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Northern Ireland Petrol and Diesel prices – data analysis

1 Background

On the 5 September 2012, the Office of Fair Trading (OFT) issued a call for information on the UK petrol and diesel sector in order to *'shed light on potential competition concerns and decide whether they warrant further action by the OFT or others'*. The call for evidence seeks to examine a number of issues in particular:

- Whether reductions in crude oil are reflected in falling pump prices;
- Whether the practices of super markets and major oil companies are making it more difficult for independent retailers to compete with them;
- Whether there is a lack of competition between fuel retailers in *'some remote communities in the UK'*; and,
- Whether the concerns identified in by other national competition authorities are relevant in the UK.

The OFT has set a deadline of 18 October 2012 for evidence; the findings of this exercise are due for publication in January 2013.

This paper provides a number of statistical analyses which are intended to assist the Committee for Enterprise, Trade and Investment in responding to the OFT's call for evidence. The paper also:

- Provides a historic comparison of Northern Ireland petrol and diesel pump prices with the rest of the UK;
- Calculates the petrol and diesel cost of travelling the median vehicle mileage in Northern Ireland;
- Examines the relationship between the price of oil per barrel and pump price of petrol and diesel; and
- Examines the relationship between fuel duty with the price paid by consumers for fuel at the pump.

2 Key facts about the UK petrol and diesel markets

In their background information, the OFT outline a number of key facts about the UK petrol and diesel markets, namely:

- In 2010 approximately 5% of UK Households' average weekly expenditure was spent on road fuel. This is based on £21.60 per week spent on motor fuels and a total weekly expenditure of £473.60;
- The UK motor fuel sector is estimated to be worth £32bn;
- Between June 2007 and June 2013 the pump price of petrol rose by 38% from £0.97 per litre to £1.34; and
- In the same time the pump price of diesel rose by 43% from £0.97 per litre to £1.39.

3 Northern Ireland – facts and figures

Using the same parameters as the OFT, Northern Ireland has experienced a proportional increase in fuel prices between June 2007 and June 2012 that is similar to the rest of the UK. In this period the:

- NI petrol pump price increased by 39% from £0.974 per litre to £1.353; and
- NI diesel pump price increased by 43% from £0.977 per litre to £1.399.¹

It is worth noting that the results of this type of analysis vary considerably depending on which month is chosen as a comparator. For example, a similar analysis, based on the pump price during September 2007 and September 2012 shows that the:

- NI petrol pump price increased by 47.6% from £0.956 per litre to £1.411; and
- NI diesel pump price increased by 49% from £0.972 per litre to £1.450.²

Applying the same dates to the UK Average price again shows a similar picture:

- UK petrol pump price increased by 47.3% from £0.952 per litre to £1.402; and
- UK diesel pump price increased by 49% from £0.969 per litre to £1.446.³

¹ See the AA fuel report archive http://www.theaa.com/motoring_advice/fuel/

² *Ibid*

³ *Ibid*

The next sections provide a more detailed analysis of petrol and diesel prices over the last five years. The data used in the subsequent analysis is sourced from the AA Fuel report archive unless stated otherwise. The complete AA data sets used for this analysis are included in the annexes.

3.1 Petrol “pump prices”

Figure 1 plots the Northern Ireland petrol prices against UK average petrol prices for each month from January 2007 until September 2012. Prices are shown in pence per litre (ppl). The figure shows that Northern Ireland prices have followed UK prices closely. Northern Ireland prices have, however, been consistently above the UK average price. Across the 69 month period there was only one occasion, January 2009, when Northern Ireland prices were lower than the UK average. During this month the Northern Ireland price was 0.2ppl lower than the UK price.

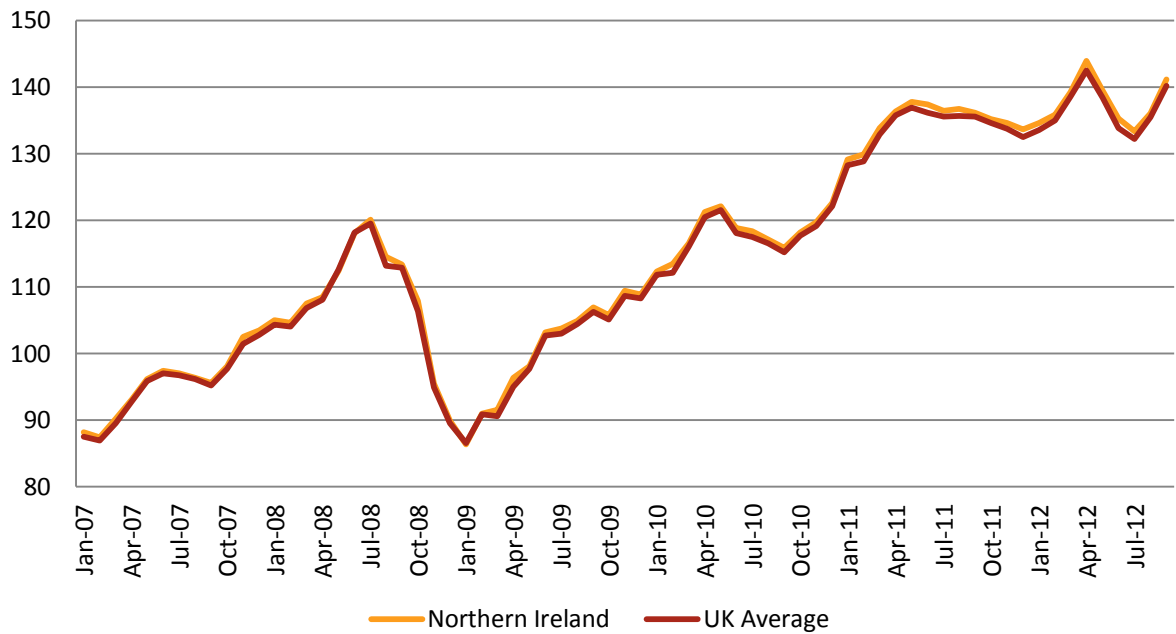
The overall trend shown in Figure 1 is upwards. The pump price of petrol peaked in April 2012 when it reached 143.9ppl in Northern Ireland and 142.5ppl in the UK as a whole. This was followed by three months of declining prices, a small increase in August 2012 and a substantial spike in September 2012 (NI hitting 141.1ppl, the UK reaching 140.2ppl).

The AA provides monthly price data for 11 UK regions. Using this data it has been possible to calculate the frequency at which Northern Ireland is the region with the highest recorded monthly price. Over the 69 months Northern Ireland recorded the highest price 33 times, or 48% of the time. However, looking at each year shows that the frequency has increased over the last two-years:

- In 2007, Northern Ireland recorded the highest monthly price four times, or 33% of the time;
- This fell to three times in 2008, or 25% of the time;
- In 2009 Northern Ireland recorded the highest monthly price six times, or 50% of the time;
- In 2010 this fell back to four times, or 33% of the time;
- In 2011 it increased to eight times, or 75% of the time; and
- In the first nine months of 2012 Northern Ireland recorded the highest monthly price eight times, 89% of the time.

This means that, in the 21 months since January 2011, Northern Ireland recorded the highest monthly petrol price 16 times, 76% of the time.

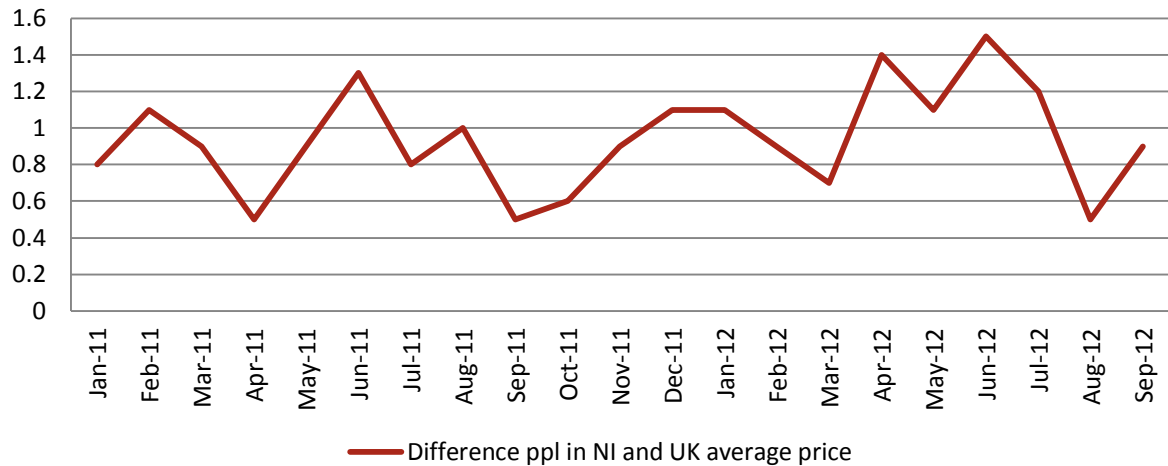
Figure 1: Monthly NI and UK petrol prices January 2007 to September 2012 (ppl)



Source: The AA

Figure 2 plots fluctuations in the difference in ppl between the UK average price and the price in Northern Ireland between January 2011 and September 2012. The price difference peaked in June 2012, where NI pump prices were 1.5ppl higher than the UK average. In April 2011, when pump prices in Northern Ireland and the UK as a whole were at their highest, the Northern Ireland price was 1.4ppl higher than the UK average. The lowest difference between the two measures has been is 0.5ppl; this occurred on three occasions during the period examined: April 2011, September 2011, and August 2012.

Figure 2: Difference between NI price and UK average petrol price (ppl) January 2011 to September 2011



Source: The AA

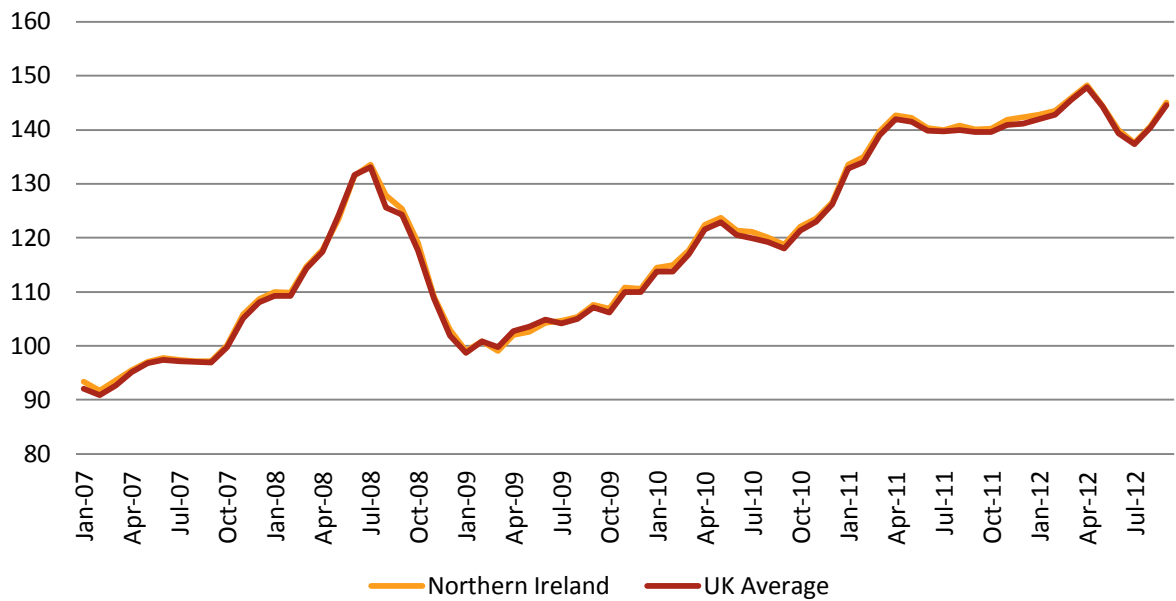
3.2 Diesel 'pump prices'

Figure 3 uses AA data to plot the Northern Ireland average diesel price against the UK average. As is the case with petrol prices, the two lines follow each other closely. Northern Ireland's diesel price is consistently above that of the UK, although it has historically fallen below the UK average more often than the petrol price has. This occurred four times in the period examined: May 2008, March 2009, April 2009, and June 2009.

Looking at the frequency at which Northern Ireland prices are the highest of all UK regions the pattern is different than it was for petrol prices:

- In the 69 months period between January 2007 and September 2012 Northern Ireland had the highest diesel price on 35 occasions, 51% of the time;
- In 2008 Northern Ireland recorded the highest price five times, or 42% of the time;
- In 2009 Northern Ireland recorded the highest price three times, or 25% of the time;
- In 2010 Northern Ireland recorded the highest price ten times, or 83% of the time;
- This decreased slightly in 2011 with Northern Ireland recording the highest price nine times, 75% of the time; and
- In the first nine months of 2012 Northern Ireland has recorded the highest price twice, equivalent to 22% of the time.

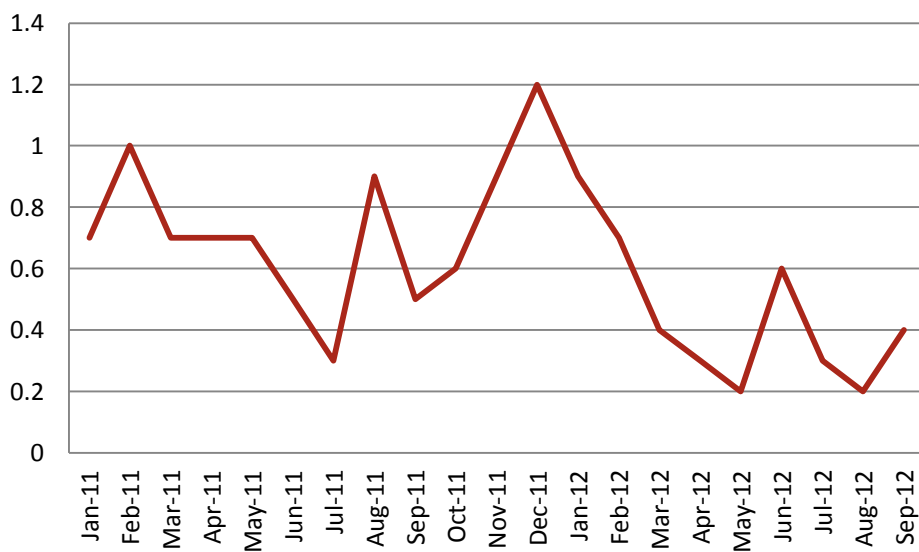
Figure 3: Monthly NI and UK diesel prices January 2007 to September 2012 (ppl)



Source: The AA

Figure 4 plots the fluctuations in the price difference between Northern Ireland and the UK average price of diesel between January 2011 and September 2012. In this period the difference in the two prices has ranged from 0.2ppl to 1.2ppl. The upper end of the range occurred in December 2011, while the lower end of the range occurred May and August 2012.

Figure 4: Difference between NI price and UK average diesel price (ppl) January 2011 to September 2011



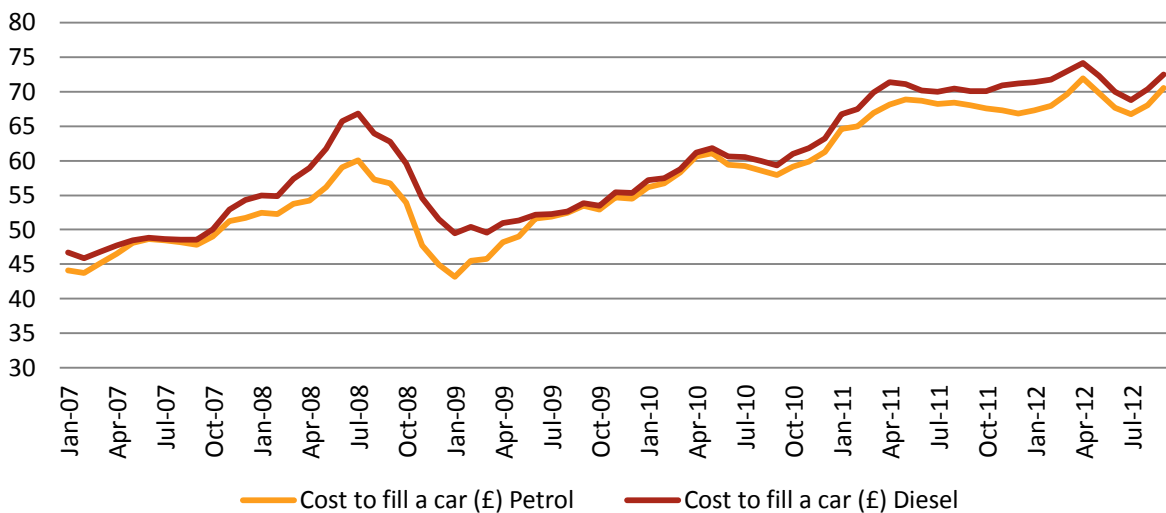
Source: The AA

3.3 Cost per average fill

Figure 5 plots the cost of filling an average fuel tank between 2007 and September 2012 for both fuel types. The figure is based on an average fuel tank of 50 litres⁴. In both cases the trend has been upwards, with peaks and troughs corresponding to the general trends in fuel prices. For petrol, the cost of filling a 50 litre tank has increased from £44.10 in January 2007 to £70.55 in September 2012, an increase of 60%. For diesel, the cost has increased from £46.70 in January 2007 to £72.50 in September 2012, an increase of 55%.

Based on the latest prices, it costs £2.45 more to fill a 50 litre diesel tank compared to the same sized petrol tank.

Figure 5: Cost to fill an average tank (50 litres) January 2007 to September 2012 (£)



Source: The AA & Consumer Council for NI

3.4 Fuel cost per average mileage

Figures 6 and 7 show the cost of fuel for the average monthly mileage. Tables 2 and 3 show the cost of fuel for the average annual mileage. The calculations used here are based on a number of assumptions which should be borne in mind when interpreting this data.

The average mileage is based on figures from DRD’s travel survey 2008-2010^{5, 6}. The figure used is annual vehicle mileage. According to the travel survey the median vehicle mileage is within the range 9,000 to 11,999 miles per year. For the purposes of this analysis the mid-point of this range has been selected. Therefore, the analysis is based on a miles per year figure of 10,500. To calculate the monthly figure it is

⁴ Consumer Council for NI *Brief on the Office of fair trading call for information on the UK petrol and diesel sector* (September 2012)

⁵ The more recent survey has not been used as the detailed sections required have not been published.

⁶ DRD *Travel Survey 2008-2010* http://www.drdni.gov.uk/travel_survey_for_northern_ireland_in-depth_report_2008-2010.pdf

assumed that the yearly miles are spread evenly over each month. Therefore, the figure of 875 miles per month has been used.

The small, medium, large and average sized engine figures are sourced from DEFRA data. These are outlined in Table 1.

Table 1: Engine size, miles per gallon (MPG) and miles per litre (MPL) for petrol and diesel vehicles⁷

Vehicle Type	Engine size	Size label	MPG	MPL
Petrol	<1.4 litres	Small	44	9.7
	1.4-2.0 litres	Medium	35.4	7.8
	>2.0 litres	Large	25.1	5.5
Average petrol car		Average	36	7.9
Diesel	<1.4 litres	Small	60	13.2
	1.4-2.0 litres	Medium	48	10.6
	>2.0 litres	Large	35.6	7.8
Average diesel car		Average	44.8	9.9

Source: DEFRA

Figure 1 shows that the trend in petrol cost for all car types has been generally upwards since 2007. Between January 2007 and September 2012 the monthly cost of travelling 875 miles has increased for each category as follows:

- For small petrol cars the cost has increased by £47.72 from £79.56 to £127.28, or 60%;
- For medium petrol cars the cost has increased by £59.35 from £98.94 to £158.29, or 60%;
- For large petrol cars the cost has increased by £84.16 from £140.32 to £224.48, or 60%; and
- For the average sized petrol car the cost has increased by £58.59 from £97.69 to £156.28, or 60%.

Table 2 provides yearly figures for each car type. The figure for 2012 is based on nine months of data available, i.e. January to September. It's notable, however, that although 2012 represents an incomplete year the total figure for each car size exceeds the 2007 figure. Based on this table, between 2007 and 2011 the cost of travelling 10,500 miles per year:

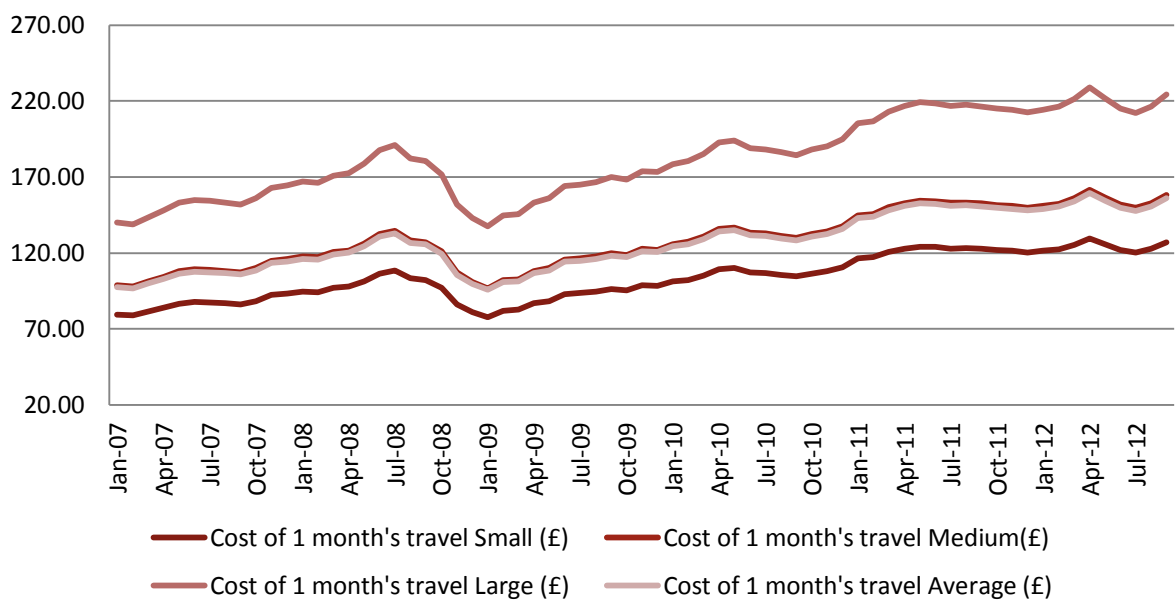
- Increased by £425.14 from £1,033.40 to £1,458.54, or 41% for small petrol cars;
- Increased by £528.70 from £1,285.13 to £1,813.83, or 41% for medium petrol cars;
- Increased by £749.79 from £1,822.55 to £2,572.34, or 41% for large petrol cars;

⁷ DEFRA *Emission Factors* <http://www.defra.gov.uk/publications/files/pb13625-emission-factor-methodology-paper-110905.pdf>

- Increased by £522.01 from £1,268.86 to £1,790.87, or 41% for averaged sized petrol cars.

Based on the above, the petrol cost of 10,500 miles per year in an average sized car in 2007 represented 6% of median full-time grossed earnings (based on a 2007 median grossed earnings for full time employees of £21,003⁸) and 7.7% in 2011 (based on a 2011 median grossed earnings for full time employees of £23,185⁹). For the UK average, the petrol cost of 10,500 miles per year in an average sized car in 2007 represented 5.2% of median full-time grossed earnings (based on a 2007 median grossed earnings for full time employees of £24,000¹⁰) and 6.8% in 2011 (based on a 2011 median grossed earnings for full time employees of £26,100¹¹)¹².

Figure 6: Petrol cost of one month’s travel January 2007 to September 2012 by car size



Source: AA, DEFRA and DRD

⁸ DETI Annual Survey of Hours and Earnings 2007 (07 November 2007) http://www.detini.gov.uk/ashe_ni_2007_bulletin.pdf

⁹ DFP Annual Survey of Hours and Earnings 2011 (23 November 2011)

http://www.detini.gov.uk/northern_ireland_ashe_2011_bulletin.pdf

¹⁰ ONS Annual Survey of Hours and Earnings 2007 <http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/2007-results/stb-ashe-2007.pdf>

¹¹ ONS Annual Survey of Hours and Earnings 2011 <http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/2011-provisional-results--soc-2010--ashe-results-2011--soc-2010-.html>

¹² UK average annual petrol cost of 2007: £1,262.33 and 2012: £1,779.35

Table 2: Petrol cost of traveling 10,500 miles per annum 2007-2012 by car size

	Cost of 1 year's travel Small (£)	Cost of 1 year's travel Medium (£)	Cost of 1 year's travel Large (£)	Cost of 1 year's travel Average (£)
2007	1033.40	1285.13	1822.55	1268.86
2008	1170.34	1455.42	2064.05	1436.99
2009	1088.25	1353.33	1919.27	1336.20
2010	1277.59	1588.80	2253.20	1568.69
2011	1458.54	1813.83	2572.34	1790.87
2012*	1117.56	1389.79	1970.98	1372.20

Source: AA, DEFRA and DRD
* Based on nine months of data

Figure 7 and Table 3 presents the same information for diesel cars. Again the overall trend has been upwards. Based on the data used to create Figure 7, between January 2007 and September 2012 the monthly diesel cost of travelling 875 miles has increased for each category as follows:

- For small diesel cars the cost has increased by £34.21 from £61.91 to £96.12, or 55%;
- For medium diesel cars the cost has increased by £42.59 from £77.10 to £119.69, or 55%;
- For large diesel cars the cost has increased by £57.88 from £104.78 to £162.66, or 55%; and
- For the average sized diesel car the cost has increased by £45.61 from £82.55 to £128.16, or 55%.

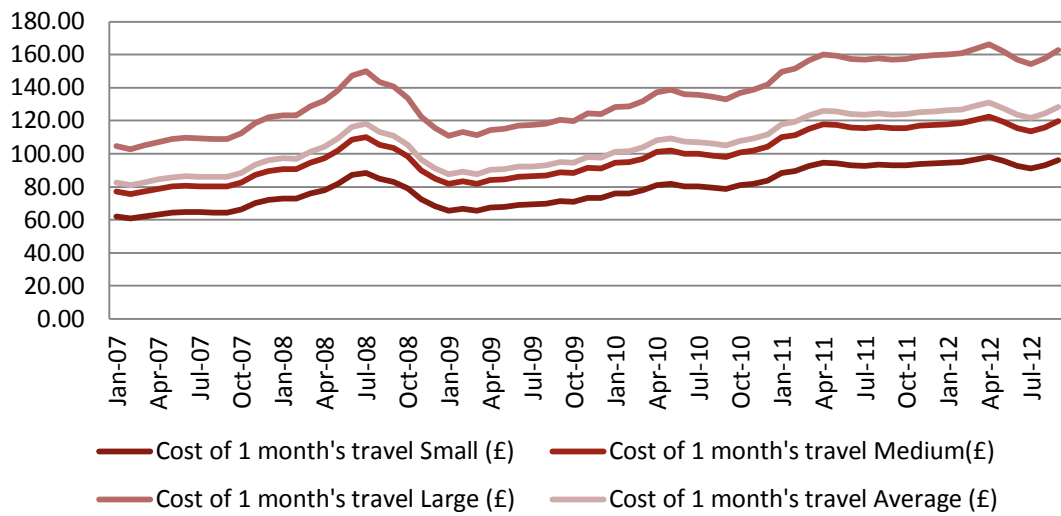
Based on Table 3, between 2007 and 2011 the cost of travelling 10,500 miles per year:

- Increased by £333.63 from £779.08 to £1,112.71, or 43% for small diesel cars;
- Increased by £415.46 from £970.18 to £1,385.64, or 43% for medium diesel cars;
- Increased by £564.59 from £1,318.45 to £1,883.04, or 43% for large diesel cars;
- Increased by £444.83 from £1,038.78 to £1,483.61, or 43% for averaged sized diesel cars.

Based on the above, In Northern Ireland the diesel cost of travelling 10,500 miles per year in an average sized car in 2007 represented 5% of median full-time grossed earnings and 6.4% in 2011 (based on the same median grossed earnings for full time employees as above). For those paying the UK average the diesel cost of 10,500 miles per year in an average sized car in 2007 represented 4.3% of median full-time grossed earnings and 5.7% in 2011 (based on the same median grossed earnings for full time employees as above).¹³

¹³ Based on a UK average diesel cost of £1,033 in 2007 and £1,475 in 2011

Figure 7: Diesel cost of one month's travel, January 2007 to September 2012 by car size



Source: AA, DEFRA and DRD

Table 3: Annual diesel cost of traveling 10,500 miles 2007-2012 based on car size

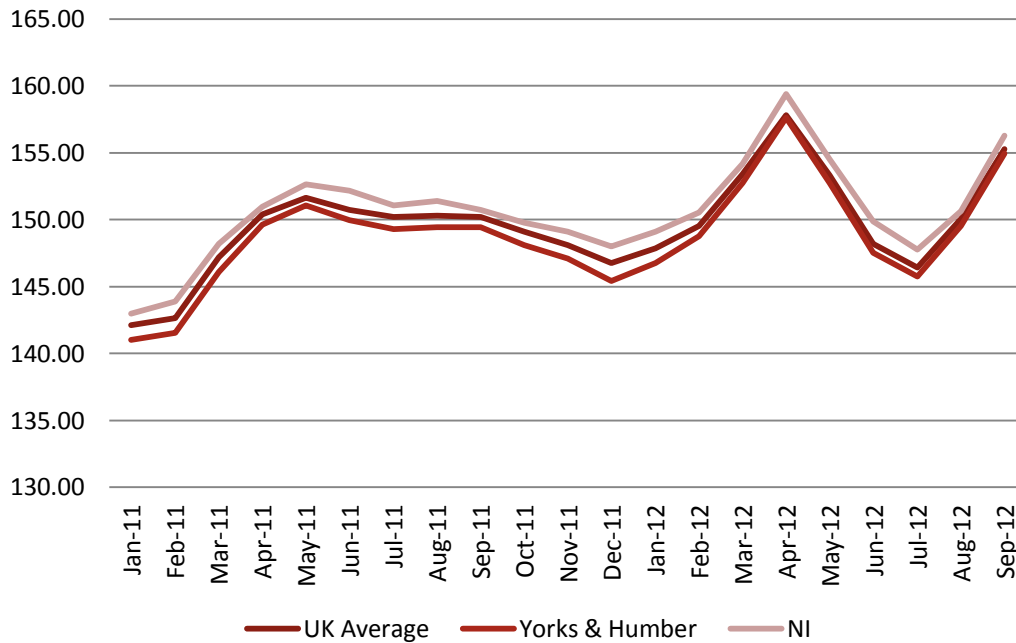
	Cost of 1 year's travel Small (£)	Cost of 1 year's travel Medium (£)	Cost of 1 year's travel Large (£)	Cost of 1 year's travel Average (£)
2007	779.08	970.18	1318.45	1038.78
2008	944.80	1176.54	1598.89	1259.73
2009	830.98	1034.81	1406.28	1107.98
2010	958.66	1193.80	1622.34	1278.21
2011	1112.71	1385.64	1883.04	1483.61
2012	853.79	1063.21	1444.87	1138.38

Source: AA, DEFRA and DRD

Figure 8 uses the same data as above to compare monthly petrol cost of travelling 875 miles per month in Northern Ireland with the UK average and with the region recording the lowest petrol prices (Yorkshire and Humberside) during the period January 2011 to September 2012. The figure shows that Northern Ireland was consistently above the UK average during this period.

Table 4 compares the total petrol cost in 2011 of travelling 10,500 miles per year in an average sized car for the same three regions. It also shows the petrol cost of travelling 875 miles per month for the first nine months of 2012. The difference in the cost in the UK and Northern Ireland of travelling 10,500 miles in 2011 with an average sized petrol engine was £11.55. The difference between Northern Ireland and cheapest region (Yorkshire and Humberside) was £194.60. For the first nine months of 2012 the difference between Northern Ireland and the UK has been £10.30, between Northern Ireland and Yorkshire and the Humber the difference has been £147.60.

Figure 8: Petrol cost of one month’s travel (average engine) UK, NI, and Yorkshire and Humberside January 2011 to September 2012 – Petrol



Source: AA, DEFRA and DRD

Table 4: Petrol cost of travelling 875 miles per month for 12 months in 2011 and 9 months in 2012 in NI, UK, and Yorkshire and Humberside

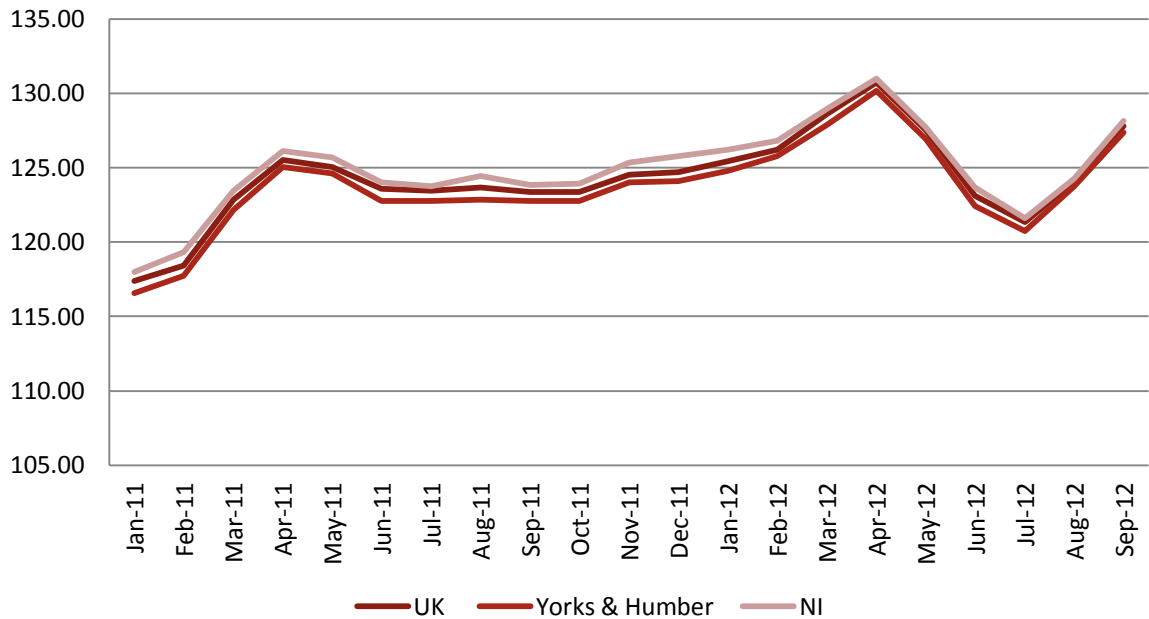
	UK	Yorks & Humber	NI
2011	1779.35	1596.3	1790.9
2012	1361.90	1224.6	1372.2

Source: AA, DEFRA and DRD

Figure 9 presents similar information, but for diesel. As can be seen from the figure the diesel cost of travelling 875 miles per month in Northern Ireland is consistently above the UK average.

Tale 5 replicates the analysis in Table 4 for diesel. The difference in the diesel cost in the UK and Northern Ireland of travelling 875 miles per month in for 12 months 2011 with an average sized diesel engine was £7.69. The difference between Northern Ireland and cheapest region (Yorkshire and Humberside) was £139.56 in the same period. For the first nine months of 2012 the difference between Northern Ireland and the UK has been £3.53, between Northern Ireland and Yorkshire and the Humber the difference has been £8.57.

Figure 9: Diesel cost of one month’s travel (average engine) UK, NI, and Yorkshire and Humberside January 2011 to September 2012 – Diesel



Source: AA, DEFRA and DRD

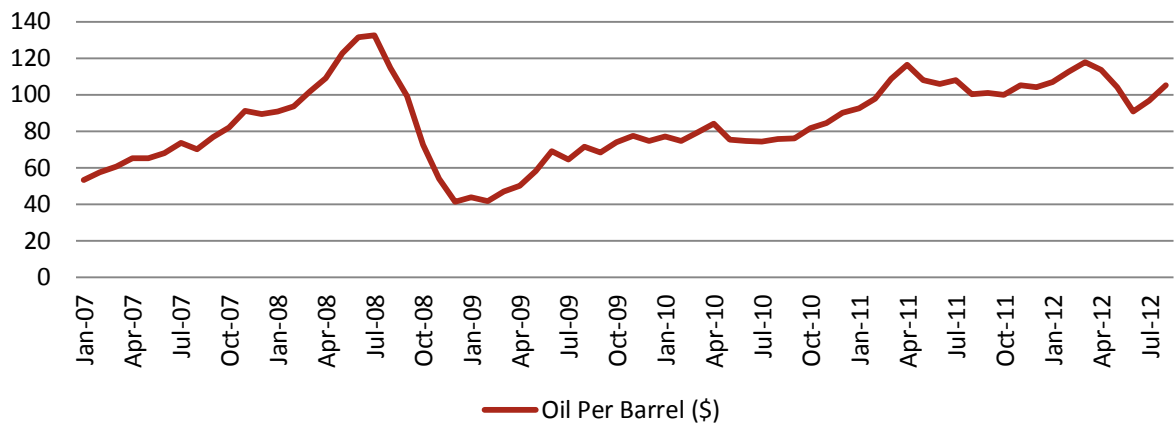
Table 5: Diesel cost of travelling 875 miles per month for 12 months in 2011 and 9 months in 2012 in NI, UK, and Yorkshire and Humberside

	UK	Yorks & Humber	NI
2011	1475.92	1344.05	1483.61
2012	1134.85	1129.81	1138.38

Source: AA, DEFRA and DRD

3.5 Petrol, Diesel and Oil Prices

Figure 10 plots the per barrel oil price for each month between January 2007 and August 2012 (September 2012 data was not available at the time of writing). The Figure shows a clear peak in July 2008 when hit \$132.55 per barrel. There have been two further, albeit smaller, peaks in the past 21 months. In April 2011 oil hit \$116.32 per barrel and in March 2012 it hit \$117.79 per barrel.

Figure 10: Oil per Barrel (\$) January 2007 to August 2012¹⁴

Source: Index Mundi

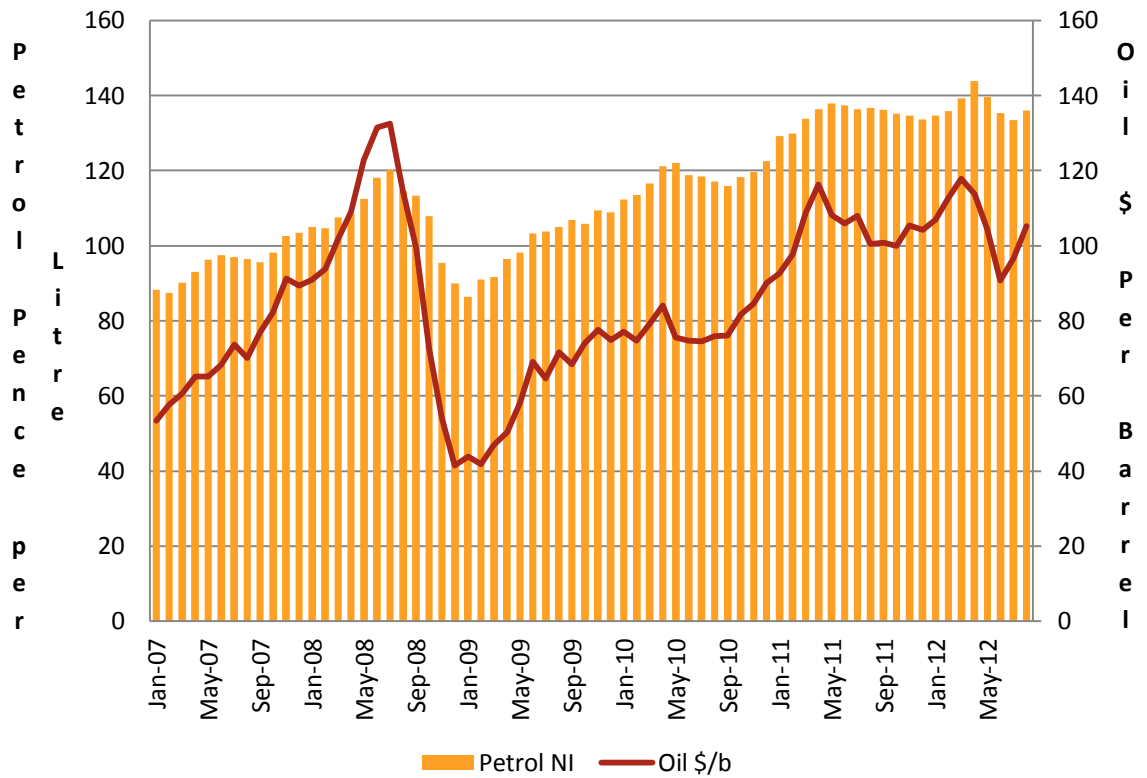
Figures 11 and 12 plot the price of oil per barrel against the Northern Ireland price of petrol (Figure 11) and diesel (Figure 12) for each month between January 2007 and September 2012. It is notable that during the most recent peaks (April 2011 and March 2012) the price of both petrol and diesel was much higher than it was during the July 2008 peak, despite the price per barrel being considerable higher in July 2008 than either April 2011 or March 2012. Looking at this in more detail:

- The price of oil was 12% lower in April 2011 and 10% lower in March 2012 than its July 2008 peak;
- The NI price of petrol was 13% higher in April 2011(136.3ppl) and 16% higher in March 2012 (139.2ppl) than it was during the peak oil price of July 2008 (120.1ppl); and
- The NI price of diesel was 7% higher in April 2011(142.7ppl) and 9% higher in March 2012 (145.9ppl) than it was during the peak oil price of July 2008 (133.6ppl).

This suggests that something else other than oil price has led to the higher petrol and diesel prices experienced during the spring of 2011 and 2012. The exploration of this possibility is beyond the scope of this paper but could be a suitable point of inquiry for the OFT investigation.

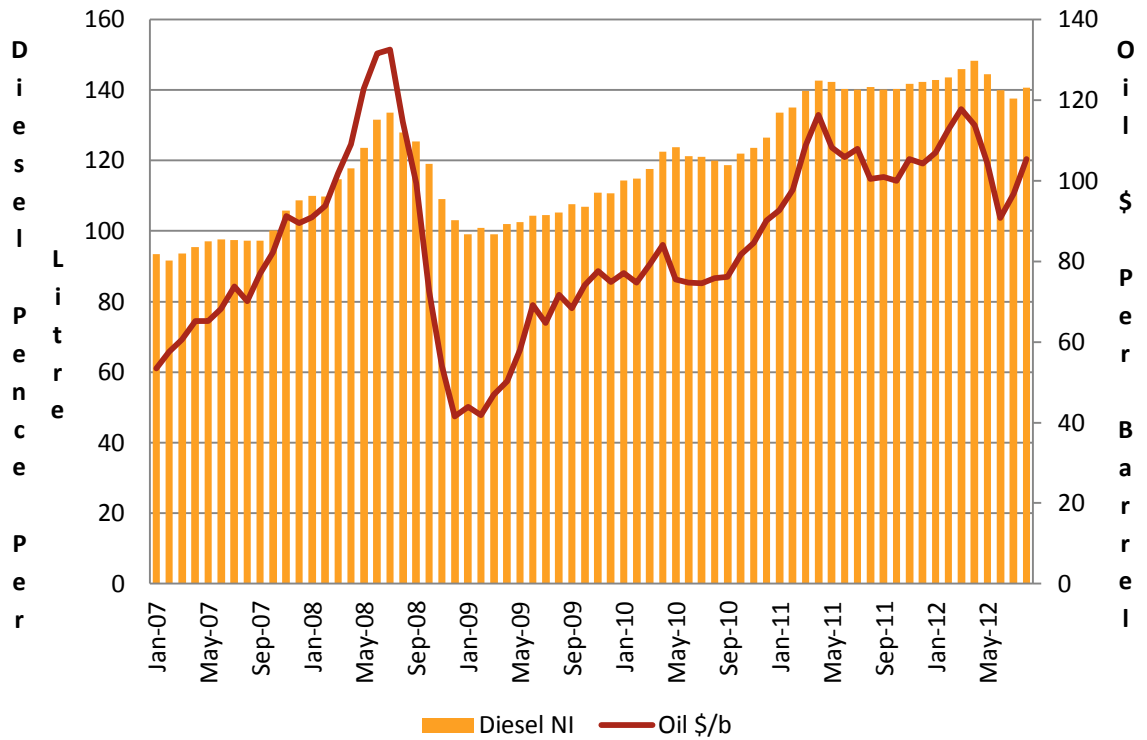
¹⁴ Index Mundi *Crude oil prices* (accessed 02 October 2012) <http://www.indexmundi.com/commodities/?commodity=crude-oil-brent&months=300>

Figure 11: Petrol price Vs Oil Price



Source Index Mundi and the AA

Figure 12: Diesel price Vs Oil Price



Source Index Mundi and the AA

3.6 Petrol, Diesel and Fuel Duty

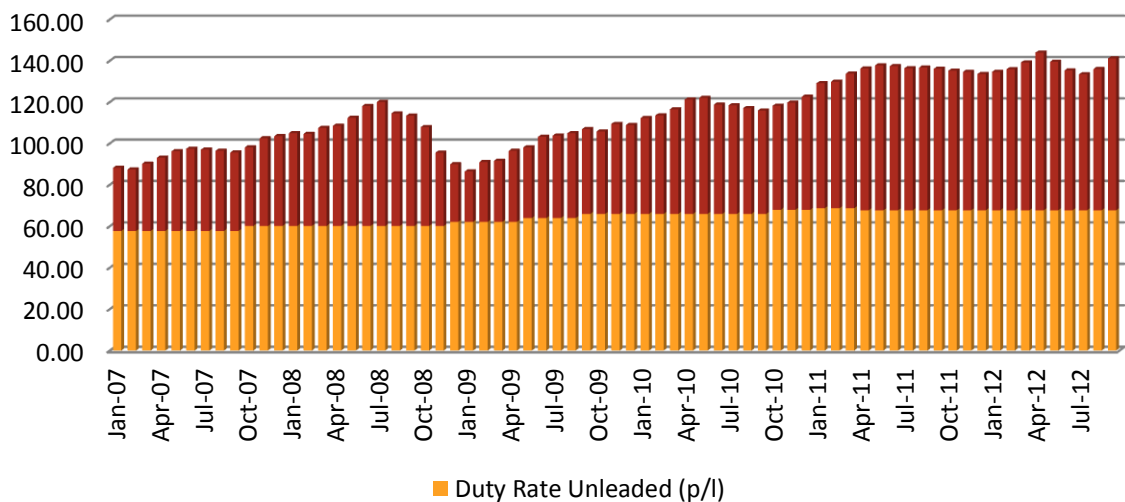
One possible factor that could form part of the answer to the point raised at the end of the previous section is the influence changes in fuel duty have had on the pump price of petrol.

Figures 13 and 14 plot the pump price of petrol (Figure 13) and diesel (Figure 14) for each month between January 2007 and September 2012 and the corresponding fuel duty rate (in ppl) for each month. It is evident in both cases that although the level of fuel duty has increased, the proportional contribution the duty has made to the final pump price has fallen. Table 6 provides more detail on the rate of fuel duty for each fuel type in the period examined.

From January 2007 to September 2012 the amount of duty payable on petrol increased by 23% from 57.68ppl to 70.69ppl. The contribution of duty to the overall price of petrol has however fallen from 65.40% to 47.96%.

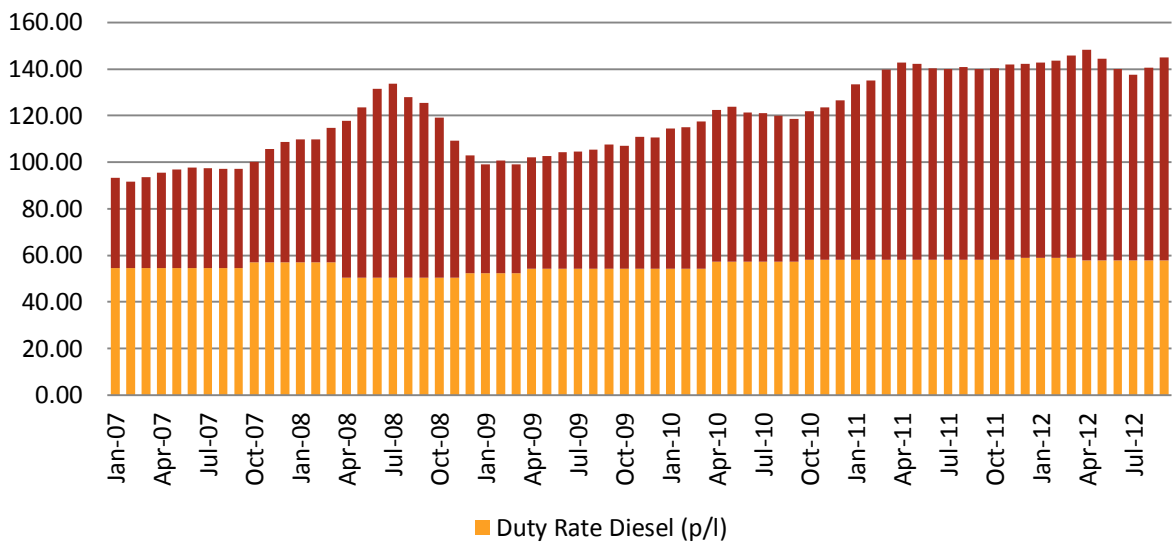
In the same time, the amount of duty payable on diesel increased by 11.5% from 54.68ppl to 60.97ppl. The contribution of duty to the overall price of diesel has however fallen from 58.54% to 39.97%.

Figure 13: Petrol pump price and fuel duty (ppl)



Source HM Treasury and the AA

Figure 14: Diesel pump price and fuel duty (ppl)



Source HM Treasury and the AA

Table 6: Changes in the rate of fuel duty since 2007

Date of change	Petrol (ppl)	Diesel (ppl)
07.12.06	57.68	54.68
01.10.07	60.07	56.94
01.04.08	60.07	50.35
01.12.08	62.07	52.35
01.04.09	62.07	54.19
01.05.09	63.91	54.19
01.09.09	65.91	56.19
01.04.10	66.91	57.19
01.10.10	67.91	58.19
01.01.11	68.67	58.95
23.03.11	67.67	57.95
01.01.13	70.69	60.97

Source HM Treasury

4 Calculating the ‘cost of the product’

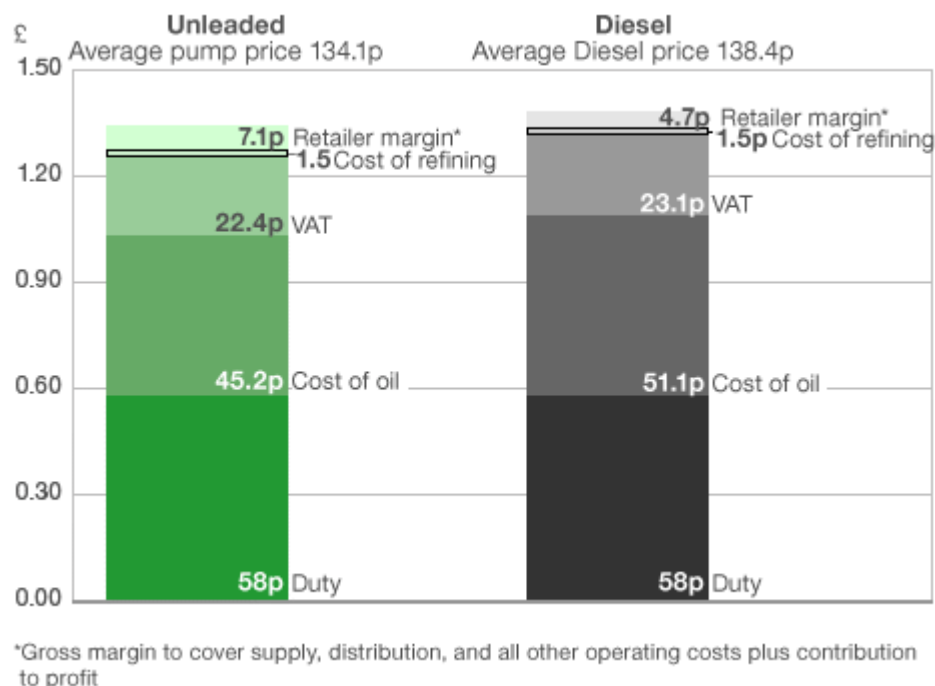
Figure 1 sourced from the BBC shows the constituent elements of pump prices as of November 2011. From the figure it is evident that taxes (duty and VAT) contribute 62% of overall petrol price and 59% of diesel pump prices (at the time of publication). The remaining price is based on a combination of retailer margin, the cost of refining and what the figure refers to as the ‘cost of oil’ but could be more accurately described as ‘cost of product’. According to the UK Petroleum Industry Association, not only is crude oil traded on the open market, but so too are the products derived from it. Therefore,

understanding the internationally traded price of petrol and diesel should enable a greater understanding of pump prices.

The cost of the product on the open market is based upon the market price of crude oil, the internationally traded price of petrol and diesel, and the dollar to sterling exchange rate. Figures 16 and 17 plot the historical price (excluding duty and VAT) of crude oil, petrol/diesel and pump prices throughout the period 2007 to 2011, in both figures there are occasions where the price of petrol and diesel move independently of crude price, although, the difference is more marked with petrol prices.¹⁵ The OFT call for evidence specifically requests information on the UK petrol and diesel sector. However, given the influence of international trade and other international factors on the final pump price paid by customers in the UK a full understanding of the prices paid by consumers may only be achieved by a life-cycle analysis of both products from their extraction to their sale on forecourts.

There is also the question of why, if tax elements are the same across the UK, Northern Ireland has consistently (especially recently) paid more at pump than other regions of the UK. The questions arises, where has this extra cost been added. One method of answering this would be to improve the transparency of the non-tax elements of pump-prices. Again, this is likely to require a life cycle analysis.

Figure 15: The components of pump prices¹⁶

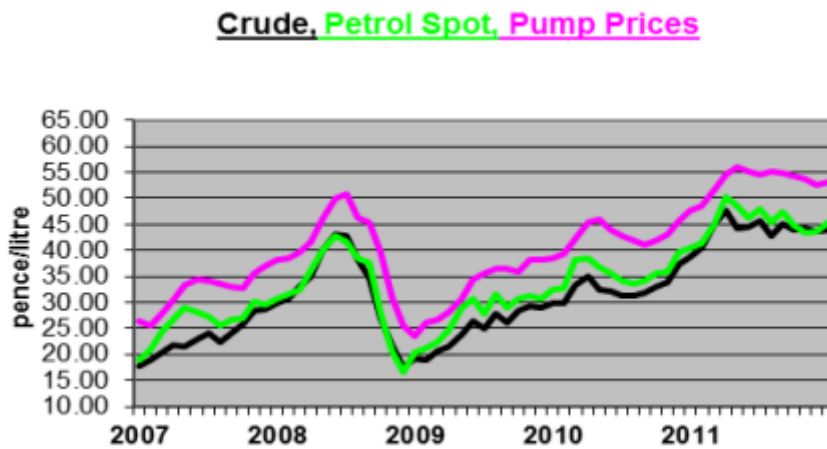


Source: BBC News

¹⁵ The UK Petroleum Industry *Understanding Pump Prices* (accessed 04 October 2012)

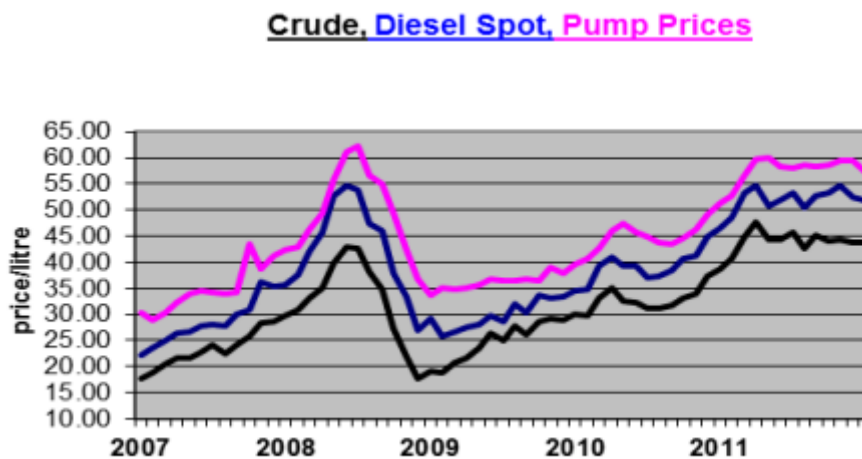
¹⁶ BBC News *The Cost of petrol and oil: How it breaks down* (11 November 2011) <http://www.bbc.co.uk/news/business-15462923>

Figure 16: Crude, petrol spot and petrol pump prices 2007-2011



Source: UKPIA

Figure 17: Crude, diesel spot and diesel pump prices 2007-2011



Source: UKPIA

5 Conclusions

The analysis in this paper has shown the following:

- Since January 2007 the average monthly petrol and diesel pump price paid by consumers in Northern Ireland had been consistently above the UK average.
- Petrol prices have only fallen below the UK average once in this period (January 2009).
- Diesel prices have fallen below the UK average on four occasions (May 2008, March 2009, April 2009, and June 2009).

- As well as being consistently above the UK average Northern Ireland has often experienced the highest price of all UK regions.
- For petrol, from 2007, Northern Ireland recorded the highest price in 33 months of a possible 69, 48% of the time. However, more recently, since January 2011 Northern Ireland has recorded the highest price in 16 months out of a possible 21, 76% of the time. In the first nine months of 2012, Northern Ireland experienced the highest price eight times.
- For diesel, in the 69 months period between January 2007 and September 2012 Northern Ireland had the highest diesel price on 35 occasions, 51% of the time. In 2011 with Northern Ireland recording the highest price nine times, 75% of the time, and so far in 2012 Northern Ireland has recorded the highest price twice, equivalent to 22% of the time.
- The cost of filling the average 50 litre petrol tank in Northern Ireland has increased by 60% since January 2007, from £44.10 to £70.55.
- The cost of filling the average 50 litre diesel tank has increased by 55%, from £46.70 to £72.50.
- Section 3.4 examined how the cost of travelling 10,500 miles a year in Northern Ireland has changed in the last five years and examined how this compared with the UK average and cheapest region. Based on this analysis, for Northern Ireland drivers, the petrol cost of 10,500 miles per year in an average sized car in 2007 represented 6% of median full-time grossed earnings and 7.7% in 2011. For the UK average, the petrol cost of 10,500 miles per year in an average sized car in 2007 represented 5.2% of median full-time grossed earnings and 6.8% in 2011. Based on this Northern Ireland petrol consumers spend a greater proportion of their earnings on petrol than the UK average.
- The same is the case for diesel. In Northern Ireland the diesel cost of travelling 10,500 miles per year in an average sized car in 2007 represented 5% of median full-time grossed earnings and 6.4% in 2011. For those paying the UK average the diesel cost of 10,500 miles per year in an average sized car in 2007 represented 4.3% of median full-time grossed earnings and 5.7% in 2011.
- The analysis of oil prices has shown that there was a clear peak in price per barrel in July 2008 when it hit \$132.55. It also shows that there have been two further, albeit smaller, peaks in the past 21 months. In April 2011 oil hit \$116.32 per barrel and in March 2012 it hit \$117.79 per barrel.
- Tracking this to fluctuations in petrol and diesel pump prices points to a notable conclusion. During the most recent peaks (April 2011 and March 2012) the price of both petrol and diesel was much higher than it was during the July 2008 peak, despite the price per barrel being considerable higher in July 2008 than either April 2011 or March 2012. This suggests that something else other than oil price led to the higher petrol and diesel prices experienced during the spring of 2011 and 2012.

- Tracking the pump prices to fuel duty shows that although that level of fuel duty has increased, the proportional contribution the duty has made to the final pump price has fallen.
- Examining the constituent elements of pump prices shows that international factors influence not only the price of oil (through its trade on international markets) but also of its derivatives (due to similar trade). This suggests that a focus broader than the UK Petrol and Diesel Sector is needed to fully understand the price paid at the pump within the UK.
- Finally, despite tax being the same across the UK, Northern Ireland has been consistently above the UK average since 2007. The question remains what occurs to make this so. One method of answering this would be to insist upon transparency of the non-tax elements of pump-prices. Again, this is likely to require a life cycle analysis.

A number of elements have not been addressed in this paper, due to time and space limitations, but may be pertinent to the OFTs investigation. These are:

- The impact fuel prices have on Northern Ireland's rural community. According to the Consumer Council Northern Ireland has a rural population of 35% compared to the UK average of 12%. Should the data be available, an analysis which compares prices at a sub-regional level in Northern Ireland may be useful;
- The impact of VAT has not been examined in this paper but has an important role in determining pump prices; and,
- The impact of fuel tourism in border regions of Northern Ireland.

Annex 1: UK Regional Petrol Price January 2007 to September 2012

Note: Colouring ranks prices with red being the highest and green the lowest. The UK Average figures are not included in the ranking.

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
Northern Ireland	88.2	87.4	90.2	93.1	96.2	97.4	97	96.4	95.6	98.1	102.5	103.5
Scotland	87.2	86.9	89.4	92.9	95.8	96.8	96.4	95.9	93.9	96.5	100.8	102.2
Wales	87.9	87.4	90.2	93.7	96.5	97.6	97.2	96.5	95.8	98	101.8	103
North	87.2	86.9	89.4	92.7	95.8	97.1	98	96.1	95	97.5	101.2	102.4
North West	87	86.4	89.3	92.5	95.6	96.6	96.1	95.2	94.3	96.9	100.8	102.3
Yorkshire and Humberside	87.3	86.6	89.3	92.7	95.7	96.9	96.4	95.5	94.8	97.2	101	102.5
West Midlands	87.4	86.9	89.7	92.9	96	97	96.7	96.1	95.1	97.6	101.5	102.8
East Midlands	87.5	86.9	89.5	92.7	95.7	96.8	96.7	96.1	95.2	97.6	101.4	102.8
East Anglia	87.7	87.1	89.5	93	96.2	97.2	97.1	96.7	95.7	98.2	102.1	103.2
South East	87.6	86.9	89.2	92.7	96	97.1	96.9	96.5	95.6	98.1	101.9	103.1
South West	87.9	87.2	90.5	93.2	96.3	97.2	97.2	96.6	95.7	98.1	101.9	102.9
London	87.6	87.1	89.2	92.5	95.5	96.8	96.7	96.5	95.7	98.2	101.8	103.3
UK Average	87.5	86.9	89.5	92.8	95.9	97	96.7	96.2	95.2	97.7	101.5	102.8

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
Northern Ireland	105	104.6	107.5	108.5	112.4	118.1	120.1	114.5	113.4	107.9	95.5	89.9
Scotland	103.8	103.3	106.4	107.8	112.4	118	119.1	112.4	112.3	105.6	94.5	89.3
Wales	104.5	104.1	106.9	108.2	112.7	118.3	119.8	113.4	113.3	106.8	95.1	89.9
North	103.8	103.4	106.2	107.6	112.1	117.6	119	112.4	112.3	106.2	94.6	89.5
North West	103.6	103.4	106	107.3	111.7	117.3	118.5	112	111.9	105.3	94.2	89.1
Yorkshire and Humberside	103.8	103.4	105.8	107.2	111.6	116.9	118.5	112	111.9	105.4	94.2	89.1
West Midlands	104.3	104	106.7	107.1	112.6	118.1	119.5	113	112.8	106.2	94.7	89.3
East Midlands	104.3	104.1	106.6	107.9	112.2	117.9	119.4	112.1	112.7	106.1	94.6	89.4
East Anglia	104.8	104.7	107.3	108.5	112.6	118.5	119.7	112.5	113.3	106.7	95	89.8
South East	104.6	104.4	107.3	108.5	113.1	118.9	120.2	113.8	113.4	106.9	95.3	89.7
South West	104.5	104.1	106.9	108.2	112.7	118.7	119.7	113.3	113.2	106.6	94.9	89.6
London	104.8	104.7	107.6	108.7	113.3	118.8	120.3	114.6	113.8	107.6	95.8	89.7
UK Average	104.3	104	106.8	108.1	112.6	118.2	119.5	113.2	112.9	106.4	94.9	89.5

	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09
Northern Ireland	86.4	91	91.6	96.4	98.1	103.2	103.8	104.9	106.9	105.8	109.4	108.9
Scotland	86.5	90.8	90.7	95.1	97.5	102.8	102.8	104.4	106	104.3	108.2	107.6
Wales	86.6	91.4	91	95.4	98	103	103	104.6	106.6	105.2	108.2	108.5
North	86.8	90.6	90.5	95.3	97.4	102.3	102.9	104	105.9	104.6	108.3	107.7
North West	86.1	90.4	90.2	94.6	97.4	102.3	102.1	103.7	105.3	104.2	107.9	107.3
Yorkshire and Humberside	86.2	90.5	90.2	94.6	97.3	102	102	103.5	105.4	104.2	107.8	107.5
West Midlands	86.6	90.9	90.5	95.1	97.8	102.8	102.8	104.4	106.2	104.8	108.7	108.3
East Midlands	86.6	90.7	90.5	94.8	97.4	102.5	102.8	104.3	106.2	105	108.6	108.3
East Anglia	87	91.1	90.5	94.8	97.7	102.4	103.3	104.8	106.5	105.5	109	108.7
South East	86.8	91	90.6	95.1	97.9	102.9	103.3	104.8	106.8	105.6	109.7	108.7
South West	87	91.5	90.9	95.5	98	103.2	103.4	104.8	106.7	105.5	109	108.6
London	87	91	90.6	94.8	97.8	102.6	103.5	104.9	107.2	106	109.7	109.2
UK Average	86.6	90.9	90.6	95	97.7	102.7	103	104.4	106.3	105.1	108.7	108.3

	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10
Northern Ireland	112.3	113.5	116.5	121.2	122.1	118.8	118.4	117.1	115.9	118.2	119.7	122.6
Scotland	111.1	111.7	116	120.7	121.5	117.8	117.1	115.9	114.6	117.1	118.6	121.6
Wales	112	112.4	114	120.8	121.6	118.4	117.8	117.1	115.8	118.2	119.4	122.3
North	111.1	111.6	115.5	120	121	117.1	116.6	115.7	114.5	117.1	118.4	121.4
North West	110.9	111.5	115.5	120.1	121	116.9	116.2	115.5	114.4	117.3	118.7	121.7
Yorkshire and Humberside	110.7	110.9	115	119.6	120.7	116.8	116.2	115.4	114.2	116.8	118.2	121.2
West Midlands	111.7	112	116.3	120.7	121.7	117.7	117.1	116.1	115	117.7	119	112.1
East Midlands	111.7	112	115.8	120.3	121.4	117.6	117	116.3	114.2	117.4	118.9	121.9
East Anglia	112.6	112.5	116.3	120.7	121.7	118.6	117.1	117	114.7	117.9	119.1	122.5
South East	112.4	112.6	116.4	120.8	122.1	119	117.4	117.2	115.8	118.3	119.6	122.7
South West	112.2	112.3	116.4	120.9	121.6	118.3	117.6	117	115.7	118	119.3	122.5
London	112.6	112.8	116.7	120.7	121.8	119.3	118.7	117.5	116.2	118.4	119.7	122.7
UK Average	111.8	112.1	116.1	120.5	121.5	118.1	117.5	116.5	115.2	117.7	119.1	122.1

	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
Northern Ireland	129.1	129.9	133.8	136.3	137.8	137.4	136.4	136.7	136.1	135.2	134.6	133.6
Scotland	127.7	128.6	132.4	135.8	137.2	136.3	135.6	135.8	135.4	134	133.4	132
Wales	128.7	129.1	133.2	136.1	137.5	136.3	135.8	135.6	135.8	134.4	133.9	132.5
North	127.4	128.2	132.4	135.4	137.1	135.8	135	135.2	135.1	134	133.2	131.4
North West	127.9	128.4	132.4	135.3	136.6	135.6	135.1	135.4	135.1	133.9	133.3	132.2
Yorkshire and Humberside	127.3	127.8	131.9	135.1	136.4	135.4	134.8	134.9	134.9	133.7	132.8	131.3
West Midlands	128.2	128.6	132.8	135.8	136.9	136	135.7	135.5	135.7	134.2	133.4	132
East Midlands	128	128.3	132.4	135.4	136.4	135.7	135.2	135.2	135.3	134	133.1	132.1
East Anglia	128.6	129	133.1	136.1	137.1	136.4	136.2	135.9	135.9	135	134.1	133.3
South East	128.9	129.5	133.6	136.3	137.1	136.5	136.1	136.3	136	135.3	134.3	133.3
South West	128.6	129	133.1	136.2	137.3	136.2	135.9	135.8	135.9	134.5	133.7	132.7
London	128.7	129.3	133.5	135.9	136.8	136.1	136	136.3	136.2	135.6	134.8	133.8
UK Average	128.3	128.8	132.9	135.8	136.9	136.1	135.6	135.7	135.6	134.6	133.7	132.5

	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12
Northern Ireland	134.6	135.9	139.2	143.9	139.5	135.3	133.4	136	141.1
Scotland	133.3	134.6	138.1	142.2	138.5	133.5	132	135.3	140.3
Wales	133.5	135.0	138.9	142.9	138.3	133.7	132.4	135.9	140.5
North	132.4	134.2	138.0	142.3	138.1	133.6	131.8	135.1	140.1
North West	133.1	134.6	138.0	142.3	138.0	133.5	131.9	135.4	140.3
Yorkshire and Humberside	132.5	134.3	137.9	142.3	137.9	133.2	131.6	135.0	139.9
West Midlands	133.4	134.8	138.3	142.5	138.3	133.6	132.0	135.6	140.3
East Midlands	133.2	134.8	138.4	142.5	138.3	133.7	132.2	135.6	140.4
East Anglia	134.4	135.5	138.8	142.5	138.6	133.9	132.6	136.1	140.2
South East	134.1	135.6	139.0	142.7	138.9	134.2	132.7	135.9	140.3
South West	133.7	135.1	138.9	142.8	138.4	134.1	132.5	136.0	140.4
London	134.4	135.7	138.8	142.3	138.9	134.0	132.0	135.2	139.8
UK Average	133.5	135.0	138.5	142.5	138.4	133.8	132.2	135.5	140.2

Source AA

Annex 2: UK Regional Diesel Price January 2007 to September 2012

Note: Colouring ranks prices with red being the highest and green the lowest. The UK Average figures are not included in the ranking.

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
Northern Ireland	93.4	91.7	93.6	95.5	97	97.7	97.4	97.2	97.2	100.1	105.8	108.7
Scotland	92.3	91.2	92.9	95.5	97.1	97.7	97.4	97.4	96.6	99.4	105.5	108.1
Wales	92.7	91.6	93.4	95.7	97.3	97.7	97.5	97.6	97.5	100.2	106.2	108.4
North	91.9	90.8	92.7	95.1	96.7	97.4	97.1	96.9	96.9	99.9	105.4	107.8
North West	91.3	90.1	92.2	94.5	96.2	96.4	96.3	96	96.1	99.1	104.7	107.3
Yorkshire and Humberside	91.5	90.3	92.2	94.6	96.4	97	96.6	96.3	96.4	99.4	105	107.6
West Midlands	92.1	90.9	92.9	95.1	96.9	97.3	97.1	97	96.8	99.7	105.5	108
East Midlands	92	90.7	92.6	95	95.8	97.3	97	96.9	96.9	99.6	105.4	107.9
East Anglia	92.2	91.1	92.7	95.4	97.1	97.7	97.5	97.5	97.4	102	106	108.3
South East	92.1	90.9	92.5	95.1	96.8	97.5	97.3	97.2	97.1	99.9	105.5	108
South West	92.4	91.3	93.1	95.5	97.1	96	97.5	97.4	97.4	100.3	105.9	108.2
London	92	91.1	92.5	95.2	96.7	97.4	97.3	97.1	97	99.8	105.1	107.9
UK Average	92.1	90.9	92.7	95.1	96.8	97.4	97.2	97	96.9	99.8	105.1	108

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
Northern Ireland	109.9	109.8	114.7	117.8	123.5	131.5	133.6	127.9	125.4	119.1	109.1	103
Scotland	109.4	109.2	114.7	117.9	124.5	132.2	133.7	125.8	124.3	117.6	109.4	102.5
Wales	109.5	109.6	115.1	118.3	124.7	132.1	133.4	125.9	124.8	118.1	102	102.6
North	109.2	109.1	114	117.2	123.7	131.3	132.9	125	123.8	117.4	108.8	102.2
North West	108.5	108.6	113.6	116.7	123.5	130.8	132.2	124.5	123.3	116.6	108.3	101.3
Yorkshire and Humberside	108.8	108.7	113.7	116.7	123.4	130.7	132.3	124.3	123.2	116.6	108.2	101.3
West Midlands	109.2	109.3	114.3	117.5	124.3	131.5	132.9	125.3	124.1	117.4	108.7	101.8
East Midlands	109.2	109.3	114.1	117.1	123.9	131.4	132.7	124.9	123.8	117.3	108.6	101.8
East Anglia	109.6	109.8	114.5	117.8	124.2	131.8	133.2	126.2	124.5	118	109.1	102.2
South East	109.4	109.6	114.2	117.5	124.5	131.8	133.4	126.1	124.8	118.1	108.9	101.8
South West	109.4	109.5	114.8	117.8	124.6	132.2	133.3	125.5	124.4	117.9	109	102.2
London	109.3	109.6	114	117.3	124.4	131.5	133.5	126.6	124.9	118.6	109	101.9
UK Average	109.2	109.3	114.3	117.4	124.2	131.6	133.1	125.6	124.3	117.7	108.8	101.9

	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09
Northern Ireland	99	100.8	99.1	102	102.6	104.3	104.6	105.3	107.6	106.9	110.8	110.6
Scotland	99.1	101.1	100.1	102.8	103.5	104.9	104.3	105.2	107.4	106.5	110.5	110.2
Wales	99.3	101	99.7	102.7	103.6	105	104.2	105.4	107.5	106.6	110.2	110.2
North	99	100.5	99.8	102.5	103.2	104.5	104	104.6	106.7	106	109.7	109.6
North West	98.2	100.2	99.5	102	102.9	104.1	102.9	104	106	105.2	109.1	109
Yorkshire and Humberside	98.1	100.2	99.4	102.1	102.7	104.1	103.2	104	106.1	105.4	109.7	109
West Midlands	98.6	100.6	99.7	102.6	103.3	104.8	103.8	104.7	106.8	105.9	109.8	109.7
East Midlands	98.6	100.6	99.8	102.7	103.5	104.9	104.1	104.9	107	106.2	109.9	109.7
East Anglia	98.8	101	100	103.1	104	105.5	104.5	105.2	107.2	106.6	110.2	110.1
South East	98.7	101	99.9	103	103.9	105.2	104.4	105.3	107.5	106.6	110.2	110.2
South West	99.1	101	100	103.1	103.8	105.2	104.4	105.4	107.4	106.7	110.4	110.2
London	98.7	101.1	100	103.2	104	105.2	104.7	105.5	107.8	106.7	110.1	110.2
UK Average	98.7	100.8	99.8	102.7	103.5	104.8	104.1	105	107.1	106.2	110	109.9

	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10
Northern Ireland	114.4	114.9	117.6	122.4	123.7	121.3	121.1	120	118.7	122	123.6	126.5
Scotland	113.7	144.2	117.3	122	123.1	120.9	120.1	119.2	118.2	121.7	123.4	126.7
Wales	114.1	114.2	117.2	122	123.3	121	120.2	119.7	118.7	112.2	123.6	126.7
North	113.3	113.5	116.5	121.2	122.8	120.1	119.4	118.6	117.7	121	122.6	125.8
North West	112.8	113.2	116.3	120.9	122.3	119.6	119	118.2	117.7	120.8	122.7	125.8
Yorkshire and Humberside	112.5	112.8	115.9	120.6	122.2	119.5	118.8	118.1	117.2	120	122.3	125.4
West Midlands	113.5	113.6	116.9	121.6	123	120.2	119.5	118.7	117.7	121.1	122.9	126.1
East Midlands	113.6	113.7	116.6	121.4	122.8	120.3	119.6	118.9	117.8	121.1	122.7	125.9
East Anglia	114.2	114.1	117	121.8	123.2	120.8	120.2	119.7	118.3	121.2	123	126.3
South East	114.1	114.3	117	121.7	123.3	121	120.6	119.7	118.3	121.5	123.2	126.5
South West	114	114	117.2	122	123	120.7	120.1	119.6	118.5	121.7	123.3	126.5
London	113.9	114	117.1	121.5	123	121	120.6	119.7	118.5	121.1	122.7	126.1
UK Average	113.7	113.8	116.9	121.6	122.9	120.5	119.9	119.2	118	121.3	123	126.2

	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
Northern Ireland	133.5	135	139.7	142.7	142.2	140.3	140	140.8	140.1	140.2	141.8	142.3
Scotland	133.2	134.2	139.4	142.8	142.2	140.5	140.3	140.5	140.1	140	141.6	141.9
Wales	133.5	134.7	139.5	142.5	141.7	139.8	139.9	139.9	139.8	139.9	141.4	141.6
North	132.4	133.6	138.9	142.1	141.7	139.6	139.4	139.7	139.4	139.6	140.8	140.8
North West	132.4	133.4	138.5	141.7	141.1	139.2	139.2	139.3	139	139	140.4	140.6
Yorkshire and Humberside	131.9	133.2	138.2	141.5	141	138.9	138.9	139	138.9	138.9	140.3	140.4
West Midlands	132.6	133.8	138.9	141.9	141.3	139.5	139.5	139.5	139.5	139.3	140.9	140.9
East Midlands	132.3	133.5	138.5	141.6	141.1	139.3	139.3	139.4	139.2	139.1	140.6	140.8
East Anglia	133.1	134.4	139	142	141.4	140.2	139.8	139.9	139.8	140	141.1	141.4
South East	133.1	134.5	139.4	142	141.7	140.3	140	140.4	140	140.1	141.1	141.3
South West	133.1	134.3	139.3	142.2	141.8	140	140.1	140.1	139.9	139.9	141.2	141.3
London	132.4	133.9	139.1	141.6	141.3	139.9	139.9	140.3	140	140.2	140.9	141.3
UK Average	132.8	134	139	142	141.5	139.8	139.7	139.9	139.6	139.6	140.9	141.1

	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12
Northern Ireland	142.8	143.5	145.9	148.2	144.5	139.9	137.6	140.6	145.0
Scotland	142.3	143.1	145.6	147.9	144.3	139.6	137.4	140.8	145.2
Wales	142.4	143.1	145.9	148.1	144.5	139.6	137.8	140.9	144.8
North	141.4	142.3	145.1	147.5	143.6	138.6	137.0	140.4	144.8
North West	141.4	142.4	145.0	147.4	143.6	138.7	137.0	140.1	144.3
Yorkshire and Humberside	141.2	142.3	144.7	147.3	143.6	138.5	136.6	140.0	144.1
West Midlands	141.8	142.7	145.2	147.7	144.1	138.9	137.0	140.4	144.7
East Midlands	141.5	142.5	145.2	147.6	143.8	139.0	137.0	140.1	144.5
East Anglia	142.3	143.0	145.7	148.1	144.9	139.8	137.5	140.7	144.6
South East	142.2	143.2	146.0	148.5	145.1	140.0	137.8	140.8	144.8
South West	142.3	143.0	145.8	148.7	144.4	139.6	137.5	140.9	144.8
London	142.0	142.8	145.6	148.0	145.1	139.8	137.2	140.1	144.2
UK Average	141.9	142.8	145.5	147.9	144.3	139.3	137.3	140.4	144.6