

Box C: Oil Usage in the Australian Economy

Average capital city petrol prices rose from around \$1.00 per litre to \$1.19 per litre over the year to the September quarter, as a result of a sharp run-up in global crude oil prices. Increases in petrol prices have a direct impact on the CPI and boosted the annual inflation rate significantly in the September quarter. This Box provides some further discussion of the impact of higher oil prices on the Australian economy, focusing on oil usage. Overall, the data suggest that the recent strength in oil prices should represent less of a shock to the aggregate price level than some earlier global oil shocks.

While the sharp increase in petrol prices has attracted a lot of attention, petrol accounts for a relatively modest share of spending by Australian households. Automotive fuel has a base-period weight of 3.8 per cent in the new 15th series of the CPI. In the broader national accounts measure of household consumption expenditure, automotive fuel accounted for a little less than 3 per cent of total household spending in 2004/05. The household expenditure survey (HES) suggests there are only modest differences in the share of petrol in consumption across different income levels.

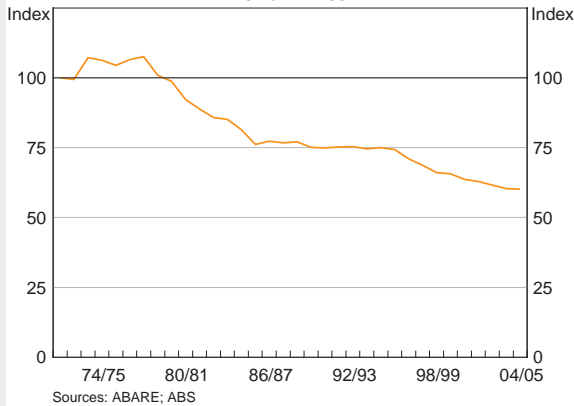
With an average weekly petrol consumption of around 35 litres per household, the price increase of nearly 20 cents per litre over the year to the September quarter would have added nearly \$7 to the average weekly household fuel bill (taking it to about \$42 per week), assuming no change in the volume of petrol purchased.¹ However, one response of households to higher prices has apparently been to look for ways to reduce their fuel consumption, such as cutting back on discretionary driving or changing to more fuel-efficient vehicles. The June quarter national accounts point to some reduction in the amount of fuel consumed by households in recent quarters, and sales of small cars have picked up significantly recently.²

Households are not the only consumers of petrol: petrol and other oil-derived products are also used by businesses as inputs into the production process. In addition, part of the amount spent by users on fuel represents taxes, which are a transfer within the economy. The broadest measure of the importance of oil in the economy is the ratio of total oil usage to GDP. For the economy as a whole, the importance of oil has steadily declined over the past 25 years as firms and households have become more efficient users of oil, largely in response to rises in oil prices in the late 1970s, reflecting the introduction of import parity pricing and the subsequent second OPEC oil shock. In addition, energy-intensive sectors now make up a smaller share of the economy as the services sector has expanded. As a consequence, oil intensity, defined as the number of barrels of oil consumed per unit of real GDP, is now around 40 per cent lower than at the end of

1 The figure of around 35 litres per week (including a small amount of diesel and LPG) can be obtained either from the 2003/04 HES or the 2004 Survey of Motor Vehicle Use. It also appears consistent with data for economy-wide sales of fuel in Australian Petroleum Statistics published by the Department of Industry, Tourism and Resources.

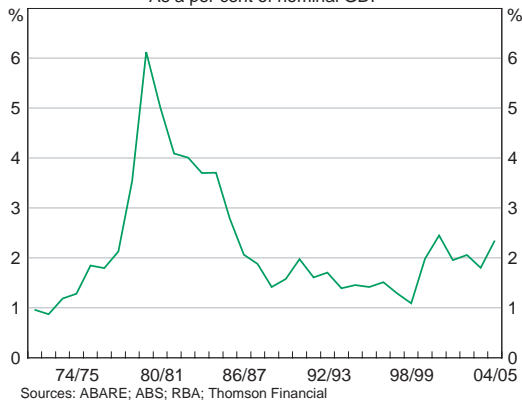
2 More generally, Australian and foreign studies have typically found that a 10 per cent increase in petrol prices tends to reduce the demand for fuel by around 1–2 per cent in the short term and by around 5–6 per cent in the longer run.

Graph C1
Oil Intensity
1971/72 = 100



the 1970s (Graph C1). Expenditure on oil consumption has fallen from a short-lived peak of 5–6 per cent of GDP around 1980 to 2–2½ per cent in recent years (Graph C2).³ If oil prices were to remain at current levels with no change in oil consumption, this ratio would rise to around 3 per cent in 2005/06. This represents a substantially smaller cost shock to the Australian economy than occurred in the late 1970s. ∞

Graph C2
Expenditure on Oil Consumption
As a per cent of nominal GDP



³ From 1978, the graph is based on the volume of domestic oil consumption valued at world prices. Prior to that it is based on an average of world and domestic oil prices, weighted according to the estimated share of imports. The price for domestically produced oil was largely fixed at below-market levels until August 1975, so Australian oil consumers were partially insulated from the direct price effects of the first OPEC price shock. Prices for domestically produced oil were increased towards world prices over the following three years, with the shift to import parity pricing completed in the August 1978 budget announcement.