

1976

# Inflation in Britain - A Monetarist Perspective

David Laidler

Follow this and additional works at: <https://ir.lib.uwo.ca/economicsresrpt>



Part of the [Economics Commons](#)

---

## Citation of this paper:

Laidler, David. "Inflation in Britain - A Monetarist Perspective." Department of Economics Research Reports, 7604. London, ON: Department of Economics, University of Western Ontario (1976).

2022/

RESEARCH REPORT 7604

INFLATION IN BRITAIN - A  
MONETARIST PERSPECTIVE

by

David Laidler

February, 1976

"...the ideas which civil servants and politicians and even agitators apply to current events are not likely to be the newest. But, soon or late, it is ideas, not vested interests, which are dangerous for good or evil."

J. M. Keynes

INFLATION IN BRITAIN - A MONETARIST PERSPECTIVE

by

David Laidler

This paper draws heavily on the work of the University of Manchester-SSRC Inflation Workshop of which the author, with Michael Parkin, was joint director. An earlier version of this paper was given at the University of Western Ontario Money Workshop and the University of Chicago Money Workshop. Extremely valuable criticism was received on these occasions. I am particularly grateful to Michael Parkin, Douglas Purvis, Milton Friedman and Robert Lucas for their comments, but nevertheless exonerate them of all responsibility for the contents of this version.

From 1953 to 1969 the British inflation rate never exceeded 5% and the unemployment rate rose above 3% of the labour force in only one quarter (1:1963). In 1975 the inflation rate reached a peak of over 30% in the second quarter, unemployment reached 5% of the labour force, and at the end of the year, was still rising rapidly. The contention of this paper is that Britain's difficulties in the 1970s arise from ill-designed policies based upon long and widely held misconceptions about how the economy works. The basic error committed has been to neglect to control the money supply while pursuing an unrealistically low unemployment target, primarily by fiscal means.<sup>1</sup> Monetary expansion, largely a by-product of "full employment" fiscal policies, has been responsible for the high British inflation rate of the early 1970s.

Figure 1 portrays the time series behaviour of inflation, unemployment and two measures of the rate of monetary expansion over the period 1953-75.<sup>2</sup> To argue that variations in the rate of monetary expansion are the main cause of variations in the inflation rate by no means implies that there should be any simple correlation between the two series, as I have shown elsewhere. (Laidler, 1975, Ch. 7.) Nevertheless, results presented there for the United States economy do suggest that marked changes in the monetary expansion rate have a discernible impact on the inflation rate with about a two year time lag, and the data charted in Figure 1 are consistent with the claim that a roughly similar relationship governs the behaviour of British data. The pattern is particularly marked from 1968 onwards, but it is possible to discern a similar, though much less clear-cut relationship for earlier years as well.<sup>3</sup> The transmission mechanism between monetary expansion and the inflation rate that underlies this interpretation of the evidence involves the initial impact

of monetary changes falling on real aggregate demand--for which the unemployment rate may be regarded as a proxy--and thence influencing the inflation rate. Inspection of Figure 1 shows that such a "Phillips Curve" relationship is clearly present in the pre-1967 data, vanished between 1967 and 1971, and begins to re-establish itself, although at much higher levels of inflation and unemployment thereafter.

Two interrelated questions are prompted by the data charted in Figure 1. First, the pursuit of high employment with fiscal policy was just as much a characteristic of British policy before 1967 as after: why did a policy that apparently succeeded for nearly two decades fail so badly in the 1970s? Second, why did the "Phillips Curve" disappear between 1967 and 1971? The answers offered to these questions in the next few pages may be summarised as follows. A fixed exchange rate and a low inflation rate in the world economy lay at the root of the apparent success of Keynesian policies in Britain before 1967. These policies led to the devaluation of 1967, which coincided with the beginning of the Vietnam War inflation that ultimately destroyed the Bretton Woods system. The way in which these changes impinged upon Britain accounts for the temporary disappearance of the Phillips Curve after 1967. However this phenomenon was interpreted by those in control of British policy as confirming a belief, widely held in the 1950s, but temporarily unfashionable in the 1960s, that inflation was to be explained in terms of "wage push" factors, many of them noneconomic. As a direct result of this misreading of the evidence, in 1972 fiscal policy accommodated by monetary expansion and a flexible exchange rate was combined with wage and price controls in an attempt simultaneously to reduce unemployment, increase real growth, and reduce the inflation rate. The current condition of the British economy is the direct consequence of this policy, but because this diagnosis

is not widely accepted in Britain, there is now a grave danger that the errors of 1972-73 might be repeated.

## II

A version of the "natural unemployment rate" hypothesis is an important implicit component of this paper's basic thesis. My first task is to show how this hypothesis can be reconciled with the behavior of the economy over the 1953-67 period. The expectations augmented Phillips curve in terms of which this hypothesis is usually formulated may be written

$$p = g(u) + X \qquad g' < 0 \qquad (1)$$

where  $u$  is the deviation of unemployment from its "natural rate",  $p$  is the inflation rate and  $X$  the expected inflation rate. It is common to postulate that expectations of inflation are formed according to a first-order error learning scheme applied to the actual inflation rate, but this hypothesis ignores the fact that data on the past time path of inflation are not usually the only information readily available and relevant to forecasting its future time path; where such extra information is available, economic agents are likely to make use of it. In a fixed exchange rate open economy the time path of the price level in the rest of the world is of vital importance. It does not take much sophistication to know that, if a fixed exchange rate is to be maintained, domestic inflation cannot forever deviate from that ruling in the world economy. If agents expect the exchange rate to be maintained, then they will also expect the domestic inflation rate to converge on that ruling abroad. There must be many specific hypotheses about the formation of inflationary expectations in an open economy compatible with this rather general set

of propositions, but one, admittedly ad hoc, model that I have experimented with elsewhere with considerable success, has expectations about domestic inflation being revised according to a weighted average of the deviations of domestic and world inflation from the previously expected rate of inflation.<sup>4</sup> Thus, with  $\Pi$  as the world rate of inflation, the change in the expected inflation rate is written as

$$X - X_{-1} = d[v(p_{-1} - X_{-1}) + (1 - v)(\Pi_{-1} - X_{-1})] \quad 0 < d, v < 1 \quad (2)$$

Combining this expression with equation (1) and solving for a situation in which  $p = p_{-1}$  and  $u = u_{-1}$  yields

$$p = \frac{g}{1-v} u + \Pi_{-1} \quad (3)$$

Equation (3) appears to show that a "long-run" tradeoff between inflation and unemployment is implicit in this approach to modelling the Phillips curve for an open economy, that a lower unemployment rate may be maintained forever at the cost of a higher but not accelerating inflation rate.<sup>5</sup> However, this result is an illusion. It can hold only for so long as the exchange rate is held constant and is expected to remain constant. The true implication of equation (3) is that, if an open economy maintains a lower than natural unemployment rate, this will result in a higher inflation rate than that ruling in the rest of the world and hence in a secularly worsening balance of payments situation. What appears at first sight to be a steady state will be one for just so long as foreign exchange reserves permit it to be sustained.

In Britain, over the period 1953-67, too low an unemployment target was set, the country experienced an inflation rate higher on average than that ruling in the rest of the world, and that higher inflation rate was associated with a secular deterioration in the balance of payments.<sup>6</sup> Apparently successful

"Keynesian" full employment policies thus culminated in the devaluation of November 1967. Data illustrating this argument are charted in Figure 2. Devaluation was bound to produce a short-term step up in the inflation rate as British prices adjusted to the new exchange rate, and the lower level of real income implicit in it, even if the inflation rate ruling in the rest of the world had remained constant. But, as Figure 2 also shows, in 1967 the world inflation rate was already accelerating. This acceleration is usually explained as being the result of U.S. policies toward financing the Vietnam War.<sup>7</sup> Devaluation and the simultaneous step up in the world inflation rate largely account for the acceleration of British inflation after 1967.

Figure 2 shows that the balance of payments did not respond immediately to the 1967 devaluation. Whether this was due to slowness of quantities of imports and exports to respond to relative price changes or to the fact that British monetary policy continued to be expansionary after devaluation is not of central importance.<sup>8</sup> The problem did lead, in 1968, to the IMF requiring a policy of monetary stringency as a condition of aid, a policy which was adopted and which, it has already been argued, had its effect in 1970-72, at first solely on unemployment and only subsequently on the rate of inflation.



## III

The experience of 1967-71 was widely misinterpreted in Britain, by professional economists and "informed opinion" alike. In the 1960s the Phillips curve, in its original form unaugmented by inflationary expectations, had gained acceptance among both groups as a valid hypothesis about the relationship between wage inflation and unemployment. For example, at least two of the three operational large-scale forecasting models in terms of which so much discussion of policy took place had, until the late 1960s treated price inflation as largely depending upon a wage inflation rate determined by some form of Phillips curve. By 1971 the Phillips curve had been dropped from these models leaving money wage inflation as an exogenous variable in all three of them.<sup>9</sup> This change was proximately caused by the failure of the non-expectations augmented version of the curve to deal with post-1967 data, but also reflected renewed and increasing acceptance of the position, popular in the 1950s, that wage, and hence price, inflation was the result of wage-push factors of mainly domestic origin.<sup>10</sup> The alternative view that the accelerating inflation of 1967-71 was largely imported, with an overlay attributable to the 1967 devaluation found few supporters in 1971.

Crucial to reinforcing the belief that inflation was a matter of domestically originating wage-push was the so-called "wage explosion" of 1969-71. Between 1966 and 1969 the rate of increase of hourly wage rates averaged 5.2% per annum; between 1969 and 1971 it averaged 11.1% per annum, and that at a time when unemployment averaged about 2.7% of the labour force, an unusually high figure by past standards. In retrospect this episode is not difficult to explain. As Table 1a shows, the rate of growth of real wage rates over the 1966-67 to 1970-71 period was similar to rates achieved in the late 1950s and early 1960s.

Table 1a

Average annual percentage of change of prices, hourly wages, weekly earnings, real hourly wages, real weekly earnings, 5 year periods, 1956-71

<u>Period</u>	<u>Prices</u>	<u>Wages</u>	<u>Real Wages</u>
1955-60			
1956-61	2.29	4.38	2.09
1957-62	2.40	4.25	1.95
1958-63	2.21	4.22	2.01
1959-64	2.75	4.68	1.93
1960-65	3.48	5.09	1.61
1961-66	3.57	5.15	1.58
1962-67	3.23	5.04	1.81
1963-68	3.76	5.61	1.85
1964-69	4.16	5.63	1.47
1965-70	4.51	6.38	1.87
1966-71	5.50	7.58	2.08

Table 1b

Year on year changes, 1966-71

<u>Period</u>	<u>Prices</u>	<u>Wages</u>	<u>Real Wages</u>
1966-67	2.5	3.9	1.4
1967-68	4.6	6.6	2.0
1968-69	5.2	5.2	0.0
1969-70	6.2	9.8	3.6
1970-71	9.0	12.3	3.3

The growth of real wage rates was unusually slow in the mid 1960s. Moreover, as Table 1b shows, price inflation began to accelerate immediately after 1967 and money wage inflation did not immediately accelerate so rapidly. Some of this wage lag was due to the effect of wage and price controls which had strong short-term effects on wages in 1966-67, and also according to some studies in 1968; (cf. Parkin and Summer, 1972. Chs. 1, 4, 10). Some of it was perhaps due to lags in the adaptation of expectations to an accelerating and largely imported price inflation. On this interpretation the "wage explosion" simply represents a "catch up" whose underlying causes were strong enough, for a while, to offset the effects of monetary stringency and rising unemployment.<sup>11</sup>

However, this interpretation was very much a minority view at the time. The Proceedings of the Conference on "The Current Inflation" held at the London School of Economics on February 22, 1971 (Johnson and Nobay 1971) give considerable insight into the state of contemporary opinion. As Harry Johnson put it in his Introduction to the proceedings, "the prevailing mood of the conference seemed to be to dismiss a change in external influences in favour of a change in internal influences, as a primal causal factor in the current inflation." The internal influences in question all centered on the idea of exogenous wage push.<sup>12</sup> By the end of 1971, those in a position to influence British policy were united in the view that the inflation rate was not susceptible to any policy relevant extent, to influence by variations in the level of aggregate demand.<sup>13</sup> Thus, when in that winter, and with a little journalistic licence (cf. Brittan (1975), pp.70-2) unemployment reached the magic number of 1 million, the scene was set for the implementation of an economic policy which, though coherent enough in terms of this new prevailing orthodoxy, was, from a "monetarist" viewpoint, inherently contradictory. The strategy, crystallized

in Mr. Barber's 1972 budget, involved using fiscal policy to stimulate aggregate demand, and letting monetary expansion take up the resulting public sector deficit lest high interest rates interfere with real expansion or discomfort owner occupiers.<sup>14</sup> Initially an attempt was made to get voluntary controls on wages and prices accepted, but by November 1972 statutory controls were introduced to deal with inflation.<sup>15</sup> Exchange rate flexibility was adopted, explicitly to ensure that balance of payments problems did not, as they were judged to have done in the past, jeopardize the pursuit of full employment and growth.

The government were showered with praise for their policy. The National Institute did criticize the budget, it is true, but for not being expansionary enough. (cf. Review, May 1972). The Economist, though noting that the public sector borrowing requirement might lead to monetary expansion, and putting little faith in informal and voluntary wage and price controls, nevertheless concluded that "Within the context of a budget that ignored [getting to grips with wage inflation] Mr. Barber produced something very close to the best economic strategy that a now very professional Chancellor could." (March 25, 1972, p. 13). By November, when statutory controls were introduced, The Economist welcomed them with the comment that "It has been obvious for at least the past two years that Britain can avoid South American style inflation only by enforcing a statutory incomes policy" (November 11, 1972). No possibility of conflict between rapid expansion of aggregate demand and a policy of wage and price controls was noted, not just because inflation was regarded as independent of the level of aggregate demand in the economy, but because expansion of real output and consumption were actually regarded as necessary prerequisites for the success of controls.

An increase in output could be relied on to reduce unit labour costs and hence lead to a short-term slackening off of price inflation; in the longer term an expansion of real consumption would enable the living standards of the labour force to be raised, hence fulfilling the very expectations of rising real incomes the frustration of which, in conditions of slow growth, was supposed to be the main cause of inflation. As the National Institute Economic Review for August 1972 put it, "The present situation in the British economy permits a rapid expansion of output for the next two or three years and requires, in the short period at any rate, a sharp increase in consumption. It is the most favourable possible situation for the introduction of [incomes] policies..." (p. 6). In November, it returned to the same theme: "The prospects for success of Phase II [of the newly introduced policy] are themselves dependent on the growth of the economy and on our forecast some additional stimulus is likely to be needed if the Chancellor's target [of 5% real growth] is to be achieved. There certainly seems little need for actually cutting public expenditure plans for 1973." (p. 6).<sup>16</sup>

Mr. Barber's "go for growth" policy of 1972-73 was qualitatively similar to Mr. Maudling's 1963-64 "dash for growth", and based on similar intellectual foundations. The Maudling policy quickly foundered on balance of payments problems. In 1972, the adoption of exchange rate flexibility against the background of the crumbling Bretton Woods system ensured that the consequence of Mr. Barber's policy would instead be a falling exchange rate and accelerating domestic inflation. However, the adoption of exchange rate flexibility was, in particular, singled out for praise, a typical reaction being that of The Economist, which referred to "an extraordinary conversion [of the Government] to the sensible doctrine that the right way to meet any balance of payments deficit will be to set sterling floating" (March 25, 1972, p. 11.)

Given only the existence of a stable aggregate demand for money function in the United Kingdom, and there was abundant evidence of this by 1972, there was no conceivable way in which the Conservative Government's policy could have succeeded in achieving the goals of price stability and rapid growth at a high level of employment.<sup>17</sup> In 1972 the money supply was already expanding rapidly, largely as a result of a favourable balance of payments, but also as a result of the implementation of the "Competition and Credit Control" reforms which had left the banking system with substantial excess reserves. The large public sector borrowing requirement (about 4% of GDP) implicit in the 1972 budget, coupled with a commitment to hold down interest rates, implied a strong, domestically originating, stimulus to monetary expansion. Under a fixed exchange rate this would have been bound to wipe out the existing surplus and run the balance of payments into deficit, exactly as had happened in 1964, but in 1972 the commitment was to let the exchange rate go in such circumstances.

The possible outcome of the Conservative Government's policy lay between two not very distant extremes. On the one hand wage and price controls would be ineffective from the outset, domestically originating monetary expansion would lead first to an intensification of an already incipient expansion of real output and thence to inflation and a falling exchange rate. On the other hand, controls might have some initial success. In this case monetary expansion, not being directly absorbed by rising domestic prices, would spill over into the foreign sector driving the exchange rate even further down than it would fall if controls were ineffective. The result in this case would be an increasingly distorted relative price structure in the economy which eventually would force the abandonment of controls. In either case the inflation rate was bound to accelerate and sterling bound to depreciate. The inevitable duly began to happen in 1972. The monetary expansion rate continued to rise, unemployment started to fall rapidly, inflation to accelerate, slowly at first, the balance of payments went into deficit and the exchange rate began to

fall, reaching a level 10% below its trade weighted average Smithsonian parity with other currencies by the end of 1972 and 18% below by the end of 1973.

#### IV

The conventional and widely accepted interpretation of the 1972-73 boom in Britain is that a correctly conceived policy, reasonably well implemented, foundered as a result of imported inflationary pressures beyond the control of the British authorities. As The Economist explained the matter at the time: "Rising import prices and devaluation robbed Mr. Heath of success in stages 1 and 2 [of his incomes policy] and threaten his growth strategy through the impact of high interest rates and monetary restraint to defend sterling" (Oct. 6, 1973, p. 87 ). The Economist did not consider the possibility that "devaluation" might have been the consequence of the government's "strategy" and nor do any of the other proponents of the foregoing interpretation of the events of 1972-73.

Cost accounting exercises do indeed show that, over this period, rising import prices, "contributed" more to domestic inflation than did changes in money wages, profits, or indirect taxes. Such exercises, interesting though they are for the evidence they generate about the behavior of relative prices, are in Britain often interpreted as saying something about the proximate causes of inflation. A clear statement of the approach to the analysis of inflation that leads to such an interpretation was given by Mr. G. D. N. Worswick, the director of the National Institute, to the House of Commons Public Expenditure sub-committee. "The principal [factors determining the movement of prices] are the level of wages and costs. The secondary one is profit margins. ... Thirdly there is the intervention by government by taxes or subsidies to raise or lower the market price from the factor cost price. Fourthly there is the import cost. In the last two or three years there has been a world wide increase in the rate of inflation. ...But who is causing it and how we interact with each other is complicated. We suffer from the world wide rise in commodity prices. ...The position we started with with the freeing of the exchange rate allowed it to fall

rather in comparison with our competitors, which adds to the import prices. To blame that on the incomes policy introduced in 1972 would be, in a certain sense perverse." (House of Commons, 1974, para. 115, p. 38.) The Treasury's evidence to the same committee (paras. 462-69, pp. 135-37) shows that their approach to the analysis of inflation is the same as that of Mr. Worswick and The Economist, though they did not there apply the analysis specifically to the 1972-3 period.<sup>18</sup>

It is above all the behavior of the unemployment rate during the 1972-73 boom that has led so many to believe that inflation since 1972 could not have its source in domestic monetary and fiscal policies and hence must be "imported". As Figure 1 shows, inflation began to accelerate when the level of unemployment was high by historical standards, and even at the peak of the boom it stood above 2%, a rate higher than the average for the 1953-67 period. This is treated as prima facie evidence that there existed considerable spare capacity in the economy throughout 1972-73.<sup>19</sup> Nevertheless, it is not difficult to reconcile the existence of a "high" unemployment rate with a demand induced explanation of accelerating inflation.

First, and least important, the mechanics of an expectations augmented Phillips curve, when expectations are based on some kind of error learning mechanism, predict that, when unemployment is falling, inflation will accelerate before the natural unemployment rate is reached. There is evidence that such an expectations scheme fits British data rather well.<sup>20</sup> Second, if as many believe, wages and prices respond more rapidly to excess demand than to excess supply, then an expansion of demand that is accompanied by an increase in the dispersion of demand pressure across micro markets, will lead to inflation rising above its expected rate before the natural unemployment rate is reached. There is evidence that the 1972-73 boom was accompanied by just such an increase in dispersion of demand both between industries and regions.<sup>21</sup> Finally, the natural



unemployment rate of the British economy was, by 1972, well above the level that had prevailed in the 1950s and 1960s. As Figure 1 shows, unemployment rose secularly throughout the period 1953-75, but this tendency was particularly marked after about 1966.

This increase in the natural unemployment rate was widely discussed in Britain in the late 1960s and early 1970s, the phenomenon usually being referred to as a shift in the vacancy-unemployment relationship. It seems to have had a number of sources. The low birth rate of the interwar years coupled with the high post-war birth rate meant that, by the late 1960s, older workers reaching retirement age and young, relatively inexperienced workers made up an unusually high proportion of the labour force. Moreover, there is some evidence to suggest that until the late 1960s labour hoarding by firms involved the existence of a certain amount of hidden unemployment. This unemployment became visible partly as a result of a "shake out" of labour during the rather deep 1970-71 recession but also as a result of a considerable improvement in the economic status of the unemployed that was brought about in the mid-1960s. Further, there is evidence to suggest that the latter factor contributed to an increase in search unemployment.<sup>22</sup>

Nevertheless the behavior of unemployment over the 1972-73 period simply confirmed those who held it in their belief that inflation was not the result of domestic policies. The National Institute went so far as to interpret the behavior of the balance of payments, which had gone from a current account surplus of £0.07 billion in 1972 to a deficit of £1.47 billion or over 2% of GDP in 1973 despite an 18% fall in the exchange rate over the two previous years, as providing evidence against the presence of general excess demand in the economy.<sup>23</sup> However, even if the deterioration of the balance of payments and the decline in the exchange rate were not attributed to the conduct of domestic policy by the authorities and their advisors, these factors certainly begin to influence the conduct of policy at some time in 1973. Although

the miners' strike, the three-day week, and the February election marked the final collapse of the Conservative Government's policy in early 1974, that policy had been changing for a few months previously. Although expansionary policies were not blamed for the behaviour of the balance of payments and the exchange rate, contractionary policies were nevertheless implemented in order to deal with these problems.

## V

We have seen that monetary policy became sharply contractionary in 1973, and continued in that vein throughout 1974. This change roughly coincides with a large increase in the ratio of sales of public sector debt to the non-bank public to total public sector borrowing. This ratio averaged 35% over the last three quarters of 1972 and 55% in 1973. Whether the reversal of the monetary aspect of economic policy was deliberate or accidental is hard to say, for it has been and remains the constant claim of all political parties that they would not resort to a tight money policy in order to combat inflation, but this turnaround was shortly followed by an attempt to reverse fiscal policy as well. The borrowing requirement of the public sector for 1973-74 generated by the March 1973 budget was just under £4 1/2 billion or about 7% of GDP. A supplementary budget introduced in December 1973 sought substantially to reduce the borrowing requirement for 1974-5, and at the beginning of March 1974 it was forecast to be £3.4 billion. Although some observers were worried that the reversal was being implemented a bit too rapidly for comfort, particularly as far as the rate of monetary expansion was concerned, it nevertheless appeared that, in the winter of 1973-4, some kind of rough and ready sanity was being restored to the conduct of macroeconomic policy in Britain despite prevailing economic orthodoxy. In fact the very opposite was happening.

Budgets are usually an annual affair in Britain, but the December 1973 budget was the first of a series of five in a sixteen-month period. Even the most orthodox "Keynesian" might find such zeal for fine tuning excessive, and suspect that all was not well with the conduct of policy during these months. However, the actual aggregate outcome of these budgets bore so little resemblance to the government's expressed intentions at the time of their introduction that the only reasonable conclusion can be that 1974 saw the disintegration of the machinery of macroeconomic policymaking in Britain. During the fiscal year 1974-75, the public sector intended to borrow just under 5% of GDP but in fact ended up borrowing about 10%; public sector borrowing for 1975-76 is running at about 12% of GDP and over one quarter of this borrowing again was not forecast. This unintentionally highly expansionary fiscal policy ran against a continued tight monetary policy, and the unemployment statistics for 1974-75 are eloquent testimony as to which policy tool proved the more powerful.

At this stage there can be no definitive account of what went wrong with the budgetary process in 1974-75, but two broad factors seem to have contributed to the debacle, the first political and the second technical. The Labour government, elected in early 1974, replaced statutory wage controls with a voluntary program known first as the "Social Compact" and later as the "Social Contract". Its essence was that the Trade Unions agreed to limit their demand for increased wages to the rate of inflation, while the government in turn agreed to maintain, for a while, the price control program of their predecessors, to freeze certain key prices such as rents, and to subsidize certain basic foodstuffs. Since it was never specified whether the rate of inflation to which wage demands were to be limited was the past rate, the current rate, or the expected rate, it was not even necessary for anyone to resort to subterfuge in order to achieve whatever wage increases market conditions indicated.

General wage inflation coupled with price restraint in the public sector involved nationalized industries in increasing deficits; food subsidies had to be paid; and a rent freeze in an economy where about one-third of households occupy already subsidized publically-owned housing ensured a further open-ended commitment to public expenditure. One cannot lay the social contract at the door of professional economists, either inside or outside of government service.<sup>24</sup> They are more culpable of whatever it was that went wrong with official and unofficial forecasts of inflation and unemployment rates in 1974-75. Public expenditure planning in Britain is carried out in real terms. Government departments are automatically granted funds to cover inflation induced cost increases. There is no current purchasing power cash budget to constrain their expenditure. Such a modus operandi means that errors in forecasting the inflation rate and relative prices play havoc with government finances. At the same time, the whole thrust of British government forecasting is geared to predicting real income and unemployment. Forecasts of the inflation rate are ancilliary to this goal, so that it is not too surprising that such forecasts are relatively unreliable. The major part of the error in forecasting public sector borrowing in 1974-75 seems to have arisen from underestimates of the effects of inflation on public sector costs.<sup>25</sup>

Even though public sector borrowing climbed steadily in 1974-75, and is doing the same in 1975-76, a relatively low rate of monetary expansion was nevertheless maintained until the end of 1975. Although the current account of the balance of payments remained in heavy, though decreasing, deficit throughout the period, the exchange rate nevertheless remained stable between the end of 1973 until mid-1975 when it fell abruptly to an effective devaluation of about 30% below its Smithsonian parity. The explanation of these facts is straightforward. First,

the ratio of sales of public sector debt to the non-bank public to total public sector borrowing remained high throughout 1974 and 1975. Moreover, the oil price increase of 1973 led to large capital inflows to Britain, first as oil producers invested surplus funds in London, and secondly as the increase in the prospective value of North Sea oil attracted development capital. In addition to this the public sector actively raised funds in foreign markets over this period.

The effects of the exchange rate being thus supported by capital inflows and public sector borrowing were to permit real domestic expenditure to remain substantially above domestic output and to ensure that the inflation rate was somewhat lower than it otherwise would have been. Policies to reduce the level of public sector borrowing must form a key part of any strategy that is to restore long-run stability to the British economy, and the period of exchange rate stability during 1974-75 might have played a valuable role in smoothing out the inflation rate a little while such policies were implemented. However, this breathing space was wasted; all that was accomplished by the delay in the decline of the exchange rate was to transfer to late 1975 and early 1976 some inflationary pressure that would otherwise have been felt earlier. In 1974-75, rising unemployment, generated by, but not attributed to, monetary policy inhibited the authorities from any serious attempts to tighten up on the fiscal side, though given the breakdown in the machinery of policy implementation already described, it is far from clear that they could have succeeded in this endeavour if they had tried.

## VI

The British economy at the beginning of 1976 presents a confusing picture. The public sector is borrowing over 12% of GDP, much of this to finance transfers and subsidies. Increasingly this borrowing requirement must be met domestically. At the same time unemployment, though rather low by current international standards, is still high enough to create a major political problem. The government is undertaking all manner of piecemeal job saving and creating schemes to deal with it and these are, of course, adding further to public expenditure. Inflation still seems to be regarded in official circles as mainly a cost-push phenomenon, and recently introduced wage controls are going for a while to seem successful as unemployment, generated by the tight monetary policy set in motion in 1973, has its predictable effect on the inflation rate. The one hopeful aspect of the current situation is that far more attention is now being paid to the behavior of the money supply than in the past and the government has recently and publically committed itself not to permit renewed rapid monetary expansion. The question remains, however, as to how durable that commitment will prove to be.

The key to maintaining a reasonable monetary expansion rate in Britain must be a reduction in public sector borrowing. It is inconceivable that this can continue to run at the rate of 12% of GDP without thereby generating a renewed acceleration in the rate of money creation.<sup>26</sup> The inflation rate is now falling rapidly, and an upturn in real economic activity is forecast for 1976. Both of these factors should help to bring the borrowing requirement down, and there seem to be no insuperable technical problems involved in preventing a large increase in the monetary expansion rate.

The real danger in the present situation is political. There is no sign of any early fall in the unemployment rate, and the government must find itself under increasing pressure to "do something" about this problem. If those in authority are convinced that inflation has been brought down in 1975-76, not by monetary policy, but rather by the use of wage controls, and if they are also persuaded that high unemployment makes such controls less rather than more effective, as is still being argued in some circles, then they will be strongly tempted to implement expansionary fiscal policy, accompanied by wage and price controls, whose consequences for monetary expansion and the inflation rate will be qualitatively similar to those of the 1972-73 episode, even if resort is had to import controls in an attempt to shore up the exchange rate and hence to offset "imported" inflation.<sup>27</sup> In short, whether 1975 has seen the peak in Britain's post-war inflation, or merely an upper turning point in a continuing and explosive series of cycles remains to be seen.

## FOOTNOTES

<sup>1</sup>The view that the quantity of money is unimportant is an article of faith in British Keynesian economics, receiving its most famous statement in the Radcliffe Report (1959). It is still influential. See, for example, the evidence of Mr. Wyn Godley and Lord Kahn to the House of Commons Public Expenditure Committee in 1974. House of Commons (1974) paras. 25-26, p. 18 and paras. 269-70, pp. 90-91 respectively.

There has, however, always existed a minority of economists in Britain who have taken the opposite position on this matter. See, for example, the evidence of Professors Lionel (now Lord) Robbins and Frank Paish to the Radcliffe Committee, Alan Walters (1969) and Harry Johnson (1972). So-called "monetarist" views however have never, as far as one can tell, had any influence on policy. The reader who wishes to assess the extent to which the author of this paper is being wise after the event is referred to David Laidler (1975), Ch. 4 and Ch. 10, written in late 1970 and early 1972 respectively.

<sup>2</sup>Two measures of monetary expansion are presented here because it is often asserted that the two series in question tell markedly different stories. However, such differences are much more apparent on a quarter by quarter basis than they are over a longer time period. The long term qualitative behavior of the series is very much the same. My own preference has always been to pay rather more attention to the broader money supply series, but nothing crucial hinges on this.

Note that with the introduction of the "Competition and Credit Control" reforms in late 1971 the Banking system became much freer to produce near monies bearing interest at competitive rates. Such assets are included in  $M_3$  but excluded from  $M_1$ . Thus the sharp downturn in the rate of expansion of  $M_1$



at the beginning of 1972 reflects, not a turnaround in monetary policy, but a substitution out of demand deposits into various types of time deposits suddenly available on more favorable terms. By the same token, the continued acceleration of  $M_3$  growth through 1972 certainly owes something to this same effect and overstates the expansiveness of monetary policy. At the end of 1973, changes in the reserve requirements against interest bearing liabilities made it much less attractive for the banks to emit these. The rather rapid expansion of  $M_1$  in 1974 at least partly reflects a shift towards non-interest bearing deposits rather than renewed monetary expansion, while the data on  $M_3$  overstate the tightness of policy for similar reasons. Nevertheless, with greater flexibility of interest rates on near monies, one would expect the turning point in the  $M_1$  series to come a little before that in  $M_3$  when monetary policy is changed. For example, as policy tightens up, short term interest rates rise, and a substitution out of demand deposits into interest bearing bank liabilities involves the growth rate of  $M_1$  turning down while that of  $M_3$  is temporarily sustained.

Finally note that for the period over which quarterly data are plotted the monetary expansion rates are annual logarithmic first differences of end quarter data; these changes are centered on the end of the second quarter of the one year period over which they are measured, and, as is well known, such measures tend to shift turning points backwards in time when these are sharp. These considerations are important in assessing just when, in 1973, monetary policy began to tighten up. My own inclination is to argue that the process began gently early in the year, being associated with the authorities beginning to meet a much larger fraction of government borrowing by securities sales to the non-bank public and became severe in the final quarter.

<sup>3</sup>I would not argue for long with anyone who found the evidence of the influence of money on inflation for the pre-1967 period presented in Figure 1 unconvincing. Rather I would refer him to the studies of Michael Artis and Bob Nobay (1969) and Bank of England (1970/1 and 2) which use data from this earlier period and do find evidence consistent with the view that changes in the quantity of money influenced certain variables, including money income and hence the inflation rate with a "long and variable" time lag. However, the results these studies generated were certainly much less clearcut than those produced by similar studies done for the United States economy. Dr. Charles Goodhart of the Bank of England, the author of one of the Bank's studies, expressed a similar view of the results generated by these studies in 1974. Cf. House of Commons (1974), para. 346, pp. 111-2. The extent to which these results reflect the fact that the British economy in the 1950s and 60s was so stable that there was little systematic variation in income and prices to explain, and the extent to which they reflect the fact that the interaction of money and prices in a rather open fixed exchange rate economy where an interest rate stabilization policy is being pursued is more complicated than in a relatively closed economy, is too complex a question to enter into here. For a simple formal analysis of the interaction of money and inflation in a fixed exchange rate open economy model, see Laidler (1975), Ch. 9.

<sup>4</sup>See Rodney Cross and Laidler (1976) and Laidler (forthcoming).

<sup>5</sup>It is worth noting that, for some countries, Cross and Laidler (1976) found that  $v$  was not different from zero, implying that there is no difference in slope between the long and short run inflation unemployment trade-offs in those countries; Britain, however, was not one of them,  $v$  taking a value of about one half for that country.

<sup>6</sup>But the unemployment target was perhaps not set very far above the natural rate. Malcolm Gray, Michael Parkin and Michael Sumner (1975) estimate the natural rate to have been 1.8% over the 1953-67 period, while the actual rate averaged 1.54%. Their estimate is subject to a wide margin of error and certainly looks low, but is not obviously inconsistent with Phillips' (1958) estimate that a 2.5% inflation rate was compatible with price stability in postwar Britain, since the expected inflation rate was surely slightly positive over the relevant period.

<sup>7</sup>British economists do not always attribute the world wide inflation of the late 1960s and 1970s to this cause. Thus Sir Henry Phelps-Brown (1975), while admitting that monetary expansion might have been a permissive factor, puts the acceleration of inflation on a world wide scale down to wage push factors based upon rising real income expectations. Such expectations are transmitted across national boundaries by the motor car and television, these playing the same role as the bicycle, the popular press, and the cinema in the period 1899-1914. He views the Paris students' revolt of 1968 as a crucial event that "sparked a prairie fire of strike action that spread across Europe." Cf. Phelps-Brown (1975). Lord Kahn, on the other hand, believes that the breakdown of wage and price controls in Holland in the early 1960s was the source of accelerating world wide inflation. As he told the House of Commons Expenditure Committee, "In fact it was really from the Netherlands in the second half of the 60s that the infection of wage inflation started and spread to most of the main industrial countries." House of Commons (1974), para. 233, p. 82.

<sup>8</sup>For a detailed analysis of this question, see Peter Jonson and Henryk Kierskowski (1975).

<sup>9</sup>The three models to which I refer here are those of the Treasury, the National Institute of Economic and Social Research, and the London Business School, respectively. All three treated the wage inflation rate as an exogenous variable, forecast on a judgemental basis, in 1970. (See House of Commons (1974) para. 456, p. 134, Johnson and Nobay (1971), Chs. 1 and 2 with respect to these three models.) It is not clear from the above sources that money wages were ever treated as anything but an exogenous variable in the Treasury model in the 1960s, but Phillips curves definitely were incorporated in the other two.

<sup>10</sup>A typical and comprehensive statement of this point of view in the literature of the 1950s is to be found in Lord (then Professor) Kahn's evidence to the Radcliffe Committee. See Memoranda of Evidence, Vol. 3, pp. 141-44.

<sup>11</sup>Note that an article in the National Institute Review for February 1971, reprinted in Johnson and Nobay (1971) under the name of its author Michael Artis, contained evidence to show that inflationary expectations were systematically influencing wage behavior, though not with a unit coefficient; moreover the relevance of the "Nordic" model of imported inflation (of Edgren Faxen and Ohdner (1969)) to the contemporary British situation was considered and recognized. Artis did not, however, develop these ingredients into an analysis of the type offered here.

<sup>12</sup>The following quotations are typical. Professor Jim Ball of the London Business School: "My own favorite candidate is...the frustration hypothesis... wage earners seek to realize some real wage objectives the frustration of which eventually causes the Phillips curve to shift," though he did note that

this hypothesis needed to be squared with the existence of inflation in a number of countries. (Cf. Johnson and Nobay (1971), pp. 47-48.) Mr. Leslie Dicks-Mireau of the Bank of England: "I would not argue that there is an overriding external factor common to the recent inflation; indeed we must probably look to factors closer to home not all of which perhaps are economic," (p. 184). Mr. Ralph Turvey, former Deputy Chairman of the Prices and Incomes Board: "it is a question of relative deprivation and the perception of social justice which is the key to understanding what has happened," (p. 200). Sir Fred Catherwood, Director General of the National Economic Development Office: "we are in a position where a key factor of production, which is labour, can be withdrawn and it pays to pay a premium all the time to keep [labour] in full supply. This to me is the major cause of wage inflation" (p. 189). For other recent British statements of hypotheses linking causes of inflation to the institutional structure of the labour market and other, non-economic, factors, see, for example, Aubrey Jones (1972), Sir John Hicks (1974), Ch. 3, and Peter Wiles (1973). It is one of the oddities of British debates at the turn of the decade that, although the inflationary problems of the time were proclaimed as being something new, requiring equally novel explanations, the explanations that were then actually advanced bore so much resemblance to those which Lord Kahn had put to the Radcliffe Committee more than a decade earlier as explanations of the mild inflation of the 1950s. Moreover, these explanations owe a great deal to the analysis of labour market institutions developed by Hicks in the Theory of Wages (1932) and further developed by him in the 1950s. Cf. Hicks (1955).

<sup>13</sup>The sharp fall in the inflation rate that was associated with the high unemployment rate ruling in 1971, as the "Phillips Curve" began to re-establish itself, did not have any effect on those who held this view. Indeed it was still the view of the Treasury as late as 1974 that no policy relevant trade-off between inflation and unemployment existed. See House of Commons (1974), paras. 465-66, p. 136. In 1974, Miss Patricia Brown of the Treasury explained the fall-off in the inflation rate in 1971-72 in the following terms. "Looking at the rate of growth of the Retail Price Index for the second quarter 1970 to the second quarter 1971, and then the second quarter 1971 to the second quarter 1972, there is a very sharp difference in the rate of growth of food prices...the prices of services provided by nationalized industries...direct to consumers...went up at 17 1/2 per cent over the first twelve-month period and only 7 1/2 per cent in the second twelve-month period. I think that these two factors probably largely account for the slowing down in the Retail Price Index as a whole." House of Commons (1974), para. 69, p. 137. Perhaps the reader will agree that there is more than a little confusion here between describing what happened to the components of the index, on the one hand, and explaining the behavior of its overall value, on the other.

<sup>14</sup>1971 did of course see the advent of new regulations for the Banking System that at least paid lip service to enabling the authorities to exert greater control over monetary aggregates. Whatever the purpose of "Competition and Credit Control", from the very outset the authorities made it clear that steps would always be taken to protect the level of mortgage interest rates under the new regime. Cf. Bank of England Quarterly Bulletin, June 1971, para. 15, p. 192. The advocates of variable interest mortgages

in the United States should learn from British experience, where such debts are typical, that their existence ensures that all mortgaged homeowners, and not just new borrowers, acquire a vested interest in the maintenance of low interest rates thus creating an immensely powerful pro-inflationary political pressure group. I believe that the desire of all parties to placate owner-occupiers (over 50% of all households) played an important role in the political processes that underlay Britain's failure to get to grips with her inflationary problems in the early 1970s.

<sup>15</sup>Note that by 1972 there existed a large body of evidence that suggested that, with the exception of the 1948-9 episode, wage and price controls had had no systematic influence on inflation. See Parkin, Sumner (eds.) 1972, Ch. 1 for a survey of this evidence, and note particularly that by then, the initial finding of Richard Lipsey and Parkin (Ch. 4 of Parkin and Sumner), that controls did reduce the rate of inflation in conditions of high demand had been discredited.

<sup>16</sup>The recipe of high employment and rapid growth as a cure for inflation has, of course, been a long-standing theme in post-war British economics. Mr. Thomas (now Lord) Balogh's evidence to the Radcliffe Committee dealt with it in some detail. See Memoranda..., Vol. 3, pp. 40-41. In fairness to Balogh, however, it should be noted that in 1958 his call was for an expansion of investment to stimulate long-term growth as a prerequisite for a voluntary incomes policy. The 1972 budget concentrated almost entirely upon generating an expansion of consumption while the incomes policy that eventually went with it was statutory. There was more than a little confusion between long-term growth of productive capacity on the one hand, and short-

term expansion up to a level of output that fully utilized existing capacity on the other, underlying economic policy in 1972-3. More than a vestige of the views under discussion here is to be found in a recent paper by Lord Kahn (1976) who argues that low unemployment reduces inflationary pressures by making the Trade Unions more willing to cooperate with wage and price controls.

<sup>17</sup>Quite apart from the early studies of Arthur Brown (1939) and A. M. Khusro (1952), and Paish's evidence to the Radcliffe Committee, ignored by them in their Report (Memoranda, Vol. 3, pp. 182-188, Minutes of Evidence, pp. 693-700), there were in print by early 1972 studies by Noel Kavanagh and Walters (1966), Douglas Fisher (1968), the Bank of England (1970(1)), and Laidler and Parkin (1970), all of which confirmed the existence of a stable demand for money function. There also existed at least three studies that seemed to show that monetary policy variations were associated, albeit weakly, with fluctuations in nominal income with a long and variable time lag (Artis and Nobay (1969), Bank of England (1970 (1 and 2))). None of these studies had any influence on policy apparently because the relationships which they produced were not sufficiently well determined to be useful in short-term forecasting exercises. For the Treasury's view on this see House of Commons (1974), paras. 477-84, pp. 138-39. Recent work by Artis and Mervyn Lewis (forthcoming) suggests that competition and credit control did not render the demand for money function unstable after 1971.

<sup>18</sup>In its November 17, 1973 issue The Economist produced data purporting to show that domestically generated inflation in Britain over the previous year had been lower than in any other OECD country, attributed this to the success of wage and price controls, and headlined the article "The miracle that Ted [Heath] pulled off, and nobody saw him do it." In July 27, 1974 (p. 85), The Economist again argued that "Mr. Heath's success in holding [wages] back with his counter-inflation policy begun in the autumn of 1972



is striking. But as wage increases slowed down, import prices took off." For an example of a similar cost accounting exercise masquerading as an explanation of inflation in a learned journal, see R. G. D. Allen (1975). Hicks (1975) takes a position somewhat similar to Worswick. He argues that Britain's problem in the 1970s is imported inflation, that the rises in commodity prices that took place in world markets in the 1970s were largely independent of the inflationary policies pursued in industrialized countries, hence were an exogenous source of inflation in those countries, and were not to be counteracted with monetary policy. Even so, his own calculations show that the British import price index, which shown an increase from 100 to 1970 to 226 by the end of 1974 would, if recalculated in terms of Deutschmarks have reached a value of 148 over the same period. In short, 78 percentage points of the change in the index may be attributed to the behavior of exchange rates. Cf. Hicks (1975), p. 10.

<sup>19</sup>The National Institute devoted pages 24-33 of its November 1973 Review to the question of whether or not the economy was "overheated", and concluded that there was no reason to suppose that it was. Though not stated in such terms the conclusion was that the natural unemployment rate had not shifted since the 1960s and that the economy was operating well above that natural rate in mid-1973. There is no space here to enter into a critique of the means whereby the National Institute reached this conclusion; suffice it to say that I did not then, nor do now, find the relevant arguments convincing, but certainly recognise that this matter is crucial to the interpretation of the 1972-3 boom that I am advancing here. Note that Gray, Parkin and Summer (1975) estimate that the natural unemployment rate had risen from under 2% in the 1950s and 1960s to over 3% of the labour force by 1973, but also note that this estimate is subject to a wide margin of error.

<sup>20</sup> See equations 1-3 above although that formulation of the curve is more relevant to a fixed exchange rate regime. Note also that John Carlson and Parkin (1975) show that a species of adaptive expectations explains survey data on British inflationary expectations rather well.

<sup>21</sup> See National Institute Economic Review, November 1973, pp. 28-29 for a discussion of the dispersion of aggregate demand in 1973.

<sup>22</sup> On demographic factors, see Foster (1974); on labour hoarding see Taylor (1972), and on the role of the level of unemployment benefits see Dennis Maki and Z. A. Spindler (1975). Sam Brittan (1975) contains a useful summary of the evidence on these matters.

<sup>23</sup> Cf. Review, November 1973, p. 30. The case put there rests on the volume of imports and exports having grown at the same pace during the boom, whereas it is argued that, had there existed domestic excess demand, the volume of imports should have increased more than that of exports. The Institute did not consider the behaviour of the exchange rate relevant to interpretation of this evidence but did not explain why.

<sup>24</sup> However in August 1974 the National Institute, though doubting that the Social Contract would achieve all its aims, was nevertheless arguing that it be given a year to run as a prelude however to a new round of statutory controls (p. 6). In House of Commons (1974), in response to a question about the desirability of statutory wage and price controls, Sir Kenneth Berrill, then Chief Economic Advisor at the Treasury is recorded as having said, with more than a little irony, "I do not think I am able to answer that because the present view of the Government, and, therefore, of the Treasury, is that a voluntary incomes policy will work." House of Commons (1975), para. 496, p. 141.

<sup>25</sup>Cf. House of Commons (1975) for an account of these and other factors affecting public sector borrowing. I base my account of the role of the inflation rate in official forecasting on the Treasury's evidence to the House of Commons Public Expenditure Committee. Cf. House of Commons (1974), paras. 426-33, pp. 127-130 and paras. 455-63, pp. 134-135.

<sup>26</sup>It is fair to record that this seems to be the view of The Economist, which now pays much more attention to the role of monetary factors in generating inflation than it did even as late as 1974. See, e.g., January 24, 1974, pp. 11, 71-72 where it is noted that "Mr. Denis Healey will keep tighter screws on money and demand than any of his postwar predecessors during [1976]. So far so better."

<sup>27</sup>See, for example, Lord Kahn (1976) and National Institute Review, November 1975.

FIGURE 1

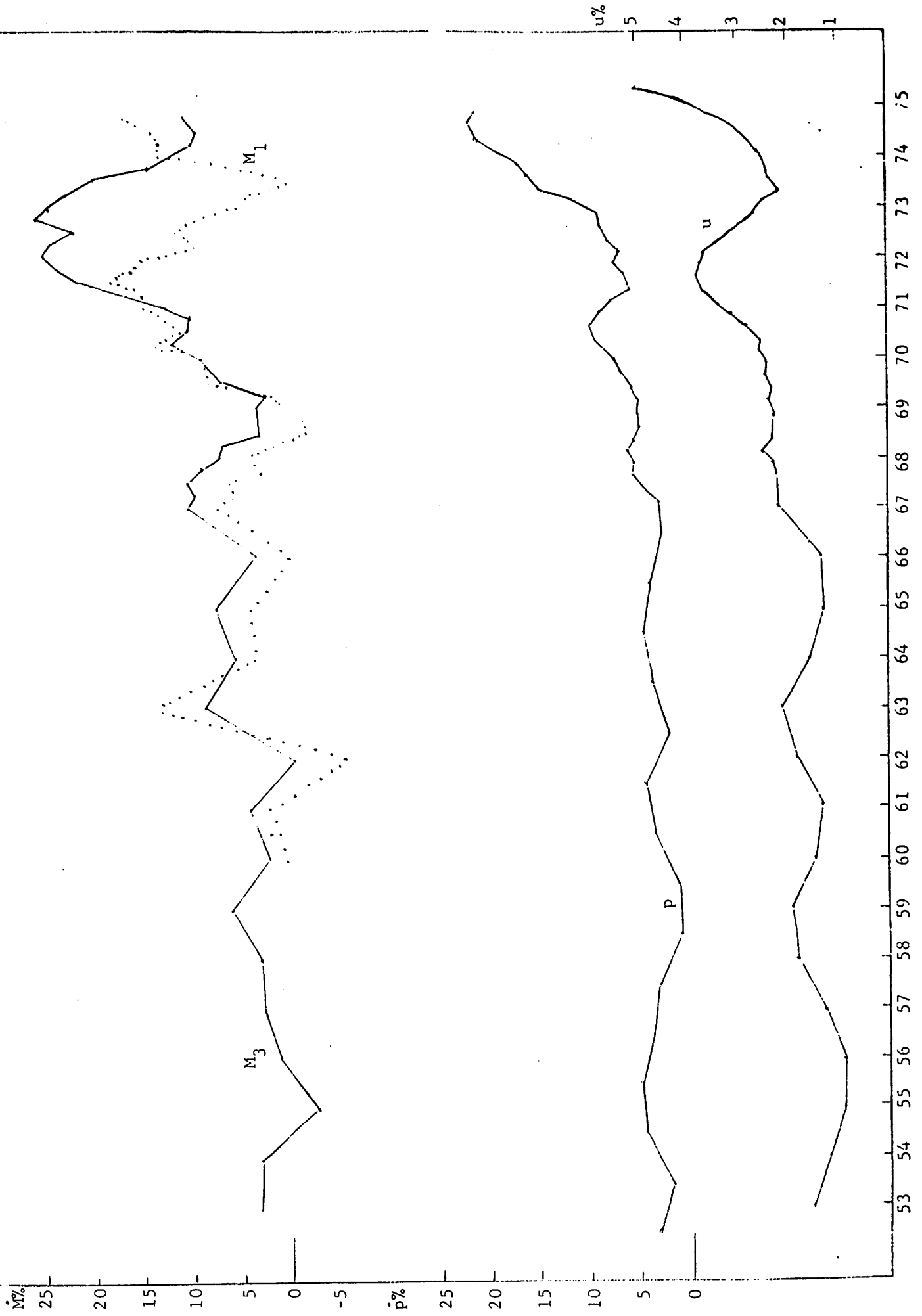
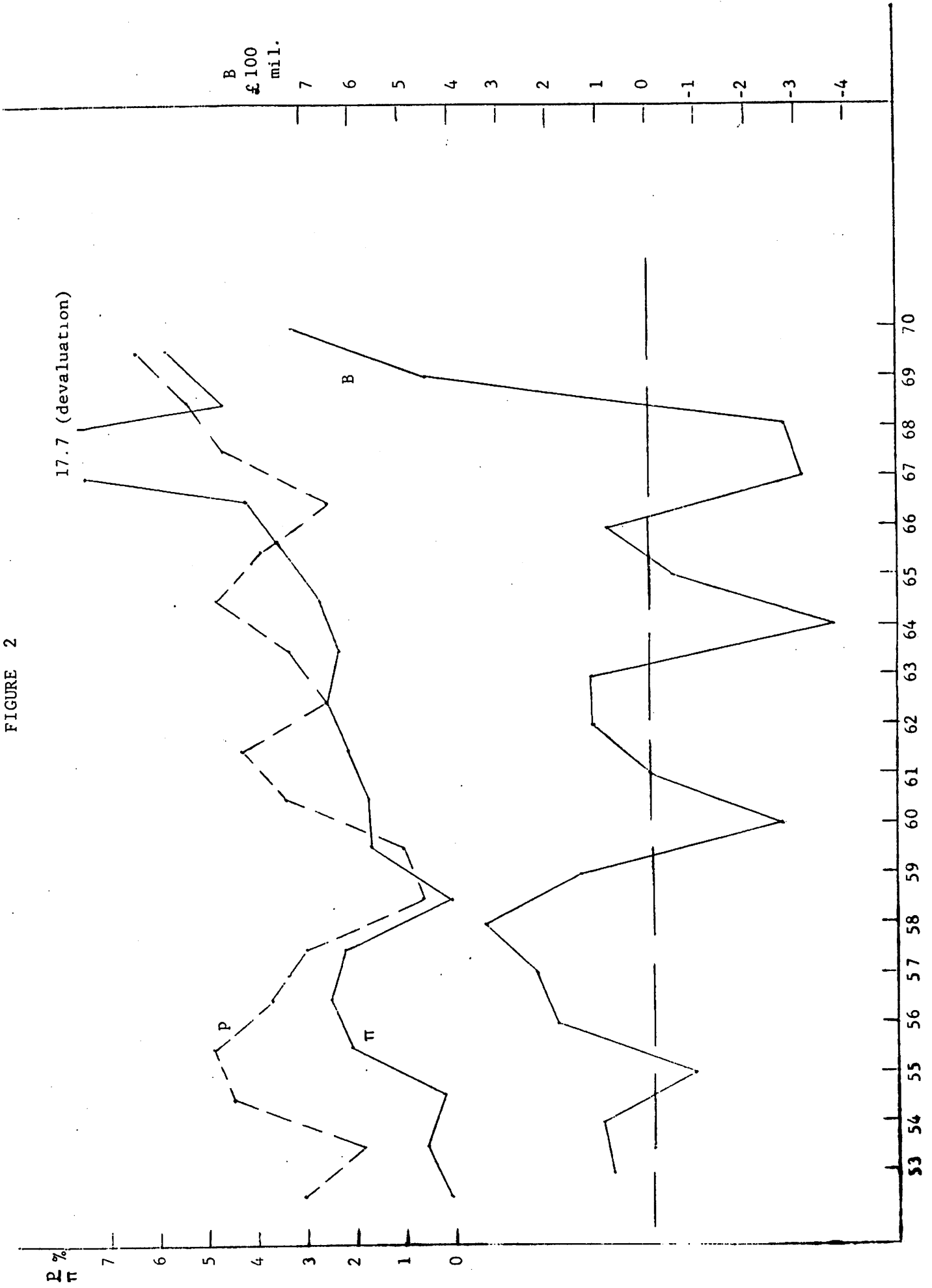


FIGURE 2



## Notes to Figure 1

$M_1$  Annual first differences of the natural logarithm of Narrow Money. 1960-67 observations are annual, thereafter quarterly. Basic data are for end period stocks. Source: International Financial Statistics, various issues.

$M_3$  As  $M_1$  but basic data are for money plus quasi money. Source: 1960-75 International Financial Statistics, various issues; 1953-1960 Bank of England Statistical Abstract.

---

Note that the Bank of England data include government deposits with Commercial Banks and the IFS data exclude them. This minor inconsistency between the series is probably of little importance when estimating percentage rates of change.

P Annual first difference of the natural logarithm of the retail price index. 1953-67, basic data are annual averages centered in mid-year. 1967-75, data are quarterly averages centered in mid-quarter. Source: National Institute Economic Review, various issues.

U Period averages of the percentage of the labor force Unemployed, Great Britain. 1953-67, annual averages. 1968-75, quarterly averages, seasonally adjusted. Source: National Institute Economic Review, various issues.

## Notes to Figure 2

P Annual first differences of the natural logarithm of the retail price index. Basic data are annual averages centered at mid-year.

$\pi$  Annual first differences of natural logarithm of a GNP weighted average of various domestic price indices for 19 countries other than the U.K. converted at the current exchange rate. Source: Cross and Laidler (1976) where the derivation of the series is described in detail.

B Balance of payments on current account, including invisibles. Source: National Institute Economic Review, various issues.

## Notes to Table 1

Rate of Change of Money Wages: logarithmic first difference at annual rates of average hourly wage rates in all industries.

Prices: logarithmic first difference at annual rates or retail price index.

Real Wages: Col. 1 - Col. 2.

Source of Basic data. National Institute Economic Review, various issues.

References

- Allen, R. G. D. (1975). "The Immediate Contributors to Inflation,"  
Economic Journal 85 (September), pp. 607-611.
- Artis, M. J. and Lewis, M. K. (forthcoming), "The Demand for Money in the  
U.K. 1963-73," Manchester School.
- Artis, M. J. and Nobay, A. R. (1969). "Two Aspects of the Monetary Debate,"  
National Institute Economic Review No. 49, August, pp. 33-42.
- Bank of England (1970(1)). "The Importance of Money," Bank of England Quarterly  
Bulletin 10, June, pp. 159-98.
- Bank of England (1970(2)). "Timing Relationships Between Movements of Monetary  
and National Income Variables," Bank of England Quarterly Bulletin 10,  
December, pp. 459-68.
- Brittan, S. (1975). Second Thoughts on Full Employment Policy, London: Centre  
for Policy Studies.
- Brown, A. J. (1939). "Interest, Prices and the Demand for Idle Money," Oxford  
Economic Papers 2, May, pp. 46-69.
- Carlson, J. A. and Parkin, J. M. (1975). "Inflation  
Expectations," Economica NS, 42, February, pp. 123-38.
- Cross, R. J. and Laidler, D. (1976). "Inflation, Excess Demand and Expectations  
in Fixed Exchange Rate Open Economies: Some Preliminary Empirical  
Results," in Parkin J. M. and Zis, G., Inflation in the World Economy  
(Manchester: Manchester University Press).
- Edgren, G., Faxen, K.O. and Odhner, G. E. (1969). "Wages, Growth and the  
Distribution of Income," Swedish Journal of Economics 71, (3), pp. 133-60.
- Fisher, D. (1968). "The Demand for Money - Britain Quarterly Results 1951-67,"  
Manchester School 38, December, pp. 327-51.



- Foster, J. I. (1974). "The Relationship Between Unemployment and Vacancies in Great Britain 1958-72: Some Further Evidence," in Laidler, D. and Purdy, D. (eds.) Inflation and Labour Markets (Manchester: Manchester University Press)
- Gray, M., Parkin J. M. and Sumner M. T. (1975). "Inflation in the United Kingdom; Causes and Transmission Mechanisms." University of Manchester (mimeo.).
- Hicks, J. R. (1932). The Theory of Wages  
London: Macmillan
- Hicks, J. R. (1955). "Economic Foundations of Wages Policy,"  
Economic Journal 65, September, pp. 389-404.
- Hicks, J. R. (1974). The Crisis in Keynesian Economics  
Oxford: Blackwell.
- Hicks, J. R. (1975). "What is Wrong with Monetarism,"  
Lloyds Bank Review, October, pp. 1-13.
- House of Commons (1974). Ninth Report from the Expenditure Committee, Session 1974-75, Public Expenditure, Inflation and the Balance of Payments  
London: H.M.S.O.
- House of Commons (1975). First Report from the Expenditure Committee, Session 1975-76, The Financing of Public Expenditure, Vol. 1, London: H.M.S.O.
- Johnson, H. G. (1972). Inflation and the Monetarist Controversy  
Amsterdam: North Holland Press
- Johnson, H. G. and Nobay A. R. (eds.) (1971). The Current Inflation  
London: Macmillan.

- Jones, A. (1972). The New Inflation. The Politics of Prices and Incomes, London: Penguin Books, ed. Andre Deutsch.
- Jonson, P. D. and Kierzkowski, H. I. (1975). "The Balance of Payments: An Analytic Exercise," Manchester School 43, June, pp. 105-133.
- Kahn, Lord. (1976). "Inflation a Keynesian View," Scottish Journal of Political Economy 23, February, pp. 11-16.
- Kavanagh, N. J. and Walters, A. A. (1966). "The Demand for Money in the United Kingdom 1877-1961: Preliminary Findings," Bulletin of the Oxford Institute of Economics and Statistics 28, May, pp.
- Khusro, A. M. (1952). "An Investigation of Liquidity Preference," Yorkshire Bulletin of Economic and Social Research 4, January, pp. 1-20.
- Laidler, D. (1975). Essays on Money and Inflation. Manchester and Chicago: Manchester University Press, Chicago University Press.
- \_\_\_\_\_ (forthcoming). "Alternative Explanations of and Policies towards Inflation in Six Countries," in Brunner, K. and Meltzer, A. H. (eds.), Proceedings of March 1975 Carnegie-Mellon Rochester Conference on Economic Policy.
- \_\_\_\_\_ and Parkin, J. M. (1970). "The Demand for Money in the United Kingdom 1955-1967 Preliminary Estimates," Manchester School 38, September, pp. 187-208.
- Parkin, J. M. and Sumner, M. (eds.) (1972). Incomes Policy and Inflation, Manchester: Manchester University Press.
- Phelps-Brown, Sir E. H. (1975). "A Non-Monetarist View of the Pay Explosion," Three Banks Review, June, pp. 183-91.

Radcliffe Committee (Committee on the Working of the Monetary System). (1959).

Report, Principal Memoranda of Evidence, Minutes of Evidence.

London: HMSO

Taylor, J. (1972). "Incomes Policy, the Structure of Unemployment and the

Phillips Curve: The United Kingdom Experience 1953-70," in

Parkin, J. M. and Sumner, M. T. (eds.), op. cit., 1972.

Walters, A. A. (1969). Money in Boom and Slump. (Hobart Paper No. 44)

London Institute of Economic Affairs

Wiles, P. J. (1973). "Cost Inflation and the State of Economic Theory,"

Economic Journal 83, June, pp. 377-98.