



Understanding Pump Prices

- In 2016, on average 70% of the pump price of petrol and diesel in the UK was made up by excise duty and VAT.
- Fuel retailing in the UK remains a high volume, low margin business due to strong competition driving down prices.
- Major brand pump prices in the UK, excluding duty and tax, have been consistently amongst the lowest in Europe over the last 10 years.

Background

The price of fuel at the pumps is a subject that attracts a lot of debate, particularly when prices rise. But there are numerous elements that make up the price of a litre of petrol or diesel, primarily:

- Government duty and tax
- The cost of petrol and diesel on the open market - cost of product
- The costs and profit of the wholesaler and retailer - Retail/Ex-Refinery spread

The other factors affecting the price include exchange rates, competition, commercial objectives of the filling station owner or operator, as well as seasonal factors. Duty and tax accounted on average for 70% of the pump price in 2016. Figures 1 and 2 (below) show the typical breakdown of a litre of unleaded petrol at the 2016 average UK major brand pump price of 109.19p.

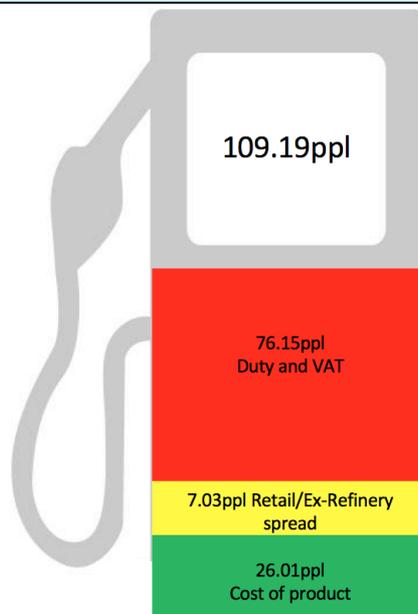


Figure 2: 2016 Average pump price breakdown (p/litre)
(Source: Wood Mackenzie)

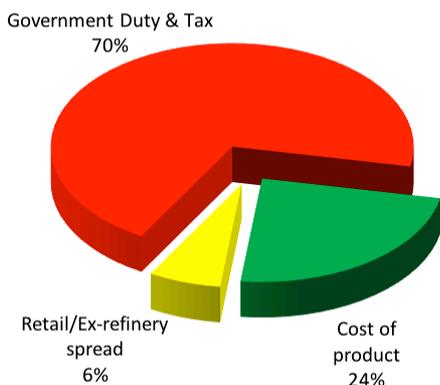


Figure 1: Average Pump Price Breakdown 2016 (%)
(Source: Wood Mackenzie)

Government excise duty

Excise duty was charged at the fixed rate of 56.19p until 1st April 2010 when it was increased to 57.19p until 1st September 2010 and to 58.19p per litre on unleaded petrol and diesel until end of December 2010. On top of this VAT was charged at 17.5% in 2010. On 1st January 2011, duty was increased by 0.76p per litre and then reduced by 1p per litre to 57.95 on 24th March 2011. On the other hand, VAT chargeable on the total pump price increased from 17.5% to 20% on 4th January 2011. This large tax component has the effect of diluting changes in underlying crude and product prices, because these still remain a smaller proportion of the total price.

Cost of product

Crude oil is traded on international markets and from it a whole variety of products are derived, including petrol, diesel, aviation fuel and heating oil. Whilst there is a connection between the underlying price of crude oil and pump prices, the internationally traded price of petrol and diesel and the \$/£ exchange rate are major influences on pump prices.

Figure 3 (below) illustrates how the “spot” market prices of Brent crude oil, petrol and diesel, and pump prices (excluding duty and VAT) moved over the period from January 2008 to December 2016. This shows periods when the market and pump prices of petrol and diesel moved independently of crude.

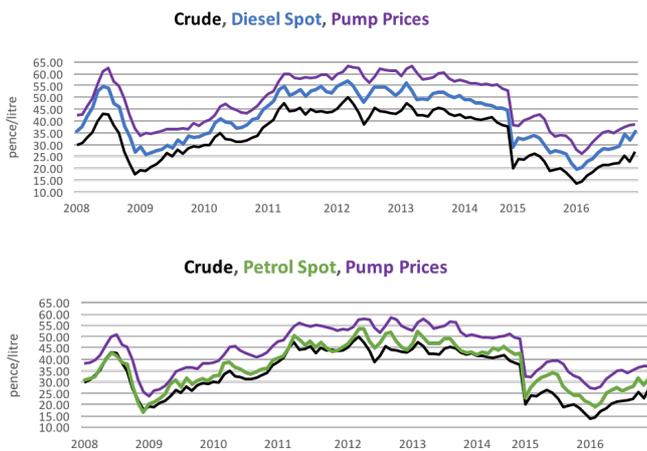


Figure 3: Crude oil, petrol spot and pump prices (excluding Duty and VAT) January 2008 – December 2016
(Source: Wood Mackenzie)

Historically, crude prices have worked through to product prices and, as an indication, a \$2 per barrel change in the price of crude oil has, on average, translated to approximately 1p per litre in the pump price, at a constant \$/£ exchange rate.

Prices of products refined from crude oil have often moved independently of each other in the short term, reflecting supply and seasonal demand. For example, demand for petrol and diesel tends to rise during the summer, while demand for heating oil/gas rises in the winter. The latter can affect the price of diesel and aviation fuel, which are closely related products in terms of composition.

The tighter supply position for diesel is also another influencing factor¹.

Typically, there is also a time delay between movements in the unrefined crude oil market and the cost of the product at the pumps. The crude oil has to be sold, transported, refined and distributed to the retailer. Some operators might not work on a lag basis but on a cost replacement basis. This means

¹ Demand for diesel has been growing in the UK and Europe, as well as globally. This has led to diesel supply in the UK becoming tighter in recent years and this has been reflected in wholesale prices and pump prices that are often higher than petrol prices.

that they calculate how much it would cost to buy oil products today to replace what is in their tanks.

Retail/ex-refinery spread

The third element is represented by the cost and profit of the wholesaler²/retailer, often referred to as the retail/ex-refinery spread. This covers:

- Costs of transport to a storage terminal/depot, storage, and distribution to a filling station.
- Marketing and promotion costs.
- Costs of operating the filling station and staff

The remaining spread has to provide a return to the supplier of the fuel and the retailer operating the filling station.

The retail/ex-refinery spread is strongly influenced by market conditions. Figure 4 (below) illustrates the fuel margin over the last 20 years and the trend since 1996. This shows that fuel retailing has become increasingly a low margin business driving the move to higher volume sites. The retail/ex-refinery spread is not the final profit that the retailer makes, it is simply the difference between the cost of the wholesale price of fuel on the open market and the selling price on the forecourt, from which, as mentioned, a range of costs have to be deducted.

Of the approximately 4,500 major oil company branded sites in the UK, more than half are owned by independent retailers. The retailer usually has an exclusive supply contract with an oil company limited by law to a maximum of 5 years’ duration.

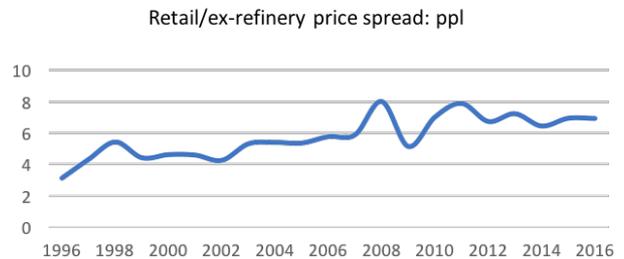


Figure 4: Retail/ex-refinery spread 1996 - 2015
(Source: Wood Mackenzie)

The retailer purchases fuel from the supplying company and decides the price to charge at the pump, based on a number of factors including wholesale prices, and competitive conditions.

A major influence on pump prices in the UK over the last 10 or more years has been the highly competitive market conditions, with strong competition between 12 significant companies in a near static market in volume terms. This has resulted in UK pump prices (excluding duty and VAT) being consistently amongst the cheapest in Europe (Figure 5 below).

² Supplier of fuels for resale.

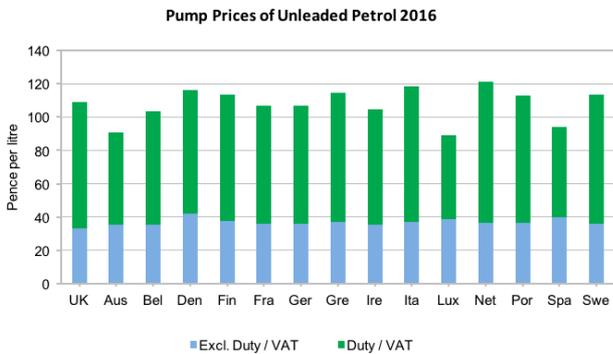


Figure 5: EU major brand pump price comparison (petrol) 2016
 (Source: Department for Business, Energy & Industrial Strategy using data from the European Commission Oil Bulletin)

The market conditions reflect, in part, a well developed infrastructure and the growing presence of supermarkets. Their share of the retail fuels' market has grown from about 11% in 1993 to 43.8% in 2015, in a market which has seen little volume growth. The overall road fuels' market has grown slightly in 2015 for the second consecutive year, following an overall drop of 12% between 2007 and 2013. In particular, out of total sales, the share of petrol has been falling steadily whilst that of diesel has risen, mainly due to an increased proportion of diesel vehicles. (Figure 6 below)

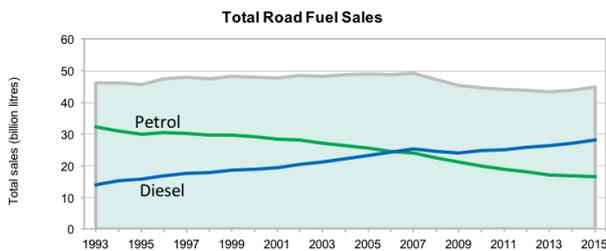


Figure 6: Motor Fuel Demand 1993 – 2015
 (Source: Department for Business, Energy & Industrial Strategy)

Price competition in petrol is particularly fierce because of ready availability of supply from within the UK or from the near continent, which means that there are no difficulties for new players to enter the market. However, increased demand, tighter supply and the convergence of specifications for diesel, aviation fuel and heating oil has tended to increase the seasonal variation in the price of diesel sometimes to a price well above petrol.

The supermarkets' growth in market share has coincided with a rapid expansion in the number of large out-of-town stores. The associated filling stations are able to sell large volumes of fuel, particularly to people doing their weekly shopping, often cross-promoting a fuel discount to the amount spent in the main store.

Inevitably, the effect of competition has come to represent one of the main causes for the closure of

smaller or less well located filling stations, a situation compounded by the increasing costs of meeting stricter environmental standards. As a result, the number of filling stations in the UK has fallen from about 17,000 in 1994 to just 8,494 in 2015 (Figure 7 below). In recent years, the proportion of oil company owned sites has also declined with several oil majors exiting the UK retail market.

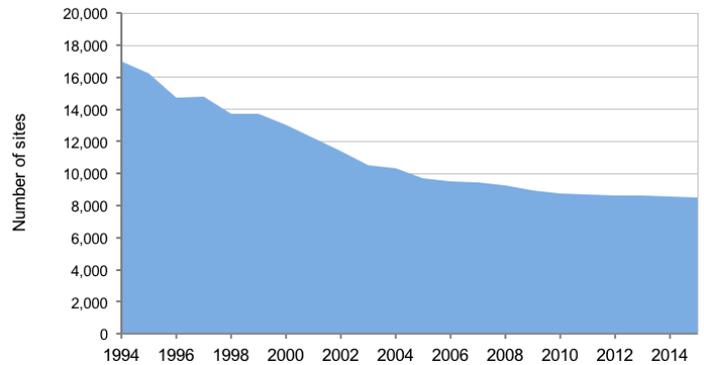


Figure 7: Retail site closures, 1994 – 2015
 (Source: Experian Catalist 2006-2015 – EI until 2005)

Conclusions
 Taxation remains the largest component of the pump price. Pump prices will fluctuate, influenced by the factors outlined above. Strong competition continues to result in petrol and diesel prices in the UK being amongst the lowest in the EU, excluding duty and VAT.

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Please note that this paper is meant as a background briefing aimed at explaining the numerous elements that make up the price of a litre of petrol or diesel, along with the various factors that affect the price of fuel (exchange rates, competition, seasonal factors and so on). For recent fuel prices in the UK and a number of EU countries, please visit our website's Fuel Prices Historic Data page www.ukpia.com/fuel-prices-historic-data.aspx