Achieving Value for Money from People in the GB Rail Industry – Theme H: Further Research

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1   Introduction

1.1.1   Following our report of 30th November 2010 "*Achieving Value for Money from People in the GB Rail Industry – Theme H Benchmarking*" AECOM had been commissioned to carry out further research in a small number of areas, as set out below:

Industry Umbrella Organisations

1.1.2   In our main report we briefly reviewed staff numbers employed by umbrella bodies, but noted that the absolute staff costs were small as a proportion of the total industry staff costs. Therefore our main focus was on Network Rail and the train operators. For a number of umbrella organisations we have now extracted a more complete picture of staff costs through time, and have made some comments about certain aspects of their roles.

Extending Datasets

1.1.3   In the main report we include a number of tables/graphs based on statutory account data. We have compiled this data into a master database, and filled in any gaps where possible. The database is supplied as an Excel appendix to this report.

Other Comparisons

1.1.4   Finally there were a few other areas of comparison which we were able progress from the main report. These include salary comparisons, and productivity comparisons with Europe.

1.1.5   This paper reports on our findings from this further research.

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2   Umbrella Bodies

2.1   Office of Rail Regulation (ORR)

Staff Numbers and Costs

2.1.1   ORR is the independent safety and economic regulator of Britain's railways. It aims to apply independent, fair and effective regulation to enable the railway to be safe, well maintained and efficient and to ensure that it provides value for money for users and for its funders.

Figure 1 – ORR Staff Statistics over Time
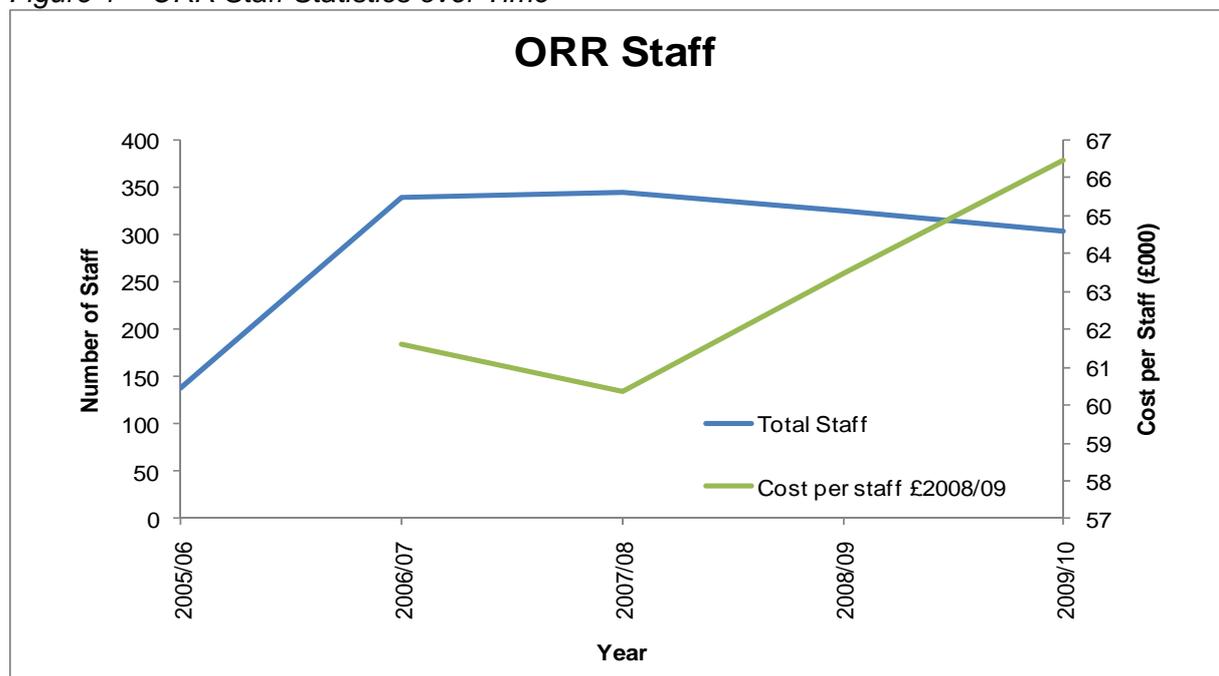
Source: ORR Online – Annual Report and Resource Accounts

2.1.2   Figure 1 shows both the number of permanent staff employed by the ORR (excluding the chairman and non-executives)[1], and the cost per member of staff, normalised to £2008/09 levels. The number of staff greatly increased between 2005/06 and 2006/07 due to a merger with Her Majesty's Railway Inspectorate (HMRI) in 2006. HMRI employed around 190 staff, so assuming the ORR retained the majority of these staff then this explains the large jump in the level of total staff.

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[1] The figures quoted in our main report were based on data received from the DfT. These were the number of permanent FTEs and therefore are not quite the same as the figures quoted here.

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2.1.3   In the 2009/10 report, the average number of full-time equivalent persons employed during the year been split by role (Figure 2). 159 staff are still employed in safety-related roles:

Figure 2 – ORR Staff by Theme in 2009/10

Staff Role	Number of Staff
Theme 1 – Focus on passenger and freight customers now and in the future	35
Theme 2 – Excellence in health and safety culture and risk control	159
Theme 3 – Excellence in asset management	21
Theme 4 – Improved industry planning and timely and efficient delivery of major projects	40
Theme 5 – Efficient use of capacity on the mainline network	24
Theme 6 – Development by the industry of the capabilities of its people	8
Theme 7 – High quality data and information for key decisions	15
Total	**302**

Source: ORR Online – Annual Report and Resource Accounts

2.1.4   The number of staff employed by ORR between 2007/08 and 2009/10 decreased by 11%. Despite this decrease, the cost per staff has increased for the last two years and in the 2009/10 figure was approximately £66,000 (£2008/09) (Figure 3). This increase is because the staff that left were cheaper than average (e.g. staff in inspection roles) and thus the remaining mix of staff have become more expensive on average.

Figure 3 – ORR Costs over Time
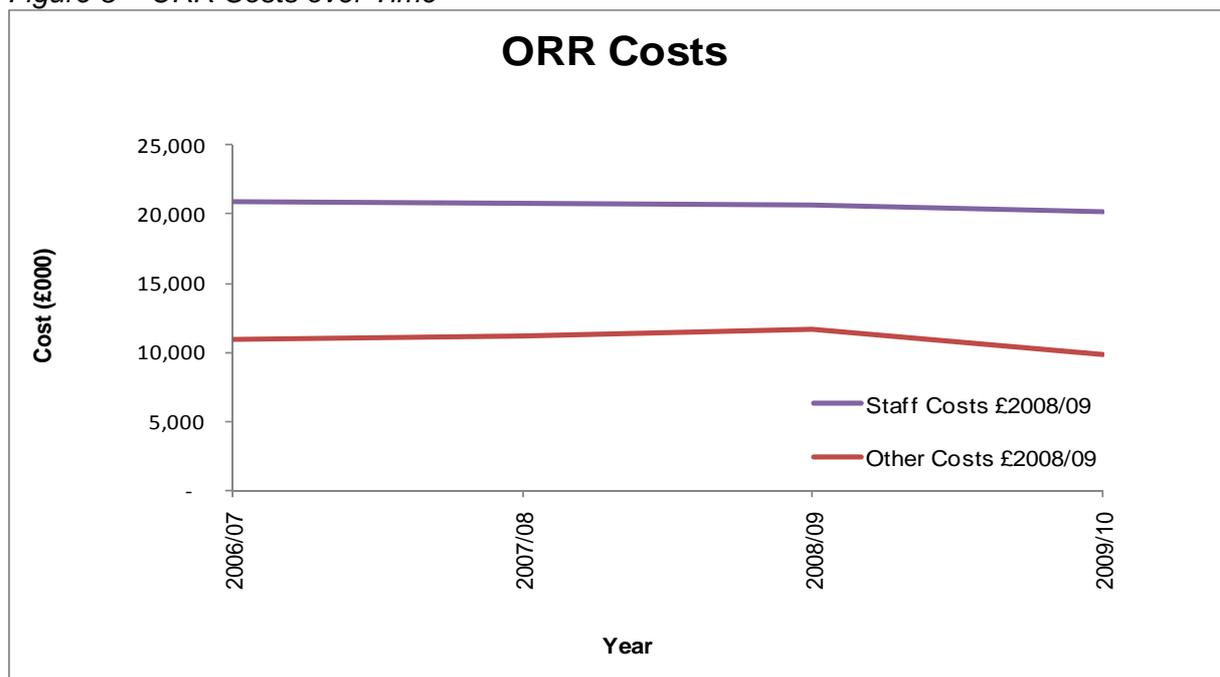
Source: ORR Online – Annual Report and Resource Accounts

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2.1.5   This increase in cost per staff is not because overall staff costs have increased (Figure 3) as these have remained constant (normalised to £2008/09 levels) at just approximately £20,000,000 since 2006/07. Overheads however, decreased in 2008/09. This was due to ORR's three-year programme for rationalising their office accommodation, which involves decreasing their number of offices from twenty to five. The start of this process was evident in 2008/09 when they closed two offices.

Reporting Requirements

2.1.6   ORR sets Network Rail performance targets over regulatory control periods of five years. The current control period runs from 1 April 2009 to 31 March 2014. Targets are set by the ORR and Network Rail are expected to report progress against the specific targets.

2.1.7   We have reviewed some of the reports that Network Rail produce for the ORR, with a view to assessing whether the reporting requirements set by the ORR are becoming more onerous, and whether there is still value in the reported content. We have considered four different Network Rail reports. They are:-

- Annual Return

- Annual Efficiency and Finance Assessment

- Network Rail Monitor

- Regulatory Financial Statements

2.1.8   To assess whether reporting requirements set by the ORR are indeed becoming more onerous we studied the various documents available and noted the number of tables in each report. We have also made a more careful analysis of trends by noting the changes in headings and tables contents reported in each document, and investigating which contents are changing year on year.

2.1.9   It should be noted that the regulatory targets do not necessarily remain the same each control period. If the number of targets is increasing, this would imply that reports produced by Network Rail must also increase in size. Figure 4 shows the regulatory targets as listed in the annual return, for three successive control periods. The list of targets for CP3 doubled in size compared to the previous list of KPIs. However, in CP4 although the targets change, the number of metrics which require reporting are not significantly more. Therefore, if we see an increase in the size of Network Rail reports over the last six years is it not just because the regulatory targets have become more detailed.

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Figure 4 – Network Rail Regulatory Targets

KPIs from 2004 Annual Return	CP3 regulatory targets (from 2009 Annual Return)	CP4 regulatory targets (from 2010 Annual Return)
1.0 Public safety index	Total Network Rail attributed delay (million minutes)	Passenger safety index (MAA)
2.0 Public performance measure	Train delay minutes/100 train kms (franchised pass operators)	Workforce fatalities and weighted injuries (MAA)
3.0a/b RAB adjustment for pass & freight volume incentives	Broken rails (No.)	PPM (% MAA) England & Wales long distance
4.0 Passenger complaints	Track geometry (Level 2 exceedences per track mile)	PPM (% MAA) England & Wales London & South East
5.0a Financial Efficiency Index	Temporary speed restrictions (No.)	PPM (% MAA) England & Wales Regional
5.0b Overall cost control	Network capability	PPM (% MAA) England & Wales Total
6.0 Asset stewardship incentive index	Earthworks failures	PPM (% MAA) Scotland Total (ScotRail)
7.0 Employee engagement	Signalling failures	CaSL (% MAA) England & Wales long distance
	Signalling condition	CaSL (% MAA) London & South East
	AC power incidents	CaSL (% MAA) Regional
	DC power incidents	Delay mins – passenger (000's) England & Wales
	AC contact system condition	Delay mins – passenger (000's) Scotland (ScotRail)
	DC contact system condition	Delay mins per 100 train km – freight
	Station condition	PDI – passenger (MAA)
	Light maintenance depot condition	PDI – freight (MAA)
	Asset stewardship index	Station Stewardship Measure (by category)
	Efficiency saving over CP3	Scotland (all stations)
	Net debt to regulatory asset base (RAB) ratio	Network Capacity
		Network Capability

Source: Network Rail Online - Regulatory Documents – Annual Return

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Network Rail Annual Return

2.1.10 The Annual Return is a regulatory requirement by the ORR. It is a report, produced by Network Rail, reporting on their achievements, developments and challenges from the previous year. The annual returns are available on the Network Rail website from 1999 to 2010.

2.1.11 Although the headings within the return have remained broadly the same, each year more detail has been generally added within the headings. For example, in the 1999 report the performance and reliability section included delays per train movement for passenger and freight trains, with just one table of results. By 2003 the report contains the same national summary of delay minutes, but also shows trends and a breakdown to detailed cause category by area. In 2005 PPM results are also reported, and figures on Cancellations and Significant Lateness (CaSL) have been added from 2009.

2.1.12 The 2010 version contains the following headings:

-   Section 1 – Operational performance and stakeholder relationships

-   Section 2 – Network capability, traffic and network availability

-   Section 3 – Asset Management

-   Section 4 – Activity volumes

-   Section 5 – Safety and Environment

-   Section 6 – Expenditure

-   Section 7 – Efficiency

-   Section 8 – Finance

-   Section 9 – Enhancements

-   Appendix 1 – Station stewardship measure – list of stations

-   Appendix 2 – Depot stewardship measure – list of depots

2.1.13 Within these headings there are some fairly detailed tables of data. For example, Tables 1.14 – 1.16 provide three separate breakdowns of delay by category in different formats. Tables 1.17 – 1.25 show delay by route. Tables 2.3 and 2.4 show line-speed changes by ELR and mileage. It is not clear to us that all such detail contained within the report is necessarily of value – particularly in this particular format. Therefore it may be worth Network Rail and the ORR jointly reviewing the detail within the report to determine which tables are needed, and if there are any that require considerable work for little return.

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Network Rail Annual Efficiency and Finance Assessment

2.1.14 The Network Rail Annual Efficiency and Finance Assessment is a document, produced annually to provide the ORR with an assessment of Network Rail's efficiency and financial performance.

2.1.15 In 2007-08 the report had information on:

- Health and Safety
- Performance
- Expenditure & Efficiency
- Finance & Income
- Network Condition
- Asset Management
- Renewal Activity
- Major Investment Projects
- Network Capability
- Planning & Operations
- Customer & Supplier Satisfaction
- Environment
- Network Licence Compliance
- Summary of Targets, Measures and Achievements

2.1.16 There has been considerable overlap between this report and the Annual Return. From 2008-09 it seems that this has been identified, and the annual assessment has been changed to focus only on:

- Expenditure
- Efficiency
- Finance

2.1.17 This change in focus explains the smaller report for 2008/09. However, the 2009/10 report increases in size again because nearly all 2009/10 figures are quoted for the whole of Great Britain, and then England & Wales and Scotland separately. There is also more detail quoted on Network Rail's net debt, financing costs and financial indicators.

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Network Rail Monitor

2.1.18 The Network Rail Monitor is a document, produced by the ORR, setting out how the ORR think Network Rail is performing in terms of delivering its obligation to its customer and funders; it also highlights any particular areas of current concern. Although the report is produced by the ORR, the data is supplied by Network Rail.

2.1.19 The Network Rail Monitor has been restructured from 2009/10. It now contains the following headings:

- Customer service

- Train service performance

- Developing the network

- Asset management

- Scotland Summary

- Key Statistics

2.1.20 To some extent, the monitor reports on topics of current interest, and therefore does not follow exactly the same headings every quarter. For example, 2009-10 Q3 has a paragraph on "rapid response to flooding" which is not found in 2010/11. By including topics in the Network Rail monitor, the ORR avoids requiring various ad-hoc data requests and reports.

2.1.21 However, of the six reports available under the new structure, there is some suggestion that more detail is being added over time, as the numbers of tables are increasing slightly (Figure 7).

Network Rail Regulatory Financial Statements

2.1.22 Under terms within its network licence, Network Rail Infrastructure Limited (NRIL) has to provide annual financial performance information to the ORR. The purpose of the information is to allow the financial performance of NRIL to be monitored against ORR's determination assumptions.

2.1.23 Figure 8 shows the number of tables in the Network Rail Regulatory Financial Statements report by year since 2001/02. The number of tables has increased since 2005/06, particularly between the 2008/09 and 2009/10 report where the number of tables increased from 41 to 98.

2.1.24 The increase in the last year is due to more detail within the current headings. For example, although both reports include an 'Analysis of Income' section, the 2009/10 report includes an 'Analysis of Income by Operator' for Great Britain, England and Wales and Scotland.

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2.1.25   Figure 5 to Figure 8 show the number of tables in each report over time. Although this is a very simplistic measure, it does support our general observation that the amount of information and level of detail in reporting is increasing.

Figure 5 – Network Rail Annual Return: Tables per Report over Time
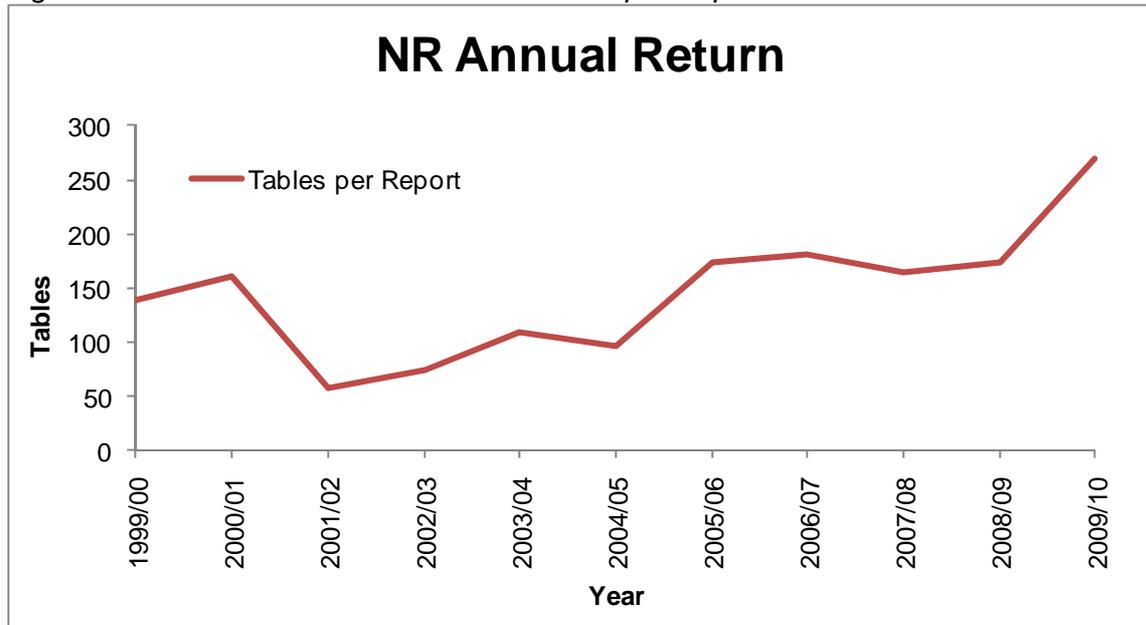
Source: Network Rail Online - Regulatory Documents – Annual Return

Figure 6 – Network Rail Annual Efficiency and Finance Assessment: Tables per Report over Time
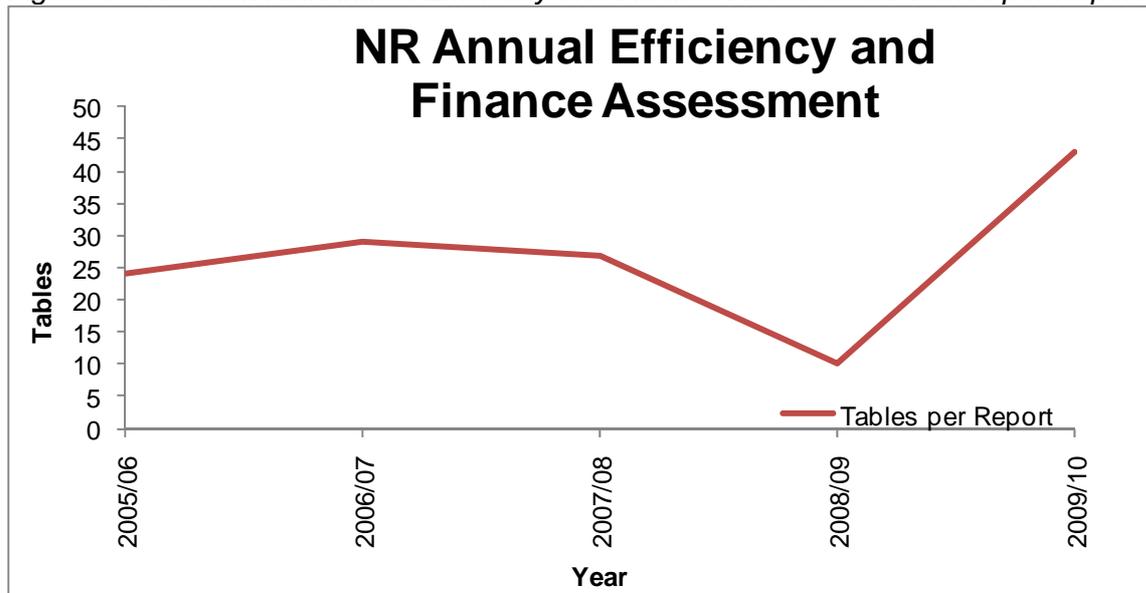
Source: ORR Online - Annual Efficiency and Finance Assessment of Network Rail

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Figure 7 – Network Rail Monitor: Tables per Report over Time
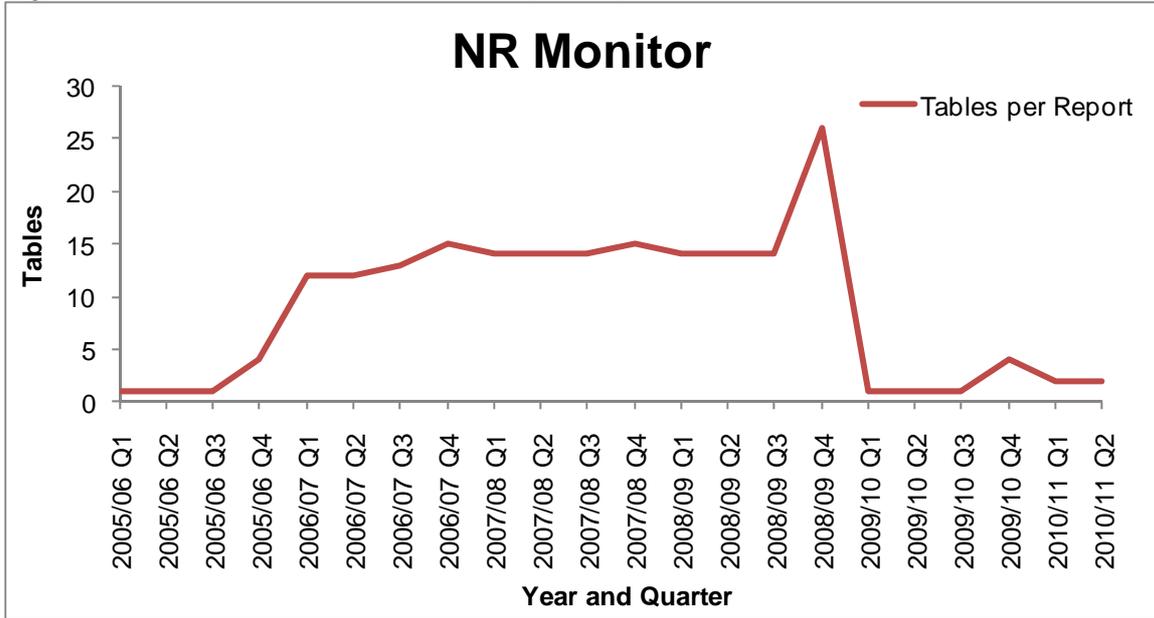
Source: ORR Online – Network Rail Monitor – 2005-2010

Figure 8 - Network Rail Regulatory Financial Statements: Tables per Report over Time
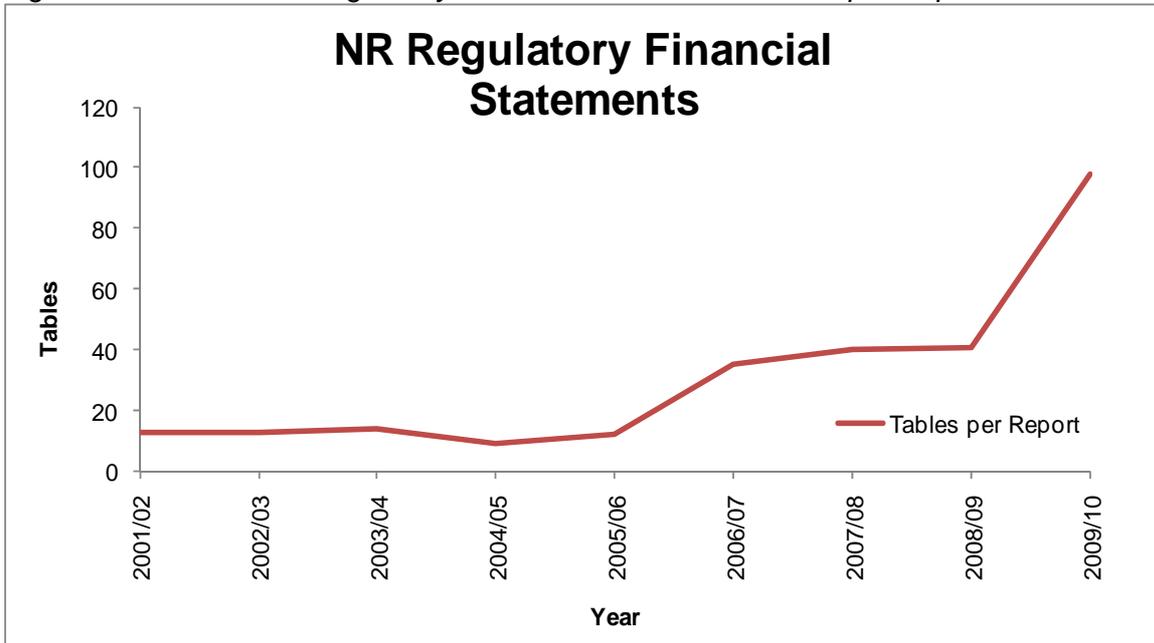
*Source: Network Rail Online - Regulatory Accounts*

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Conclusions

2.1.26 Generally speaking the overall topics and headings which are reported on remain fairly constant, and some of the overlaps between different reports seem to have addressed recently. However, in all four documents there is evidence that within the various headings, the level of detail at which information is reported is increasing.

2.1.27 We have not investigated the number of man days that Network Rail spends specifically producing these reports. If this is a significant amount of time over and above their regular internal reporting processes, then we recommend that the ORR and Network Rail jointly review the level of detail required within the documents. If there are tables produced which have little value to either party (or to the wider industry) then it is possible that efficiency savings could be made by reporting at a summary level of detail.

2.2   Association of Train Operating Companies (ATOC)

2.2.1   ATOC is a trade association created in 1993 after the privatisation of British Rail, to represent the interests of the train operating companies.

Figure 9 – ATOC Staff Figures[2]
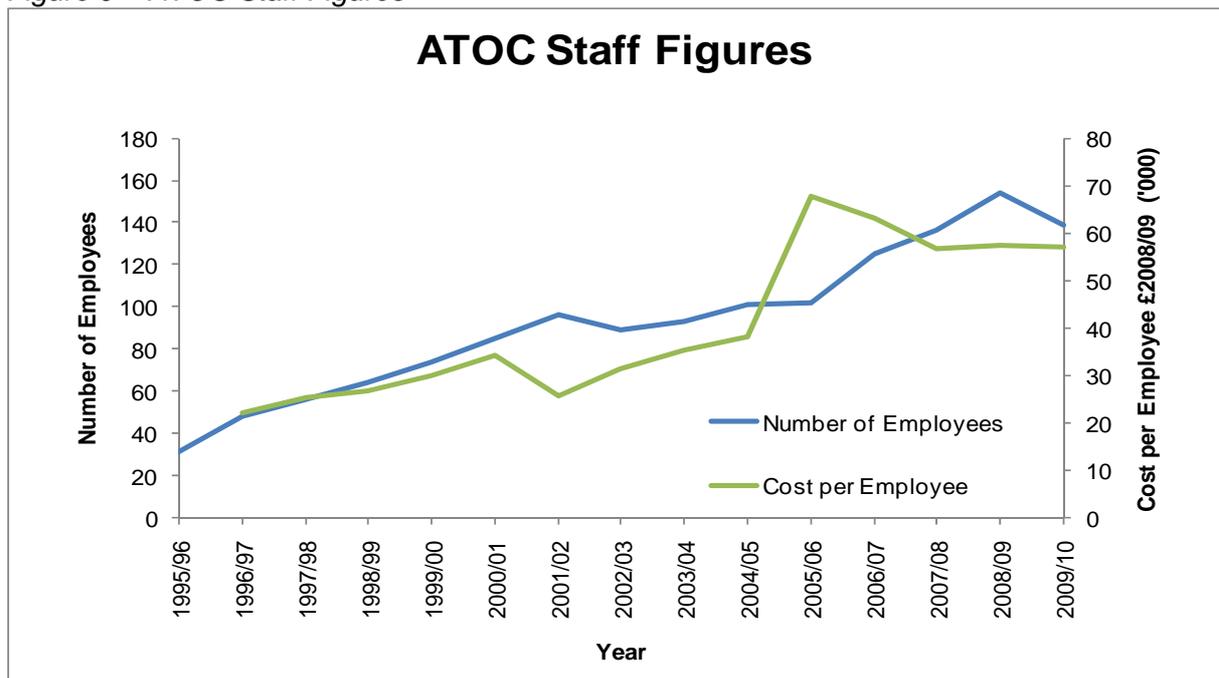
Source: ATOC Limited: Directors' report and financial statements

2.2.2   Figure 9 shows both the number of employees over time employed by ATOC and the amount that each employee costs on average per year. The number of employees at ATOC has gradually risen by around 10% each year, with a high of 154 in 2008/09, this then decreased to 139 in 2009/10.

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[2] The figures quoted in our main report were based on data received from the DfT. Figures here are from published accounts, and therefore not necessarily exactly the same.

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2.2.3   Until 2000/01 the cost per employee followed a very similar pattern to that of the number of employees. In 2000/01 however, there was a 24% decrease in the cost per employee, whereas employees rose by 12%. Cost per employee reached a high in 2005/06 but has since become more consistent at about £57,000.

2.3   Passenger Focus

2.3.1   Passenger Focus is an independent passenger watchdog. Their mission is to get the best deal for passengers using rail, bus (outside London), coach and trams in Britain. They carry out a large amount of evidence-based campaigning and research and work with the government and key players in the industry to ensure that passengers have a say in decisions made. Their main publication is the National Passenger Survey which is produced annually with 50,000 rail passengers contributing their opinions.

2.3.2   Prior to 2005 Passenger Focus was called the Rail Passenger's Council and Committees (RPC) and they operated within the Strategic Rail Authority (SRA). This changed due to the 2004 White Paper 'The Future of Rail' which stated the need for a more independent and focused rail passenger organisation. Passenger Focus was formed in July 2005.

Figure 10 - Passenger Focus Staff Figures[3]
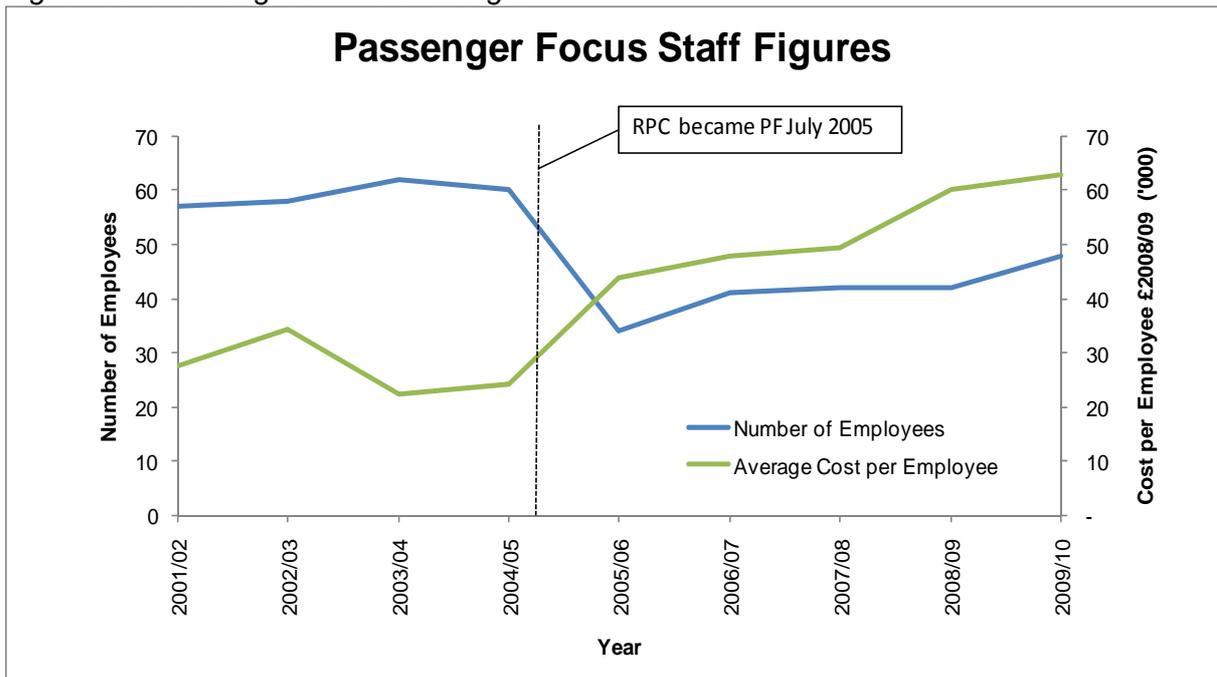
Source (a): Strategic Rail Authority: Annual Report
Source (b): Passenger Focus: Annual Report and Accounts

2.3.3   Figure 10 shows that until 2004/05, operating as the RPC the organisation had a consistent number of employees at around 60. This figure then dropped by 43% to 34 as a result of the changes to the organisation's structure when Passenger Focus was created. Some staff members transferred following a job matching exercise and some employees left the organisation. Since 2005/06 the number of employees employed by Passenger Focus has gradually increased by around 10% on average a year.

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[3] The figures quoted in our main report were based on data received from the DfT. Figures here are from published accounts, and therefore not necessarily exactly the same.

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2.3.4   The Average Cost per staff member is particularly intriguing as the staff costs do not really change, even after 43% of the work force left the company, meaning that costs per employee increase dramatically after the change to the organisation's structure. Figure 10 shows that costs per employee remained relatively consistent before 2004/05 with a high of 34,000 (£2009/09). Costs per employee rise significantly in 2005/06 when the new organisation is formed with costs per staff member rising by 81% to 44,000 (£2009/09). This then gradually increases by around 3% a year until 2008/09 when it rose by 19% to 60.

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3   Extending Datasets

3.1   Statutory Account Data

3.1.1   From information taken from statutory accounts, we have been able to compile a database of the following information:

- Staff numbers

- Annualised real staff cost (including social security and pension contributions)

- Average wages = (real staff cost / staff numbers)

- Train km

- Train km per staff

The database is supplied as an appendix to this report in Excel.

3.1.2   For passenger franchise TOCS, the information has come from ITS at the University of Leeds. They have taken the TOC statutory accounts and processed them to produce a consistent time series of staff numbers and costs for each franchise. Their methodology takes account of franchise handovers, different reporting years etc.

3.1.3   The results based on the statutory accounts are not always exactly the same as those reported in the DfT TOC Returns database. ITS Leeds have also processed this data, and have produced a breakdown by operator, which is included in our database. For most years, the staff headcounts vary by up to ±3% between the two sources, except for 2005/06 where the DfT source appears to be too low. The staff costs are more variable and generally differ by around ±10%.

3.1.4   Information for the five main freight operators has been taken directly from the statutory account data, and has been adjusted by the RPI to express costs in terms of £2008/09. The train km information has been taken from data supplied by the DfT. For the main report, our freight staff numbers and staff costs information also came from a spreadsheet supplied by the DfT. The statutory account data has filled in a number of gaps in this spreadsheet. Generally the DfT spreadsheet and the statutory returns contain identical figures, but not always.

3.1.5   Information for some open access operators has been taken from statutory account data where available. Again, this has been adjusted by the RPI to express costs in terms of £2008/09.

3.1.6   Network Rail data has been taken from their annual returns and normalised to £2008/09. This is identical to the data in the main report.

3.2   Headline Figures

3.2.1   From our database we have produced some high level summaries of the information. These largely repeat information from the main report. However, the data for the freight operators is now more complete.

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Figure 11 – Number of Employees
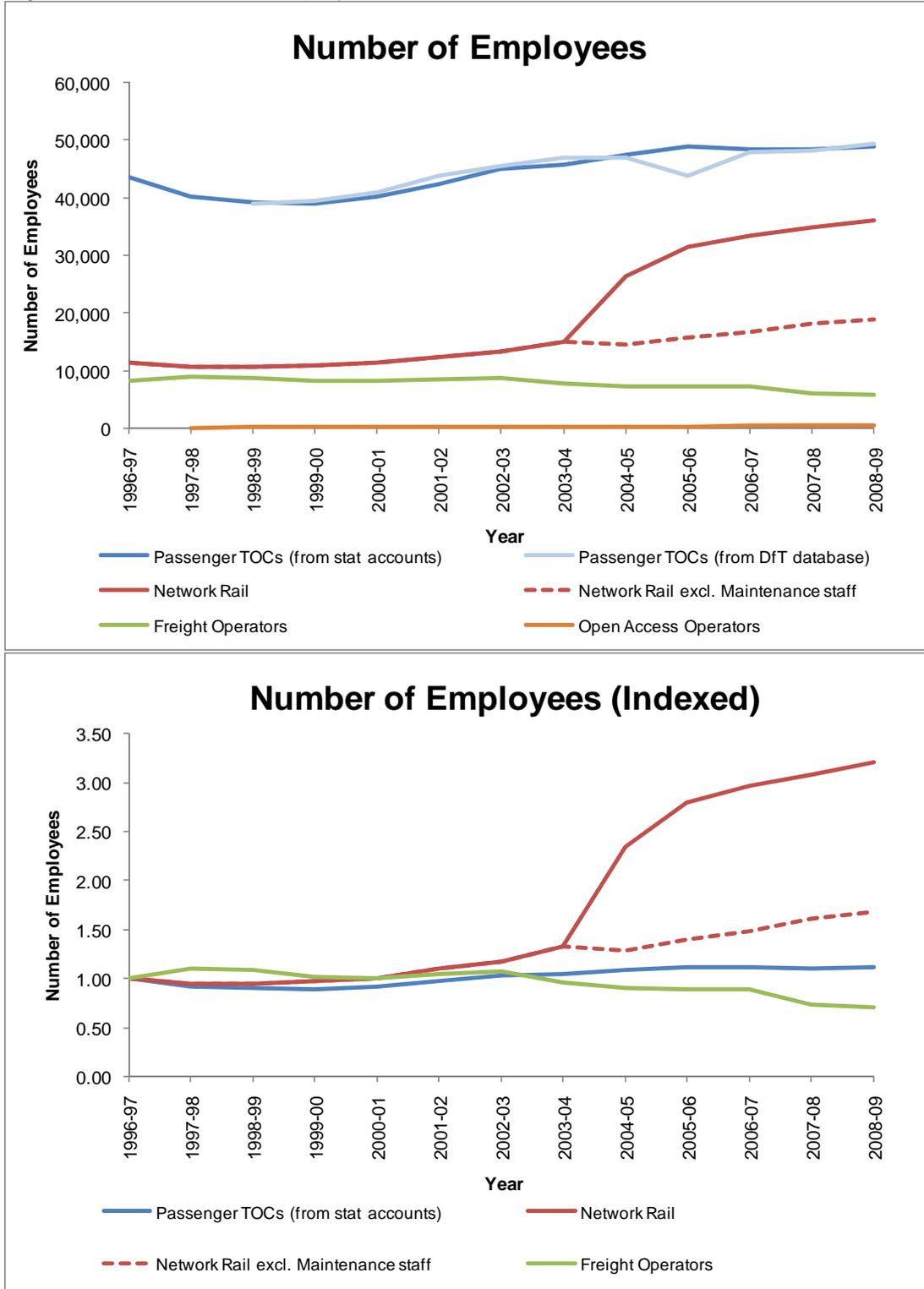
Source: TOC data from University of Leeds based on published statutory accounts; FOC, Open Access and Network Rail data from statutory accounts; Estimates of maintenance staff based on other data supplied by Network Rail.

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Figure 12 – Annualised Real Staff Cost £2008/09
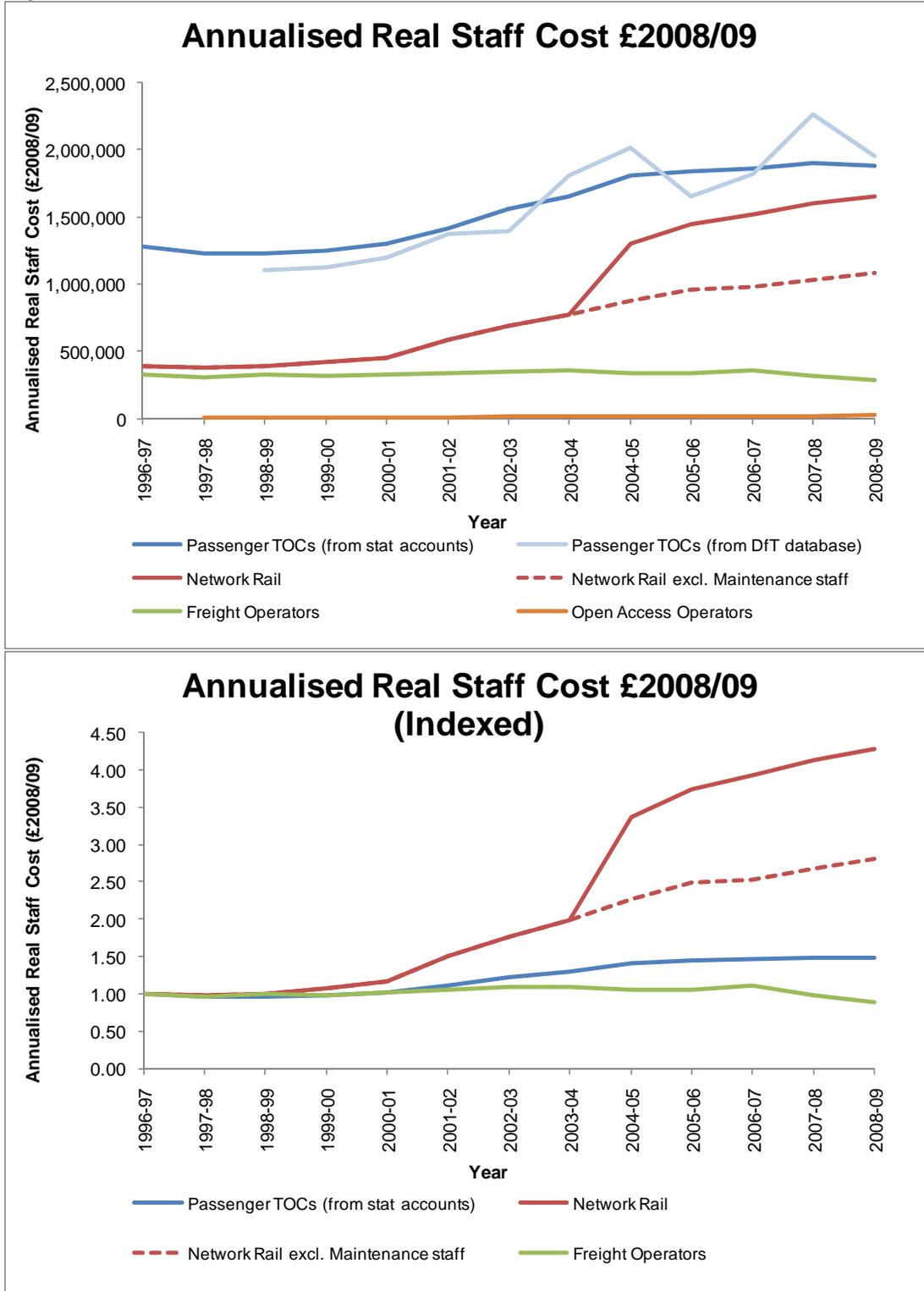
Source: TOC data from University of Leeds based on published statutory accounts; FOC, Open Access and Network Rail data from statutory accounts; Estimates of maintenance staff based on other data supplied by Network Rail.

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Figure 13 – Average Real Staff Cost per Employee £2008/09
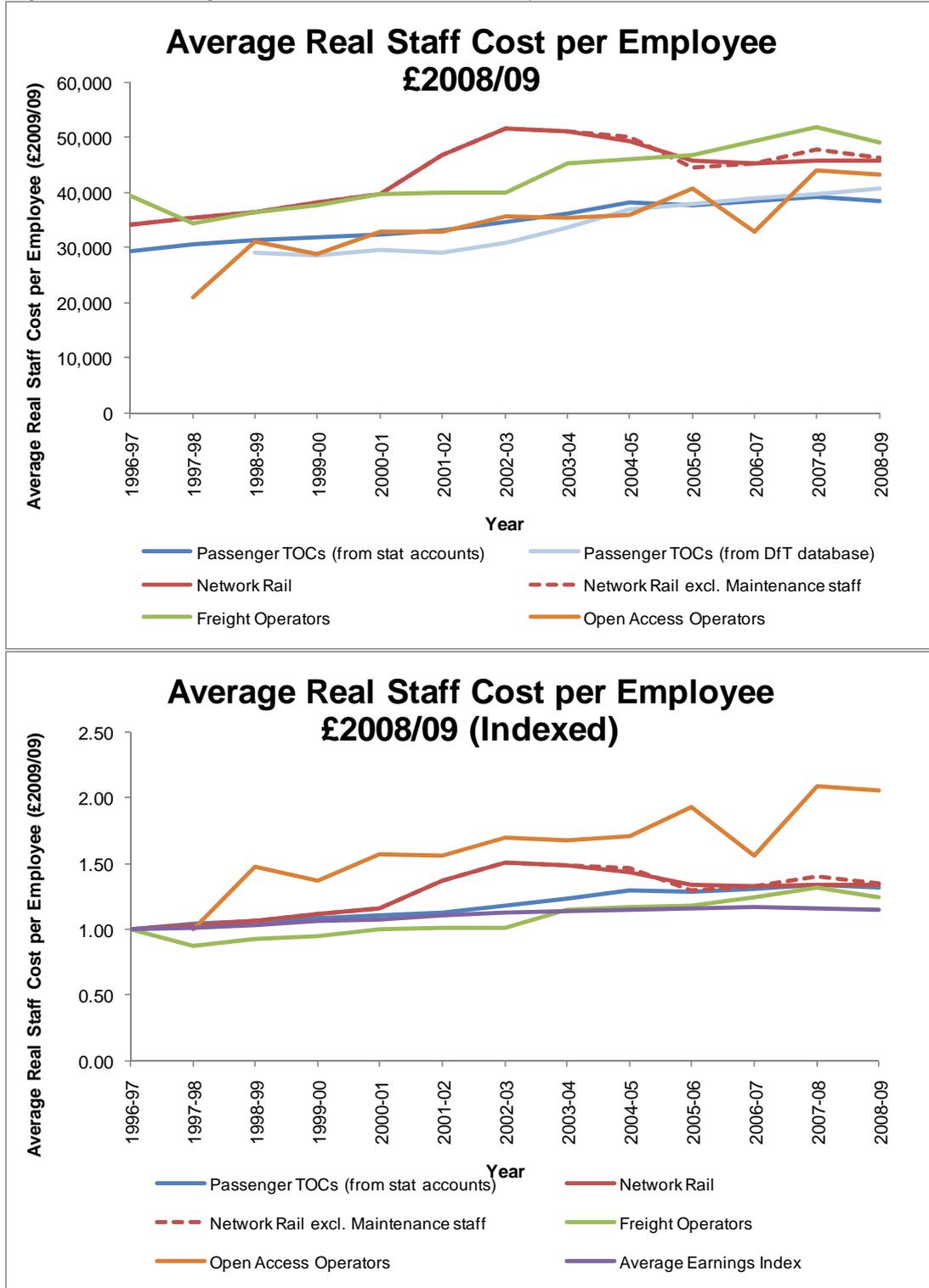
Source: TOC data from University of Leeds based on published statutory accounts; FOC, Open Access and Network Rail data from statutory accounts; Estimates of maintenance staff based on other data supplied by Network Rail.

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Figure 14 – Average Real Staff Cost per Employee £2008/09 by Freight Operator
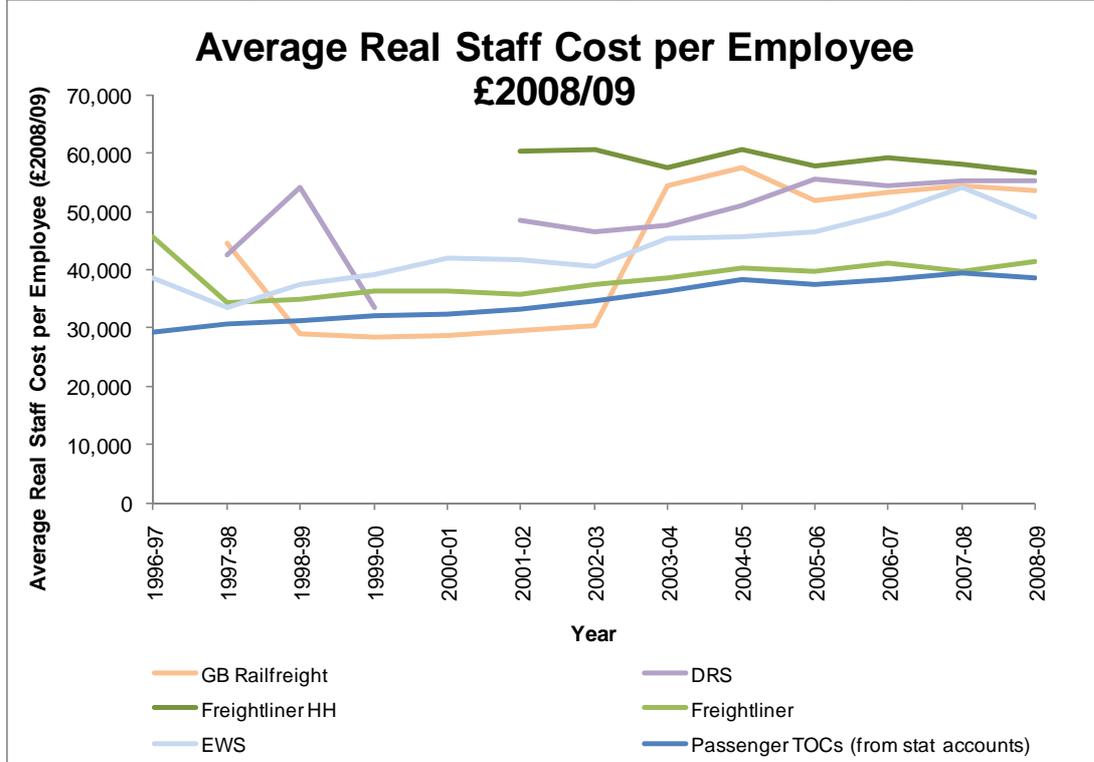
Source: TOC data from University of Leeds based on published statutory accounts; FOC data from published accounts.

Figure 15 – Train km
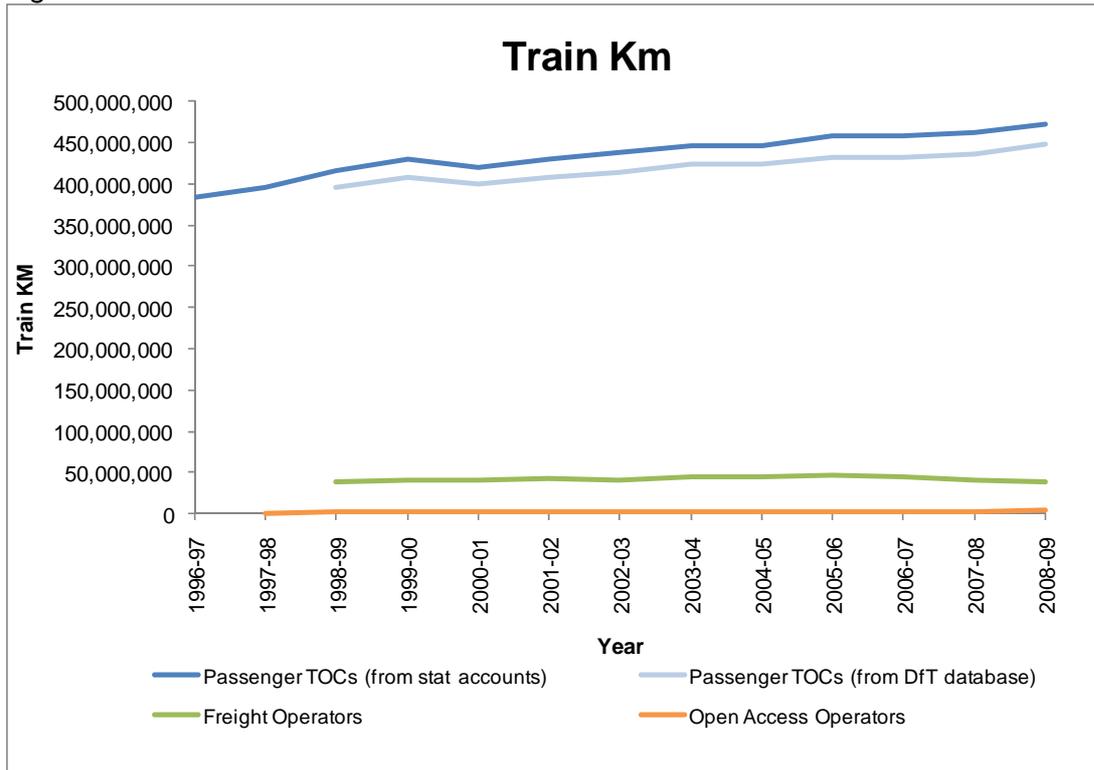
Source: DfT database of Train Km

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Figure 16 – Train km per employee
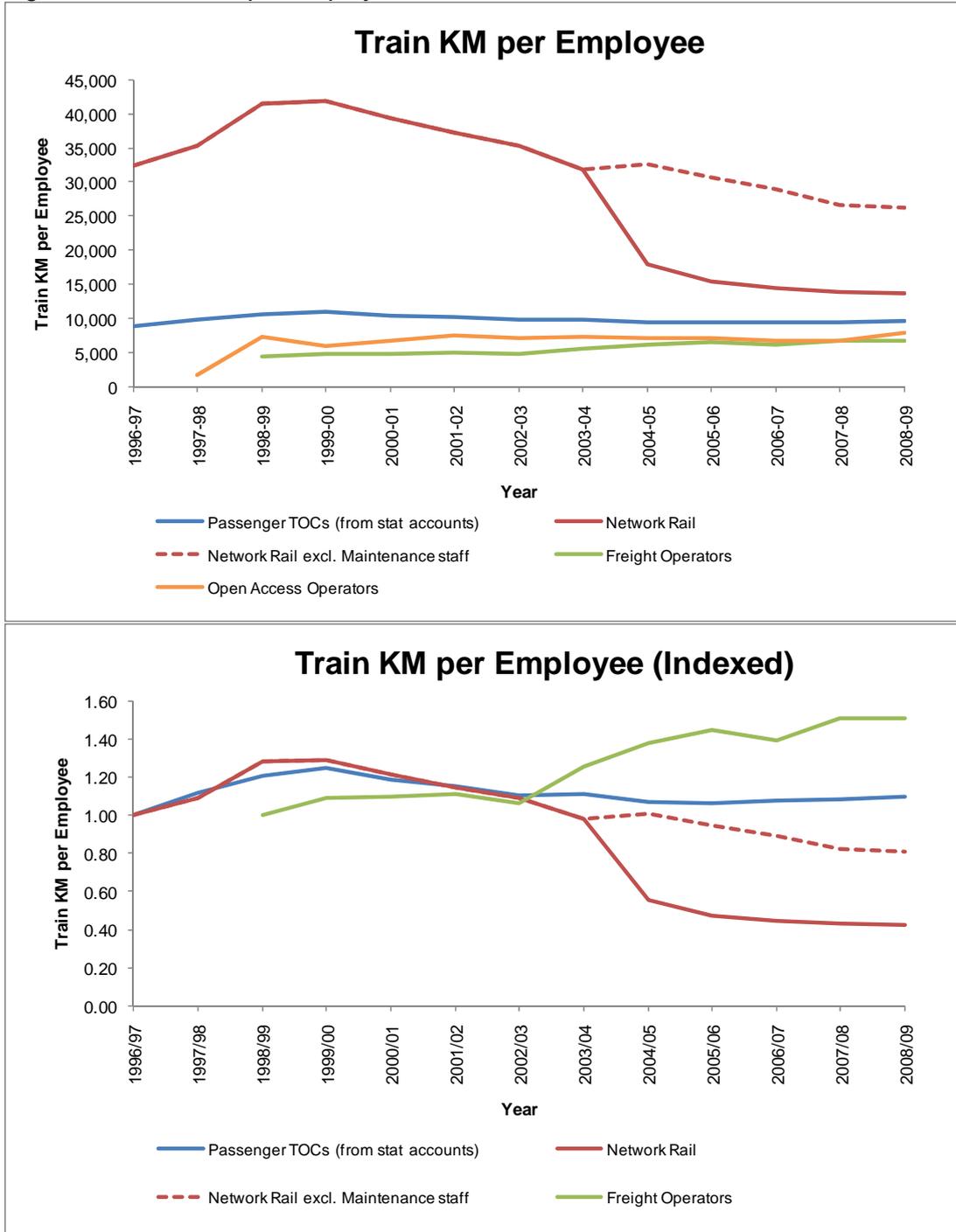
Source: TOC data from University of Leeds based on published statutory accounts; FOC, Open Access and Network Rail data from statutory accounts; Estimates of maintenance staff based on other data supplied by Network Rail. Train Km from DfT database.

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3.2.2   The more complete set of freight data enables us to make some interesting comparisons. While the number of employees in passenger TOCs has increased from around 2000 – 2006, only to flatten off in recent years, the freight operators have had a general decrease in staff numbers over the same period (Figure 11). This is also reflected in the staff costs (Figure 12). However, the fall in staff costs has not matched the fall in staff numbers, as (like passenger TOCs), the freight operators have been paying increasingly higher wages year on year. This has only changed in the last year (Figure 13)

3.2.3   Although freight operators have higher costs per employee than passenger or open access operators, aside from 1996/97 when costs fell and 2002/03 when costs rose, freight employee earnings have increased at a comparable rate to the average earnings index. It is only from 2005/06 that they have risen significantly faster than the AEI. In contrast, passenger costs per employee have outstripped AEI from about 2001/02 and open access operators since their introduction.

3.2.4   Figure 14 is an update of Figure 10 in the main report. The different data sources have changed the results slightly, but the main message is the still the same – namely that the average staff costs in freight operating companies tends to be higher than the average across passenger TOCs.

3.3   Productivity Measures

3.3.1   In the main report, our primary measure of productivity has been train km per employee. This is shown in Figure 15. However, in the main report we note a number of limitations with this measure of productivity.

3.3.2   Applying this measure to Network Rail has a number of particular problems. Firstly the raw data includes maintenance staff from the point when they were brought in-house during 2003/04 which distorts the graph. We have produced an estimate of the figures excluding this staff to try and give a consistent time series. The second major weakness is that the staff figures also include personnel employed in enhancements, but the train km measure does not capture the output from these staff. If Network Rail increase their level of investment in their infrastructure it will actually lead to a reduction in train km per staff.

3.3.3   In order to find a more meaningful picture of Network Rail productivity, ideally we would like to be able to separate out both maintenance and enhancement staff. We could then measure train km per staff for normal on-going operations (making an adjustment for the inclusion of maintenance staff part way through the time series).

3.3.4   It is not entirely clear what an appropriate measure of productivity for enhancement staff would be. It is easy to define an output measure for an individual enhancement scheme, as the scheme will have a well-defined purpose (e.g. increase capacity, improve performance). A global measure is less easy to identify. One solution would be to measure enhancement staff/costs against the range of outputs that enhancements might be intended to deliver.

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3.4   Industry Summaries

3.4.1   From British Railways Annual Report and Accounts, we have been able to extend some of the data series at the total industry level to before privatisation. (Unfortunately we have not been able to get complete information on train km pre-privatisation, hence the breaks in Figure 21 and Figure22 below).

3.4.2   Before privatisation the number of employees (Figure 17) and total staff costs (Figure 18) were decreasing. This trend was reversed at privatisation, and staff numbers remained fairly constant until about 2002/03, and then began to increase.

3.4.3   However, the average staff cost per employee (Figure 19) has continued on an upward trend since about 1992/93. We suspect that the "hump" in the graph from 1992/93 to 1995/96 may be as a result of the different data sources not being entirely consistent. We are not very confident in the figures for 1995/96 and the apparent fall in average costs per employee may not be genuine. Nevertheless we can be certain about the overall trend, which when expressed as an index and compared to a baseline Average Earnings Index (Figure 20) suggests that staff costs per employee only started increasing faster than baseline after privatisation.

3.4.4   With the increase in staff numbers and costs since privatisation, there has also been a reversal in the trends seen in the various output measures (Figure 21). Although costs have increased, so have the passenger km and tonne km delivered. The trend on train km less clear, but these have also increased overall.

3.4.5   For completeness, we have included a graph of train km per employee. We have previously discussed the limitations of this measure in the main report, and above in 3.3. Train km per employee shows a step change pre- and post- privatisation. The post-privatisation increase in efficiency does not appear to have been sustained, and the productivity measure begins to tail off from around 1999/00.

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Figure 17 – Number of Employees (whole industry)
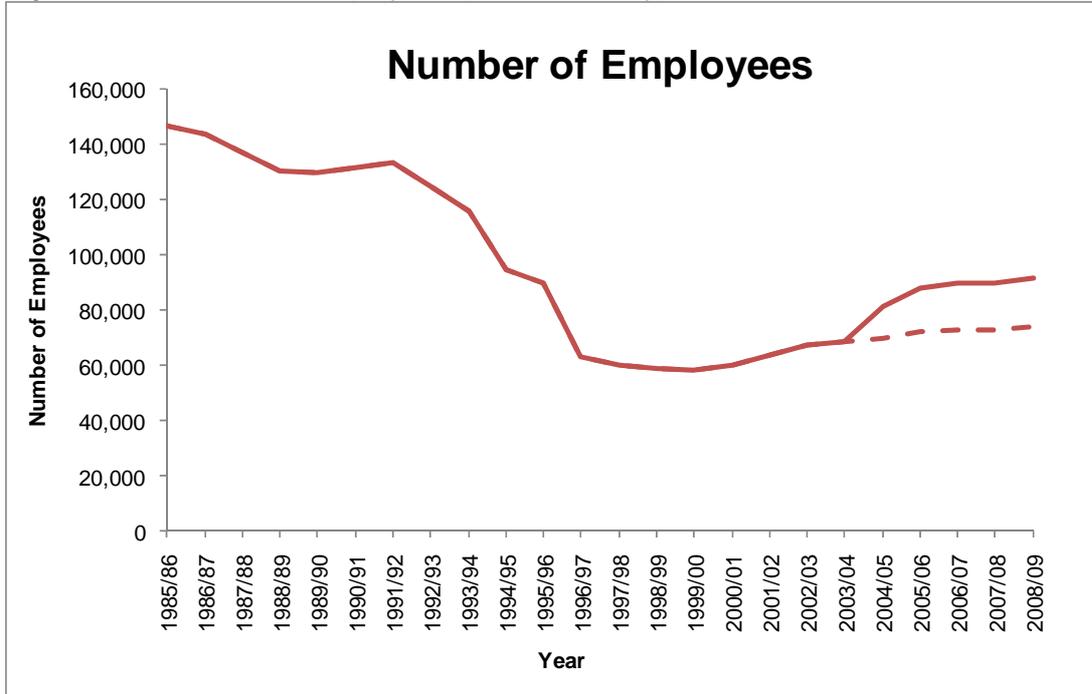
Number of Employees

Source: TOC data from University of Leeds based on published statutory accounts; FOC, Open Access and Network Rail data from statutory accounts; Estimates of maintenance staff based on other data supplied by Network Rail. Pre-privatisation data from BR Accounts.

Figure 18 – Annualised Real Staff Cost £2008/09 (whole industry)
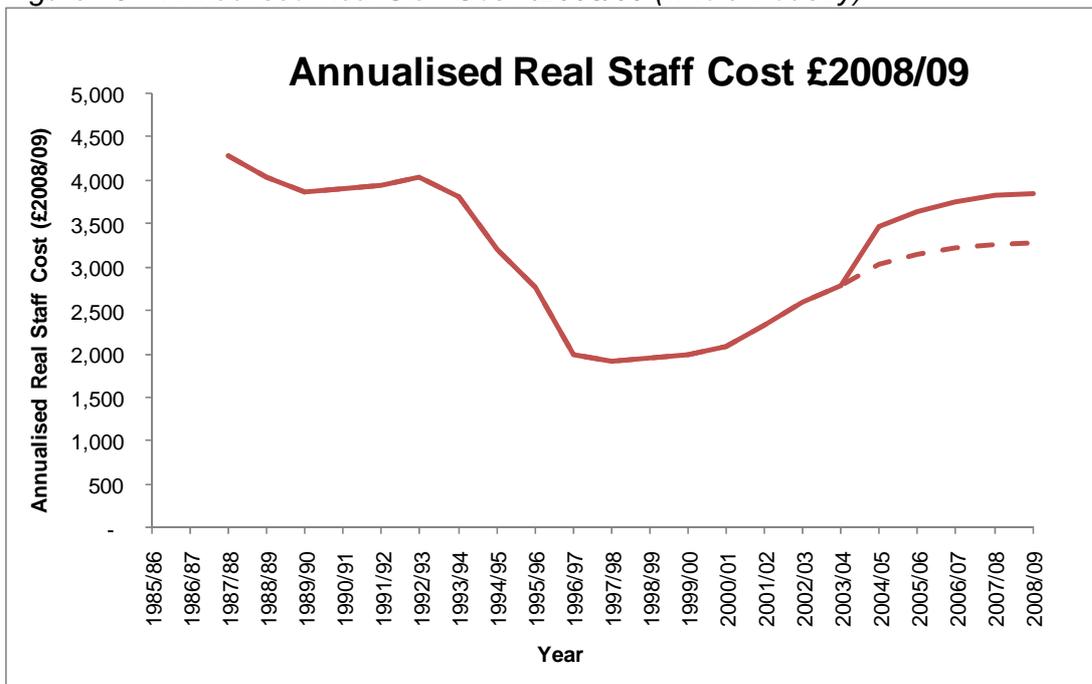
Annualised Real Staff Cost £2008/09

Source: TOC data from University of Leeds based on published statutory accounts; FOC, Open Access and Network Rail data from statutory accounts; Estimates of maintenance staff based on other data supplied by Network Rail. Pre-privatisation data from BR Accounts.

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Figure 19 –Average Real Staff Cost per Employee £2008/09 (whole industry)
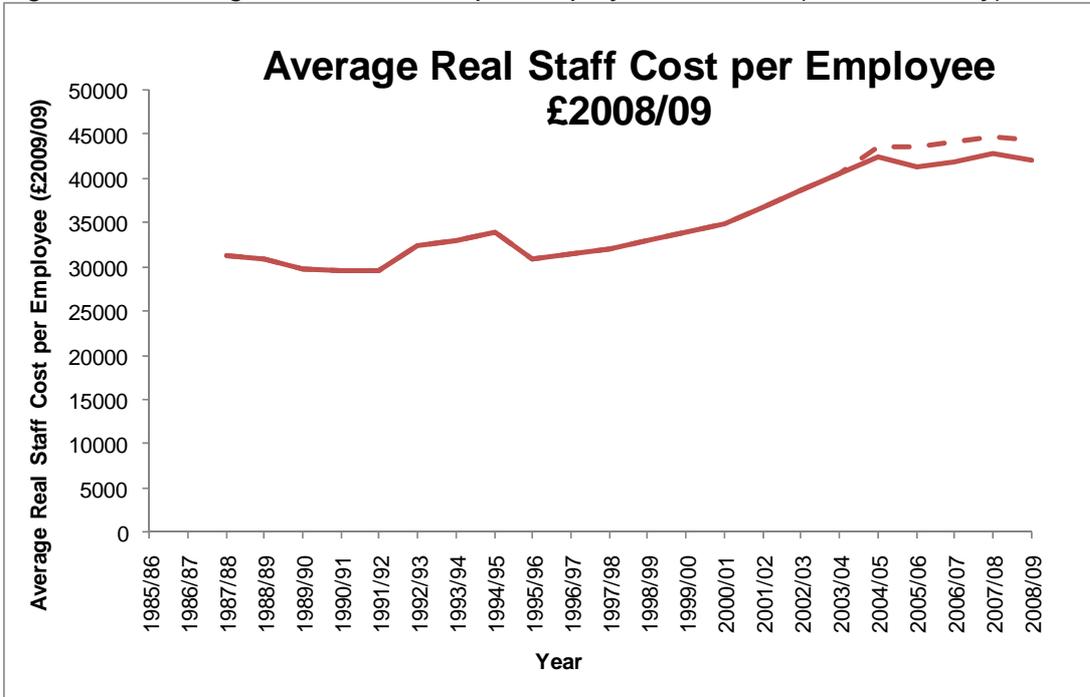
Source: TOC data from University of Leeds based on published statutory accounts; FOC, Open Access and Network Rail data from statutory accounts; Estimates of maintenance staff based on other data supplied by Network Rail. Pre-privatisation data from BR Accounts.

Figure 20 – Average Real Staff Cost per Employee £2008/09 (whole industry) Indexed
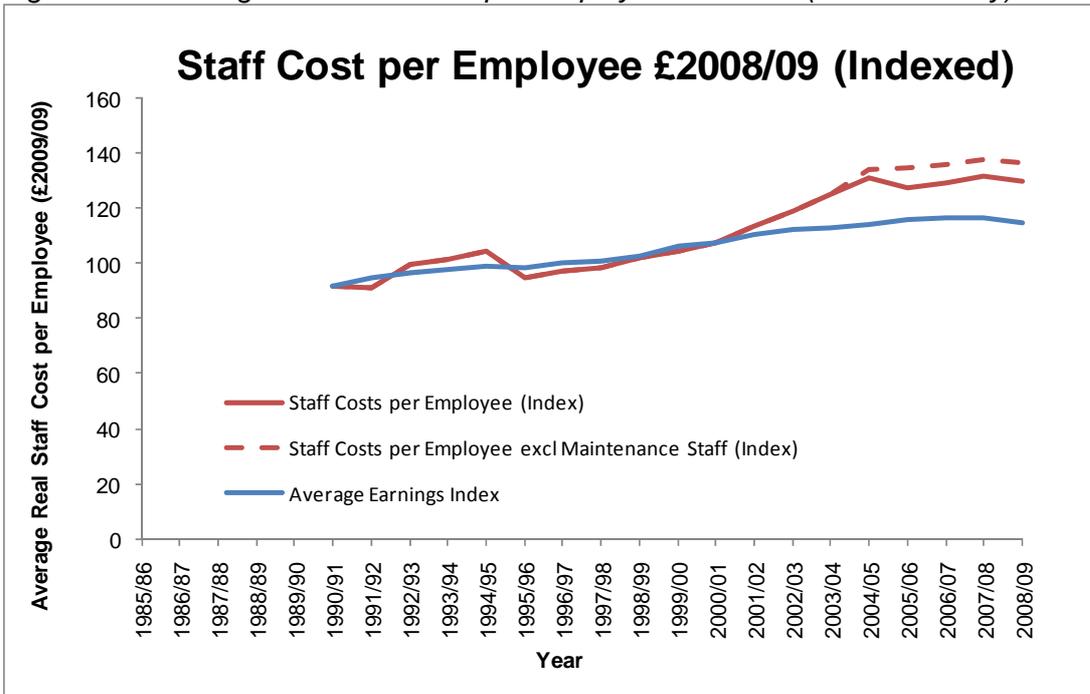
Source: TOC data from University of Leeds based on published statutory accounts; FOC, Open Access and Network Rail data from statutory accounts; Estimates of maintenance staff based on other data supplied by Network Rail; Pre-privatisation data from BR Accounts; AEI from Office of National Statistics.

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Figure 21 – Industry Outputs
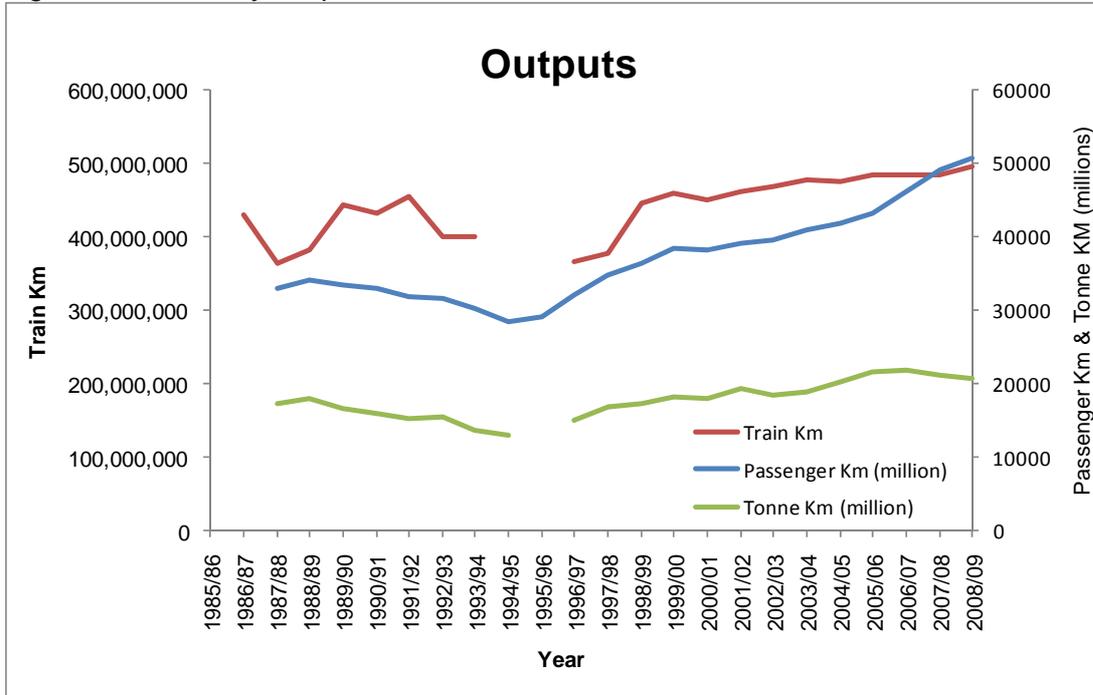
Source: DfT database of Train Km; Pre-privatisation data from BR Accounts.

Figure 22 – Train Km of Employees (whole industry)
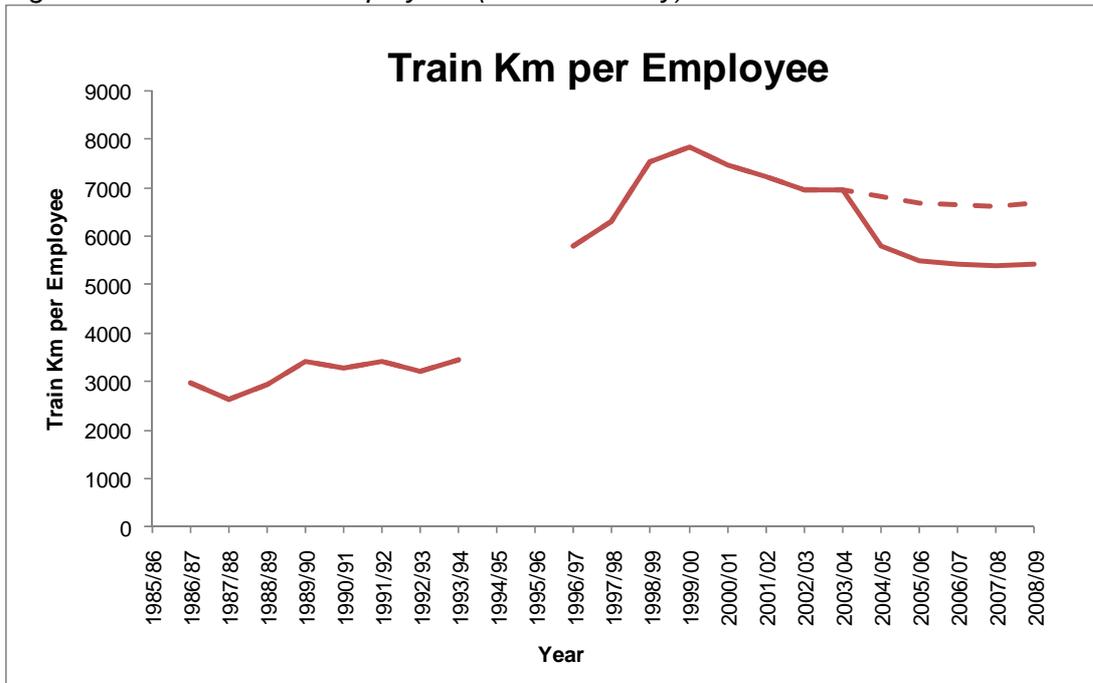
Source: TOC data from University of Leeds based on published statutory accounts; FOC, Open Access and Network Rail data from statutory accounts; Estimates of maintenance staff based on other data supplied by Network Rail. Train Km from DfT database. Pre-privatisation data from BR Accounts.

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4   Other Comparisons

4.1   Salary Comparisons

4.1.1   To make a fair comparison of average salaries against comparable roles in other industries, we need access to a wide range of remuneration information. Job remuneration will vary by many factors such as location, experience, organisation etc. Therefore comparison against individual salaries is open to criticism as there are always potential reasons why a particular job is not directly comparable. The solution to this problem is to compare across a wide range of individual salaries across different organisations, locations etc. By averaging across these types of variables, the comparison becomes more reliable. However, such a comparison does require access to a wide database of remuneration information.

4.1.2   We have used The Annual Survey of Hours and Earnings (ASHE) as our main source of salary comparison information. This is based on a 1% sample (around 175,000) of employee jobs, drawn from HM Revenue & Customs (HMRC) Pay As You Earn (PAYE) records. The information on these employees is then collected through a questionnaire sent to their employers. The survey provides information about the levels, distribution and make-up of earnings and hours paid for employees within industries, occupations and regions. ASHE is generally considered to be a reliable source of data, mainly due to the large sample size.

4.1.3   Other possible database sources include:

- The Labour Force Survey (LFS) - a quarterly sample survey of households living at private addresses in Great Britain.

- Incomes Data Services (IDS) - an independent research organisation providing information on pay, working arrangements and the labour market etc across Europe.

- XpertHR (formerly IRS) – specialists in the publication of salary survey and payroll data.

4.1.4   We looked into using these alternative sources, particularly IDS. Our conclusion was that we could not see any advantage in their generic database over ASHE. IDS was prepared to carry out a specialised database search which would be tailored to particular job comparisons that we wished to make. However, such a search would be costly and could not be guaranteed to provide meaningful results.

4.1.5   From ASHE we have extracted time series information on occupations within the rail industry, and other comparable jobs. The four specifically rail occupations available in the dataset are as follows:

- Train Drivers

- Rail Transport Operatives

- Rail Travel Assistants

- Rail Construction and Maintenance Operatives

Rail Transport Operatives include shunters, controllers, foremen, signallers, depot staff etc.

Rail Travel Assistants include conductors, guards, ticket collectors, porters and train crew.

Rail Construction and Maintenance Operatives include track & permanent way engineers, inspectors etc.

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4.1.6   For each occupation we have extracted mean annual and hourly gross pay, normalised to £2008/09. We have also extracted a series of related occupations by way of comparison. When we have expressed the results as an index, we have generally tried to use 2002 as the base. When data for this year is not available, we have used the next year for which we have information. ASHE does not contain information on every occupation for every year. This is either because their job definitions have changed through time, or because ASHE did not receive enough data on that occupation to report a figure based on a sufficient sample size. Where the data is missing in ASHE, we have left a gap in the graph.

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Figure 23 – Rail Occupations: Annual Gross Pay £2008/09
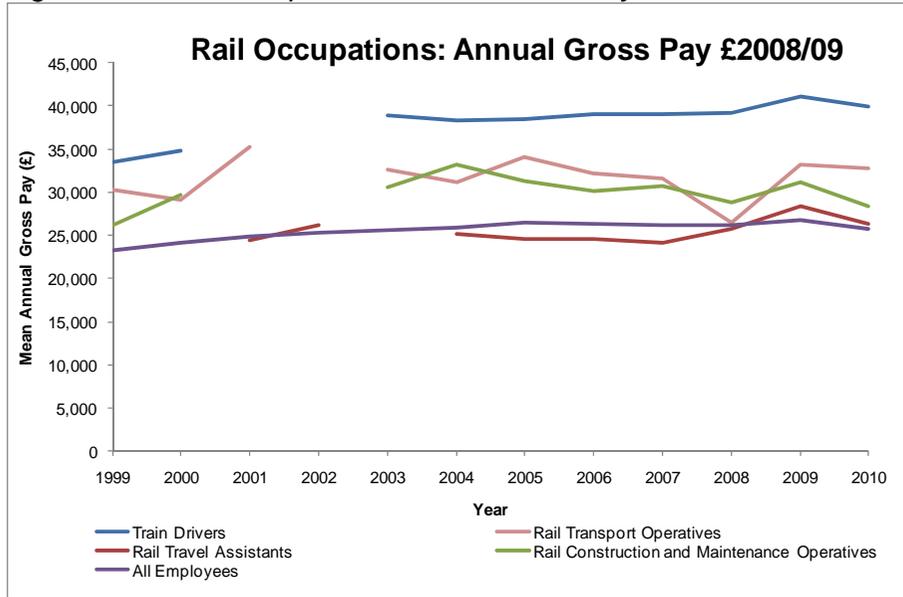
Figure 24 – Rail Occupations: Annual Gross Pay £2008/09 Indexed
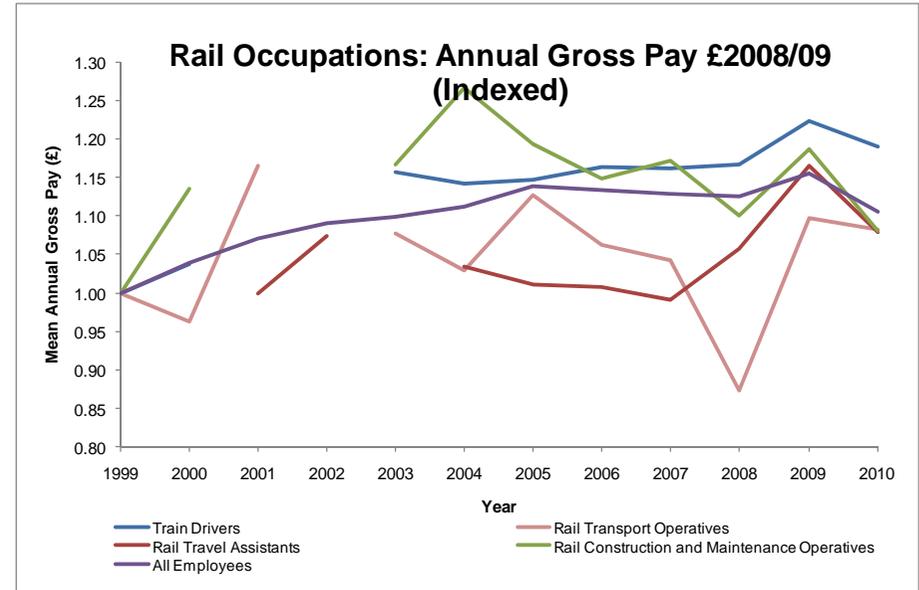
Source: ASHE

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Figure 25 – Rail Occupations: Hourly Gross Pay £2008/09
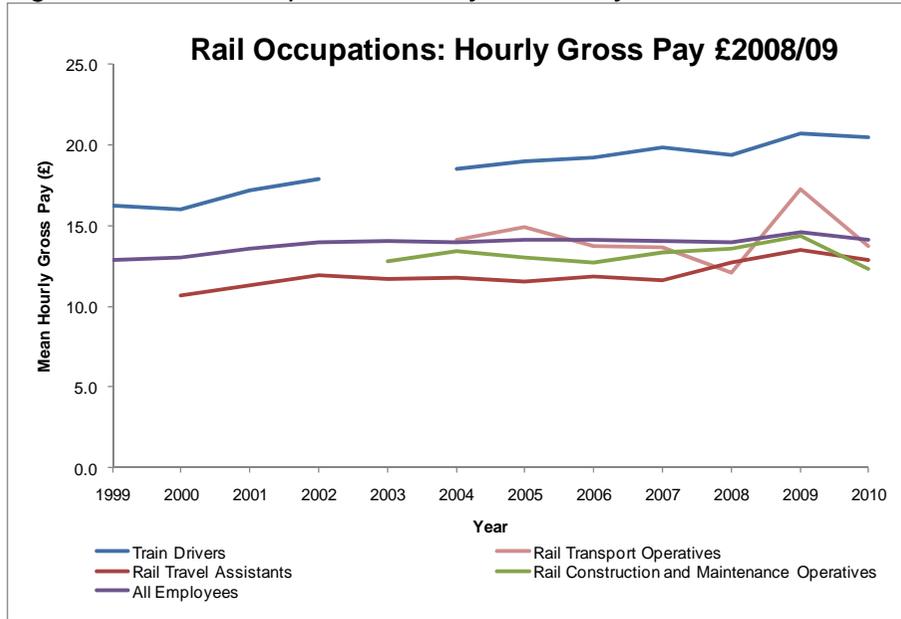
Figure 26 – Rail Occupations: Hourly Gross Pay £2008/09 Indexed
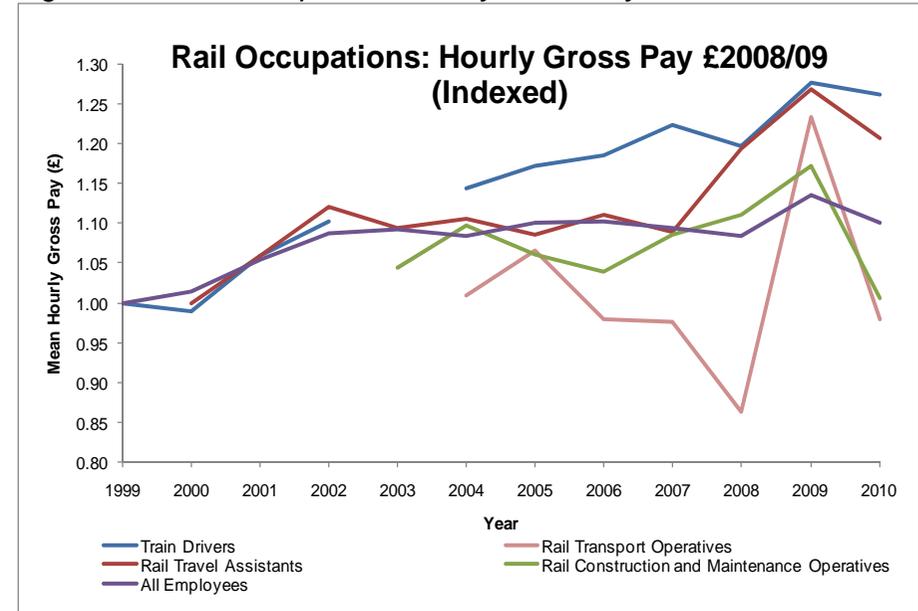
Source: ASHE

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Figure 27 – Driver Comparisons: Annual Gross Pay £2008/09
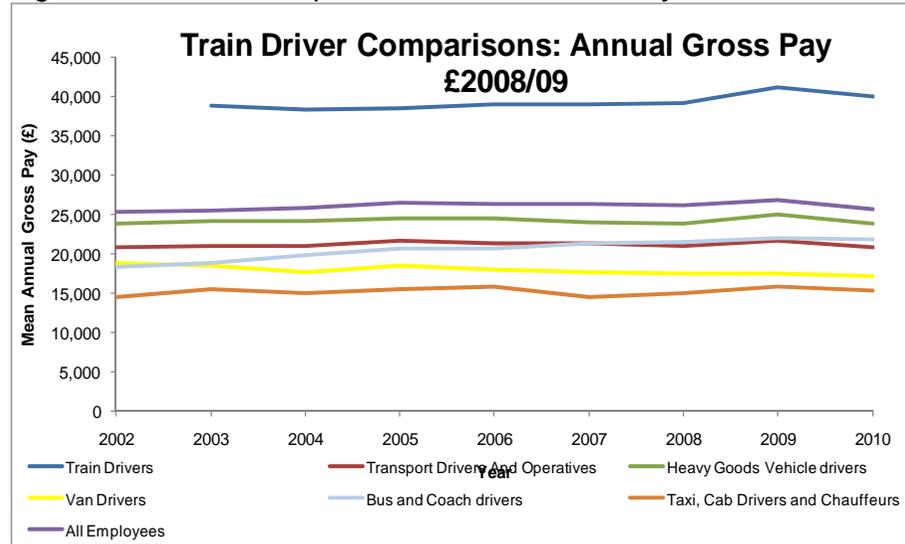
Figure 28 – Driver Comparisons: Annual Gross Pay £2008/09 Indexed
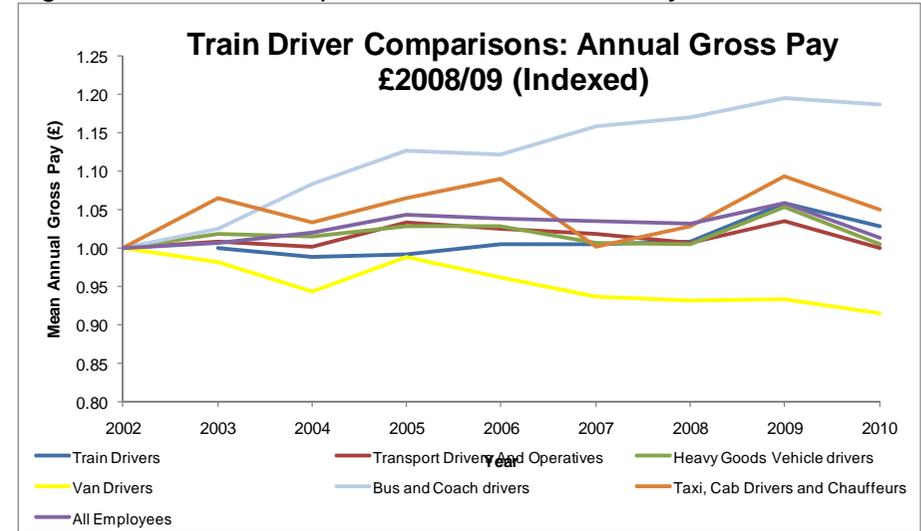
Source: ASHE

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Figure 29 – Driver Comparisons: Hourly Gross Pay £2008/09
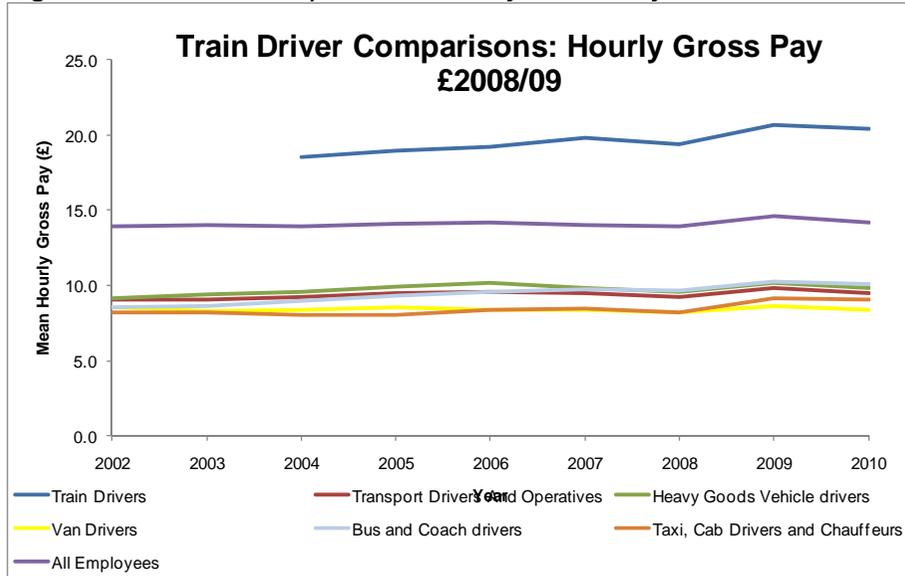
Figure 30 – Driver Comparisons: Hourly Gross Pay £2008/09 Indexed
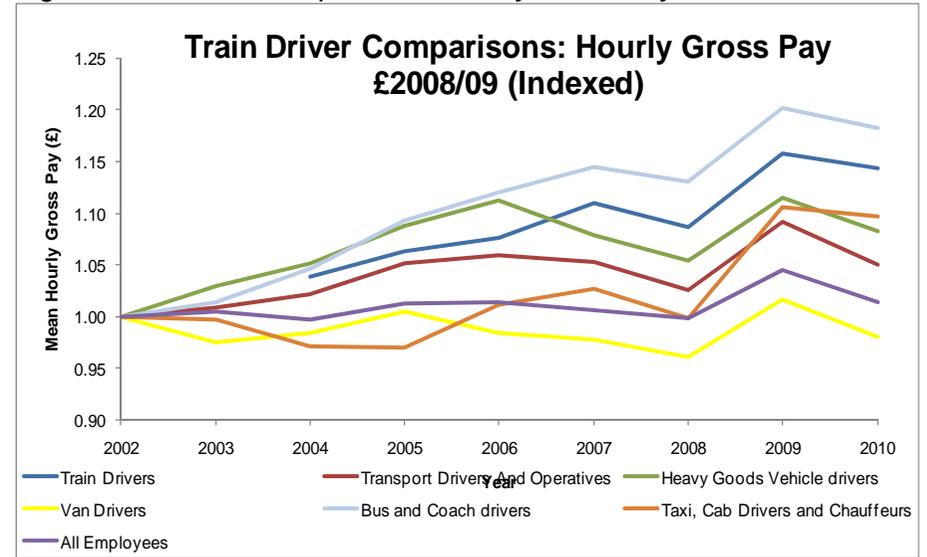
Source: ASHE

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Figure 31 – Transport Op Comparisons: Annual Pay £2008/09

Rail Transport Operative Comparsions: Annual Gross Pay £2008/09
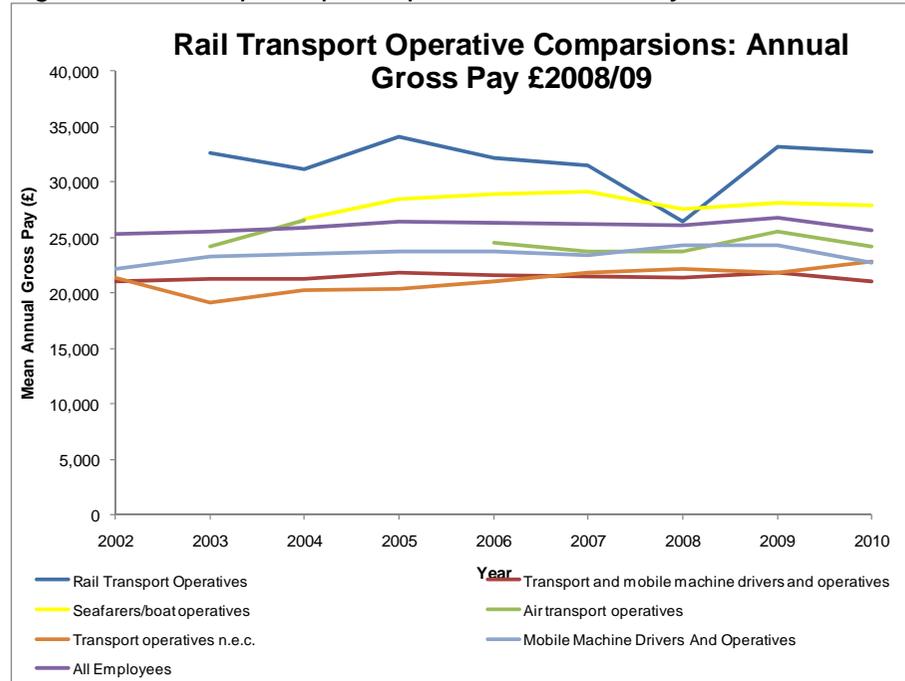
*Figure 32 – Transport Op Comparisons: Annual Pay £2008/09 Indexed*

Rail Transport Operative Comparsions: Annual Gross Pay £2008/09 (Indexed)
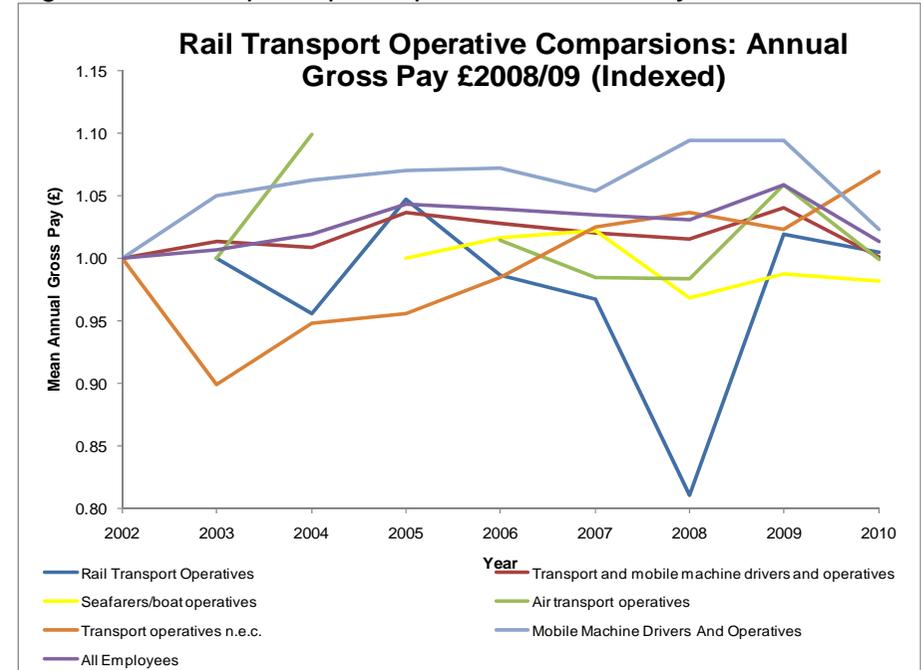
Source: ASHE

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Figure 33 – Transport Op Comparisons: Hourly Pay £2008/09

Rail Transport Operative Comparsions: Hourly Gross Pay £2008/09

Legend:
- Rail Transport Operatives
- Seafarers/boat operatives
- Transport operatives n.e.c.
- All Employees
- Transport and mobile machine drivers and operatives
- Air transport operatives
- Mobile Machine Drivers And Operatives
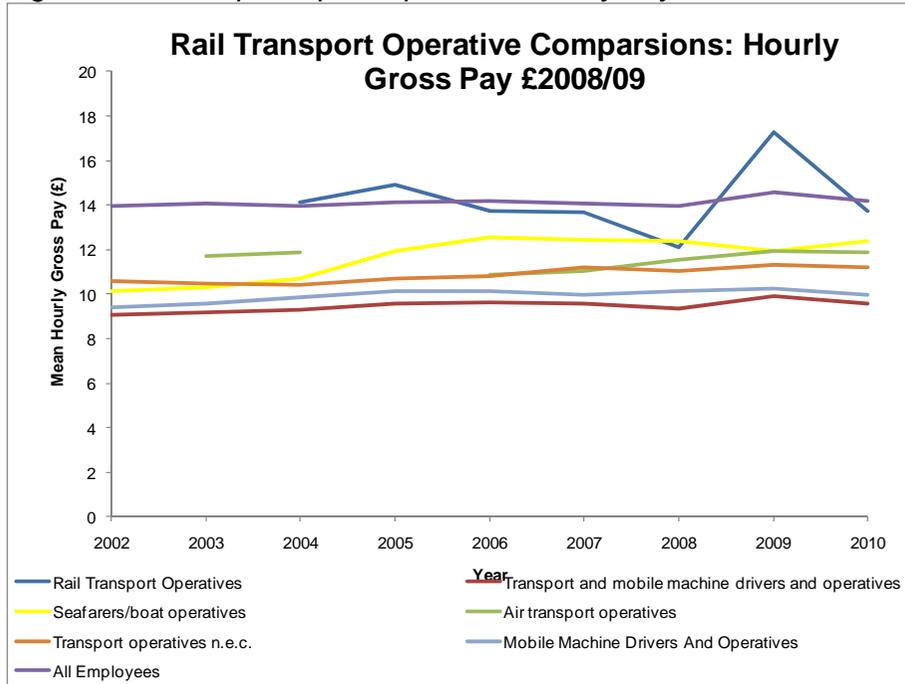
Figure 34 – Transport Op Comparisons: Hourly Pay £2008/09 Indexed

Rail Transport Operative Comparsions: Hourly Gross Pay £2008/09 (Indexed)

Legend:
- Rail Transport Operatives
- Seafarers/boat operatives
- Transport operatives n.e.c.
- All Employees
- Transport and mobile machine drivers and operatives
- Air transport operatives
- Mobile Machine Drivers And Operatives
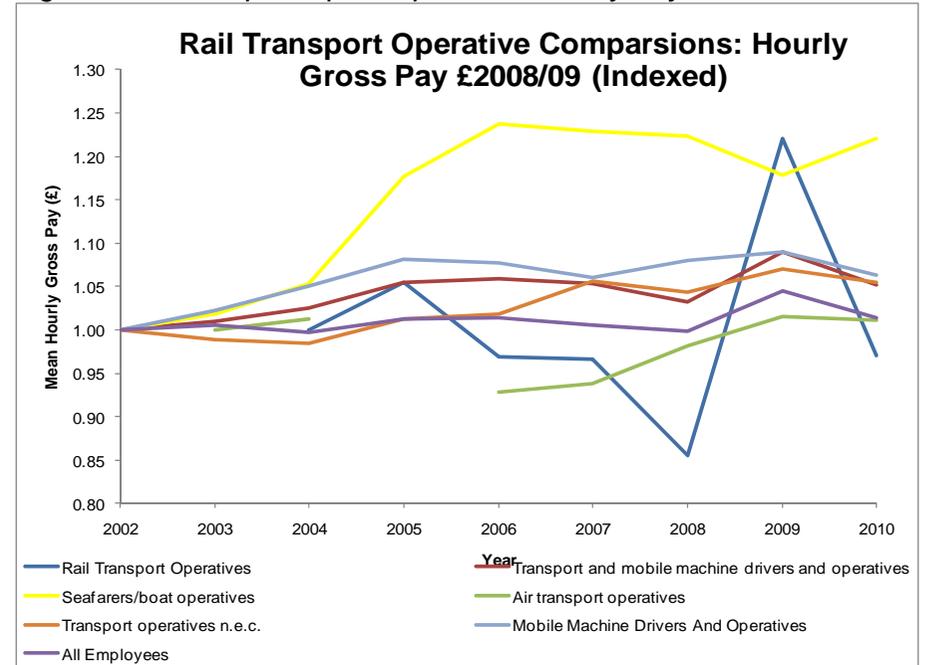
Source: ASHE

Capabilities on project:
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Figure 35 – Travel Asst Comparisons: Annual Gross Pay £2008/09
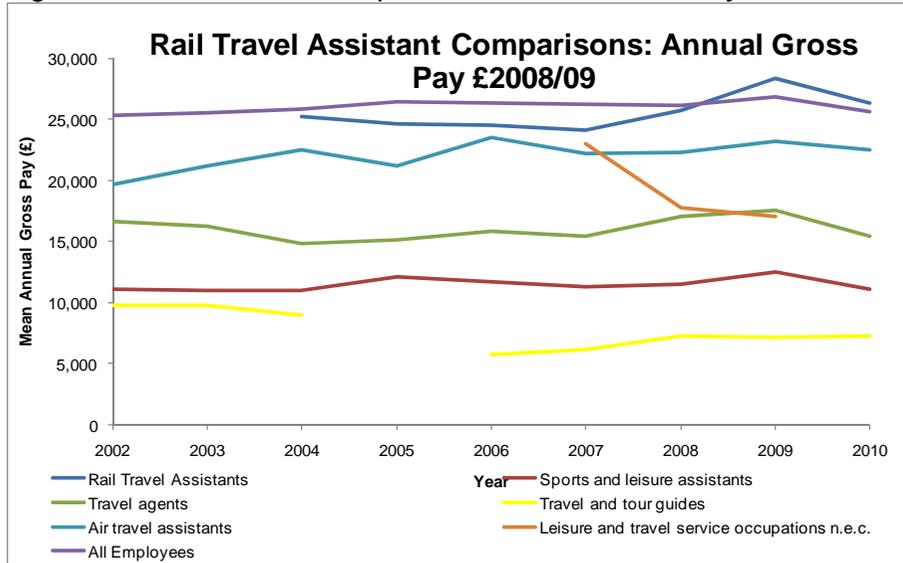
Figure 36 – Travel Asst Comparisons: Annual Pay £2008/09 Indexed
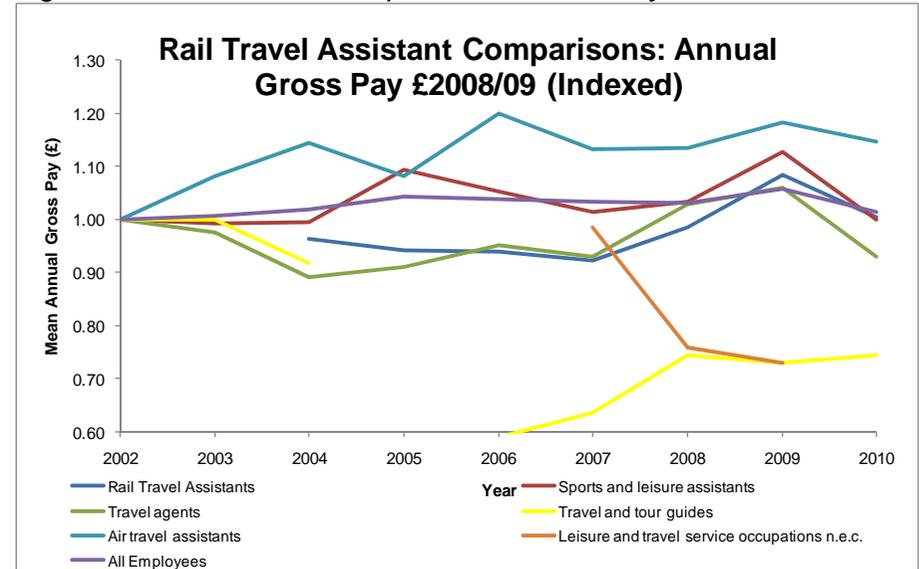
*Source: ASHE*

Capabilities on project:
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Figure 37 – Travel Asst Comparisons: Hourly Gross Pay £2008/09
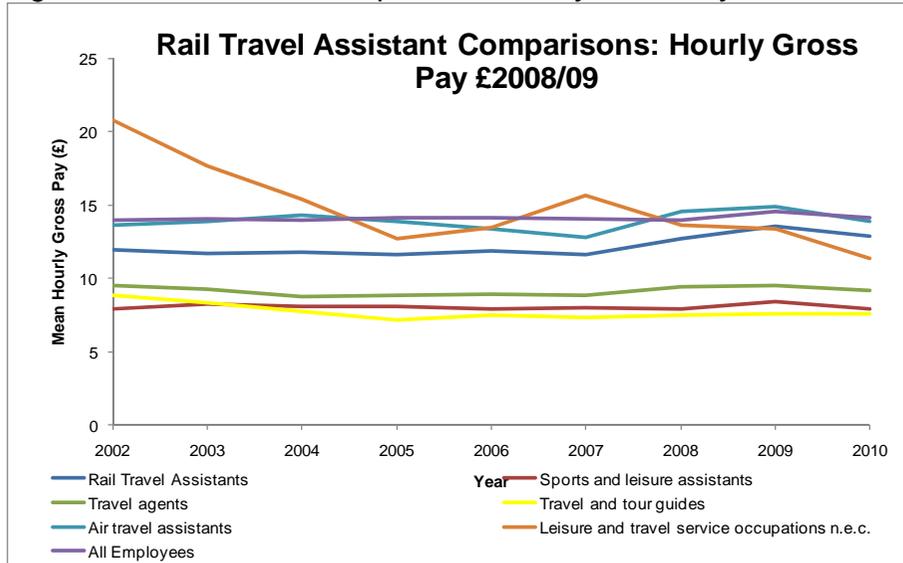
Figure 38 – Travel Asst Comparisons: Hourly Pay £2008/09 Indexed
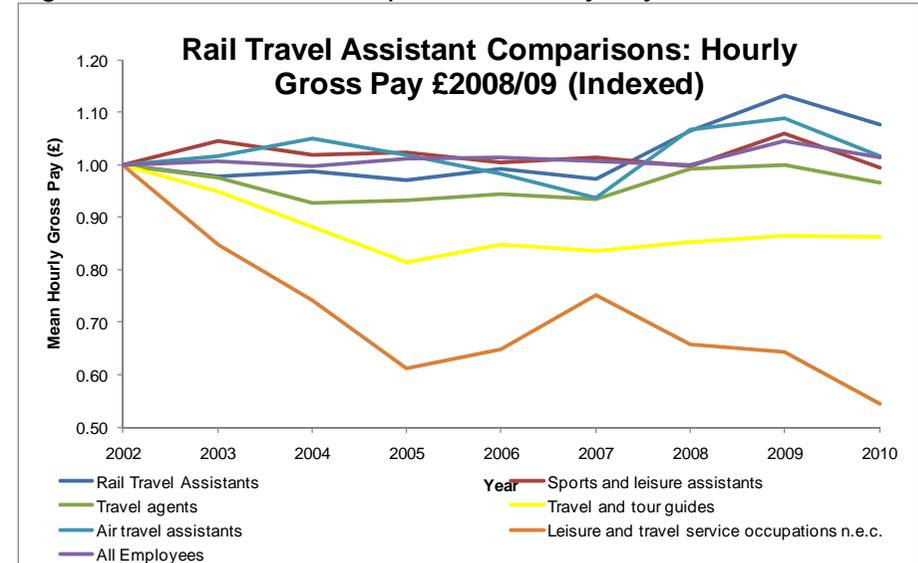
Source: ASHE

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Figure 39 – Const & Maint Comparisons: Annual Gross Pay £2008/09
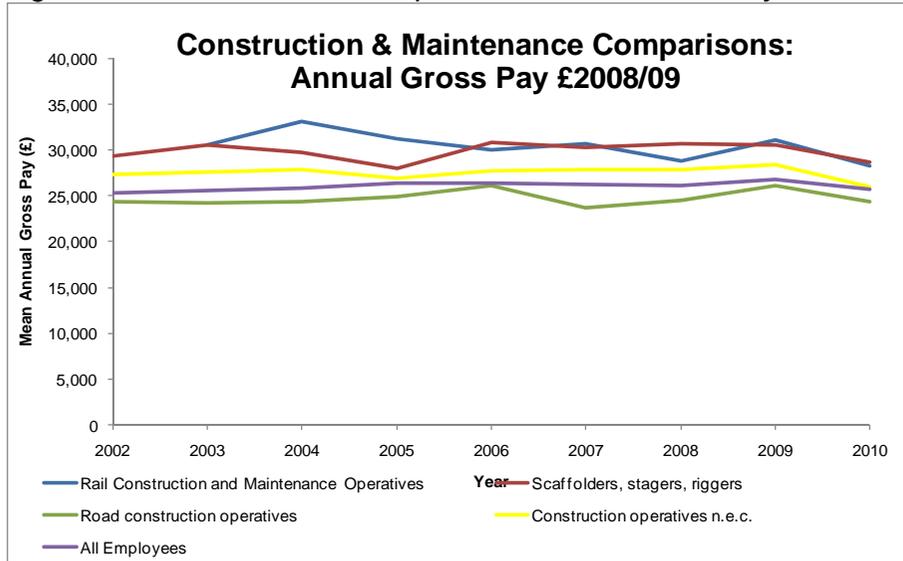
Figure 40 – Const & Maint Comparisons: Annual Pay £2008/09 Indexed
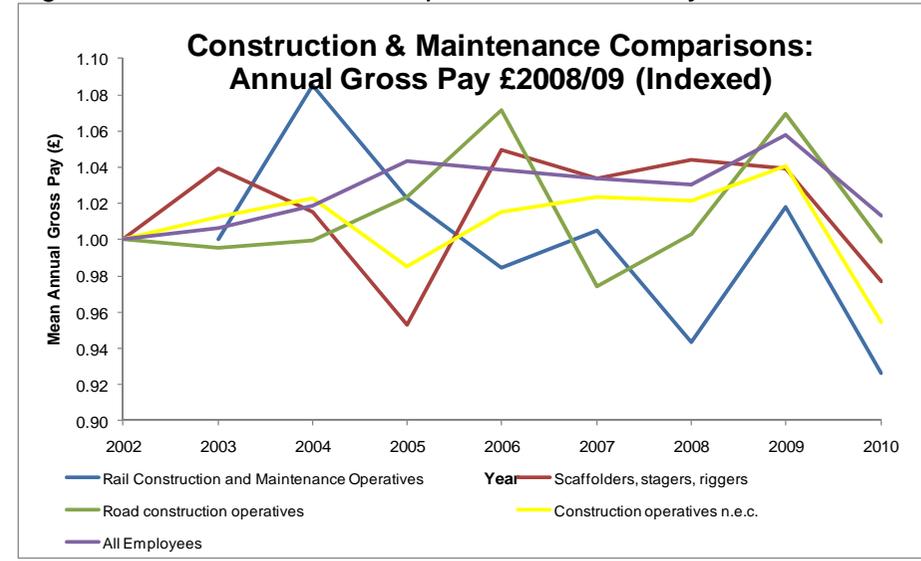
Source: ASHE

Capabilities on project:
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Figure 41 – Const & Maint Comparisons: Hourly Gross Pay £2008/09

Construction & Maintenance Comparisons: Hourly Gross Pay £2008/09

Mean Hourly Gross Pay (£)

Year

- Rail Construction and Maintenance Operatives
- Scaffolders, stagers, riggers
- Road construction operatives
- Construction operatives n.e.c.
- All Employees
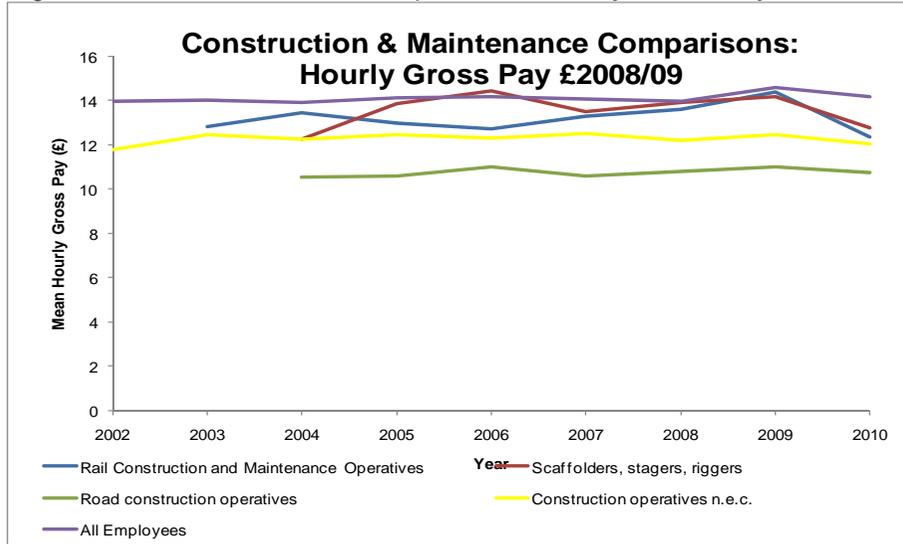
Figure 42 – Const & Maint Comparisons: Hourly Pay £2008/09 Indexed

Construction & Maintenance Comparisons: Hourly Gross Pay £2008/09 (Indexed)

Mean Hourly Gross Pay (£)

Year

- Rail Construction and Maintenance Operatives
- Scaffolders, stagers, riggers
- Road construction operatives
- Construction operatives n.e.c.
- All Employees
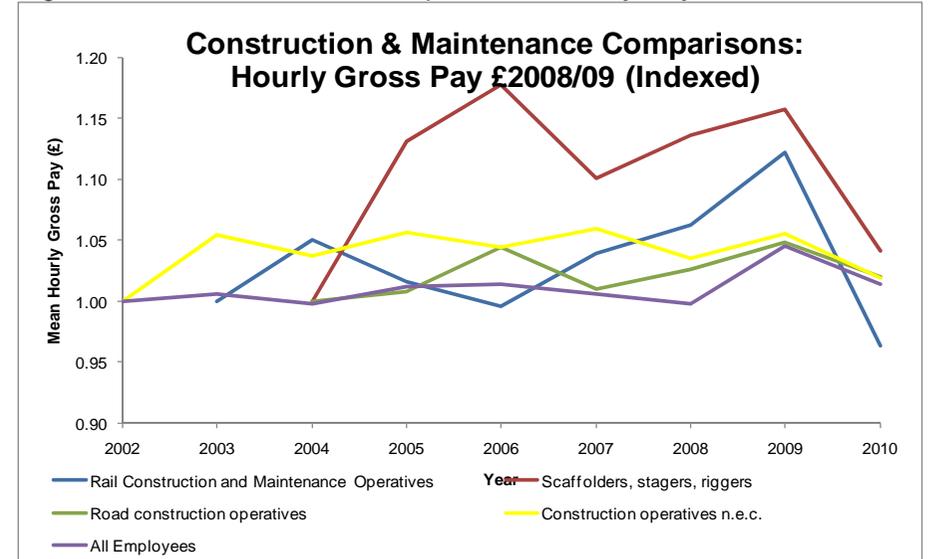
Source: ASHE

4.1.7   Train drivers, rail transport operatives and rail construction & maintenance operatives are all paid above the national average in terms of annual gross pay (Figure 23). However, in terms of hourly pay only train drivers are paid above the national average (Figure 25).

4.1.8   Only train driver annual salaries have risen faster than the average for all employees since 1999 (Figure 24). There has not been much increase over the average for all employees in annual pay, but there is a significant increase in hourly pay (Figure 26). In hourly pay, rail travel assistants have also seen an increase above the national average since 2007.

4.1.9   The data for rail transport operatives shows a marked decrease on all measures in 2008. We are not sure why this is, or whether the data is correct.

4.1.10 Whether we look at annual pay or hourly pay, train drivers are paid more than any other driver occupation. All other types of driver are paid less than the national average (Figure 27) and Figure 29).

4.1.11 Train driver annual pay has not particularly increased faster than the national average. Bus and coach drivers have seen a much steeper rise in average pay (Figure 28).

4.1.12 When we look at hourly pay (Figure 30), bus & coach drivers have the fastest increase in pay. However, train driver hourly pay definitely outstrips the national average, and nearly increases at the same rate as bus & coach drivers.

4.1.13 According to ASHE classifications, rail transport operatives (shunters, signallers etc) fall with the subgroup *mobile machine drivers and operatives*, which in turns falls within *transport and mobile machine drivers and operatives*. Rail transport operatives have a higher average salary than any other group within this sub-classification (Figure 31 and Figure 33).

4.1.14 The pay data for this occupation is quite 'spiky' suggesting that either the pay for these roles has been subject to considerable variation, or the data is not entirely accurate. It is difficult to determine anything particularly conclusive from the comparisons in the form of an index (Figure 32 and Figure 34).

4.1.15 Rail travel assistants are paid less than national average, both in terms of annual pay (Figure 35) and hourly pay (Figure 37). However, they are paid more than nearly all other occupations classified in the same sub-category by ASHE. Only air travel assistants have a higher hourly pay.

4.1.16 Since 2008 rail travel assistants and air travel assistants have grown faster than the national average (Figure 38).

4.1.17 Rail construction and maintenance operatives are paid at a level comparable to scaffolders, stagers and riggers, but better than road and other construction operatives. The growth in pay for all these related occupations has been very limited.

4.1.18 Although we have not carried out formal job evaluations and found a set of comparable roles to compare with, based on the ASHE classifications of related occupations, rail occupations have higher pay than nearly all related occupations. Both train drivers and rail travel assistants have seen an increase in hourly pay that is higher than the average across all employees.

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4.2   Comparisons with Europe

4.2.1   The figures below are based on RMMS data (Report to the Council and the European Parliament on monitoring development of the rail market). The graphs show basic measures of productivity in each European country.

4.2.2   The 2008 RMMS does not contain output measures (passenger km and tonne km) for 2008. Therefore we have taken these figures from UIC (International Union of Railways) 2009. Although the UIC data is not regarded as reliable as RMMS, the 2008 outputs from UIC are generally comparable to the 2007 outputs from RMMS.

Figure 43 – Country Codes for Europe Efficiency Comparison Plots

Code	Country
AT	Austria
BE	Belgium
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
EE	Estonia
FI	Finland
FR	France
DE	Germany
EL	Greece
HU	Hungary
IE	Ireland
IT	Italy
LV	Latvia
LT	Lithuania
LU	Luxembourg
NL	Netherlands
NO	Norway
PL	Poland
PT	Portugal
RO	Romania
SK	Slovak Republic
SL	Slovenia
ES	Spain
SE	Sweden
SW	Switzerland
UK	United Kingdom

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Figure 44 – Passenger KM per Employee
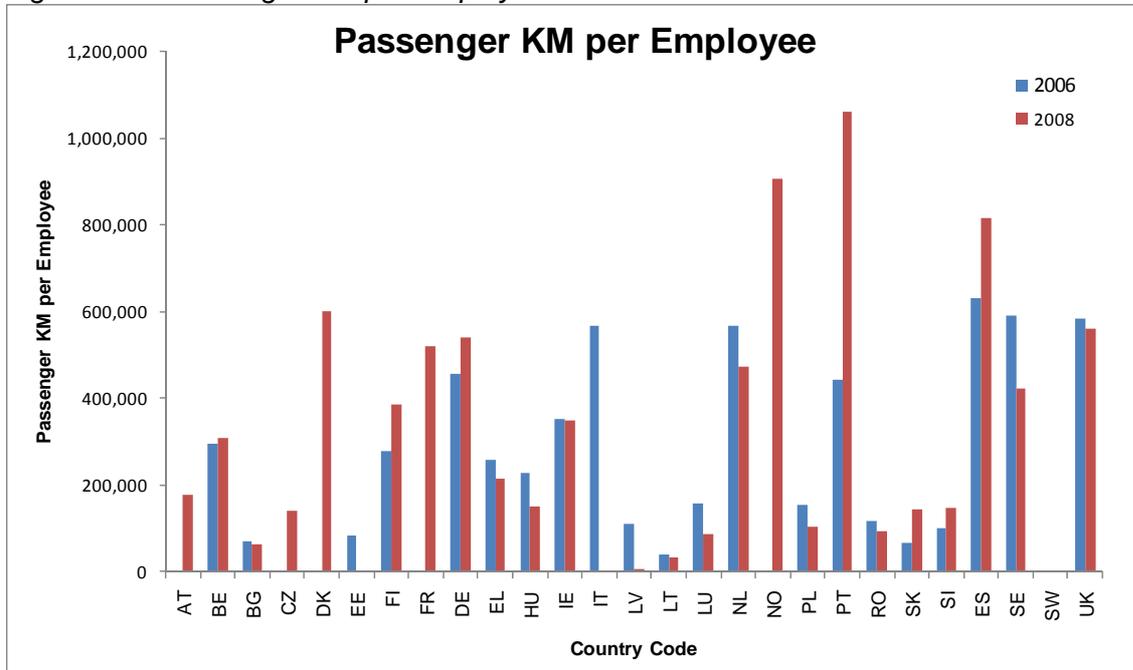
Source: RMMS 2006, 2008 and UIC 2009

Figure 45 – Passenger KM per Infrastructure Employee
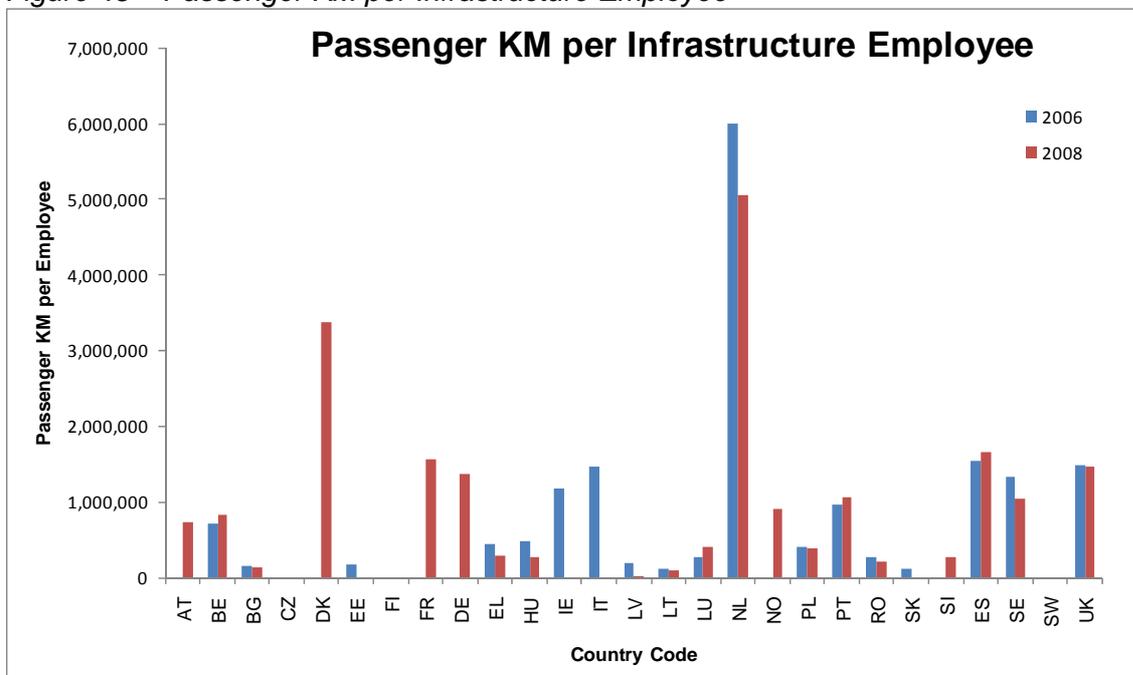
Source: RMMS 2006, 2008 and UIC 2009

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Figure 46 – 2006 Tonne KM per Employee
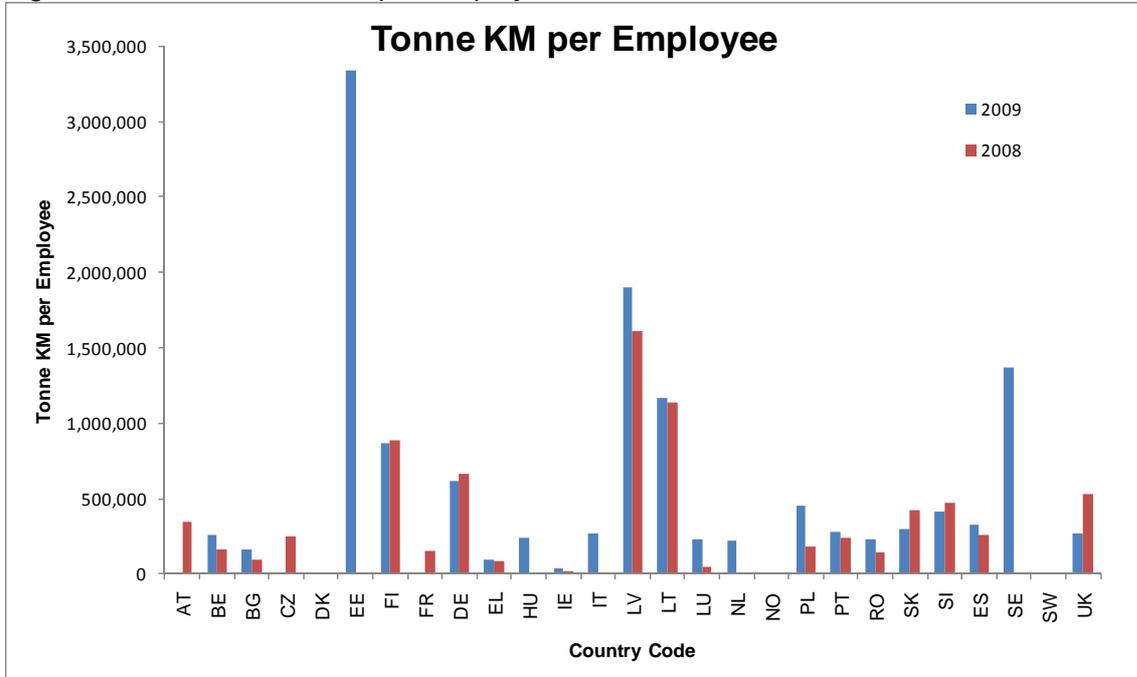
Source: RMMS 2006, 2008 and UIC 2009

Figure 47 – 2006 Tonne KM per Infrastructure Employee
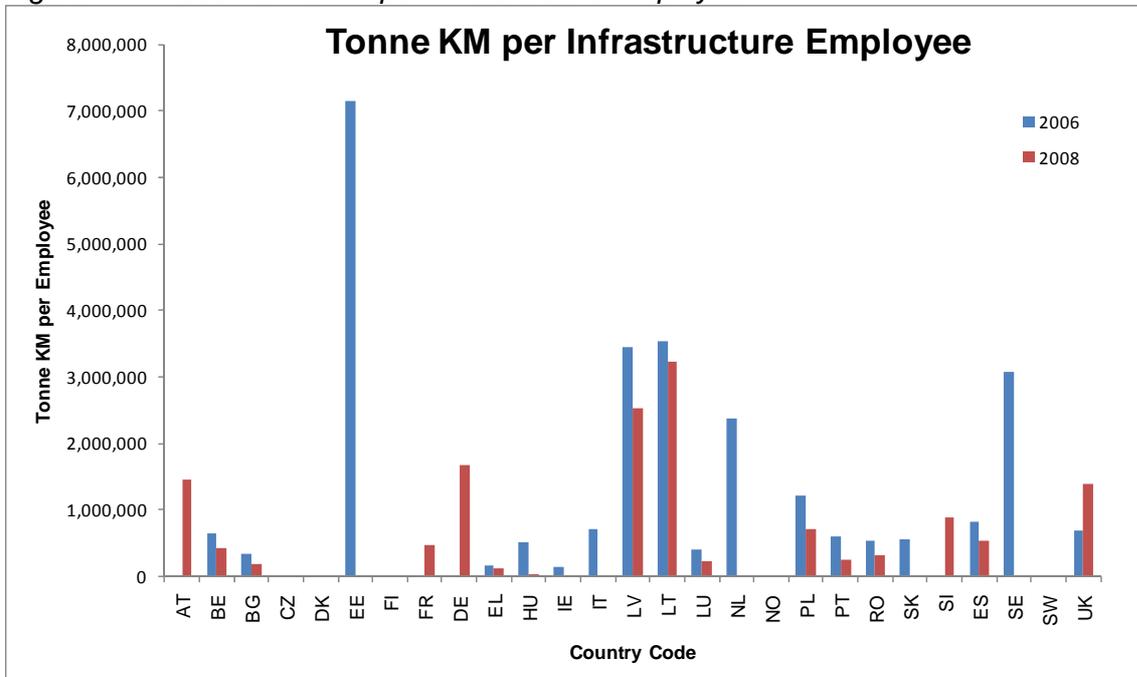
Source: RMMS 2006, 2008 and UIC 2009

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4.2.3   In terms of passenger km per employee, the UK rail industry is one of the most efficient in Europe.

4.2.4   In 2006 and 2008 the UK rail industry output about 600,000 passenger km per employee (Figure 44). By 2008 Denmark, Norway, Portugal and Spain were apparently generating more passenger km per employee. While we have supporting evidence that the UK figures are broadly correct, we cannot be sure that the variations seen in other European countries are genuine. For example, the number of employees in the Portuguese railway industry was 8,782 in 2006 and 3,556 in 2008 according to RMMS. However, in 2009 it was back up to 8,142 according to UIC. The 3,556 is possibly incorrect, and is making Portugal appear more efficient than it really is. Therefore we feel that it is only possible to draw the broad conclusion that the UK appears to be one of the most efficient industries in Europe on this measure.

4.2.5   More specifically, as the UK Infrastructure Manager, Network Rail also appears to be similar to other railways of a similar size, on the passenger km per employee measure (Figure 45). The Netherlands have an output of about three times as many passenger km per infrastructure employee compared to the UK. This is consistent with findings in the main report (Table 32).

4.2.6   In terms of freight tonne km per employee, the UK rail industry is of average efficiency. This reflects the fact that compared to other European countries, freight traffic is a smaller proportion of total traffic on the railway.

4.2.7   The main problem with passenger km and tonne km per employee measures is that a country can appear inefficient on (e.g.) the passenger measure, because it is mainly a freight railway. Therefore we have also looked at total train km per employee, as a composite measure across both passenger and freight operations (Figure 47). Unfortunately the RMMS data source does not contain train km (or enough information to infer train km), therefore we have had to use UIC data. This is less complete, and generally considered to be less reliable.

Figure 48 – Train KM per Employee

Source: UIC 2006, 2009

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4.2.8   We have selected a peer group of 10 countries with more than 100 million train km per year to compare train km per employee in more detail (Figure 49).

Figure 49 – Train KM per Employee for comparable countries

Source: UIC 2006, 2009

4.2.9   The 5 bottom ranking countries have remained the same from 2006 to 2009, although the order has changed slightly.

4.2.10 In 2009 the UK ranked 4th out of 10. In 2006 it used to rank 2nd. This fall in rank has been due to a decrease in Switzerland and UK productivity, plus an increase in Spain and the Netherlands. However, the large increase in the Netherlands productivity is possibly not correct. It is due to a very low number of staff recorded for the Netherlands in 2009 by the UIC.

Figure 50 – Train KM per Employee for comparable countries

Country		2006 Train km per employee	2006 Rank	2009 Train km per employee	2009 Rank
Netherlands	NL	4457	4	8261	1
Spain	ES	5969	3	6315	2
Switzerland	SW	6285	1	5903	3
UK	UK	6124	2	5749	4
Germany	DE	3957	5	3627	5
Italy	IT	3464	6	3534	6
France	FR	2999	8	3264	7
Austria	AT	3033	7	3228	8
Czech Republic	CZ	2493	9	3102	9
Poland	PL	1567	10	1523	10

Source: UIC 2006, 2009

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5   Appendices

5.1.1   The following databases are supplied with this report:

- Stat Account Data.xls – data on staff numbers, staff costs and train km, compiled mainly from statutory accounts and other annual returns.

- EuropeComparisons.xls – comparisons of the UK rail industry with other European countries, based on RMMS and UIC

- Annual Salary Comparison by Occupation.xls & Hourly Salary Comparison by Occupation.xls – extracts from ASHE on average pay by occupation.