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No. 5: RESOURCE PRICES AND MACROECONOMIC POLICIES: LESSONS FROM TWO OIL PRICE SHOCKS

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

This paper examines a number of the consequences, at the level of the OECD economy as a whole, of the two large increases in the price of internationally-traded oil - the first in 1973/74, the second in 1979/80.

The paper evaluates the effects of the price increases themselves, and of the ensuing changes in macroeconomic policy.

Resource prices and macro-economic policies: lessons from two oil price shocks*

by G.E.J. Llewellyn(1)

Introduction

1. This paper reviews the experience, over the last decade, of the main effects of a change in oil prices on the economic performance of OECD countries. The concern is both with the direct effects of an oil price rise, and the indirect effects resulting from induced changes in economic policy. There is only brief mention of the reverse effect whereby macro-economic policies and economic performance influence resource prices, particularly of oil. The emphasis is on what has been found to be quantitatively important, rather than on what may be of theoretical interest but of unproven importance.

2. Certainly the two main oil price rises, the first in 1973/74 and the second in 1979/80, were large. So too were the policy responses to them. Indeed these have been amongst the largest macro-economic impulses the OECD has had to analyse over the last fifteen years or more of making its six-monthly sets of internationally-consistent economic projections, published each July and December in the Economic Outlook. These shocks have also been some of the most *difficult* to analyse. Given that the policy response to the second event was very different from that following the first, and that the effects of the second episode, considered in the large, are still being felt, the analysis in this paper is offered with some hesitancy. Specifically, the aim is to illustrate likely orders of magnitude, rather than to imply certainty. As this work progresses, it may prove necessary to revise the numbers, perhaps considerably.

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(1) Head, Economic Prospects Division, OECD, Paris. Many helpful comments have been given by Kjell Andersen, Stephen Potter and Flemming Larsen. Any remaining errors, however, are the responsibility of the author, and the views expressed do not necessarily represent those of the OECD.

* This paper was originally given at the OPEC-UNITAR Seminar "Energy, the International Economy and the North-South Agenda", held at the University of Essex January 17-21 1983.

7. Throughout this period consumers' expenditure too was volatile and difficult to forecast correctly; even after the event, some of the fluctuations in the proportion of income that was spent are hard to account for. While less volatile than investment and stockbuilding, consumption accounts for about 60 per cent of total expenditure in the OECD area as a whole, so that its fluctuations are quantitatively important.

8. In 1975 the OECD economy came out of recession. The OPEC current surplus, though still large, was falling. Inflation was slowing, and the impact of budgetary changes was strongly expansionary. After the sharp fall in the first half of the year, OECD GNP grew 5 per cent at an annual rate in the second half of 1975 and at a 6 1/2 per cent annual rate in the first half of 1976. This was led by a sharp rebuilding of stocks and was sustained by consumption which, as a result of a significant and unexpectedly large fall in the saving ratio, grew in 1976 about 2 percentage points faster than income. Ultimately private fixed investment picked up also. Thereafter OECD spending behaviour became both more stable and more predictable. The rapid growth of early 1976 was not maintained, however, and GNP in Europe and Japan nowhere near reached potential.

Evaluating this first policy response

9. While the OECD economy started to recover in 1975, in virtually no country was the rate of recovery sufficient to reduce unemployment significantly. Taking the OECD area as a whole, unemployment rose from 3 1/4 per cent in 1973 to 5 1/4 per cent in 1978. A second problem was that the large combined current account deficit of the OECD area - in large part the counterpart of OPEC's substantial surplus - quickly became very unevenly distributed across OECD countries, partly as a result of differential rates of domestic demand growth, partly as a result of differential rates of inflation and hence international price competitiveness, and partly because of different rates of supply-side adaptation to changed patterns of demand. The combination, in many countries, of a large oil-induced deficit on the current account of the balance of payments, and the large fall in private sector investment and stockbuilding, had its counterpart

12. The other aspect of inflation performance that caused particular concern was the significant decrease in the share of profit in most countries after 1973 and emerging, although often not rigorously-documented, signs of accelerated substitution of capital for labour. For reasons that have not been completely satisfactorily explained many firms in the period following the 1973/74 oil price rise, when capacity utilization rates were still quite high, did not pass their higher fuel and wage costs fully into prices. Profitability suffered considerably, and cash flow positions deteriorated, these being important factors behind the dramatic decline of investment and stockbuilding in 1974 and 1975. The extent of this phenomenon can be indicated by the so-called "real labour cost gap", a measure which is obtained by taking the changes in the ratio of real total compensation per head of dependent employment to real national income per person employed. The individual figures shown in Table 4, being ratios of index numbers, have no absolute significance: but changes over the period illustrate the extent to which profits suffered after 1973. In retrospect, most observers seem to agree that the failure to ensure that the increase in energy prices was fully passed on to consumers, with the result that profit shares were eroded, was an important mistake in the period following the first large oil price rise.

Table 4

Real labour costs relative to real national income

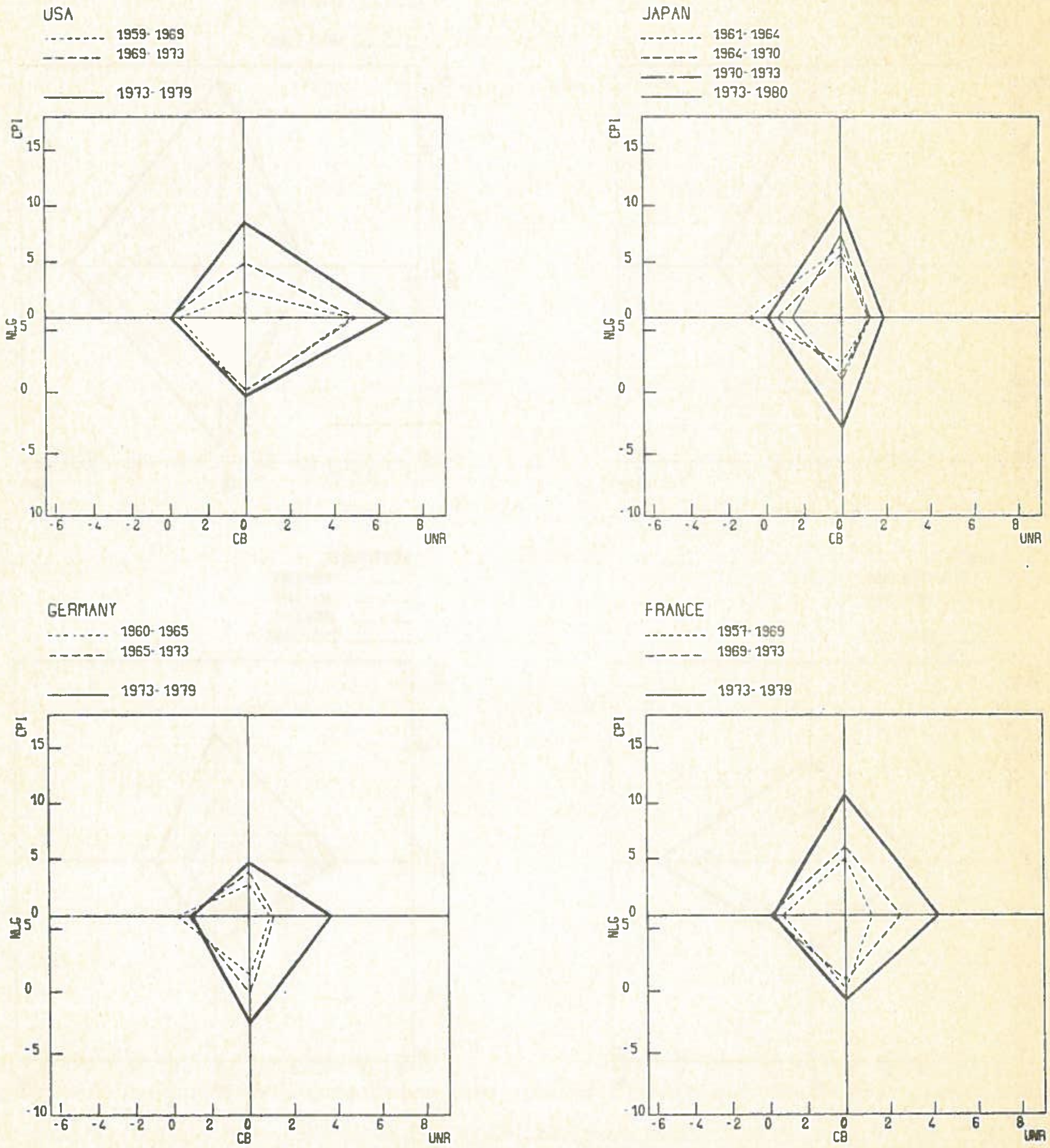
Indices, 1972 = 100

	1973	1974	1975	1976
United States	99.7	100.8	100.1	100.1
Japan	103.9	110.4	113.2	111.7
Germany	101.5	105.2	104.1	101.7
France	101.3	105.0	109.5	109.8
United Kingdom	101.1	107.0	112.0	106.7
Italy	101.5	102.4	107.2	104.9
Canada	98.4	100.5	105.2	106.7
Average, seven countries(b)	100.9	103.9	105.1	104.2

(a) Change in real total compensation per employee divided by real national income per employed person, national accounts basis.
(b) 1981 GNP/GDP weights and exchange rates.

Source: OECD. For further information, and the basic data, see OECD Economic Outlook 32, December 1982, Table 21 page 45.

MACROECONOMIC IMBALANCES



NOTE: The four axes represent:

CPI: percentage increase in consumer prices, annual rate;
NLG: net lending of general government, expressed as a percentage of GNP/GDP;
CB: current external balance expressed as a percentage of GNP/GDP;
UNR: rate of unemployment.

MACROECONOMIC IMBALANCES cont.

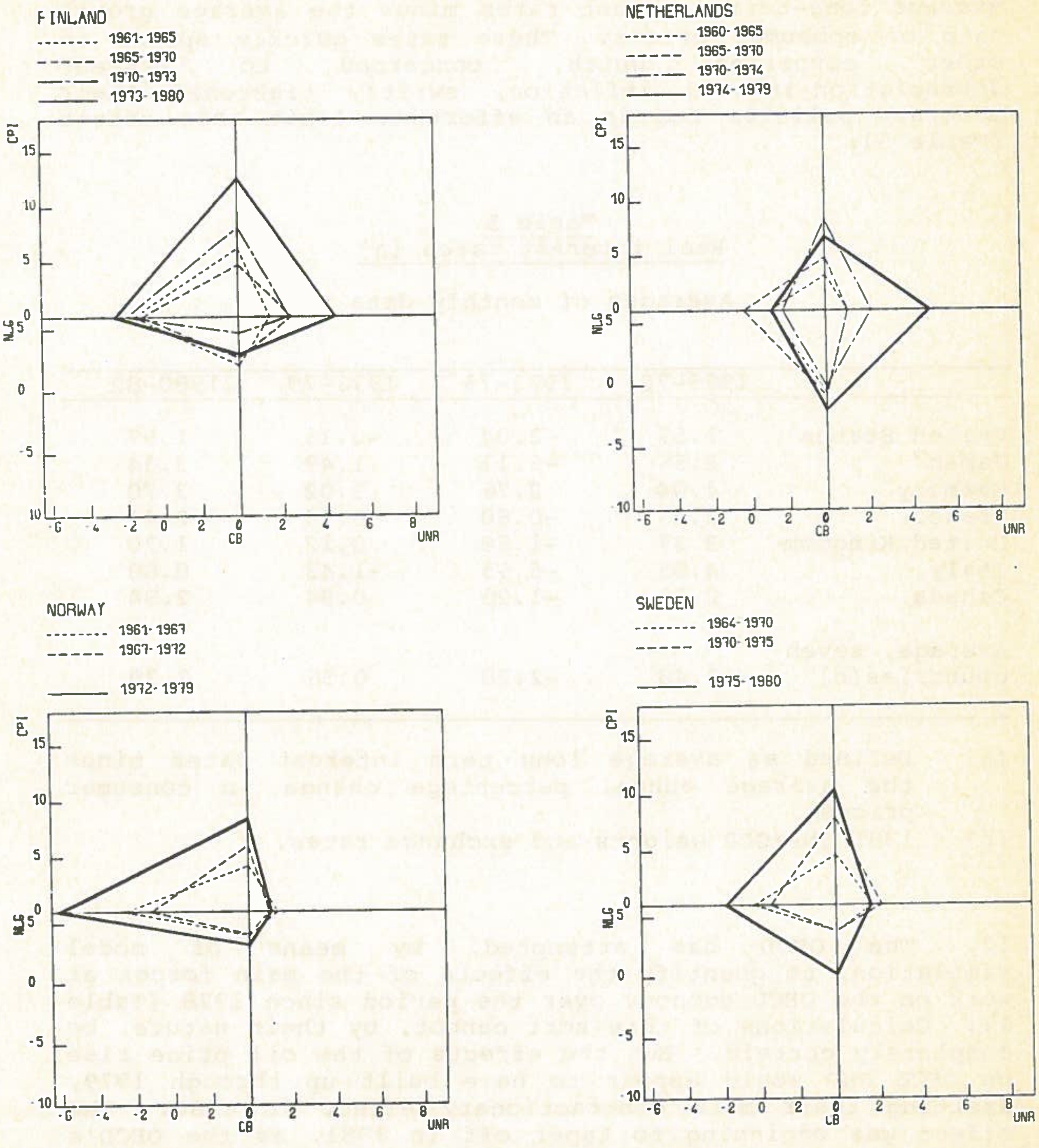


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Table 6

Estimates of main forces acting on the OECD economy

Per cent contribution to change in real GNP

	1978	1979	1980	1981
Oil	0	-1/2	-2 1/4	-1/2
Fiscal policy	1/2	-1/2	-1/2	-1 1/2
Monetary policy	0	0	0	-3/4
Memorandum item:				
Change in GNP	4	3	1 1/4	1 1/2

Source: These figures, which include estimated multiplier effects, are based on simulations carried out using the OECD Secretariat's INTERLINK model. For a description of the model, see for example Llewellyn and Samuelson (1982), and OECD (1982).

18. These estimated deflationary effects of the oil price rise are slightly smaller than earlier seemed likely to have been the case(4), because it is now apparent that OPEC import volumes grew somewhat faster (and hence OPEC countries' current accounts approached balance somewhat sooner) than had earlier been expected. Particular uncertainty attaches to the estimated effects of monetary policy which, at least as represented by real interest rates, has been unusually tight, and for a comparatively long two-year period. The estimated effects have been derived from evidence of earlier episodes, when real interest rates were, on average, considerably lower. Perhaps the most notable feature of the period after the second large oil price rise is that, despite the much tighter fiscal policy stance than after the 1973/74 episode, OECD GNP continued to grow in both 1980 and 1981. In substantial part this was due to the steadier behaviour of inventories and, particularly, private non-residential investment, which has held up better than many forecasters had expected.

Evaluating the second policy response

19. Evidence discussed in the recent December 1982 issue of the Economic Outlook is drawn on in this section, which focusses on the four main problems that policy had to contend with - inflation, current account deficits, public sector deficits and unemployment.

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21. In line with this better inflation picture has been a greater degree of nominal and real wage flexibility, promoting the adjustment of factor shares and, to a lesser extent, profit positions. For example, the growth in hourly earnings in manufacturing for the seven largest economies in 1982 was barely 1/2 percentage point above the average rate of increase over the 1962-72 period and real wages in most countries have not moved significantly out of line in the way that they did after the 1973/74 shock (Table 8).

Table 8

Real labour costs relative to real national income(a)

(indices, 1979 = 100)

	1980	1981	1982
United States	100.3	99.8	101.3
Japan	99.0	99.3	100.3
Germany	101.2	100.9	98.5
France	101.4	103.5	102.2
United Kingdom	102.8	101.6	98.6
Italy	100.0	104.7	105.5
Canada	100.6	100.9	103.7
Average, seven countries(b)	100.4	100.6	101.0

(a) Real total compensation per employee divided by real national income per employed person, national accounts basis.
(b) 1981 GNP/GDP weights and exchange rates.

Source: OECD. For further information, and the basic data, see OECD Economic Outlook 32, December 1982, Table 21 page 45.

22. Nevertheless the sharp reduction in productivity growth over the past few years has meant that progress in reducing unit labour costs, and in improving corporate balance sheet positions, has been more limited. For example, had productivity gains since 1979 been merely half those experienced during the 1960-72 period (2 per cent rather than 4 per cent annually), factor shares both in the total OECD economy and in manufacturing would be approximately back to the levels prevailing in the early 1970s. Furthermore, factor shares are not the whole story: profitability is also important as a determinant of investment. Although comparable cross-country data are somewhat fragmentary, it is clear that in a number of

Table 9

Changes in budget balances(a), 1979 to 1982

- = movement towards deficit

	Actual change	Effect of changes in economic activity	Effect of increased interest payments(b)	Apparent "ex ante" change(c)
United Kingdom	1.1	-4.4	-0.5	6.0
Japan	1.5	-0.7	-1.2	3.4
Canada	-4.4	-5.7	-1.3	2.6
Germany	-1.4	-2.8	-0.7	2.1
France	-2.2	-2.5	-0.9	1.2
Italy	-2.9	-2.3	-1.8	1.2
United States	-4.3	-3.5	-0.6	-0.2
Average, seven countries(d)	-2.3	-3.0	-0.8	1.5

(a) General government financial balances, per cent of GDP/GNP.
(b) On public debt, assuming one-third of interest payments is returned to the government in taxes.
(c) i.e., excluding effects of changes in economic activity and increased interest payments.
(d) 1981 GNP/GDP weights and exchange rates.

Source: OECD.

Conclusions

26. This paper has been concerned largely with oil price changes and induced macro-economic policy changes, without consideration of the numerous, and important, supply side effects. From this standpoint the sequence of the two oil shocks suggests that, as far as activity and inflation are concerned, no way has yet been found for the OECD economy to come through such an event unscathed. The years after 1973 saw a recession which was reasonably short, but deep; although unemployment was higher at the end than at the beginning, inflation was not tamed. The post 1979/80 recession has been shallower, and inflation has been brought down much more. But the recession has been more protracted, and unemployment in the OECD area, already at a post-war high, seems almost certain to rise further in 1983. The shortfall of GNP below its trend on this second occasion has now been greater than on the earlier occasion(5), even given the fact that the growth of potential output after the second oil shock was probably slower than after the first.

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(5) This conclusion is based upon an update of the figures given in OECD Economic Outlook 31 July 1982, pp 16-17; the data are available upon request.