fuel Duty</b>	
Currently fuel duty is charged at <sup>1</sup> :	
Ultra low sulphur diesel	48.35p/litre
Sulphur free diesel	48.35p.litre
Diesel	54.68p/litre
Biodiesel	28.35p/litre
Ultra low sulphur petrol	48.35p/litre
Sulphur free petrol	48.35p/litre
Unleaded petrol	51.52p/litre
LPG/CNG	10.81p/kg
This produced a total yield of £28bn in 2007/08: <sup>1</sup>	

Most road users pay fuel duty but local bus services and some longer distance bus/coach operations receive Bus Service Operator Grants (formerly Fuel Duty Rebate) based on the amount and type of fuel they use. However these do not cover the entire amount of fuel duty they pay. Eligible services are local (i.e. in a specific geographic area) and have regular, known stops, which are published in advance. They must have 50% or more of the seats available to the general public to purchase tickets on demand and the fares must not be a deterrent to use by the general public. Currently rebates in England are<sup>1</sup>:

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<sup>1</sup> Information from DfT BSOG Group 20<sup>th</sup> Non 2008 (0207 944 8588).

Ultra low sulphur diesel	41.21p/litre
Sulphur free diesel	41.21p.litre
Diesel	41.21p/litre
Biodiesel	28.35p/litre
Ultra low sulphur petrol	38.83p/litre
Sulphur free petrol	38.83p/litre
Unleaded petrol	38.83p/litre
LPG/CNG	13.70p/kg

Most buses are diesel powered and the overwhelming majority run on ultra low sulphur spirit, so the net fuel duty payment rates are between 7.14p and 13.47p/litre but averaging much closer to the lower of these two figures. Bus Service Operators' Grants totalled £467m in 2005/06<sup>2</sup>. With rebates amounting to about 80% of the duty, the payment to the Exchequer from eligible bus services will have been about £125m. BSOG is a devolved power; there are different rates of grant in Scotland, Wales and Northern Ireland. There is no automatic link between a change in the level of duty and the amounts that are paid through the BSOG regime, although it has been recent practice to up-rate BSOG to reflect changes in fuel duty rates. It is proposed that the BSOG system is changed to encourage the use of more fuel-efficient buses in future. Starting on 1st April 2010 BSOG rates will only be up-rated for those operators who have achieved an improvement in fuel efficiency equivalent to 3% per annum for each of the two previous years<sup>3</sup>.

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<sup>2</sup> Public Transport Statistics Bulletin GB: 2008 Edition, tables F.

<sup>3</sup> Changes to Bus Service Operators Grants, December 2008.

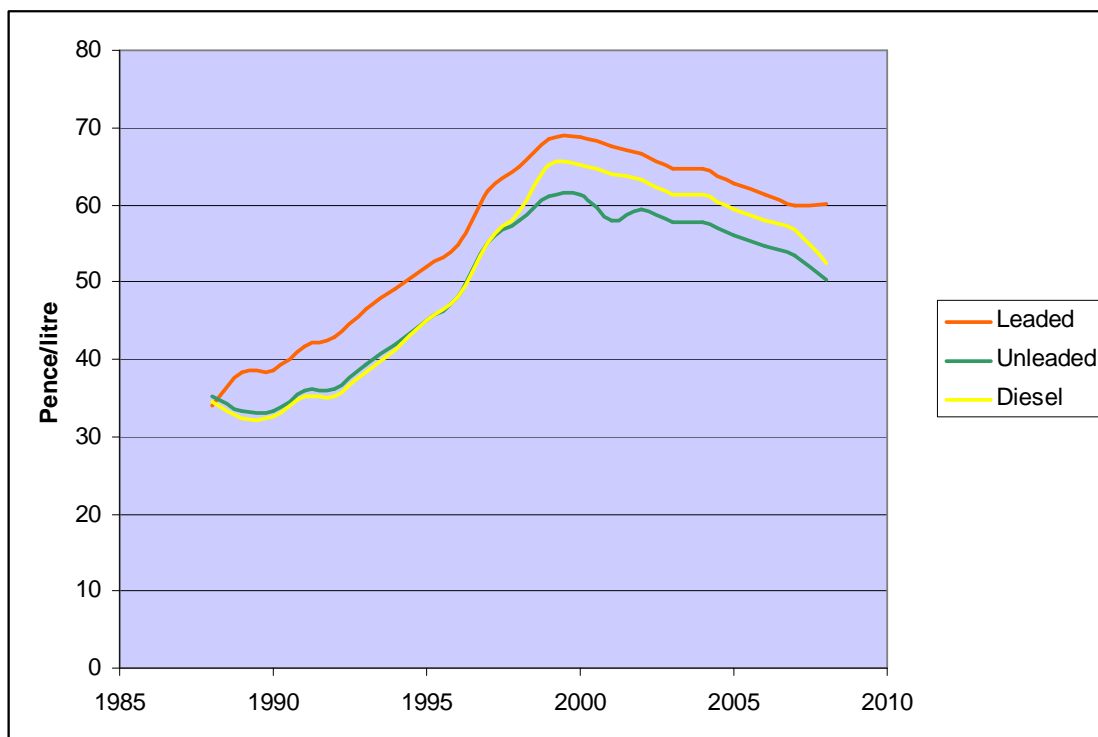


Figure 1: Fuel Duty Rates 1988 to 2008 (2007/2008 prices)<sup>4</sup>

The fuel currently used by the UK rail industry for diesel traction is Duty Rebated A2 Gas Oil, which is set at a rate of 10.1p/litre (as of 1st December 2008). In 2006/07 the national railways consumed 683m litres of diesel fuel<sup>5</sup>. With a differential duty rate of about 30p/litre this means that the duty saved by not paying the rate for cars and lorries was about £200m.

Whilst aviation kerosene is duty free, aviation gasoline has a duty of 30.03p/litre. The great majority of domestic and international flights are operated by kerosene fuelled aircraft.

Long distance Bus and Coach Services, along with their specific infrastructure (e.g. coach stations) are operated as commercial ventures and consequently do not receive any government subsidy, other than for the relatively few services which are eligible for BSOG. Long distance bus services pay fuel duty and vehicle excise duties and so contribute to the sums for road transport included in figure 5. Where services provide reduced fares for the elderly and people with disabilities, a form of BSOG is payable.

<sup>4</sup> Source. Hydrocarbon Oils: Historic Duty Rates

<sup>5</sup> National Rail Trends Yearbook 2007/08, table 9.1.

Non-local bus services cover about 54% of the kilometrage of local bus services<sup>6</sup> and can be expected to have lower fuel consumption, as they operate more on inter urban roads and have less frequent stops. On this basis it would appear that they would contribute about £150m a year in fuel duty.

Figure 1 illustrates what has happened to fuel duty rates over the last twenty years. After allowing for inflation, duties increased sharply during the 1990s but have been falling in real terms since. Fuel duties are planned to increase by 1.84p/litre on 1st April 2009 and 0.5p/litre above indexation on 1st April 2010<sup>7</sup>.

### Vehicle Excise Duty

The amounts of VED paid in 2006/07 by vehicle type are shown in table 1.

Type of Vehicle	Number in Parc (thousands)	VED Revenue (millions)	Average VED Rate (£s/vehicle)
Car & Vans	29,856	£4,778	£160
Motorcycle	1,097	£51	£46.50
Bus/Coach	107	£30	£280
Lorry	444	£296	£667
Others	2,095	£64	£30.50
All	33,599	£5,220	£155

Table 1: Vehicle Excise Duty 2006/07<sup>8</sup>

This tax has to be paid periodically by motorised vehicles<sup>9</sup>, which are operated on public roads, irrespective of the distance they are driven. The basis for this tax has changed over the years from, prior to 1947, a 'horsepower tax' based on a vehicle engine's piston face area<sup>10</sup> to a flat rate scheme and then to the current scheme for cars and light vehicles, based on estimated CO<sub>2</sub> emission rates. Cars emitting less than 100gms CO<sub>2</sub>/km pay nothing whilst those emitting more than 225gms CO<sub>2</sub>/km pay £400/year – more than a single decked bus. Motorcycles pay between £15 and £66, depending on engine size.

The VED scale for cars is to be changed on 1<sup>st</sup> April 2009 to comprise thirteen bands. These along with the rates to be charged are shown in table 3. The standard rates are for all ages of vehicle except, in 2010/11 those bought during that tax year.

<sup>6</sup> BPTSG 2008 Annex A table 4.

<sup>7</sup> Pre-Budget Report 2008, para 7.40.

<sup>8</sup> Source: Transport Statistics Great Britain 2008, table 7.15.

<sup>9</sup> Excluding cars more than 25 years old.

<sup>10</sup> Based on a formula developed by the RAC in 1906 ( $hp = D^2n/2.5$ , where D = bore in inches and n = number of cylinders). This favoured long stroke engines and consequently inhibited the development of more efficient 'square bore' engines.

The higher first year rate is designed to act as a disincentive to purchase high CO<sub>2</sub> emitting vehicles. It is estimated that these changes will reduce VED receipts by about £½bn a year below what they would otherwise have been, by 2010/11<sup>11</sup>.

BAND	CO <sub>2</sub> /km (gms)	2008/09 RATE	2009/10 RATE	2010/11 RATE	2010/11 1 <sup>st</sup> YEAR RATE
A	<100	£0	£0	£0	£0
B	101 – 110	£35	£35	£35	£0
C	111 – 120	£35	£35	£35	£0
D	121 – 130	£120	£120	£120	£0
E	131 – 140	£120	£120	£120	£110
F	141 – 150	£120	£125	£125	£125
G	151 - 165	£145	£150	£155	£155
H	166 – 175	£170	£175	£180	£250
I	176 – 185	£170	£175	£200	£300
J	186 – 200	£210	£215	£235	£425
K*	201 – 225	£210	£215	£245	£550
L	226 – 225	£400	£405	£425	£750
M	>225	£400	£405	£435	£950

Table 2: VED Rated for Petrol & Diesel Engine Cars\* 2008/09 – 2010/2011<sup>12</sup>

\* Registered on or after March 2001.

Vans pay either £120 or £180/year depending on how 'clean' their exhaust emissions are. Buses pay between £160 and £500/year depending on their size and emission performance and lorries pay between £160 and £1,200/year depending on their size and emission characteristics.

Buses pay VED at the rates shown in table 3. These rates are rather higher than an equivalent HGV (e.g., 7½ tonne – 15 tonne two axeled lorry, which is broadly equivalent to a large bus, pays £200 a year or £160 at the reduced pollution rate).

<sup>11</sup> Pre-Budget Report table 1.2.

<sup>12</sup> Source: Pre-Budget Report 2008, table 7.1.

<sup>13</sup> Source: Rates of Excise Duty V149.

Seating Capacity	Annual Rate	Annual Rate (reduced pollution)
10 -17	£165	£165
18 – 36	£220	£165
37 – 61	£330	£165
62 and over	£500	£165

Table 3: Bus Twelve Monthly VED Rates from 31<sup>st</sup> March 2008<sup>13</sup>

The trend in VED rates is shown in figure 2. Rail vehicles do not pay VED even where they use the highway as part of their operations.

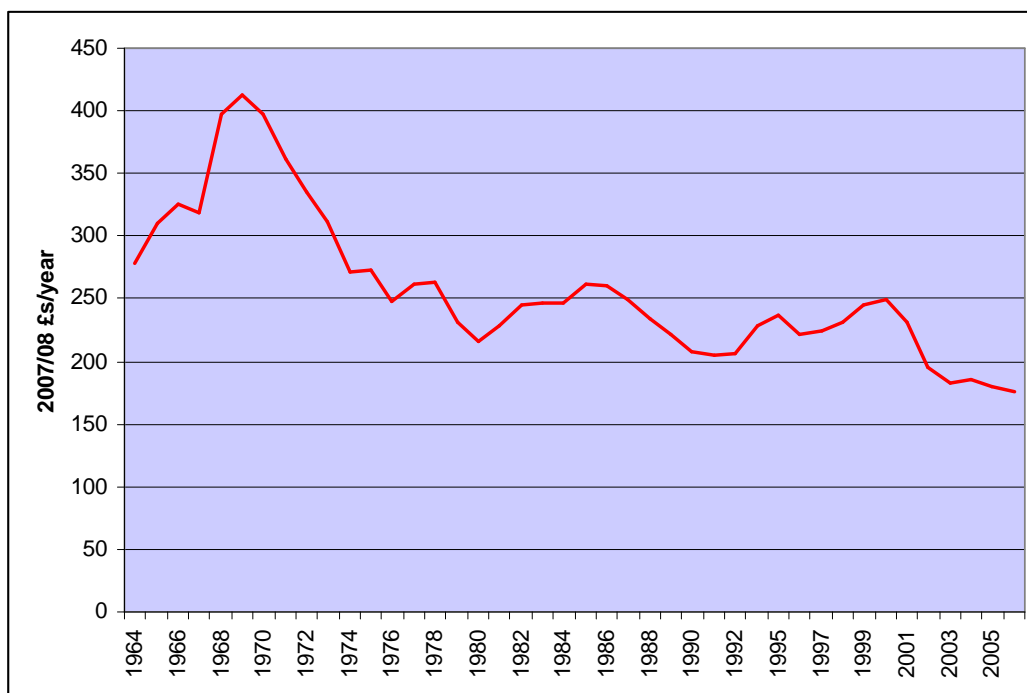


Figure 2: VED Rates (weighted average at 2007/08 prices) 1964 - 2006<sup>14</sup>

### Car tax

Between 1973 and 1990 there was a tax specifically on the purchase of cars. This yielded under £1bn a year on introduction (2007/08 prices) and peaked at £2½bn in 1989 shortly before it was abolished.

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<sup>14</sup> Sources; TSGBs 1964-74 to 2008



## Tends in Direct Motoring Taxes

Figure 3 shows how the proceeds from specific motoring taxes have grown since 1964. In total they have almost trebled and over this 43-year period have produced £870bn of revenue at 2007/08 prices.

The increase since 1964 has been as a result of both increased car ownership and use and higher taxation rates. When fuel taxes were introduced in 1909 they comprised 21% of the sale price and they were at much the same level in 1930 having ranged between 12% and 30% over the intervening two decades. Throughout the 1930s fuel taxes made up about 45% of the pump price but by the 1950s this had grown to 55%. By the late 1960s taxes exceeded 60% but fell back again to below 50% by 1980. Since then the tax take steadily increased, accelerated by the fuel duty escalator policies of the Major and subsequently Blair Government to top 80% in 2000 when the escalator was abandoned.

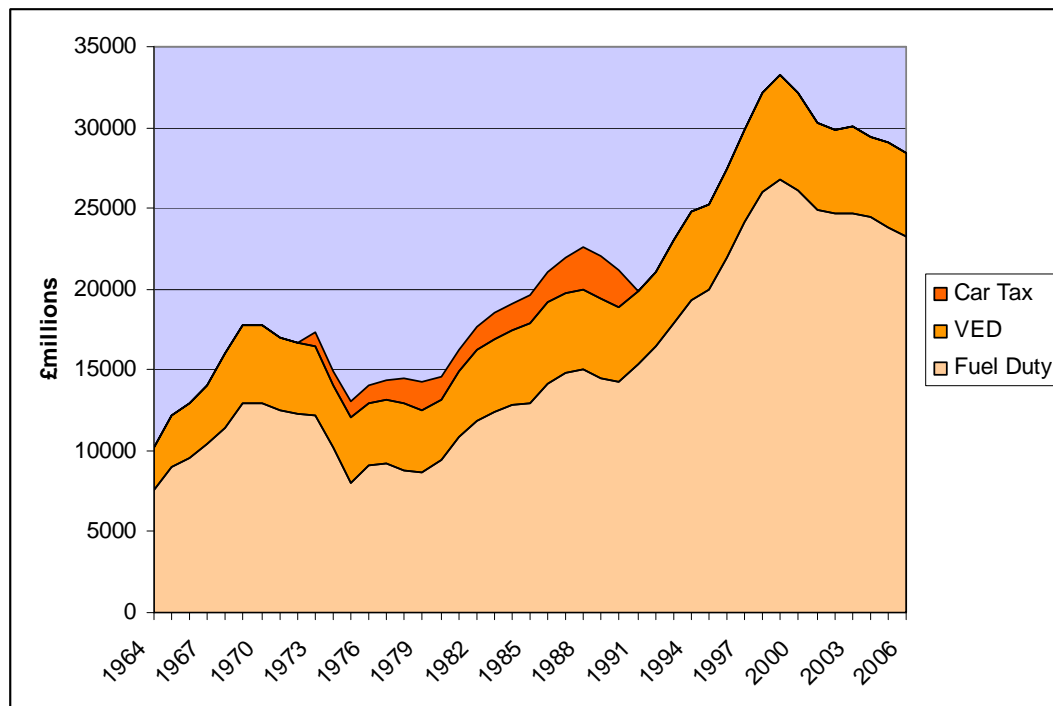


Figure 3: Road User Tax Receipts 1964 – 2005/06 (2007/08 price levels)<sup>15</sup>

## Other Taxes Paid on Motoring Expenditure

In addition to Fuel Duty, motorists pay VAT on fuel and other motoring products at the standard rate of 17.5% -reduced to 15% from 1<sup>st</sup> December 2008 'till 31<sup>st</sup> December 2009.

<sup>15</sup> Sources: Various including TSGBs 1964 -1974 to 2008.

This standard rate is up 15% from 1991 when the Community Charge was replaced by the Council Tax. This tax is applied to both the untaxed price of fuel and the fuel duty, so if the basic price of fuel is 50p/litre and the duty is also 50p/litre VAT is added at 17½p/litre giving an overall tax rate of 135% of the price net of taxes or 57½% of the gross price.

The last time a figure for VAT on motoring expenditure was published was for 1990 and amounted to £5,330m<sup>16</sup> (£8¼bn at 2006/07 prices). Figure 4 shows estimated recent trends in VAT on motoring paid by households (£11.9bn in 2006/07). Companies will also pay VAT in addition to this but much of this will be reclaimable. The Road Users Association gives a higher estimate of £13.2bn for all VAT on motoring goods and services 2007<sup>17</sup> - presumably including net VAT paid by firms.

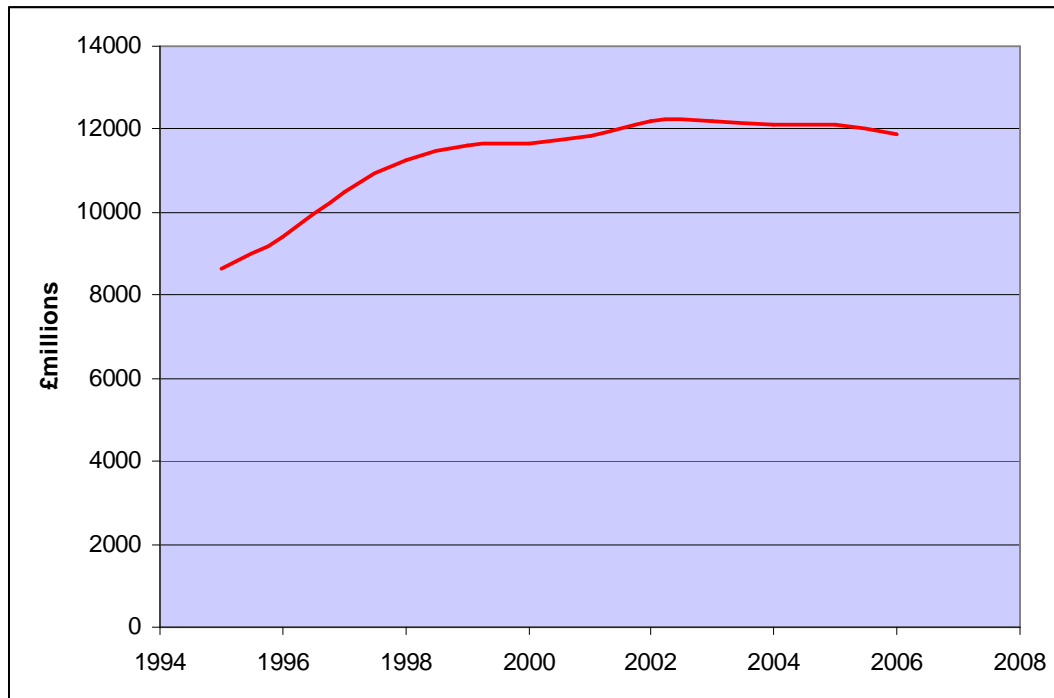


Figure 4: VAT Paid on Household Motoring Expenditure 1995 - 2006<sup>18</sup>

Bus, rail and tram passengers pay relatively small amounts of tax for their travel; with public transport fares being zero rated for VAT for vehicles that carry 10 or more passengers. In its analysis of the costs of structural reliefs to VAT, HM Revenue and Customs estimated that the cost of zero rating VAT on domestic passenger travel in 2005/06 was £2,250m<sup>19</sup>.

<sup>16</sup> TSGB 1991, table 1.18(b).

<sup>17</sup> Road File 2008/09, page 7.

<sup>18</sup> Source: Motoring Facts 2008, page 25.

<sup>19</sup> Annual Report 2004/05 Tables and Statistics, table C9.

VAT is chargeable on off-street parking but there are no VAT charges for parking on the highway.

Some car users pay company car and fuel benefit taxes. This is now also related to CO<sub>2</sub> emission rates, but is regarded as a 'benefit in kind,' along with other company assets in private use, such as telephones. However, the tax liabilities are substantial. For an average car with limited company use, a driver on the 20% tax rate could well pay £700/year and twice that if on the maximum tax rate. With company cars making up 5% of the car parc,<sup>20</sup> the 1.3m company car owners could easily pay as much as £1bn a year in this tax. The Road File estimates this to total £2.6bn in 2007/08<sup>21</sup>.

Insurance premia are also subject to tax,<sup>22</sup> with the standard rate at 5%, but a higher rate of 17.5% applied to certain types of commercial motor transactions. The estimated yield of insurance tax in 2006/07 was £2.3bn<sup>23</sup> and motor insurance premia in the UK amounted to £10.5bn<sup>24</sup>. On this basis, the annual yield from motor insurance premia taxes in Britain would be roundly £½bn.

### **Other Road User Costs, Fees and Fines**

Although not taxes, road users have to pay to take driving tests, for the issue of driving licences and to have their vehicles checked for roadworthiness and emission performance. Driving Licence fees were £158m in 2007/08<sup>25</sup> and the costs of MoT tests about £1.1bn<sup>26</sup>. The cost of MoT tests includes time as well as money. If the costs of driving tuition and time were added to the cost of fees this could well increase this by £¾bn a year<sup>27</sup>. Motorists are charged, in some locations, for parking at the roadside and can be fined for a range of stationary and moving vehicle offences. In 2006, 12.7m motoring offences were dealt with by some form of official action<sup>28</sup>; usually involving a fine. Even at the lowest rate of £60 this would generate gross revenues of about £¾bn/year.

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<sup>20</sup> Transport Statistics Great Britain: 2007 Edition, table 9.17.

<sup>21</sup> Road File 2008, page 7.

<sup>22</sup> Insurance Premium Tax: Notice IPT 1.

<sup>23</sup> Budget 2008, table C6.

<sup>24</sup> UK Insurance – Key Facts, page 6.

<sup>25</sup> DSA Annual Report 2007/08 page 65.

<sup>26</sup> MoT Evidence-base, para 59 (average of £794m and £1383m).

<sup>27</sup> Based on £1k fees and time per test entry with 782k tests in 2007/08 (TSGB 2008, table 9.18).

<sup>28</sup> Motoring Offences and Breath Test Statistics: England and Wales 2006.

## Expenditure by Government on Transport

### Roads

Many new roads are built by private developers, as part of housing, industrial and commercial estates, to be adopted by the local highway authority when these are completed. However, most expenditure on the maintenance and development of the existing road network is from the public purse. Where concessions are financed by private organisations, these are repaid either by shadow tolls from the public purse (e.g. the A1(M) Alconbury to Peterborough) or by direct charges to users (e.g. the Dartford Bridge and the Midland Expressway). Unlike some continental countries, there are relatively few major 'user toll' roads in Britain (and none in Scotland)<sup>29</sup>.

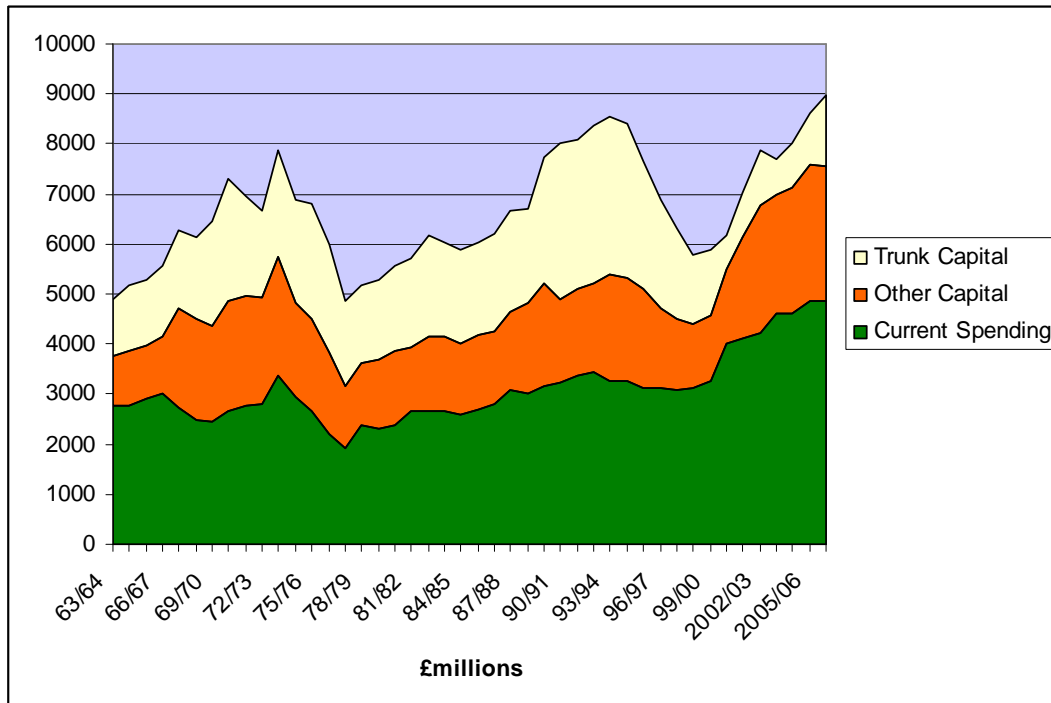


Figure 5: Public Expenditure of Roads in Great Britain 1963/64 – 2006/07 (2006/07 Prices)<sup>30</sup>

Figure 5 shows spending levels on public roads over the last forty years. At today's prices, this has averaged £6.8bn/year and has seen two peaks: one in the mid 1970s and the other in the mid 1990s.

<sup>29</sup> Britain's Inter-urban Road Network – Problems and Options, appendix D.

<sup>30</sup> Sources: Relevant tables in TSGB 1964/1974 – 2008.

The mid 1970s peak was caused by an upsurge in maintenance spending in the early 1970s, and the first half of the 1990s peak came as a result of substantial increases in both trunk capital and current spending. The basis of accounting for capital expenditure has changed recently; with a consequent switch from capital to current. Under the old system capital spending on trunk roads was £1,195m in 2001/02, whilst under the 'resource accounting' that replaced it, this fell to £582m. Capital spending on trunk roads and Motorways peaked in the 1970s: between 1970 and 1977 and again in the 1990s between 1990 and 1996. Capital spending on other roads peaked between 1966 and 1974 and has grown strongly over the last four or five years.

Some public expenditure on roads forms part of that which is allocated to other services. The most important of these is policing and highways administration. It is not possible to be certain as to what these cost, but in its recent submission to the House of Commons, the Select Committee on Transport and the Chartered Institute of Transport estimated these to be £1¾bn in 2006/07<sup>31</sup>.

### **National Railways**

The levels of support for the national railways have changed over the years, as can be seen from figure 6. This combines general financial support for British Rail before its privatisation and the Train Operating Companies and Railtrack/Network Rail subsequently. It also includes funding of rail freight and payments by the Passenger Transport Executives in respect of services in and around their areas.

Over the 30 years shown up 'till 2000/01, the average annual subsidy had been £2bn at current prices, ranging from a peak in 1975 of over £3bn (at 2006/07 prices), caused in part by a period of fares restraint, to a low of £760m in 1995/96, when proceeds from Train Operating Companies and Rolling Stock Leasing Companies were at their peak.

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31 Inquiry into taxes and charges on road users, Submission by the Chartered Institute of Logistics and Transport in the UK, section 6.

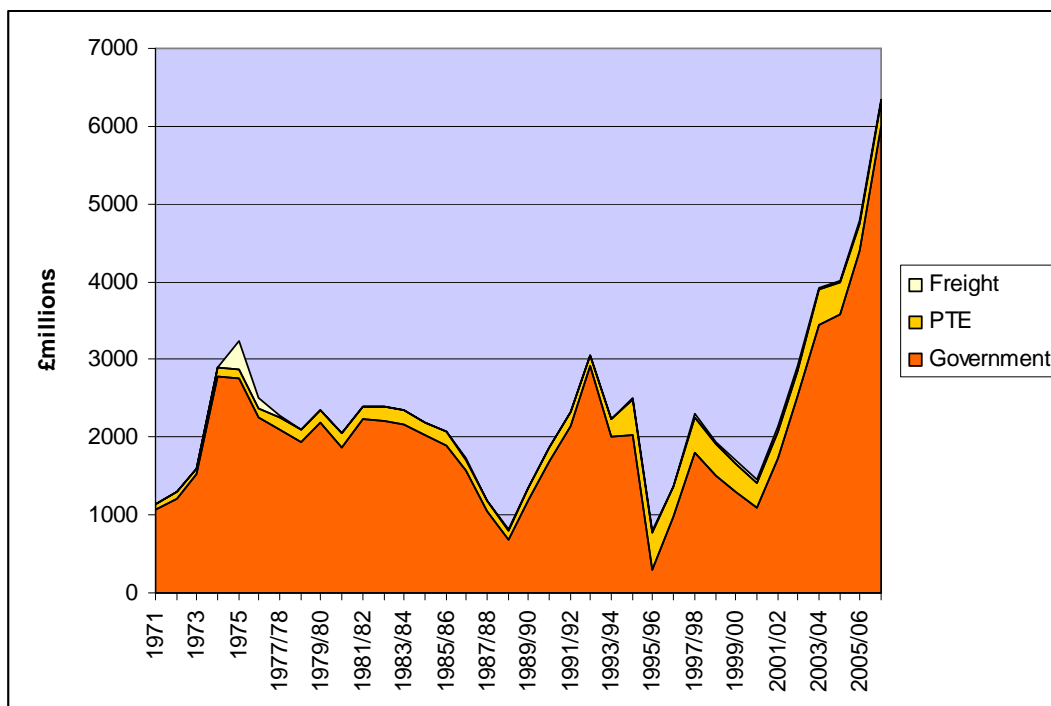


Figure 6: Support for National Rail 1971 – 2006/07 at 2006/07 Prices<sup>32</sup>

### Local Bus Services

Figure 7 shows the history of financial support for local bus services since 1968/69. Whilst during the 1960s bus company finances had been deteriorating, it was not until the provisions of the 1968 Transport Act were implemented that formal financial support for local bus operations was introduced on an ongoing national basis<sup>33</sup>. These arrangements were extended in 1975 with the introduction of Transport Supplementary Grant by way of the 1974 Local Government Act.<sup>34</sup> Together with the high rates of inflation in the mid 1970s and policies to keep price increases in check, this resulted in the rapid increase in support for local bus services shown in figure 7.

The prospect and then implementation of bus deregulation in the mid 1980s reversed this support and bus subsidies were reigned in through to the late 1990s. Changes in policy following the election of a Labour government in 1997 and, in particular, a ballooning of bus subsidies in London (from £1m in 1997/98 at 2006/07 prices to £625m in 2006/07<sup>35</sup>).

<sup>32</sup> Sources: National Rail Trends 2007/08 table 6.2a, BPTSG2004 Annex B table 2 & various editions of TSGB from 1964/74 to 1977/78.

<sup>33</sup> 1968 Transport Act, secs. 13, 20, 32, 34 & 56.

<sup>34</sup> Local Government Act 1974, sec 6.

<sup>35</sup> TSGB 2008, table 6.14.

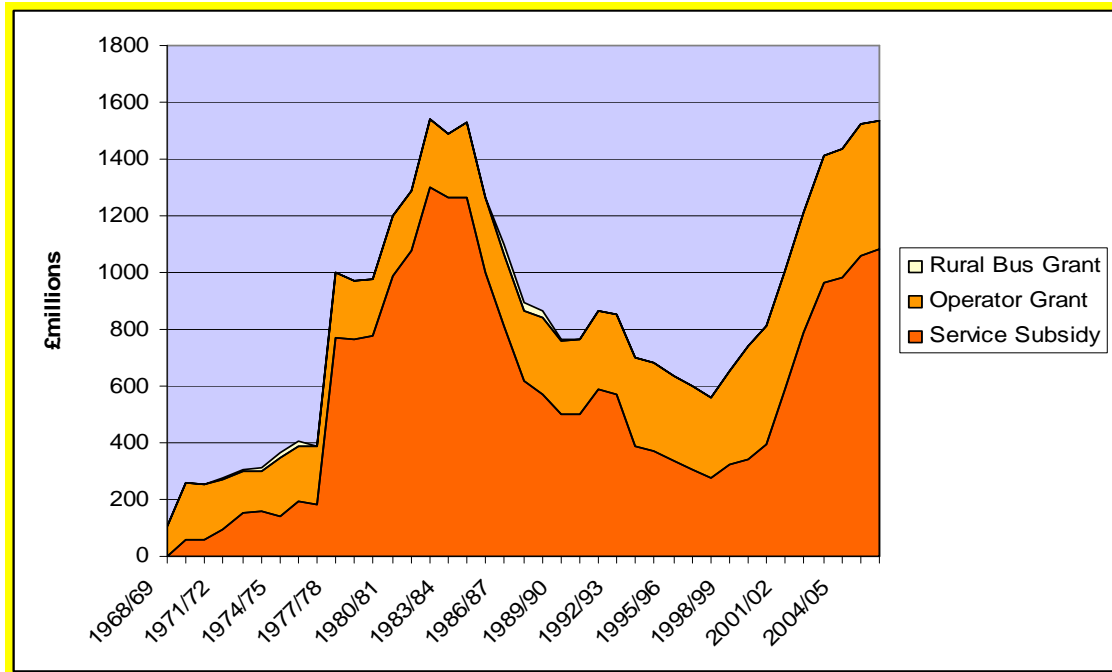


Figure 7: Support for Local Bus services in Great Britain 1968/69 – 2006/07 at 2006/07 Prices<sup>36</sup>

Over the 38-year period covered, the average level of financial support for local bus services, at today's prices, amounted to £0.9bn/year.

Many bus passengers also benefit from concessionary fares and these also have grown over the years as shown in figure 8. From a limited start in the early 1970s they quickly grew to between £0.5bn and £0.6bn a year during the 1980s and 1990s and have recently increased to almost £1bn. Concessionary fares are likely to exceed this sum as the new national free concessionary fares scheme takes effect.

<sup>36</sup> Sources: TSGB 1964-74 table 48, TSGB 1972-82 tables 1.15 and 1.17, BPTSG 2000 table 19 and PTSBGB 2008 table F. (n.b. service subsidy comprises New Bus and Infrastructure grants between 1968/69 and 1975/76).

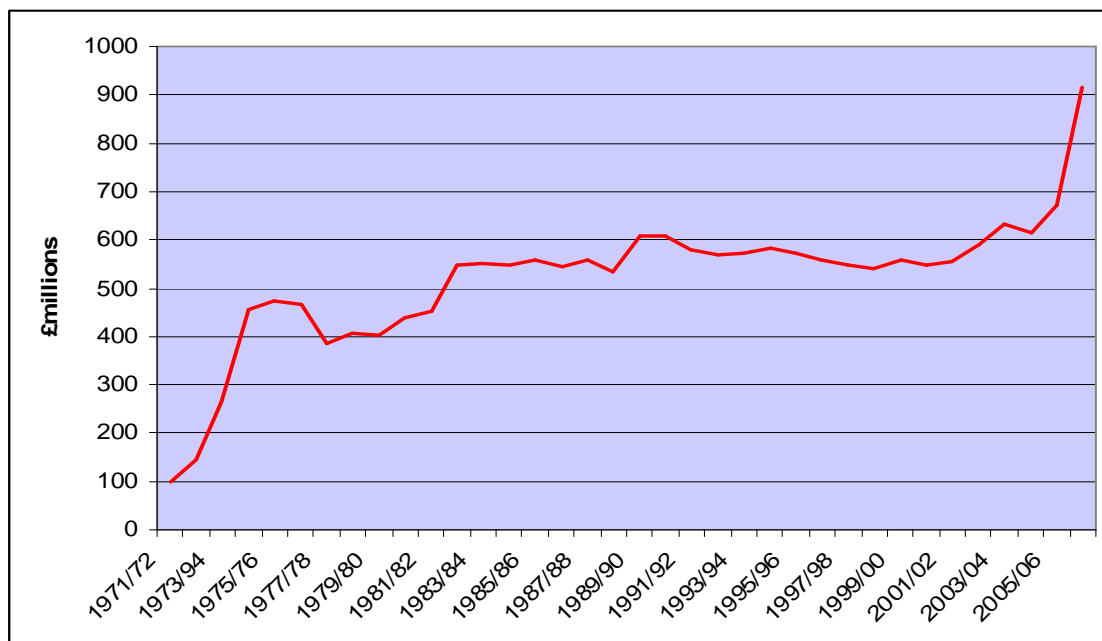


Figure 8: Concessionary Fare Payments 1971/72 to 2006/07 (2006/07 prices)<sup>37</sup>

## London Underground

London Underground (LUL) has received substantial sums of public financial support since 1970 when London Transport was transferred from central government control to the Greater London Council. At this time, London Transport's accumulated debts amounted to £268.9m (approximately £2.6bn at today's prices) and were written off by government. Figure 9 contains an estimate of LUL's external funding (derived from a series of annual accounts). Because of changes to the ways that grants are attributed; the payments of sums to and from reserves changing in accounting years; lack of specificity in some sets of accounts, and; the raising and repayment of loans, the figures for any single year may not fully accord with the published accounts. However, the overall picture is believed to be a fair reflection of the scale and pattern of LUL's call on external funding.

During the 1970s, the construction of the Fleet (later Jubilee) Line to Charing Cross, along with a fares freeze in the mid 1970s, increased LUL's need for support. Despite a number of ups and downs, the need for subsidy has grown steadily, with a sharp peak superimposed on the needs for renewal of the existing system during the 1990s, when the Jubilee Line was extended into the Docklands.

<sup>37</sup> Sources: TSGB 1964-74 table 48, TSGB 1972-82 tables 1.15 and 1.17, BPTSG 2000 table 19 and PTSBGB 2008 table F. (n.b. Includes small amounts for rail and ferry concessionary fares.)



At the turn of the century, when Transport for London was formed to, *inter alia*, take over the buses and Tubes, London Regional Transport retained London Underground, whilst a Public Private Partnership for ongoing maintenance and renewals was established. This resulted in something of a hiatus, which then settled down; albeit with annual support requirements approaching £1bn. In 2007/08 one of the PPP contractors (Metronet) went into administration and was acquired by TfL at a cost of roundly £1.7bn.

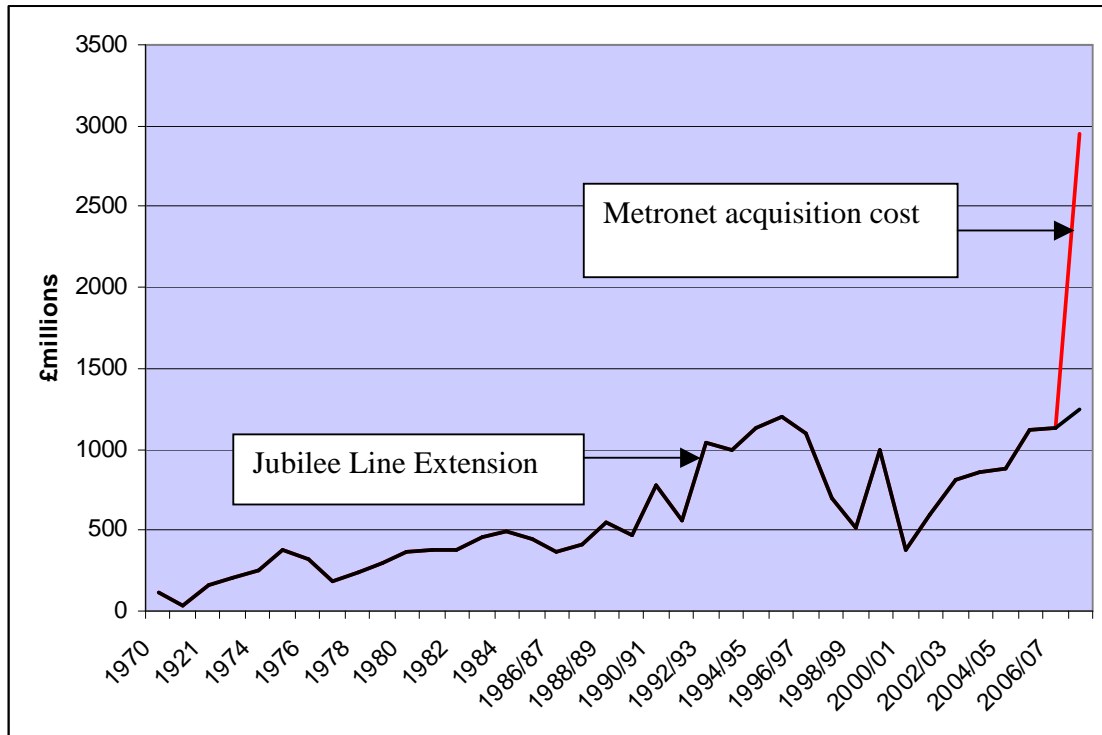


Figure 9: Financial Support for London Underground 1970 – 2007/08 (2007/08 Prices)<sup>38</sup>

<sup>38</sup> Sources: LT's, LUL's and TfL's Accounts from 1970 to 2005/08

## Local Government Capital Spending on Public Transport

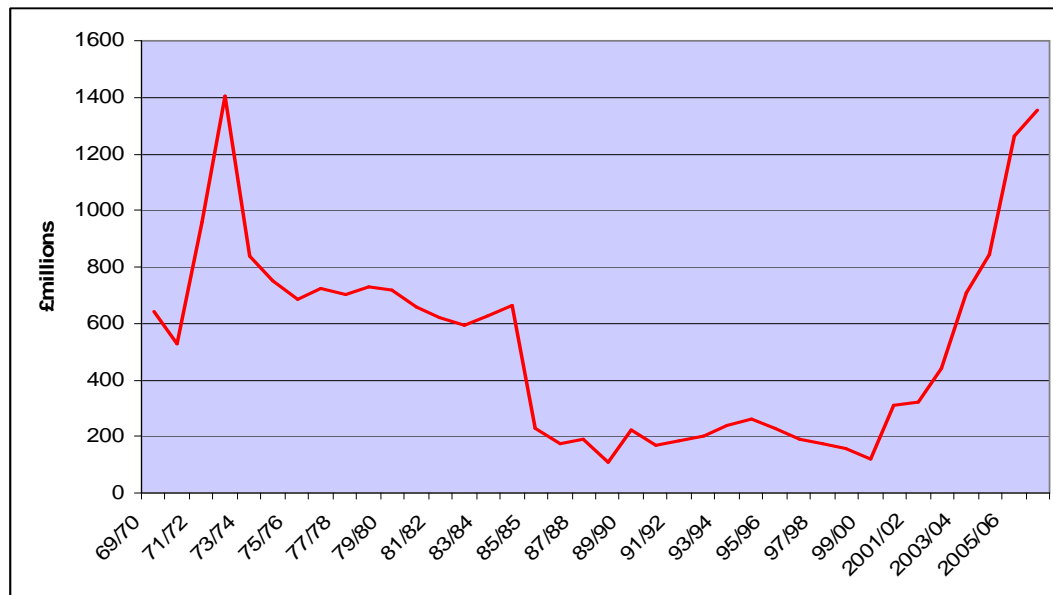


Figure 10: Local Government Capital Spending on Public Transport<sup>39</sup>

Local authorities provide capital funding for public transport as well as roads. This has averaged just over £½bn a year since 1970, but has increased sharply over the last few years from £118m in 1999/00 to £1½bn in 2006/07, as shown in figure 10. It includes spending on bus stations and related assets; the total spending for buses in 2006/07 was £191m. The balance of £986m was spent on rail, tolled road bridges, tunnels and ferries.

### Light Rail

There are nine 'light rail' systems in Britain<sup>40</sup>. There is no readily available information on how much financial support has been provided for these over the years, but the DLR alone has cost about £1½bn at current prices.<sup>41</sup> The other systems (excluding Glasgow and Blackpool) have a combined length of 211kms,<sup>42</sup> and at a cost of £15m/km (at 2006/07 prices), the cost of these would be of the order of £3bn. Some systems have also required operating subsidies (included in the totals shown in figure 10,) so it is likely that financial support for light rail in Britain over the last thirty years has been well in excess of £5bn.

<sup>39</sup> Sources: TSGBs 1964 – 1974 to 2008.

<sup>40</sup> Glasgow Underground, Tyne and Wear Metro, Docklands Light Railway, Manchester Metrolink, Sheffield Supertram, Croydon Tramlink, West Midland Metro, Nottingham NET and Blackpool Trams.

<sup>41</sup> Approximately £1bn at historic prices (DLR Facts) factored up by the GDP Market Price Deflator

<sup>42</sup> TSGB 2005 table 6.2.

## Transport Investment

Transport investment is funded from a range of sources. Road and rail infrastructure is mainly, but not exclusively, funded by the public sector. Road and rail vehicles are mainly funded by the private sector, as are most port and airport developments.

### Roads

Expenditure on road building, as part of commercial, residential and industrial developments, is not known, but must be significant. Road investment by public agencies and private contractors on major road schemes over the last two decades, along with mainly private investment in road vehicles, is shown in figure 11. This makes clear that spending by road users on vehicles is approximately one order of magnitude greater than spending in the road system itself. Over the last two decades, user investment has increased by a factor of about 1.8 - rather more than the increase in road vehicle ownership of 1.6. Infrastructure investment has averaged just over £5bn at 2006/07 prices, rising to a peak of £6.8bn in 1993, before falling back to under £5bn in 1997 where it has remained since. Over this period the ratio of road user investment to road provider investment has grown from 6.9:1 to 10.7:1.

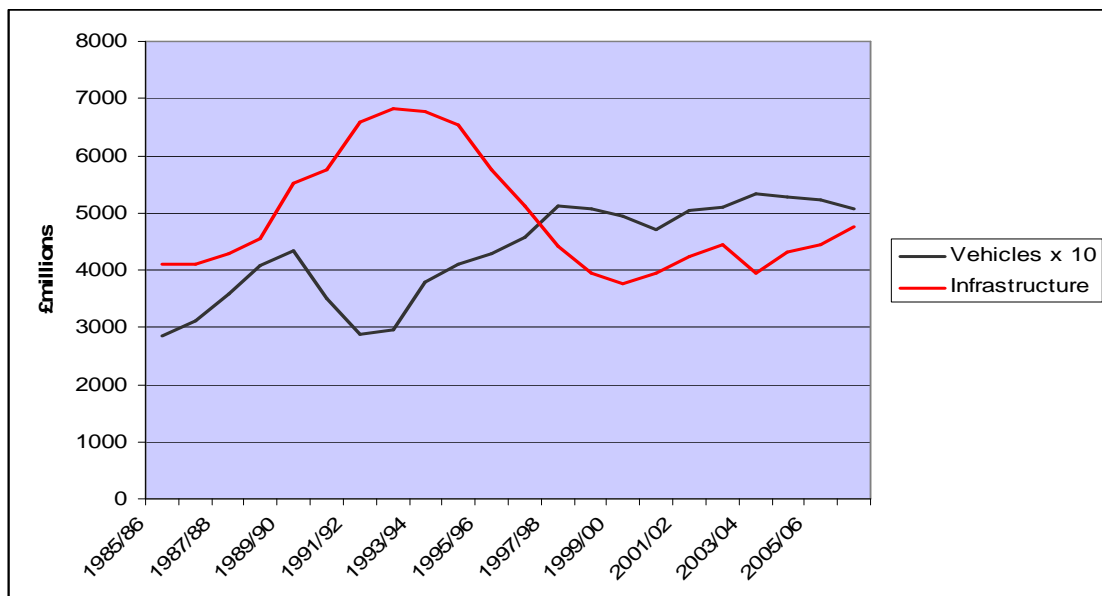


Figure 11: Investment in Road Infrastructure and Vehicles 1985/86 – 2006/07 (2006/07 Prices)<sup>43</sup>

<sup>43</sup> Source TSGBs 1993 – 2008 editions.

<sup>44</sup> Source TSGBs 1993 – 2008 editions.

## Railways

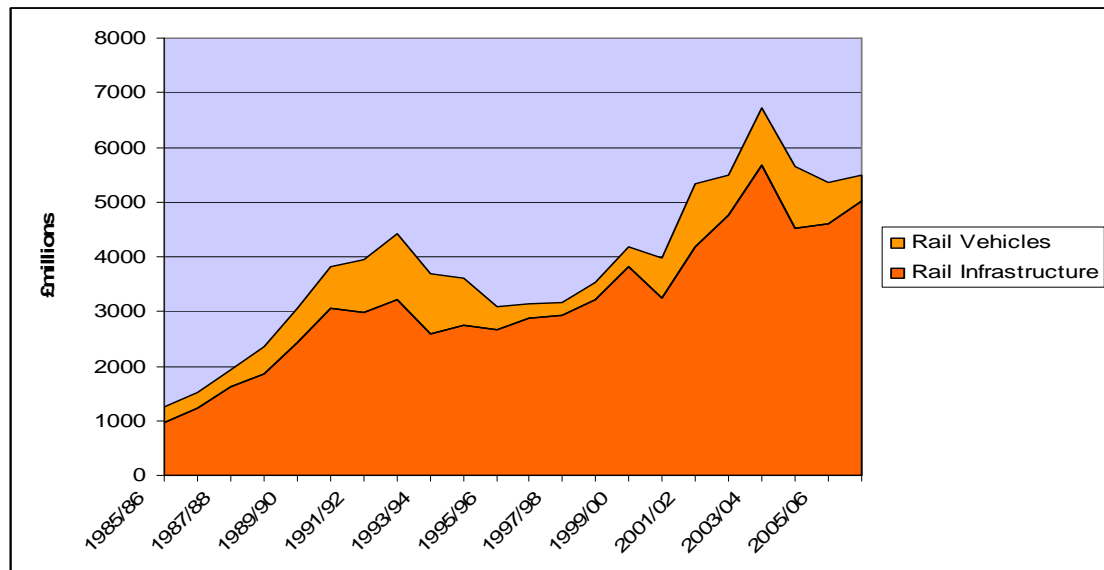


Figure 12: Investment in Rail Infrastructure and Vehicles 1985/86 – 2006/07 (2006/07 prices)<sup>44</sup>

Rail investment over the last two decades is shown in figure 12. The most noticeable trend is the more than fourfold increase over the period, comprising a fivefold increase in infrastructure investment and a trebling of investment in rail vehicles from the first few years to the mid 2000s.

## Buses

Information on investment in bus transport is not readily available. There are 57 thousand buses and coaches in Great Britain<sup>45</sup>. On the basis of an 8-year average life<sup>46</sup> and a replacement cost of £170k each, annual investment would be of the order of £1¼bn a year. During the late 1980s and early 1990s, investment in new buses fell sharply, with the average vehicle age rising to 9.8 years<sup>47</sup>. There is other bus related investment, such as in stations; stops; depots; passenger information systems; ticketing equipment, and; traffic priorities. Therefore it would appear that investment in the bus industry is probably of the order of £1½bn/year, which amounts to 6p/passenger kilometre.<sup>48</sup>

<sup>45</sup> BPTSGB 2008, Annex A table 8.

<sup>46</sup> The average of buses in March 2008 was 8.3 years: BPTSBB 2008 table A.

<sup>47</sup> Bus & Light Rail Statistics GB: April – June 2006 table 3.1.

<sup>48</sup> £1½bn/25.1bn pkms (BPTSGB 2008, table A2).

## Relative Road and Rail Investment Rates

The absolute levels of investment do not necessarily reflect the utilisation of the different forms of transport, as can be seen from figures 13 and 14. Over the last twenty years, the investment rate for rail has been substantially higher than for road, regarding personal and freight traffic: by a factor of ten in the case of personal travel and just over 5 in the case of freight. The gap between rail rates and those of road has been widening to a ratio of 14:1 in 2006/07 for personal traffic and 8:1 in the case of freight. On this basis, investment in rail vehicles exceeds that in roads infrastructure, in relation to both personal and freight travel.

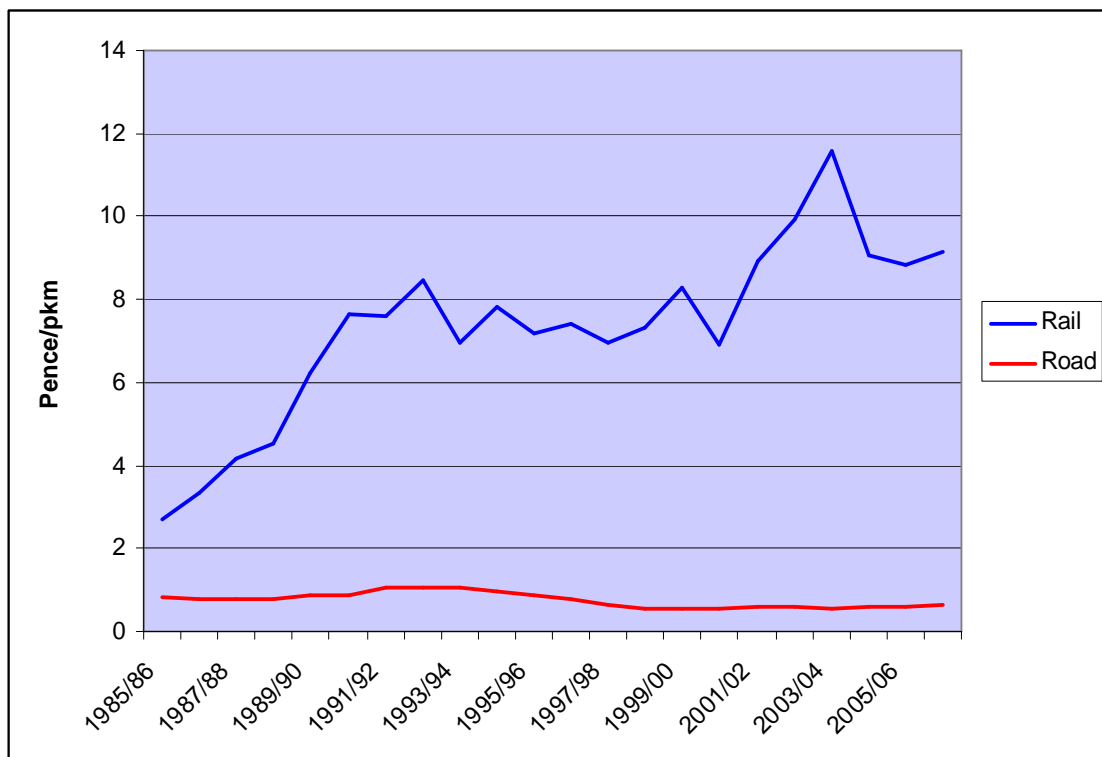


Figure 13: Road & Rail Infrastructure Investment Rates (Personal Travel) 1985/86 – 2006/07 (2006/07 prices)<sup>49</sup>

<sup>49</sup> Source TSGBs 1993 – 2008 editions

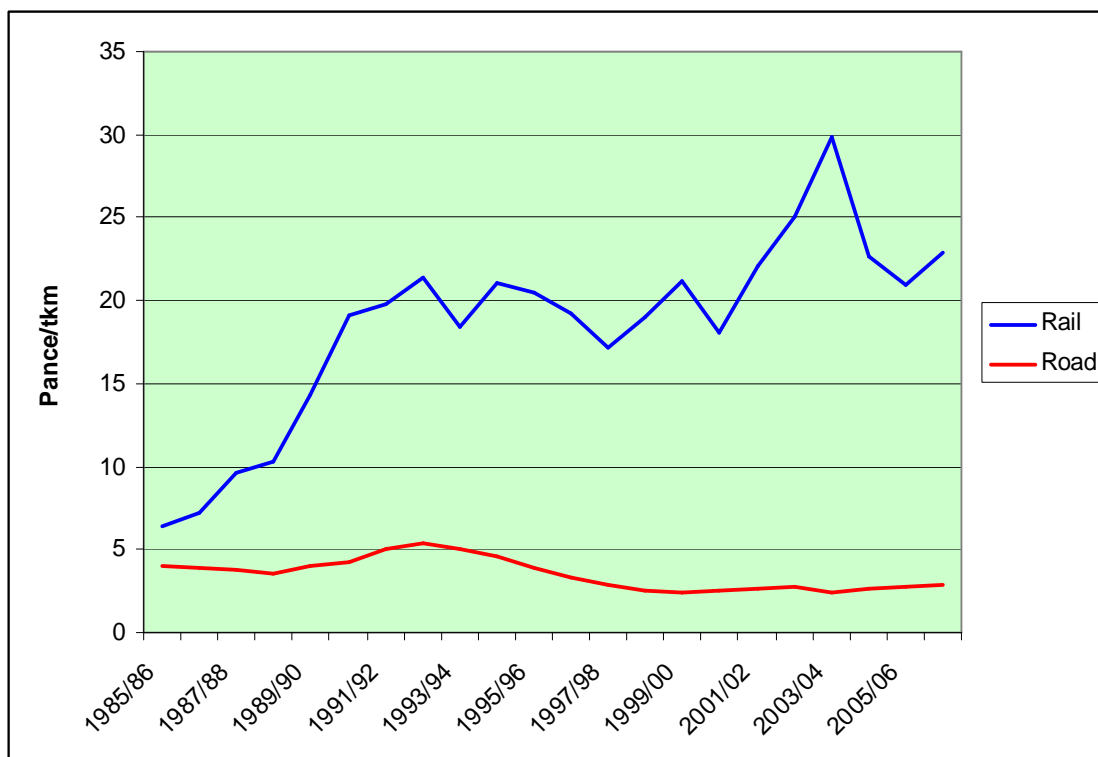


Figure 14: Road & Rail Infrastructure Investment Rates (Freight) 1985/86 – 2006/07(2006/07 prices)<sup>50</sup>

## Summary and Conclusions

Domestic transport in Britain is heavily taxed, with road users particularly paying much higher than average fuel taxes and a special Vehicle Excise Duty (VED). Together these yield over £28bn annually. Local bus services are partly compensated for fuel duty, although they pay VED at similar rates to other road users. There is no equivalent of VED for rail vehicles and rail diesel is taxed at a much lower rate than road fuel.

As well as specific transport taxes and transport tax rates, most road users pay taxes on transport expenditure. The most important of these is Value Added Tax (VAT), which yields £12bn a year from households' purchases of motoring goods and services. Also, company cars are subject to a 'benefit in kind tax' producing at least £1bn a year. Public transport fares however, are zero rated for VAT.

<sup>50</sup> Source TSGBs 1993 – 2008 editions

Most spending on roads is by central and local government. Specifically identified expenditure on roads generally amounts to about £9bn/ year and if other administrative and policing costs are added to these the total rises to somewhere in the £10bn - £11bn/year region. Local buses also receive substantial public financial support: direct support for un-remunerative services in came to just over £1bn in 2006/07 and Bus Service Operator Grants (formerly Fuel Duty Rebate) totalled £454m. Concessionary fares for bus users amounted to £0.9bn in 2006/07.

Spending on rail has grown over the last few years and reached about £8bn<sup>51</sup> in 2006/07. This included spending on the London Underground and on rail and light rail by local authorities.

Table 4: An Illustrative Surface Transport Balance Sheet

<b>TRANSPORT SECTOR</b>	<b>TAXES PAID (ANNUAL)</b>	<b>GOVERNMENT SPENDING (ANNUAL)</b>
<b>Cars, vans, lorries motorcycles and coaches</b>		
<b>Fuel Duty</b>	<b>£23bn</b>	
<b>VED</b>	<b>£5.2bn</b>	
VAT on households purchases of motoring goods and services	£12bn	
Company Car Tax	£1bn - £2½bn	
Insurance Premium Tax	£½bn	
<b>Local Bus Services</b>		
<b>Fuel Duty</b>	<b>£125m</b>	
<b>VED</b>	<b>£18m</b>	
VAT on fares	-	
<b>All Road Transport</b>		
<b>Roads Capital</b>		<b>£4bn</b>
<b>Roads Current</b>		<b>£5bn</b>
Policing etc		£1¾bn
<b>Local Bus Services</b>		
<b>Service Support</b>		<b>£1bn</b>
<b>Local authority capital</b>		<b>£190m</b>
Concessionary fares		£0.9bn
<b>Rail</b>		
<b>Fuel Duty</b>	<b>£70m</b>	
VAT on fares	-	
<b>Gov grants to national rail</b>		<b>£6bn</b>
<b>Support for London Underground</b>		<b>£1¼bn</b>
<b>PTE grants</b>		<b>£310m</b>
<b>Freight grants</b>		<b>£30m</b>
<b>Local gov grants</b>		<b>£½bn<sup>52</sup></b>

<sup>51</sup> Excluding the one off payment of £1.7bn by Transport for London to acquire Metronet.

<sup>52</sup> Notional share of £968m total LG capital spending on non-bus local public transport.

Table 4 sets out an illustrative balance sheet for taxation and public expenditure on road, bus and rail transport. It is necessarily approximate due to allocation problems and possible differences in accounting practices. However balance of the overall picture is probably reasonable.

Clearly both the taxation system and public expenditure allocation strongly favour public transport use over private transport. Buses apart, road users have a positive financial balance of about £18bn a year or (assuming personal travel provides two thirds of this) around 2½p/person kilometre. Local bus travel has a negative financial balance of approximately 4p/person kilometre (7¾p/person kilometre if concessionary travel is included). Rail travel is even more costly to the public purse at 13p/person kilometre.

Transport investment comes from a variety of sources with the purchase of road vehicles being by far and away the largest item. For road and rail infrastructure, investment is at similar levels – roughly £5bn a year; but this time it is the public sector that provides the lion's share of the funding. However, when compared to the use of the two systems, there is a wide difference, with rail investment at a much higher rate on a person kilometre (more than ten times) or tonne kilometre (eight times) basis.

These large differences in taxation, spending and investment rates between the different elements of Britain's surface transport system, raise the question of what, if any, is the rationale for the structure of the transport taxing system. It does not seem to be designed to promote efficient use of the networks; otherwise we would have a more developed form of congestion pricing. It does not appear to be particularly progressive – except for the high levels of support for buses. It does not appear to be well balanced between public and private, nor road and rail. Even the recent concerns about climate change do not appear to justify the differences between road and rail, with the relevant greenhouse gas costs being 0.33p/pkm for cars, 0.28p/pkm for buses, 0.16p/pkm for rail and 0.08p/pkm for coaches<sup>53</sup>: nothing like the actual differential levels of taxation/support.

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<sup>53</sup> Based on How to use the Shadow Price of Carbon in policy appraisal (£26/tonne of CO<sub>2</sub>) and 2008 Guideline to DEFRA's GHG Conversion Factors: Methodology Paper for Transport Emission Factors, tables 11, 17, 20 & 21.



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