CHAPTER 3
COSTS AND PRICES 1974-1976

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This chapter reviews the recent behaviour of costs, prices and profit margins and some of the effects of government policy on the phasing of price inflation. It also gives a forecast of retail prices to the end of 1976.

Wages: recent experience and short term prospects

The rise in average hourly earnings[1] after reaching about 30% during the course of 1974 fell back to 22% during 1975.

The main factors generating these changes are now well known. The way the threshold scheme worked was, in effect, to introduce an extra wage award for virtually everyone. The rate of increase in earnings compared with a year earlier peaked[2] at the end of 1974 when the threshold scheme came to an end. In settlements made after December 1974, while most threshold awards were consolidated, 'new money' increases of nearly 20% were generally obtained until the government introduced a limit of £6 per week on pay increases on wages and salaries up to £8500 per year, with no increase allowed on incomes above this level. The policy became effective at the beginning of August, except for agreements already concluded with an anniversary date between 1 August and 1 September; so many of the wage increases implemented in August itself did not conform to the new policy.

The wage rate index for all workers excluding those in metal industries increased by 15·0% between December 1974 and August 1975, and by 5·8% between August 1975 and December 1975. The new awards agreed since August 1975, nearly all of which were within the £6 limit, have covered about one-third of all workers. Thus the implied increase in wage rates resulting from the new policy is about 17% for these workers.

There are some points to be noted about the way the progress of wage inflation has been recorded in the official statistics, which are illustrated in Table 3.1.

During the course of 1974 the wage rate index understated the true rise in basic rates because it measures only national awards and there was no national threshold agreement for engineering workers[3] – although they did obtain local threshold awards. The increase in basic rates is therefore better measured if the engineers are excluded. As Table 3.1 shows, the wage index excluding all metal workers rose 34%, of which rather more than half was the result of threshold awards. On the other hand, as threshold awards were not quite like ordinary wage rate increases in that they did not count in the calculation of overtime and other premium payments, wage drift in 1974 was quite strongly negative. Average hourly earnings (after correction for a fall in overtime) rose only about 30%.

Table 3.1 Percentage changes in hourly wage rates and earnings, 1974 and 1975

	Year ending December 1974	Year ending December 1975
Hourly wage rate:		
(1) All workers	29·4	25·5
(2) Metals	17·3	36·9
(3) All workers excluding metals	34·0	21·7
(4) of which: thresholds	18·2	...
(5) new money	15·8	21·7
Average hourly earnings		
(6) All workers	29·7	21·3
(7) Metals	27·1	21·6
(8) All workers, roughly corrected for changes in paid hours	30·2	22·1
Wage drift ((8) less (3))	− 3·8	+ 0·4

In 1975 the statistical distortions were reversed. Engineering workers' threshold awards were, in effect, consolidated in their national award, causing their own index of basic rates to rise very rapidly and far in excess of their earnings. For this reason the underlying movement of basic rates in 1975 can again be only sensibly measured by an index which excludes metals; this rose in the year ending December by 21·7%, compared with an increase of 25·5% for all workers.

At the same time average hourly earnings for engineers and, on average, other manual workers rose about 22% if allowance is made for a further fall in

[1]Corrected for cyclical effects.

[2]Ignoring comparisons affected by the three-day week at the beginning of 1974.

[3]Engineers account for about a quarter of the all-workers' index of wage rates.

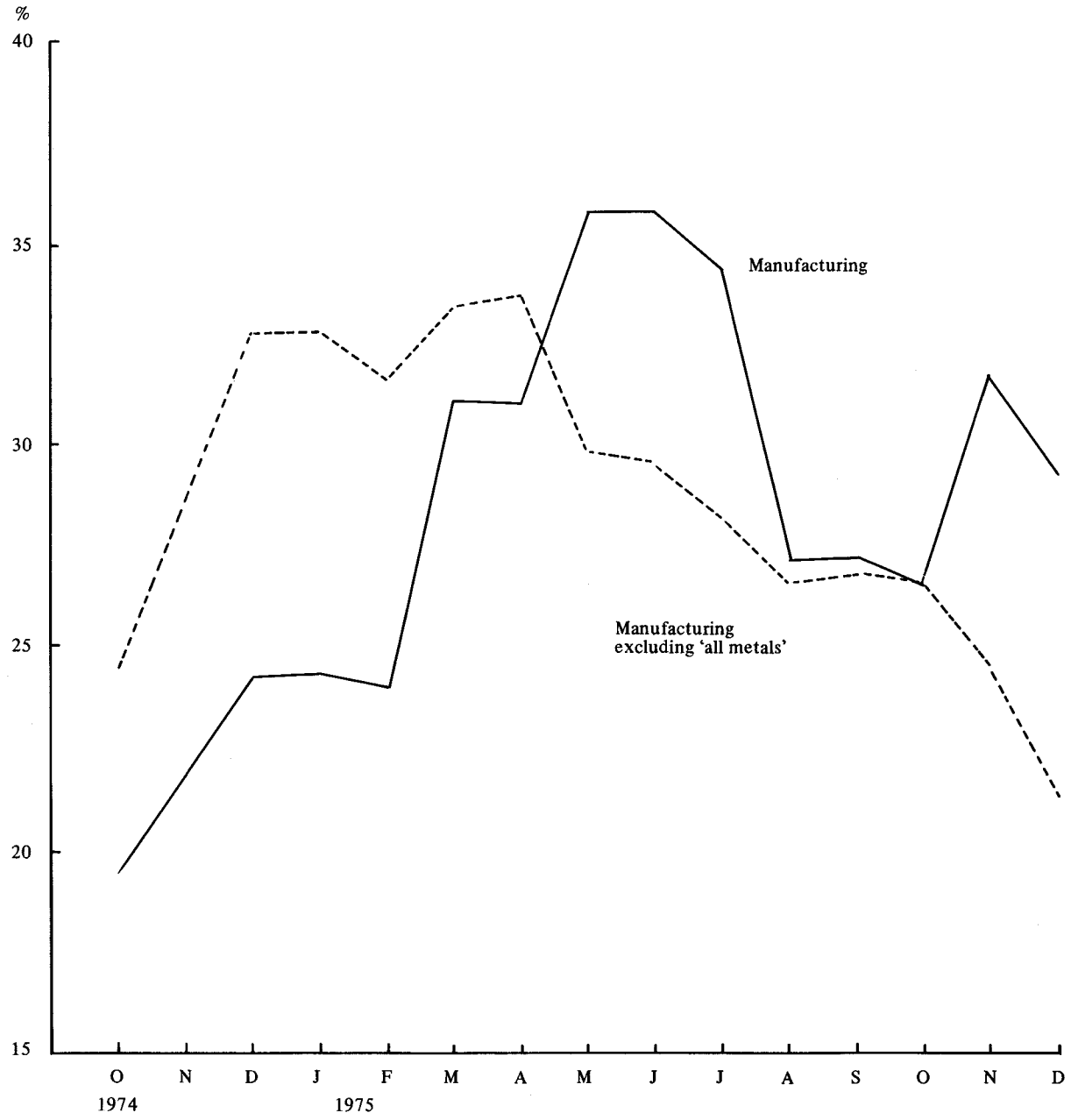

Fig. 3.1. Wage rates and earnings (percentage increase with a year earlier)

the number of overtime hours worked. The important point to note is that wage drift *taking the year as a whole*, if relevantly measured, was slightly positive; the fact that average earnings rose substantially less than the all-workers' index of basic rates has no significance whatever.[4] The extent of the positive wage drift would probably have been perceptibly larger had it not been for the new incomes policy, which denominated the permissible increase in terms of a cash limit which therefore, like threshold awards, is not 'enhanceable'. Consequently, taking the period August to December in isolation, wage drift has again been negative.

Fig. 3.1 illustrates how some indicators have at times given a very misleading impression. This is particularly the case with the wage rate index for manufacturing which, in the early summer just after the engineering settlement, peaked (in terms of its increase on a year earlier) at something over 35% about six months after the true peak.

[4]It has sometimes (wrongly) been suggested that this apparent negative drift was the consequence of high and rising unemployment.

Profit margins: the effect of demand

It might be thought that the fall in the rate of inflation during the second half of 1975 can be attributed, in part at least, to the direct effect of low demand. The 'normal cost' hypothesis, on which all forecasting in these *Reviews* has so far been based, implies that firms set prices by reference to medium-term objectives and hence that the mark-up is invariant to short-run fluctuations in demand, at least within the range normally experienced. Short-run forecasts of cost-determined prices have therefore been made by

Table 3.2 Manufacturing wholesale prices: a summary test of the normal price hypothesis*

	Constant	$\triangle \ln \hat{p}_t$	$\triangle \ln(X/XN)_t$	$\ln(X/XN)_t$	$\bar{R}^2$	d.w.	Time period
(1)	− 0·0023	0·94	− 0·15	...	0·79	1·71	1970.2–1975.4
	(0·6)	(8·9)	(1·8)				
(2)	− 0·0047	0·95	...	− 0·056	0·78	1·47	1970.2–1975.4
	(1·1)	(8·8)		(1·5)			
Nordhaus-Godley							
(1)	0·0014	0·62	0·00024	...	0·34	1·83	1954.3–1970.4
	(1·42)	(5·36)	(0·6)				

*The price variable is the wholesale price index for manufacturing industry, excluding food, drink and tobacco to conform with the Nordhaus–Godley study.

Figures in brackets are t statistics
The specifications are:
(1) $\triangle \ln p_t = \alpha_0 + \alpha_1 \triangle \ln p_t + \alpha_2 \triangle \ln (X/XN)_t$
(2) $\triangle \ln p_t = \alpha'_0 + \alpha'_1 \triangle \ln p_t + \alpha'_3 \ln (X/XN)_t$
where p_t is the wholesale price index
$\hat{p}_t$ is the lagged normal unit cost
X/XN is the ratio of manufacturing production to its trend rate of growth.

reference to lagged prime unit costs incurred at a 'normal' level of capacity utilisation. A brief digression is worthwhile to reconsider the evidence for the normal price hypothesis, since the recent recession has been so severe that any putative reduction in the gross mark-up over normal costs should now be clearly apparent.

The hypothesis can be tested with a minimum of statistical manipulation by examining the movement of the wholesale price index of domestic sales by manufacturing industry (excluding food, drink and tobacco) during the period 1968 to 1975, since the cost and price data are comprehensive and well matched while prices are measured exclusive of indirect taxes and subsidies.

Average earnings were adjusted for the effects of cyclical changes in hours worked, combined with employers' contributions per head and divided by the trend growth of productivity to produce a normal unit labour cost series. Distributed lags were imposed on both the index of normal unit labour costs and the wholesale price index of materials and fuel purchased by manufacturing industry, and the two series were combined using weights derived from input–output tables.[5]

The result of this procedure was a series for lagged prime normal unit costs. To examine whether the gross mark-up on lagged normal costs has responded to the state of demand, two regressions were estimated relating the proportional change of price to the proportional change of lagged normal cost and two specifications of demand; these are summarised in Table 3.2.[6]

The results show that the state of demand *in no degree whatever* reduced the average level of manufacturing prices in relation to normal costs. The regressions indicate that changes in lagged normal costs provide a reasonably good explanation of price changes. The coefficient on cost is not significantly different from its theoretically expected value of unity but the demand term, whether specified in levels or changes, has the *wrong sign*, although it is insignificant. There was no tendency at all for prices to fall relative to costs in the last part of the period when the recession was at its worst.

Retail prices in 1975: the effects of economic policy

From December to June 1975, the all-items index of retail prices increased by over 17%, but in the next six months the increase was less than 7%, making 25% for the year as a whole. This is much higher than the 'pessimistic' forecast made in last year's *Review*. It has been shown above that industrial wholesale prices can be explained, even during the recent period of exceptionally rapid inflation and deep recession, by normal cost changes. Since last year's prediction of *cost* movements during 1975 turned out to be fairly good, the explanation of the unexpectedly high rate of inflation should lie either with non 'cost-determined' prices or tax changes, or both. It will be shown that it was indirect tax changes, rather broadly defined, which were mainly responsible for the discrepancy.

To isolate the effects of tax policy, a new 'policy-excluded' index which excludes indirect taxes, nationalised industry prices and the effects of subsidies on consumers' expenditure has been constructed, and is given in Table 3.3.[7] This index is an important indicator of the underlying rate of inflation, though we do not mean to suggest that changes in net taxes, often the consequences of public expenditure decisions, are not an essential and integral component of inflation.

[5]The procedure adopted has been described in detail in W. D. Nordhaus and W. A. H. Godley, 'Pricing in the trade cycle', *Economic Journal*, 1972. The distributed lags used had a shorter mean lag than those given by Nordhaus and Godley, since their lags were derived on the assumption that all firms practise historic cost pricing.

[6]A comparable regression is reproduced from Nordhaus and Godley, 'Pricing in the trade cycle'.

[7]For details of the method of construction, see the appendix to this chapter.

Table 3.3 Retail prices and prime costs, 1974 to 1976 (Jan. 1974 = 100)

	Unit indirect taxes	Import prices	Normal labour costs	Cost-determined prices	Non-cost-determined prices	'Policy excluded' prices	All-items prices
1974 1	100·4	105·7	101·1	101·6	100·7	100·5	101·4
2	114·7	114·4	107·0	107·8	106·6	106·0	107·5
3	111·8	117·2	116·5	111·1	107·5	110·4	110·2
4	115·8	122·1	123·2	116·6	110·7	116·5	115·1
1975 1	119·8	124·1	133·5	124·3	116·0	124·6	122·0
2	150·4	125·6	140·3	134·1	133·5	130·9	133·6
3	153·4	128·6	147·9	139·8	139·7	136·8	139·4
4	156·4	134·3	153·2	143·9	147·3	140·6	144·2
Forecast:							
1976 1	160·4	137·9	158·6	149·0	153·3	145·8	150·0
2	164·6	140·6	164·2	153·9	164·3	150·7	156·3
3	168·5	143·9	168·7	157·9	164·4	154·6	159·4
4	172·7	147·7	171·7	161·8	169·3	158·3	163·5
	Percentage changes compared with a year earlier						
1974 1	1·1	47·1	15·9	13·0	12·4	15·1	13·0
2	17·5	49·8	15·6	16·8	13·2	17·7	15·9
3	14·0	42·9	21·4	17·6	15·2	19·3	17·0
4	16·7	37·6	26·0	19·8	13·4	21·2	18·2
1975 1	19·3	17·5	31·9	22·4	14·5	24·1	20·3
2	31·1	9·8	31·1	24·4	24·7	23·4	24·3
3	37·3	9·7	27·0	25·9	29·1	23·9	26·5
4	35·1	10·0	24·4	23·4	33·0	20·8	25·3
Forecast:							
1976 1	33·9	11·1	18·8	19·9	32·1	17·0	23·0
2	9·4	11·9	17·0	14·8	23·1	15·1	17·0
3	9·8	11·9	14·1	12·9	17·7	13·0	14·3
4	10·4	10·0	12·0	12·2	14·9	12·6	13·2

Fig. 3.2 illustrates percentage changes compared with a year earlier in the 'policy-excluded' index and the all-items index. By contrasting the movements of the two indices, it clarifies some factors governing the way in which inflation was phased through 1974 and 1975.

Fig. 3.2 shows that the underlying rate of inflation peaked in the first quarter of 1975, fully six months ahead of the all-items index. From the beginning of 1974 until the second quarter of 1975, the all-items index rose less than the 'policy-excluded' index, mainly because the Conservative government held down the prices of nationalised industries. On their return to power, the Labour government's March budget raised indirect tax rates, although the effect on the price index was partly offset by the introduction of food subsidies. Further measures, including additional food subsidies, the reduction of VAT to 8% in July and the postponement until November of substantial nationalised industry price increases, constrained the rise in the all-items index by the year end to nearly 4% below the rise in the 'policy-excluded' index (both compared with a year before) and therefore limited the number of threshold supplements triggered.

This temporary restraint on prices relative to the underlying rate of inflation was one of the factors which led to an increase in the public sector deficit. The subsequent decisions to phase out the subsidies to the nationalised industries and on food, and to increase rates of indirect taxes reversed the effect of government policy on the rate of inflation. So, although by the fourth quarter of 1975 the policy-excluded index was 20·8% higher than a year earlier, the all-items index was still 25·3% higher;[8] by the year end (as measured by the average for December and January) these increases had fallen to respectively 18·7% and 24·1%.

Thus at the beginning of 1975, although high rates of wage increase, particularly threshold payments, were the main underlying cause of inflation, it was the inevitable reversal of earlier government policy, which had only temporarily been able to moderate it, which kept the all-items index accelerating (in terms of comparisons with the previous year) up to the third quarter of 1975.

[8]There is, of course, one other factor – seasonal food prices – which affects this comparison, but this was not very important; the total change in the policy-excluded index over the two-year period as a whole is very similar to that in the all-items index.

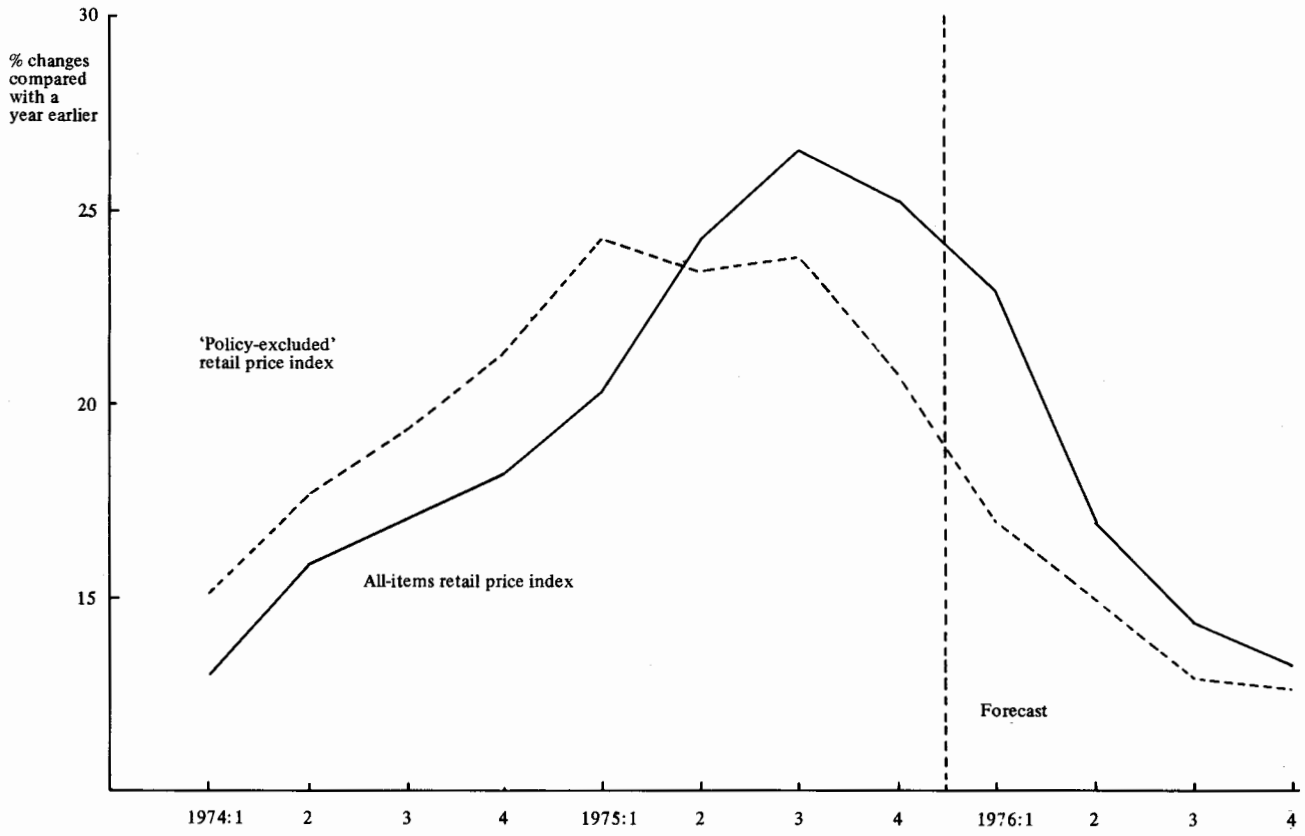

Fig. 3.2. Underlying and manifest rates of inflation, 1974 to 1975.

The short-term outlook for wages and prices

Price changes over the next few months depend largely on the costs which have already been incurred. At the end of 1975, average hourly earnings were about 20% higher than a year earlier and import prices were rising at about 10% per annum; we can therefore feel reasonably confident that the 'policy-excluded' index will rise at an annual rate of about 14% over the next six months. Fresh food prices are expected to peak as usual in the second quarter and, apart from any changes made in the coming budget, nationalised industry prices are expected to continue to rise relative to other prices. The immediate short-term outlook is then that the rate of inflation will continue to slow down during the first half of 1976 but will still be on average about 20% up on a year earlier.

Beyond the middle of the year, the forecasts depend mainly on our assumptions about cost changes. The forecast of wage costs is crucially important and the outcome will depend on the effectiveness of the current policy of a £6 limit on pay awards. During the five months beginning in August 1975, there was no serious breach and it is expected that the policy will be effective in limiting new awards, so that wage rates in August 1976 will be around 17% higher than a year earlier. After taking account of certain allowable exceptions and the difficulty of applying the £6 limit rigidly at local level, we expect average earnings to rise about 14% in the year to August 1976.

The next stage of the pay policy, which will take effect from August 1976, is still completely unclear. It has been assumed very arbitrarily, and purely for the purpose of producing a conditional forecast of prices, that the new limit will be denominated in percentage terms and will add 7·5% per annum to wage rates, with wage drift making the earnings increase something over 10%.

By the end of 1976, the average prices of imported goods and services are assumed, again very arbitrarily, to be about 10% higher than a year earlier. Following the likely upturn in world trade, the world terms of trade between manufactures and raw materials will probably start to deteriorate. But a crucial element of the forecast is the movement of the sterling exchange rate. The forecasts include an assumption that there will be an effective depreciation of about 9% during the year. One of the alternative projections discussed in Chapter 1 focuses on a substantial and effective step depreciation during 1976; in this event, the forecasts for the end of the year would be quite different.

Seasonal food prices are a factor about which there

is some uncertainty, but their effect is only to exaggerate short-term movements in the RPI and, by the end of the year, the effect should not be large.

It has been assumed that, for the second year in succession, nationalised industry prices will increase more rapidly than other prices, in pursuance of the government's policy to bring the nationalised industries into surplus. But the excess of increase of these prices over cost-determined prices should be less than occurred last year. By the end of 1976, the actual all-items index and the 'policy-excluded' index are expected to give similar annual rates of increase.

While changes in import prices or in net indirect taxes could drastically alter the outcome, our central expectation is that the all-items index in the fourth quarter of 1976 will be about 13% higher than a year earlier. If so, the rate of inflation would have been cut by almost half, but this would still be significantly above the government's objective, set in 1975, of an annual rate by the end of the year of under 10%.

APPENDIX

Definitions of terms

Normal labour costs. This is measured as a weighted average of 'normal' average weekly earnings in manufacturing and employers' contributions per head. Average weekly earnings are adjusted for cyclical changes in hours worked by the following procedure. Econometric explanations[9] have been obtained for hours worked and average weekly earnings:

$$H_t = \alpha_o + \alpha_1 HS_t + \alpha_2 (X/XN)_t + e_t \quad (1)$$

$$AWE = \exp [b_o + b_1 t]\ BHR^{b_2}.\ \bar{H}^{b_3}\ e^{u_t}$$
$$\bar{H} = (HS + b_4 (H - HS)) \quad (2)$$

where:

AWE = average weekly earnings of manual workers
H = hours worked per week
HS = standard working hours in the week (used as the basis for calculating overtime)
(X/XN) = the ratio of manufacturing output to its trend rate of growth, used as a proxy for the degree of capacity utilisation
BHR = basic hourly rates of wages of manual workers

Normal hours worked may be defined as hours worked when output is on trend.

$$HN \equiv \hat{\alpha}_o + \hat{\alpha}_1 HS + \hat{\alpha}_2 \quad (3)$$

Similarly, normal earnings may be defined as earnings at normal hours worked

$$AWEN = \exp [\hat{b}_o + \hat{b}_1 t]\ BHR^{\hat{b}_2}.\ H^{\hat{b}_3}\ e^{\hat{v}_t}$$
$$\bar{H} = (HS + \hat{b}_4 (HN - HS)) \quad (4)$$

Equations (3) and (4) together imply that AWE may be adjusted in the following manner:

$$AWEN = AWE \left[\frac{HS + \hat{b}_4 (HN - HS)}{HS + \hat{b}_4 (H - HS)}\right]^{\hat{b}_3}$$

$$\hat{b}_3 = 0{\cdot}945$$
$$\hat{b}_4 = 1{\cdot}5 \quad (5)$$

When hours worked are above normal hours, average earnings are above normal earnings, and *vice versa.*

Normal *unit* labour cost is defined as normal labour cost divided by a trend growth of productivity of 3·25% per annum.

Import prices. The price variable used is the quarterly national income deflator for imported goods and services.

Unit indirect taxes. This is defined on an annual basis as a sum of money divided by an index of consumers' expenditure at constant prices which corresponds to the cost-determined items of the retail price index. The taxes included are, for the past, purchase tax and the estimated SET falling on consumption and currently, VAT and customs and excise duties on alcohol, tobacco and hydrocarbon fuels.

Cost and non-cost-determined prices. The all-items index has been divided into two groups. The non-cost-determined items are: housing, fuel and light, transport fares, post and telephone charges and seasonal food prices. These items together comprise about 23% of the all-items index. The cost-determined items make up the remaining 77% of the index.

The forecast of cost-determined prices

The detailed econometrics of forecasting C–D prices using normal unit labour costs, import prices and unit indirect taxes are explained in last year's *Review* and in 'Prospects for economic management 1973-77' (DAE Mimeo., 1974), Chapter 9. The forecasting equation in current use and its forecasting properties are set out below.

$$CDP = -2{\cdot}4218 + 0{\cdot}1892\ ULCN + 0{\cdot}11\ ULCN_{-1} + 0{\cdot}1365\ ULCN_{-2} + 0{\cdot}2766\ ULCN_{-3} + 0{\cdot}0373\ PM + 0{\cdot}0859\ PM_{-1} + 0{\cdot}0317\ PM_{-2} + 0{\cdot}0285\ PM_{-3} + 0{\cdot}1665\ UIT$$

where:

ULCN = normal unit labour cost
PM = import price index of goods and services
UIT = unit indirect taxes
CDP = cost-determined prices 1970 = 100

[9] M. H. Pesaran, 'A dynamic inter-industry model of price determination – a test of the normal price hypothesis', *Quarterly Journal of Economic Research*, University of Teheran, 1973 (Department of Applied Economics Reprint Series No. 401).

Table 3·4 Percentage residual errors between actual and forecast C–D prices

Sample period (1956-73)		Prediction period			
1973 1	− 0·00%	1974 1	− 0·09%	1975 1	− 0·20%
2	− 0·06%	2	− 0·40%	2	− 0·20%
3	− 0·39%	3	− 1·40%	3	+ 0·01%
4	− 0·16%	4	− 1·30%	4	− 1·30%

The construction of a 'policy-excluded' index

The C–D index excludes nationalised industry prices and the direct effects of policy on rents and rates. In addition the above equation allows one to exclude indirect taxes, since it gives an estimated coefficient by which unit indirect tax changes contribute to changes in the C–D price index. Information on the effects of food subsidies on the food component of the retail price index is given in the September 1975 issue of *Economic Trends*. By adding back the reduction in the food price index due to food subsidies to the C–D index (exclusive of indirect tax changes) one has an index of retail prices which is invariant to the direct effects of net taxes (widely defined).