Public and private sector investment in roads in Britain

Over the past 50 years there has been considerable growth in the road network in Britain, as shown in Fig. 1. During this time the vast majority of roads have been built and maintained by the public sector, with only a tiny number of private sector road projects being undertaken, such as the M6 Toll road.

<table>
<thead>
<tr>
<th>Year</th>
<th>Motorways</th>
<th>A roads</th>
<th>Minor roads</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>153</td>
<td>45192</td>
<td>267158</td>
</tr>
<tr>
<td>1970</td>
<td>1057</td>
<td>45990</td>
<td>275437</td>
</tr>
<tr>
<td>1980</td>
<td>2556</td>
<td>46580</td>
<td>290497</td>
</tr>
<tr>
<td>1990</td>
<td>3070</td>
<td>47823</td>
<td>307142</td>
</tr>
<tr>
<td>2000</td>
<td>3467</td>
<td>46607</td>
<td>340163</td>
</tr>
<tr>
<td>2010</td>
<td>3558</td>
<td>46707</td>
<td>343989</td>
</tr>
</tbody>
</table>

Fig. 1 – Road lengths by road type in Britain (kilometres)

The government has indicated that it would like the private sector to take on a greater role in funding the expansion and running of the road network in Britain, as shown in the following article. This suggestion has led to much debate about whether the public or the private sector should finance this vital part of the nation's infrastructure.

‘The Open Road’

In early 2012 the Prime Minister, David Cameron, gave a speech encouraging “large scale private investment” to upgrade the country's road and motorway network. Mr Cameron’s speech focused on the long-standing problem of how to fund infrastructure. Whilst Britain's transport network is relatively good, congestion is a daily problem in some places and maintenance work is needed elsewhere to upgrade roads in order to improve their use.

Chosen well, investment to address the problem of ‘pinch-points’ (areas where traffic congestion is very bad) is one of the most cost-effective types of transport spending there is in Britain, as Sir Rod Eddington noted in his 2006 report. Some economists note that although improving roads is neither exciting nor glamorous cost-benefit analysis favours these schemes more highly than national projects such as high speed rail links.

The issue for the Prime Minister is where to get the money from for funding road infrastructure projects. In 2010 the coalition government clearly ruled out road pricing on existing roads, although it has since said that it would consider tolls on new roads.

The bigger issue which the Department of Transport has now been asked to consider is whether roads can be leased to private companies to encourage investment in them. In such cases, motorists would still not directly pay for using the roads but private companies would receive a payment from central government according to the number of drivers using the road. These payments would be funded from the annual £6 billion revenue from Vehicle Excise Duty (VED).

Such a proposal would be a huge change in road funding in Britain. It would raise the debate about whether or not the principle of hypothecation of tax revenue should be applied to transport in Britain.
SECTION A

Answer all parts of the question in this section.

1 (a) (i) Using Fig. 1, identify which decade saw the largest percentage increase in Britain’s motorway network.
.......................................................................................................................................................... [1]

(ii) State and explain one external benefit of expanding Britain’s motorway network.
..........................................................................................................................................................
..........................................................................................................................................................
..........................................................................................................................................................
..........................................................................................................................................................
.......................................................................................................................................................... [2]

(b) Lines 17–18 state that ‘cost-benefit analysis favours these schemes (to improve roads) more highly than national projects such as high speed rail links’.

(i) What does this statement mean?
.......................................................................................................................................................... [1]

(ii) State and explain two problems of using cost-benefit analysis when deciding whether or not to build a new road.

1 ..........................................................................................................................................................[4]
(iii) Explain one difference between the approaches of the public and private sectors to decision making about major infrastructure investment projects.

...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................
........................................................................................................................................... [3]

(c) What is meant by the ‘hypothecation of tax revenue’ (line 28)?

...........................................................................................................................................
........................................................................................................................................... [1]
(d) ‘In 2010 the coalition government clearly ruled out road pricing on existing roads, although it has since said that it would consider tolls on new roads’ (lines 20–21).

Comment on the effectiveness of tolls on new roads (road user charging) in reducing market failure.

...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
...................................................................................................................................................
................................................................................................................................................... [5]
(e) Discuss whether increasing the role of the private sector will be beneficial to the road transport market.
2 (a) Analyse the level of economic efficiency achieved in the short run in a monopolistically competitive transport market. [15]

(b) Discuss the impact of a fall in market concentration on the economic efficiency of a transport market of your choice. [20]

3 (a) Analyse negative externalities arising in transport markets. [15]

(b) Discuss the effectiveness of using forecasts of transport trends to meet the future needs and requirements of transport markets. [20]

4 (a) Analyse barriers to entry in the UK air transport market. [15]

(b) Discuss whether the UK government should raise indirect taxes, such as Air Passenger Duty, on air travel in order to increase sustainability. [20]