

Pricing

Summary

1. The prices paid by domestic customers for bulk LPG vary widely depending on the supplier, on whether the customer is new or established, and on whether the customer has negotiated a discount. Variations in the cost of supplying different customers (depending on factors such as the tank size and volume of LPG purchased) are reflected in prices to at most a limited extent, and explain only a small part of price differences between customers. Substantial differences exist between the average prices charged by the four major suppliers (Calor, Flogas, Shell and BP)—nearly 10 per cent between the highest and lowest priced supplier.
2. [X]The prices of smaller suppliers vary around a wide range: [X] Apart from [X], the major suppliers told us that they do not, on the whole, charge systematically different prices between regions, and this is supported by our analysis.
3. [X] all offer introductory discounts to new customers.¹ [X] introductory price is fixed for only six months. Those of [X] are fixed for the first [X] and those of [X] are fixed for up to three years; the size of the discount falling each year.
4. Calor [X] offer standard prices to domestic bulk LPG customers, [X], and a proportion of customers are charged at a discount on the standard price. In contrast, [X] and Shell told us that they calculate prices individually depending on expected customer usage and other features of the account. Our analysis of prices in Annex 1

¹[X] commented that because it had no standard charges 'initial price' was a more appropriate term than 'discount'.

indicates that, for each major supplier, such features explain only a proportion of the variation in prices between customers.

- Price changes by the four major suppliers appear, in recent years, to have been caused more by changes in the wholesale price of propane (which has fluctuated considerably over the period), than competitive responses to changes in each other's prices. Of the major suppliers, [redacted] systematically collect information on competitor prices.

Headline prices

- We begin with an overview of prices charged by the major suppliers. Further details are provided in later sections. Average revenues and prices for the four major suppliers are shown in Table 1. Average revenue per litre is the sum of the average price and the revenue from associated services, including standing charges, installation, and removal charges, averaged per litre.² [redacted]

TABLE 1 Average prices and revenues 2003

	Price per litre	Revenue per litre for associated services	Total revenue per litre
Calor	([redacted])
Flogas UK			
Shell			
BP			

Source: LPG suppliers.

Note: [redacted]

- We analysed prices charged by three of the major suppliers, and propane costs, in recent years. A number of customers had complained that suppliers were quicker to

²[redacted] noted that the additional revenues were fixed and not volume-related. It argued that for this reason they should not be expressed in pence-per-litre terms. However, our intention is simply to compare revenues from LPG relative to the volume of LPG supplied.

pass on increases in the cost of propane than decreases. Our analysis did not support this complaint.

8. We also considered whether there was any price coordination between the suppliers. Coordination—firms anticipating each other’s responses to their actions and taking this into account in their decisions—requires three market conditions to be in place.³ The first of these is that the market must be sufficiently concentrated for firms to be aware of the behaviour of their competitors, and for any significant deviation from the behaviour by a firm to be observed by other firms in the market. Both the Great Britain and Northern Ireland markets are highly concentrated. Price transparency appears limited in the domestic bulk LPG market in Great Britain although, as discussed in paragraphs 51 to 53, some price monitoring does take place. The second condition is that deviation from the prevailing behaviour must be costly, and the third is that the threat of entry, or competition from a fringe of firms outside the largest firms, is not sufficient to undermine coordination. However, under current market conditions, particularly the switching costs faced by customers and the very limited extent to which customers consider switching in response to price differences (discussed in Appendix G), application of all three of these tests is problematic: as our guidelines note, the essence of interdependence is that price cuts by one firm will have a significant impact on others’ volumes.

9. We developed a model to assess whether suppliers were coordinating their prices. However, data was not available from one of the major suppliers, with the result that competitive interaction between the four could not be modelled in full. Furthermore, structural shifts, particularly Flogas’s acquisition of British Gas, indicated that the period should not be studied as a single time series, but analysis of shorter periods would have been based on an unsatisfactorily small number of observations. In view

³See *Market Investigation References: Competition Commission Guidelines*, June 2003 (CC3).

of these concerns, we considered that the model we developed was not sufficiently robust to constitute evidence of coordination.

10. Average monthly prices to domestic customers, from mid-1999 to mid-2004, are shown in Figure 1.⁴ Prices increased substantially in 2000: [redacted] had an average price of around [redacted]. The major suppliers told us that price fluctuations were principally due to changes in the cost of propane, (see Annexes 2 and 3). The major suppliers have sustained substantially different average prices over the period: BP maintained [redacted]. Flogas UK told us that [redacted].⁵⁶

FIGURE 1

Average monthly prices to domestic customers

[redacted]

Source: CC from information supplied by major suppliers.

Pricing policies

Calor

11. [redacted]
12. [redacted]
13. As of 1 January 2004, [redacted] per cent of Calor's domestic bulk customers were charged a price equivalent to [redacted]; a further [redacted] per cent paid the [redacted] price of [redacted] pence per litre (ppl). Around [redacted] per cent of Calor customers did not pay one of these standard prices.

⁴Month-to-month fluctuations may be due in part to variations in the customer mix—eg more (or fewer) deliveries to customers who are on lower prices in one month than another.

⁵[redacted]

⁶[redacted] commented that the price fluctuation in Figure 1 did not show different prices each month but was due to the mix of customers and therefore distorted the price smoothing effect. [redacted]'s standard prices are shown in Figure 3.

¹⁰[redacted]

14. [REDACTED]

FIGURE 2*

Calor customer prices as at 1 January 2004

[REDACTED]

Source: CC from information supplied by Calor.

[REDACTED]

15. [REDACTED]

16. [REDACTED]¹⁰

17. [REDACTED]¹¹

FIGURE 3

Calor prices, weekly trend, 1999 to 2004

[REDACTED]

Source: CC from information supplied by Calor.

Flogas UK

18. [REDACTED]

19. At the start of 2004, Flogas UK charged [REDACTED] of its customers a price of [REDACTED], while the remaining [REDACTED], with no other single price being charged to more than [REDACTED] per cent of its customers.

20. Flogas UK [REDACTED]. If the shift in propane prices is expected to be temporary, Flogas UK will [REDACTED]. Flogas UK told us that, in general, all domestic customers would receive a standard letter announcing a price change. [REDACTED]

¹¹[REDACTED]

21. Flogas UK told us that the factors it considered in determining a price reduction to prevent customer switching were [REDACTED].

22. [REDACTED]

Shell

23. In 2003, Shell charged an average introductory price of [REDACTED]ppl (compared with an average price overall of [REDACTED]ppl). Shell provided us with an analysis of prices which concluded that new customers had not been paying consistently lower prices than existing customers. However, this analysis defined new customers to include customers who had moved into a house that was already supplied by Shell, as well as customers who were 'truly' new to Shell.

24. [REDACTED]

25. Shell told us that it did not differentiate between regions other than for depots in the [REDACTED] which faced higher transport costs.

BP

26. [REDACTED]

27. [REDACTED]

28. [REDACTED]

29. [REDACTED]

30. [REDACTED]

Standing charges

31. The average standing charge a year is around £[<] for [<] customers and [<] for [<] customers. Revenue from standing charges is around one-fifteenth (for [<]) and [<] of the size of revenue from LPG sales. (See also Table 1.)

Comparative price levels

32. The distribution of prices (excluding standing charges) to domestic bulk LPG customers at the end of 2003 are shown in Figure 4.^{12,13} [<]

FIGURE 4

Distribution of prices on 1 January 2004

[<]

Source: CC from information supplied by major suppliers.

Pricing by smaller suppliers

33. The prices, and pricing policies, of smaller suppliers vary widely (see Table 2). [<] out of [<] suppliers that provided information did not offer lower prices to new customers than to established customers, while one offered a very small discount to new customers. [<] of the [<] charged a standard price, but [<] of these offered discounts to a majority of their customers. Prices charged by different suppliers varied widely—for example, average prices charged in 2003 ranged from under [<]ppl ([<]ppl below that of the cheapest of the major suppliers) to above [<]ppl (more than [<]ppl above that of the most costly of the major suppliers). [<] and [<] appear to have increased their prices since 2003, but others have not.

¹²[<]
¹³[<]

TABLE 2 Prices and pricing policy

Smaller suppliers	Number of domestic customers (2003)	Introductory price (Oct 04)	Average or standard price (Oct 04)	Average price 2003	Standard price	Proportion of customers negotiating discount from standard price
			⌘			
Larger suppliers Calor Flogas UK Shell BP				⌘		

Source: LPG suppliers.

[⌘]

Comparison by sector

34. Average prices to domestic customers are compared with those charged to other customers in Figure 5. [⌘] told us that domestic customers generally did not have access to deals aimed at non-domestic customers. One reason for this was that business customers had higher demand, generating a higher ROCE. Another was that non-domestic customers were more likely to use LPG throughout the year, improving tanker fleet utilization. In addition, the average price may be influenced by a few high-volume customers paying lower prices. Other suppliers made similar points.

35. Trend data indicate a substantial price increase in 2000/2001 across companies and customer groups, a dip in 2001/2002 (for [⌘]) and relatively stable prices thereafter (see also Figure 1). The relationship between prices and the principal input cost—propane—are analysed in Annex 2.

FIGURE 5

Average prices by sector and company 2003

[X]

Source: CC from information supplied by major suppliers.

Metered estates

36. Metered estate customers pay lower prices than other customers [X]. The major suppliers told us that tank utilization is generally higher for metered estate installations than tanks supplying individual premises thereby giving logistical efficiency advantages. Table 3 presents data on prices paid to the suppliers by metered estate customers.

TABLE 3 Prices to metered estate customers and others

Ppl	Calor		Flogas UK		Shell		%
	Non-metered estate	Metered estate	Non-metered estate	Metered estate	Non-metered estate	Metered estate	
Average ppl:	(X)

Source: LPG suppliers.

Notes:

- 1. BP did not provide pricing data for metered estate customers.
- 2 Some estate-management firms purchase bulk LPG for domestic use on their estates; they are classified by suppliers as commercial customers.

Price negotiations

Evidence from customer databases

37. The major suppliers provided us with customer databases, indicating which customers had negotiated prices. Customers whom Calor described as having individually negotiated prices ([X] per cent of all customers) paid an average of [X]ppl, compared with an average of [X]ppl for Calor customers who did not. On the basis of our analysis in Annex 1, whether a [X] customer was recorded as having individually negotiated prices did not make a significant difference to the price. [X] told us that all of its customers negotiated prices, while [X] did not identify which of its customers did so.

38. [X]

39. Table 4 shows data for [X] non-metered estate customers in 2003. Over this period [X] per cent had an absolute price reduction, [X] per cent saw no change in price, and [X] per cent had a price increase of less than the standard increase of [X]ppl. [X] told us that, for all of these customers, had prices increased by the standard rate during 2003, there was a significantly enhanced risk that they would have switched away from [X] to another LPG supplier or to another fuel.

TABLE 4 [X] non-metered customers: distribution of price increases

<i>Price change</i>	<i>Number of customers</i>	<i>Proportion of customer base %</i>	<i>Average price (exl metered estates)</i>
<0	(X)
0			
0<p<1			
1			
>1			

Source: CC, based on data from [X].

Survey evidence

40. Among respondents to the CC/ORC survey, 29 per cent said that they had tried to negotiate a lower price from an LPG supplier. However, only 12 per cent had done so within the past year. Around 60 per cent of these (7 per cent of all customers) had successfully negotiated a lower price from their supplier when they last tried, typically of around 1ppl, or 5 per cent.
41. [X] provided us with responses from a recent customer satisfaction survey showing customer perceptions of price flexibility—reproduced as Table 5. More than four-fifths of domestic customers were not aware that there was any scope to negotiate on price. In contrast, half of [X] commercial customers were aware that some opportunity for negotiation existed. Only 1 in 20 domestic customers believed that every customer could negotiate on price.

TABLE 5 [X] customer perceptions of scope for negotiation

	<i>per cent</i>	
	<i>Domestic</i>	<i>Commercial</i>
Every customer can negotiate on price		
Large users can negotiate on price		
Different prices set for high and low users		
All customers pay the same price per litre		
Don't know		

Source: [X].

Threats to switch supplier

42. A [X] survey in 2000 found that one-third of customers claimed they were likely or very likely to review their gas supplier in the next year. However, half the respondents were non-domestic customers and the report notes that 'This "review" may be standard company practice'. [X] told us that 9 per cent of domestic customers responding to a 2003 survey indicated an 'intention to quit'.

43. The number of customers threatening to switch supplier but persuaded to stay with their existing supplier is shown in Table 6. The basis of calculation is slightly different in each case. In general, only a small proportion of the domestic customer base had to be 'price defended' in 2003. The final column shows those customers who were persuaded to stay as a proportion of all those threatening to switch, giving notice, or actually switching. Flogas told us that [redacted]. In aggregate, around 3 per cent of the customers of the major suppliers threaten to switch each year.

TABLE 6 Customers threatening to switch, 2003

	<i>Persuaded to stay after threatening to switch</i>	<i>Persuaded to stay after giving notice</i>	<i>Total customer base</i>	<i>Share of customer base† %</i>	<i>Proportion of these customers persuaded to stay (after threatening to switch or giving notice) %</i>
Calor Flogas Shell* BP	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Source: LPG suppliers.

[redacted]
[redacted]

44. The term 'negotiation' is open to interpretation and may range from a supplier offering to delay a price increase in compensation for a delivery error, to a customer giving notice of termination to the supplier and being persuaded to stay with a price cut. There is a corresponding uncertainty about the precise number of customers who are aware that they can negotiate, or that have actually done so. However, it appears that at most around one customer in four is aware of the scope to negotiate prices, and not much more than 1 in 20 is currently receiving a negotiated discount.

Other points on negotiation

45. Calor told us that there are currently [redacted] domestic bulk buying groups, comprising [redacted] of its customers. These customers generally ask for a lower price because of the quantity purchased in total or their ease of filling (for example, residential caravan

parks). Calor told us that each customer in these groups has an individual tank and a separate contract, and that they face no particular obstacle to switching.

46. [redacted] referred, in the context of price sensitivity, to the increase in the amount of telephone calls [redacted] when a general price increase was implemented. [redacted] provided us with data as to the outcome of telephone calls [redacted] to query price between [redacted]. Customers making queries accounted for only 1.1 per cent of those whose price had been increased. [redacted] of those querying their price did not get a discount from the standard price increase, although we note that a price query is not necessarily a request for a discount.
47. [redacted]¹⁴ Flogas UK told us that it sees increases in the volume of calls into its domestic customer call centre at times of price changes in the market, including customers of competitor companies. [redacted]
48. Shell told us that local word-of-mouth required consistent pricing logic at the local level. Calor told us that it did not have specific information as to the number of cases in which price reduction for one customer led to requests by others in the area, although it told us that such cases did occur. Flogas UK also told us that price reductions spread by word of mouth, and [redacted].

Other determinants of price

49. The major suppliers also told us that prices charged to individual domestic customers were influenced by, among other things, cost factors including volume purchased, distance from depot, and the length of time that customers had been with the supplier.

¹⁴Figure 1 indicates that this was not necessarily the case.

50. Annex 1 consists of a regression analysis relating cost factors such as volume of LPG, tank size, and distance from depot to the price of LPG. It finds that, while some cost variables have a significant effect on price, the effects tend to be relatively small, and, even when they are combined with other factors such as whether the customer is new, or has negotiated prices, much of the variation in prices between customers is unexplained.

Monitoring of competitor pricing

51. [X] surveys a panel of its competitors' customers each month in order to monitor prices. [X] competitor prices by [X] are shown in Figure 6, along with the actual maximum and minimum average prices of [X]. [X] estimate is between the actual maximum and minimum average price in [X]. The results of [X] panel for September 2004 appear as Table 7. [X] did not have a monitoring program in place, but received indicative prices of other suppliers from its account managers. [X].

FIGURE 6

[X] price monitor estimates v actual competitor prices ([X])

[X]

Source: CC from information supplied by [X].

¹⁶Annual volume consumption for 2003 was used, and price as of 1 January 2004; however, prices on 1 January 2004 can be expected to be closely correlated to prices over 2003 and before.

TABLE 7 [X] price panel results, September 2004

	<i>Average</i>	<i>Max</i>	<i>Min</i>	<i>Observations</i>
		X		

Source: [X]

52. [X].

53. [X] provided us with reasons for its price increases and decreases over the period. In all cases the reasons related to current and forward prices of oil and LPG: competitor pricing was not mentioned as a reason. [X] told us that none of the price changes were in response to the retail price of another supplier. It said that the period was one of unprecedented volatility and increases in raw material prices, which inevitably had a major short-term effect on pricing decisions by [X], and that no general conclusions about long-term pricing strategy should be drawn from the behaviour of market players during such a period.

Regression analysis of inter-firm price differences

1. The major suppliers provided us with details from their customer databases about the price charged to each domestic customer (as of 1 January 2004), and features of the customer account which could potentially affect the price charged—such as the volume of LPG consumed, the length of time the account had been in place, and whether the customer had negotiated a discount.
2. We analysed this data to assess how much, if at all, variation in prices to different customers by the same supplier reflected cost differences in supplying those customers.
3. We found that while some features (not necessarily cost-related) of the customer account had a statistically significant effect on the price, those features on which the parties provided us with data, taken together, explained only a small part of the observed price variations between customers.

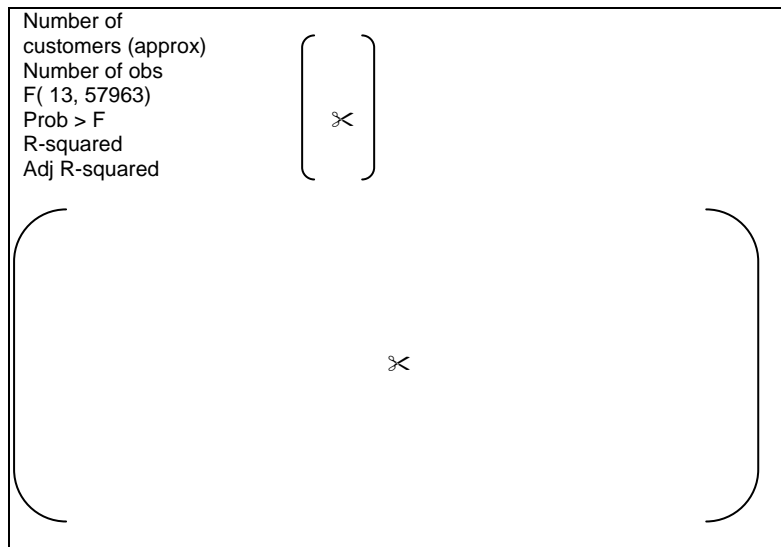
Background

4. Variables considered for inclusion in the equations were based on the following:
 - volume of LPG consumed;
 - the year when the contract was signed;
 - whether the customer's tank was difficult to access;
 - whether or not the customer had negotiated a discount;
 - payment by direct debit;
 - automated top-up arrangement; and
 - whether property was on a metered estate.

5. The regression equations are estimated by Ordinary Least Squares (OLS). The validity of the method assumes implicitly that price and volume are not simultaneously determined, ie that LPG consumed does not depend on the price charged.¹⁶ It is possible that some consumers use more LPG because they pay a lower price, but we have assumed that such an effect is limited. To the extent that this does occur, the effect will be to overstate the effect of volume consumed on price in the equations discussed below.
6. The data we received from the four major suppliers included records with no, zero or negative distance, volume or price information. We excluded these observations from the following regression analysis. In addition, variables are based on supplier reports and some—such as whether the customer negotiated or was free to switch supplier—may have been open to interpretation. Variables included in the equations (depending on availability of data) are shown below. The purpose of the variables neg04_lvol and nego04_dist is to assess whether distance from the depot and the volume of LPG consumed have a greater impact on prices among customers who negotiate their prices.

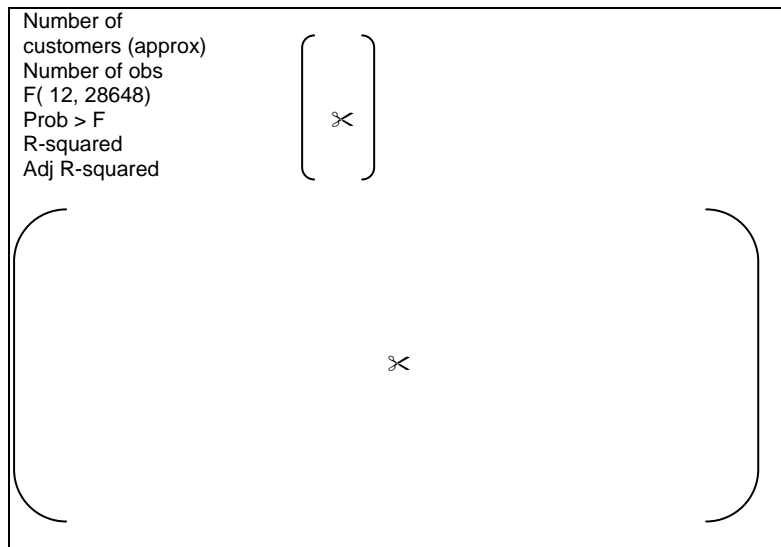
<i>Variable name</i>	<i>Description</i>
In_p04	Log of price as at 1/1/2004
Lvol	Log of volume consumed in 2003
neg04	Whether negotiated price in 2004 (Yes = 1, No = 2)
neg04_lvol	"neg04" multiplied by "lvol"
Dist	Distance from depot
neg04_dist	"neg04" multiplied by "dist"
top_up	Whether received automatic top-up
d_d	Whether paid by direct debit
Metered	Whether property was on a metered estate
y_1999 (etc)	Supply agreement commenced in 1999
Free	Customer is free to change suppliers (as reported by suppliers)
In_tank_size	Log of tank size
Cons	Constant term

Dependent variable: in prices 04



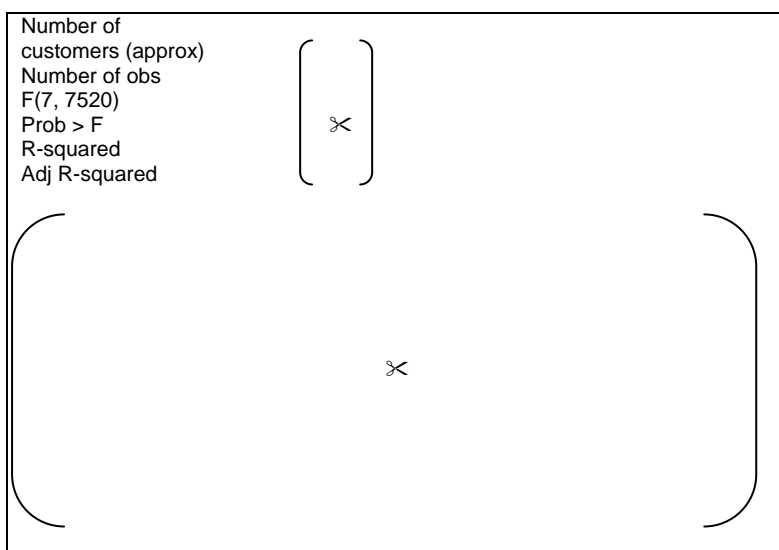
7. The R-squared indicates that [0.38] per cent of the variation in prices can be explained by variations in the characteristics of customers and their contracts with Calor.
8. [0.38].
9. [0.38].
10. [0.38].
11. [0.38].
12. [0.38].

Dependent variable: in prices 04



- 13. [x] per cent of the variation in prices between Flogas customers is explained by the available explanatory variables. [x].
- 14. [x].
- 15. [x].
- 16. [x]

Dependent variable: in prices 04



17. The above results confirm that [X] explain around [X] per cent of variation in prices among BP customers, [X].

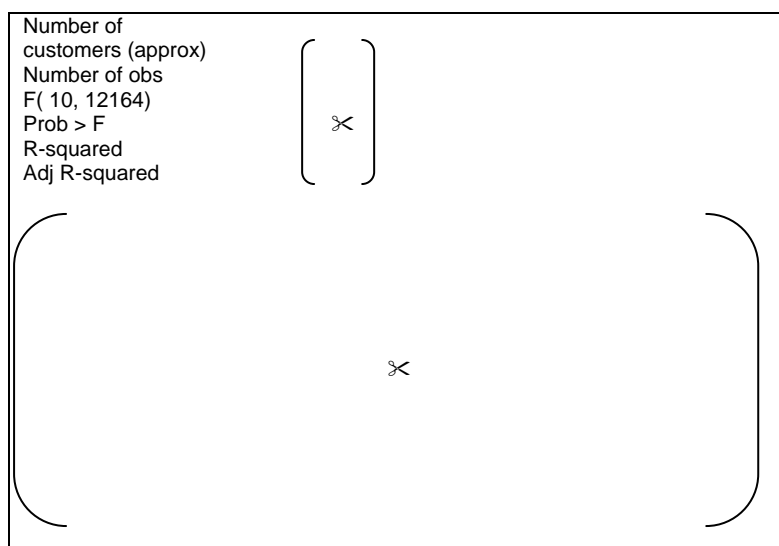
18. [X].

Shell

19. [?].

Regression (5)

Dependent variable: ln Prices 04



20. The covariates in this regression explain [?] per cent of the variation in prices. [?].

Pooled regression

21. We considered regressing prices on account features across the databases of the major suppliers. However, such a pooled regression explained only around 5 per cent of the variation in prices between customers. Volume consumed, year started, and supplier were all highly significant in explaining customer prices. However, the variables appear to be strongly correlated—in that some suppliers have more new customers, and offer deeper discounts to new customers than others—with the result that the coefficients on the included variables cannot be considered reliable.

Summary of findings

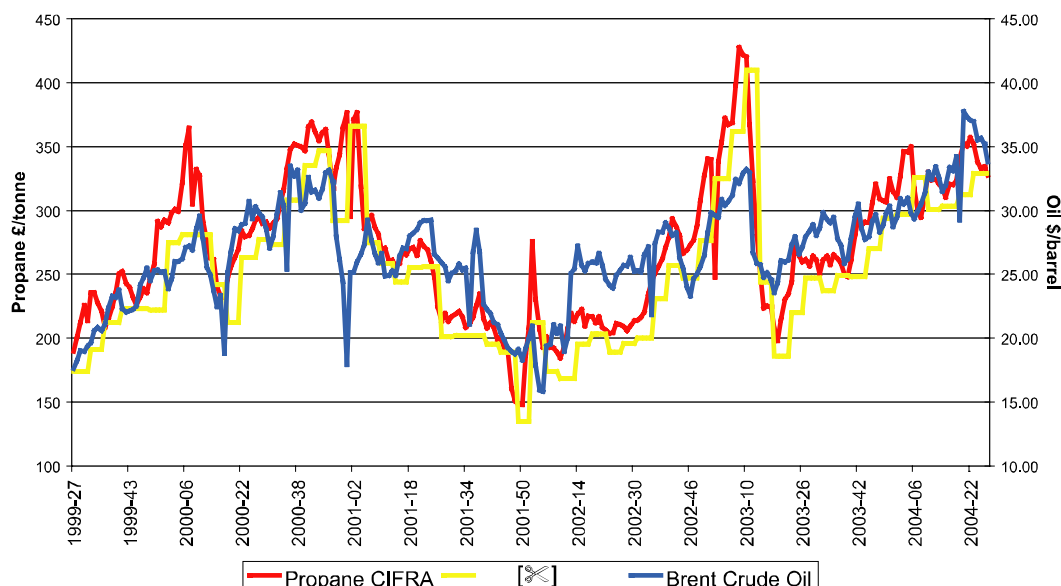
22. The estimated logarithmic relationships between prices and volume suggests a non-linear price schedule, subject to bargaining, although substantial variation in unit prices remains unaccounted for on the basis of the available covariates. Prices are not, however, very responsive to the volume consumed: substantial differences in consumption between customers are associated with only small differences in price.
23. LPG prices are on average lowest in the year during which a contract has been signed. This finding is indicative of companies offering lower introductory prices to new customers, although some suppliers appear to offer below-average prices to customers who have started using them in the past five years.
24. Other characteristics of customers' contracts (for example, tank size, distance from depot, whether the customer pays by direct debit or has an automated top-up agreement) which could potentially affect the cost of supply do not in general have a meaningful and statistically significant impact on per unit prices. On the whole, very little variation between customer prices is explained by such factors, and even start dates and volume consumed have limited explanatory power.

Price and input cost trends

- Two measures of propane price (CIFRA) are illustrated in Figure 7, along with the price of Brent Crude Oil. Shell told us that the price of crude oil does not affect the retail price of LPG other than to the extent it moves with/affects the price of internationally traded propane. The chart has been arranged to show Brent Crude on a similar level to the propane prices, although the unit of measurement is different. Crude oil and propane prices are evidently highly correlated although they do not move in unison. [redacted] told us that Figure 7 demonstrated that the price of propane was far more volatile than that of crude oil in the long term. [redacted] told us that the cost of propane was only materially affected by the cost of crude when the latter increased significantly in a short period of time.

FIGURE 7

Commodity prices 1999 to 2004



Source: CC study.

- [redacted].

FIGURE 8

Calor prices, weekly trend, 1999 to 2004

[<]

Source: CC from information supplied by Calor.

FIGURE 9

Calor average price minus propane (CIFRA) price, 1999 to 2004

[<]

Source: CC from information supplied by Calor.

3. Some customers expressed concern that suppliers passed on increases in input costs more quickly than decreases. Analysis of [<] retail pricing from 1999 to 2004 does not support this view. [<] provided monthly data which contained too little variation for robust analysis.

4. [<] also told us that for customers buying relatively small volumes of LPG such pricing structures would be inappropriate, as such customers typically wanted to know the price expressed in ppl.