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THE IRISH ECONOMY:
Policy and Performance 1972-1981

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Chapter 1

THE IRISH ECONOMY 1972-81: AN OVERVIEW

In this section it is proposed to provide an analysis and description of the causal factors at work affecting the economy in the period under review, i.e., 1972-1981. Later sections will deal with the actual experience with regard to (i) growth, inflation, employment and external balance, (ii) the performance of the Irish economy relative to selected other economies, (iii) the short-term policy response and the development of policy over the period – covering monetary, fiscal and incomes policies. Finally, given the importance of incomes for an open economy a cross sectional analysis of income developments in other countries is also given.

The period under review has been marked by two major world recessions – that of 1974/75 and that of 1980/81. In mid-1973 it could be said that the world economy was supply constrained. From mid-1972 to mid-1973 output grew at an unprecedented rate. This growth was accompanied by supply shortages of some products and rapid price inflation in primary products. Within the industrial world the rapid growth of output led to rapid price inflation, both of factors of production and of products – the period was a characteristic inflationary boom.

The situation in Ireland mirrored that abroad. The growth in output from mid-1972 to mid-1973 had been extraordinarily rapid at home. By mid-1973, however, domestic output had levelled off and manufacturing industry was experiencing supply constraints. Stocks of finished products and of raw materials were considered by firms to be inadequate and an increasing proportion of firms reported that their resources at that time were inadequate to increase production. The domestic and international supply shortages were accompanied by rapid price inflation – of factors and products, particularly primary products – import prices rose by 13

per cent in 1973, compared with 4.5 per cent in 1972, consumer prices increased by 11.5 per cent in 1973 compared with 8.5 per cent in 1972 and average earnings increased by 19 per cent compared with 15.5 per cent in 1972. A half-year analysis shows the rise in prices increasing from the second half of 1972. The earnings data lagged somewhat – the rise in the rate of increase in earnings occurred in the first half of 1973 when earnings rose at an annual rate of almost 25 per cent.

In response to the very rapid growth in output and prices in 1972/73, policy in some major economies was tending to be restrictive. The purpose of restriction was to allow some time for new investment underway in 1973 to increase the productive capacity of the industrial world and to dampen down primary product prices. However, the latter effect was only likely to be short lived as investment in primary products tended to have a much longer gestation period and there was some evidence that investment, particularly in developing countries, was being directed away from primary products and into manufacturing in response to what appeared to be a long-term secular decline in primary product prices relative to the prices of manufactured products.

It was within this sort of context that the rise in oil prices occurred. The rise in oil prices affected internal and external demand adversely. In the short to medium term the demand for energy is relatively price inelastic. The rise in price for energy led to some fall in demand for oil but an increase in total expenditure on oil and a decline in the demand for other goods and services in the industrial world. If OPEC countries had been able to absorb their increased revenue in imports, then the fall in domestic demand in industrial countries would have been compensated by increased external demand. However, OPEC countries did not have the absorbtive capacity. Simultaneously governments in industrial countries did not wish to counteract fully the short-term demand deflationary effects of the oil price increase and the OPEC surplus – because of the general concern with inflation. Indeed for some of the major industrial countries the short-term price inflationary effect of the oil prices increase led to an intensification of existing restrictive monetary and fiscal policies. The effects of such restrictive policies spread through trade to other countries reinforcing the demand deflationary factors already at work.

In Ireland policy in 1974 and 1975 was expansionary. However, it was not sufficiently expansionary to take account of the impact effect of the oil price rise, or indeed the effect of the fall in demand externally. Simultaneously the particular stage of the cattle cycle led to a very marked increase in sales of cattle off farms and this led to a very large fall in cattle prices and in farmers' incomes. Some part of the fall in cattle prices was

reflected in increased profits of meat factories so that there was an internal transfer underway in the economy. However, the situation in Ireland was by no means unique and prices of cattle fell internationally. For Ireland the effects of the restrictive monetary and fiscal policies internationally and the oil price increase were reinforced by the fall in farmers' income.

Output in manufacturing fell from the first quarter of 1974 to mid-1975. The peak in the first quarter of 1974 was itself somewhat artificial and reflected industry's attempts to restore stock levels to normal, following the supply shortages of the previous half year. A good part of the fall in output, following the first quarter, represented an attempt by firms to adjust stock levels to reflect the new levels of demand.

The recovery phase for output in manufacturing began in the second half of 1975. The bottom of the destocking internally and externally seemed to have occurred about the middle of the year. Internally there was a reduction in the excess levels of firms' stocks (both of finished products and raw materials) and manufactured exports (SITC 5-8) increased by about 3 per cent, annual rate, in volume terms. There was also a recovery in cattle prices at the end of 1974 and by the summer of 1975 they had reached their previous peak. Agricultural incomes increased by 40 per cent in 1975 and this aided the recovery.

While the external recovery was important it is still debatable whether the external stimulus might have been greater if domestic costs had been more favourable. The fall in manufactured exports from Ireland was less than the fall in world trade but the initial recovery was also less. In part, some of the slow recovery may have been due to the evolution of incomes during the 1974/75 period. The 1974 National Pay Agreement incorporated an escalator clause – a clause which increased basic rates of pay by 10 per cent in early 1975. Moreover during 1974 firms' competitive position did not worsen. The 1975 Agreement was essentially an indexation agreement and resulted in an increase of 8 per cent in pay in the first three month phase and a further increase of 5 per cent in the second three month phase. The first of these increases followed three months after the 10 per cent escalator clause increase of the 1974 Agreement and in the absence of an exchange rate change led to a worsening of the competitive position of Irish firms against other countries with the exception of the UK where the experience was similar. The situation looked set to deteriorate further with the expected increase in consumer prices in the third quarter of 1975. The Government, however, with a supplementary budget in June, introduced a range of subsidies designed to reduce the rate of price increase and hence modify the growth in incomes. In the event consumer prices fell marginally and there was no increase in basic rates of pay under the third

phase of that agreement. The rise in the fourth quarter was relatively modest, at 2.8 per cent.

From mid-1975 the economy recovered. The external stimulus became very important with manufactured exports increasing by over 20 per cent in volume terms in 1976 and 1977. This increase reflected not only increased demand abroad but also an increased supply of goods for export from new firms established under the industrial development programme. Fiscal policy remained expansionary, though there are paradoxical results for 1976, discussed in the section on policy. In 1977 and 1978 in particular, fiscal policy was expansionary in a period when other factors were providing a significant stimulus to growth. If in both these years fiscal policy had been neutral then growth might still have been reasonable with a lower payments deficit and a lower borrowing requirement.

Fiscal policy in 1977 and 1978 was geared towards an expansion in demand, a reduction in the rate of increase in consumer prices and a consequent reduction in the rate of increase in basic wage rates. The expansion in demand was expected to lead to a worsening of the payments deficit but this was expected to be short-lived as with smaller increases in basic wage rates firms were expected to become more competitive on the home market and on export markets. The strategy was relatively straightforward but required as an instrument of policy that which was endogenous to the system viz. wage rates. The increase in demand resulted in increased demand for labour and in pay awards much greater than envisaged. However, the payments deficit did not worsen to any marked degree as there was an improvement in the terms of trade in 1978 of 1.8 per cent. The effective improvement in the terms of trade was greater than this as net EC transfers increased from £245 million in 1977 to £366 million in 1978 under the EC Common Agriculture Policy: Guarantee Section. The effect of the increase in demand on the payments deficit was masked by the improvement in the terms of trade and the increase in EC transfers. Agricultural incomes also peaked that year. In 1979 fiscal policy was again expansionary with reference to 1978. The terms of trade, however, deteriorated and the payments deficit worsened from a deficit of £200 million in 1978 to £725 million in 1979. Some part of the worsening deficit reflected the increase in oil prices of that year (oil imports rose from £338 million in 1978 to £520 million in 1979). In fact the terms of trade deterioration (£180 million) is identical to the rise in the value of oil imports that year. However, the greater part of the increase reflected the increase in demand that had occurred in 1978 and 1979. The economy in 1979 was experiencing supply shortages very similar to those felt in 1973. For example, there were shortages of skilled labour even though unemployment was higher

than in 1973 – met by direct recruitment in the UK – and of home produced materials, notably cement. In spite of the postal dispute which seriously affected many businesses, GDP still grew by 3.2 per cent. If the economy could be characterised in any way it was as one suffering from an excess level of demand which was being translated in a higher balance of payments deficit. Simultaneously there was a marked worsening in the net external position of the public authorities with net external liabilities increasing from £140 million at end-1978 to £1090 million at end-1979. The external reserves fell by £277 million and Government (Central Government and semi-State companies) indebtedness abroad increased by £673 million. Financial movements in 1978 and 1979 were complicated by proposed and actual membership of the EMS. Clearly there was some portfolio adjustment going on throughout both years.

Potentially the most significant feature of development in 1979 was the National Understanding which was an attempt to integrate wage developments with employment creation and which proposed and used fiscal measures as instruments to realise a desirable pay outcome. The National Understanding contained an explicit recognition of the importance of pay for full employment on the part of Government, Employers and Trade Unions. In addition to this, specific action by Government, Employers and Unions outside the field of pay was proposed. On the Government side it was proposed to set up a National Hire Agency, a National Enterprise Agency, and to provide a more equitable tax structure. There were also conditional fiscal proposals. Employers undertook to promote greater co-operation with Trade Union representatives to resolve industrial relations problems while the Trade Unions undertook to prepare measures to deal with inter-union disputes. A comparison of the First National Understanding with the previous National Pay Agreements marks it as innovative. There were problems with the Understanding however. First, the basic increase in pay was too high. Second, there were conditionality clauses where benefits to some groups were dependent on the actions not of those in the group but outside it. The prime example of this was the increase of £1 per week on all adult social welfare payments. Third, the question of indirect tax increases and increases in pay was only partly recognised, as was the associated problem of oil price increases. Fourth, the National Understanding assumed away the industrial relations problems of the Public Sector – as indeed does the current Public Service Pay Agreement for this year. Fifth, the Understanding ignored the question of the public finances. In spite of these problems the explicit recognition of the importance of pay for employment was positive. The use of wages as an instrument of policy for full employment will not come either readily or without consent

so that even a minor shift in this direction must be built upon.

Internationally the governments of industrial countries were concerned with evidence of rates of inflation increasing towards the end of 1978. Policy was once again becoming more restrictive at about the same time that oil prices rose again under the impact of the Iranian Crisis. In marked contrast with the earlier recession there was very little attempt worldwide by smaller countries to reflate their economies – the size, both of external deficits and government deficits militated against this. Of particular importance to Ireland was the election in the UK of a government committed to reducing the size of the public sector and the rate of inflation and the inevitable adjustments that this necessitated.

In output terms the period 1979/80 is very like the period 1973/74 in Ireland. Output in manufacturing was relatively stagnant throughout 1979 but grew rapidly in the first quarter of 1980. After this output declined, with the decline being very much as in 1974/75 in extent but much more concentrated – the trough being reached after three quarters. As in the first recession stocks of finished products and raw materials became excessive, though it appears that firms were very much better able to control stocks than in the earlier recession.

Agricultural incomes fell in 1979 in nominal terms and fell again in 1980 and this as in 1974 was a very important negative influence on the domestic economy in those two years. The decline in real agricultural income in 1979-1980 was very much greater than the decline in real income in 1974. Unemployment increased throughout 1980 and again throughout 1981.

Domestically fiscal policy was expansionary, but much less so than in 1974/75. The effect on GNP of expansion in 1979, 1980 and 1981 was about 2 per cent, 0.5 per cent and negligible respectively compared with almost 4 per cent in 1974 and 1.5 per cent in 1975. However, as fiscal policy has been expansionary throughout the whole period 1972-1981 the borrowing requirement was a rising percentage of GNP and debt interest payments abroad were becoming a larger proportion of required borrowing. Thus for any given level of the borrowing requirement there was a smaller domestic impact than in the first recession. The size of the borrowing requirement and the degree of external funding became a matter of increasing concern. Fiscal policy had been primarily concerned with short-term income generation without sufficient regard to long-term capacity creation out of which debt could be serviced. In 1981, for instance, almost one half of total borrowing by the Exchequer was to finance the current budget deficit. Furthermore, it is by no means clear that capital expenditure undertaken in this period provides a return to the Exchequer

either directly or indirectly to finance the interest on the debt. If this situation is not changed then the external debt becomes unstable with interest payments rising rapidly and eventually requiring further foreign borrowing simply to pay foreign interest. This is an unsustainable position in the medium-term. The July 1981 Budget represented an attempt to reduce slightly the borrowing requirement. For policy-makers the situation in the period 1980-1981 was one of balancing the need to maintain domestic demand against the future interest payments and the possibility that foreign lenders might prove unwilling to lend. The root of the dilemma, however, was, and is, the fact that foreign borrowing was being used to finance the current budget deficit and marginal capital expenditure. It is impossible to change this without affecting short-term income generation, whatever about capacity creation.

If there are lessons for stabilisation policy for Ireland to be learned from the two recessions they are that (i) fiscal policy affects primarily the size of the balance of payments in the short run, (ii) fiscal policy is very hard to reverse, i.e., there is an expansionary bias in the system, (iii) incomes policy requires a new institutional framework if it is to be used for stabilisation purposes. There are also some lessons for monetary policy which have not been considered here – in essence, however, the appropriate instrument for monetary control is domestic credit expansion (DCE). The control of DCE requires the integration of fiscal and monetary policies if the private sector is not to be squeezed of credit unless net foreign liabilities are to rise further.

In looking at the period 1972-81 as we have done there is an inevitable concentration on short-term demand management or stabilisation since policy is given effect through annual budgets. This concentration on the short-term obscures the supply side effects of policies and programmes, yet it is the supply side that provides for potential increases in output. We have not discussed policy on the supply side: infrastructural policy; educational policy; health policy; transport policy; industrial policy; agricultural policy, etc. These are areas beyond macro-economic policy and deserve individual detailed studies.

Chapter 2

ECONOMIC REVIEW 1972-1981

Traditionally the short-run performance of economies has been judged by the extent to which internal and external balance have been realised or maintained. The target variables covered by internal balance are: the rate of growth in output; the level of unemployment and the rate of inflation. External balance, on the other hand, covers the balance of payments on current account. In this section it is proposed to cover recent experience with regard to these target variables.

Growth in Output

The conventional measure of output as used in Ireland has been Gross National Product (GNP). There are, however, two measures of GNP in volume terms – that based on expenditure on GNP and that based on output comprising GNP. As these measures give somewhat different results for GNP growth, the analysis of this part covers both expenditure and output measures. A further reason for this dual analysis is that concentration on the expenditure aspects of output obscures the particular sectoral developments that occurred over the period. Table 1 summarises both measures over the period of the analysis.

Table 1 in very broad outline summarises the movement in total output over the period of the two recessions. The expenditure data do not at any point over the period show any decline in GNP.

However, even using annual data there was clearly a decline in the rate of growth in 1975 compared with the previous two years and indeed with the average of the previous 10 years of 4.4 per cent. The output data indicate a decline in 1975. Both expenditures and output data reflect the rapid growth of 1977 and 1978 followed by the second recession where

Table 1: *Annual Percentage Changes in GNP 1972-1981*

	1973	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*	*Average 1972-81*
1. Expenditure data	4.0	4.2	1.5	1.6	6.3	6.2	2.5	1.3	1½	3¼
2. Output data	5.8	2.7	−1.1	1.8	4.8	6.9	3.9	0.7	1½	3
3. Difference (2−1)	1.8	−1.5	−2.6	0.2	−1.5	0.7	1.4	−0.6	—	¼
4. Average $(\frac{1+2}{2})$	4.9	3.4	0.1	1.7	5.6	6.5	3.2	1.0	1½	3
5. GNP per head % change (average)	3.3	1.7	−1.6	0.1	4.2	5.1	1.5	0.0	¼	1½

Source: NIE 1979. Own Estimates.

Table 2: *GNP and GDP (Expenditure data) 1972-1981*

	1972	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*	*Average 1972-81*
GDP % GNP	98.7	99.1	98.9	99.4	100	100.6	101.1	100.9	101.4	102.1	–
GDP % Change	–	4.6	4.2	2.0	2.1	6.9	6.7	2.4	1.9	2.0	3½
GNP % Change	–	4.0	4.2	1.5	1.6	6.3	6.2	2.5	1.3	1.5	3¼

Table 3: *Expenditure on GDP Volume % Change 1973-1981*

	1973	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*	*Average 1972-81*
Private Consumer Expenditure	7.0	1.6	-4.6	2.8	4.1	9.5	3.1	-0.5	-0.4	1¾
Public Net Current Expenditure	6.8	7.5	7.4	2.2	3.4	8.0	6.3	4.0	1.0	5¼
Gross Domestic Fixed Capital Formation	18.0	-7.5	-3.4	9.4	8.3	7.6	12.8	-7.7	6.2	5¼
Exports of Goods and Services	10.9	0.7	7.2	8.0	14.0	12.4	7.2	6.5	1.2	7½
Final Demand	9.6	1.8	-3.0	6.1	9.1	10.0	7.2	-0.8	2.2	4½
Imports of Goods and Services	19.0	-2.3	-11.9	14.4	13.0	15.6	14.9	-4.5	2.5	6¼
GDP at market prices	4.6	4.2	2.0	2.1	6.9	6.7	2.4	1.9	2.0	3½

the GNP growth fell.

A feature of developments over the period has been the change in the divergence between Gross National Product and Gross Domestic Product. The difference between GNP and GDP arises because of interest (including National Debt interest) and dividends paid abroad and received from abroad. Up to 1976 the net position, as measured, was in Ireland's favour but since then the net position has deteriorated. The principle reason for this has been the increase in national debt interest paid abroad which has risen from just under £10 million in 1972 to £315 million in 1981.

Expenditure on Gross Domestic Product

Tables 3 and 4 summarise the position with regard to expenditure components of GDP. Table 3 considers percentage changes by principal expenditure heads whilst Table 4 examines the "*ex-post* contribution" to growth of these components. It is readily apparent from Table 3 that the experience of the expenditure components between the two recessions has differed.

First, the fall in 1980 in private consumption was 0.4 per cent compared with the 4.6 per cent fall in 1975. Second, the fall in investment was confined to one year, 1980, in the second recession whereas in the first recession, investment fell for two years. Third, Government consumption expenditure grew very rapidly in 1974 and 1975 – by 7½ per cent, in each year, whereas in the later recession the growth was cut back to 4 per cent in 1980 and possibly as low as 1 per cent in 1981. Fourth, final demand fell by 3 per cent in 1975 compared with a decline of 0.8 per cent in 1980. However, the recovery in final demand to 6.1 per cent in 1976 has not been matched in 1981 when final demand grew by only 2.2 per cent. Fifth, imports were much more volatile in the earlier recession, falling for two successive years with a decline of 14 per cent between 1973 and 1975 compared with a one year fall of 4.5 per cent in 1980.

Table 4 indicates the relative contribution to growth of the different components and includes stock changes explicitly. From Table 4 it is clear how important the stock cycle was in both 1975 and 1980. In 1974 stock levels increased while demand was weakening. The adjustment to stocks in 1975 was equivalent to 5 per cent of GNP. In the later recession the adjustment was less, but still substantial at nearly 3 per cent of GNP in 1980.

A characteristic of the period under review was the overall importance of investment. In 1972 gross investment was 22.2 per cent of GDP, but was in excess of 30 per cent of GDP on average in the period 1979-1981. While this rate of investment is by no means unique it is high by international standards and would normally be expected to be accompanied by

Table 4: *Contribution to growth of GDP by expenditure categories 1973-1981*

	1973	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*
Private Consumer Expenditure	4.80	1.14	-3.16	1.81	2.62	5.97	1.98	-0.36	-0.2
Public Net Current Expenditure	1.17	1.31	1.34	0.41	0.63	1.47	1.16	0.77	0.2
Gross Domestic Fixed Capital Formation	4.45	-2.09	-0.84	2.19	2.07	3.92	3.51	-2.34	1.8
Change in Stocks	-0.13	+2.18	-5.0	+1.21	+2.22	-1.75	+1.40	-2.83	1.3
Exports	4.41	0.30	2.97	3.46	6.45	6.10	3.69	3.48	0.6
less Imports	-10.06	+1.38	+6.71	-6.99	-7.08	-8.99	-9.30	+3.15	-1.7
GDP	4.64	4.22	2.02	2.09	6.91	6.72	2.44	1.87	2.0
External Sector	-5.65	+1.68	+9.68	-3.53	-0.63	-2.89	-5.61	+6.63	-1.1
External Sector plus Change in Stock	-5.78	+3.86	+4.68	-2.42	+1.59	-4.64	-4.21	+3.80	+0.2

Source: NIE 1979, Tables A6, 3(b).

significant output growth. Unfortunately the available data on investment by sector are poor and not up to date so that we cannot carry out detailed analysis by sector to disentangle pure capacity expansion investment or "social" investment from pure cost cutting investment. There may also be other structural factors at work. We can, however, say something about the finance of investment.

From Table 5 the growth in the relative importance of investment in GDP is clearly seen. However, the growth in investment has not been matched by an equivalent growth in domestic savings but by increasing net foreign indebtedness. Net national savings in 1981 financed only a quarter of total gross investment compared with three-fifths in 1972. If it is assumed that the depreciation allowance for housing in total depreciation is small, then net national savings by 1981 were financing a trivial amount of new non-housing investment.

It is possible to take this a stage further and to examine the components of net national savings over the period. Table 6 summarises the position. The most striking feature of the data is the deterioration in the position of the public authorities which moved from a marginal surplus on current account to a very large deficit by 1981. The personal savings rate increased quite dramatically in 1975, the year in which the government deficit was relatively worst in the earlier recession. However, the personal savings rate declined from 1978 onwards and the government deficit increased.

Gross Domestic Product by Sector

Table 7 summarises the growth experience by sector over the period 1972-1981. There are several aspects of this table that are worth noting.

First, there are very large differences between the growth rates by sector on an annual basis. The greatest differences are between agriculture and the other two sectors of industry and services. The differences were largest in 1979 when value added in agriculture in volume terms declined by 12.5 per cent while output in industry and services increased by 10.6 per cent and 5.3 per cent respectively.

Second, there have been very wide fluctuations in growth rates by sector. In agriculture the range was −12.5 to +10.8, in industry the range was −6.9 to +10.6, whilst in the services sector the range was narrower – from 1.3 to 6.6. The coefficient of variation by sector is as follows: Agriculture 930%, Industry 135%, Services 55%. Agriculture, which had the lowest annual average growth, experienced the widest fluctuations.

Third, at least in value added terms, agriculture is at a different phase of the cycle to industry. The declines in industry occurred in 1975 and 1980.

Table 5: *Investment and its financing 1972-1981 % GDP (current prices)*

	1972	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*
1. Gross Investment	22.2	24.3	25.2	23.3	24.7	25.9	28.3	31.7	29.4	30.1
of which Housing	5.4	5.6	6.8	5.6	5.5	5.5	6.2	7.2	6.7	6.6
2. Changes in stocks	2.9	2.6	3.9	−1.0	0.2	2.0	0.3	2.0	−1.1	0.1
3. Total	25.1	26.9	29.1	22.3	24.9	27.9	28.6	33.7	28.3	30.2
Depreciation	8.2	8.0	8.7	8.0	8.0	8.4	9.1	9.4	9.0	8.8
Net foreign disinvestment	2.2	3.0	9.4	0.2	3.4	2.8	3.1	9.7	8.4	13.5
Net national saving	14.7	15.9	11.1	14.1	13.5	16.7	16.4	14.6	10.9	8.0
Total	25.1	26.9	29.1	22.3	24.9	27.9	28.6	33.7	28.3	30.3
Net National Saving less Housing Investment	9.3	10.3	4.3	8.5	8.0	11.2	10.2	7.4	4.2	1.4

Table 6: *Savings 1972-1981 % GDP*

	1972	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*
Personal Savings	12.7	15.2	15.9	22.4	18.0	18.3	19.2	19.0	16.6	15.3
(% Disposable Income)	16.4	19.1	18.9	25.9	22.1	22.8	23.6	23.2	20.7	19.4
Companies Savings	2.8	3.9	2.8	2.6	3.8	4.9	4.3	4.4	3.5	2.7
Public Authorities	0.6	0.0	−2.3	−7.2	−4.0	−3.6	−5.3	−6.2	−6.2	−7.3
Stock Appreciation	−1.4	−3.2	−5.3	−3.6	−4.3	−2.9	−1.8	−2.7	−3.0	−2.7
Net National Savings	14.7	15.9	11.1	14.1	13.5	16.7	16.4	14.6	10.9	8.0

Table 7: *GDP (1975 prices) by sector of origin, percentage change 1972-1981*

	1975 Weights	*Annual average growth 1972-1981*	*Percentage change on previous year*								
			1973	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*
Agriculture	17.6	0.6	−2.9	7.5	10.8	−10.8	9.7	1.6	−12.5	7½	−2
Industry	34.8	4.3	8.6	3.7	−6.9	5.8	8.1	10.5	10.6	−3	3
Services	50.7	3.7	6.4	2.8	1.3	3.4	4.1	6.6	5.3	2	1½
less Financial Services	−3.1	6.7	4.3	7.7	−0.1	10.4	9.6	15.6	9.9	2	2
GDP at factor cost	100	3.4	5.7	3.7	−0.2	1.5	6.2	6.9	4.4	0.7	1.5

Source: National Income and Expenditure 1979 for 1972-1979. Estimates for later years.

Sub-annual data discussed later will place the decline more precisely, annual data show the decline, on average, occurring in these two years mirroring and indeed identifying the two recessions of 1974/75 and 1979/80.

Fourth, there has been much less variation in GDP at factor cost than in any of the broad sectors identified in the table. The difference in the cyclical pattern of agriculture has tended to compensate partly the movement in industry and services.

The figures in Table 7 are very global figures. The variation in the rate of growth by sector and by sector relative to GDP as a whole suggest a greater degree of instability and hence uncertainty by broad sector than in GDP as a whole. The data do not tell a causal story and do not indicate the feedback mechanism between sectors through output, price and income effects. It is proposed to examine the broad sectors in more detail where the data permit.

Agriculture

Table 8 provides data on selected agricultural statistics in volume terms over the period 1972-1981.

It is clear from the table that gross output is much less variable than net output – the difference being due to variations in inputs into farming. The two principal inputs are feedstuffs and fertilisers. Over the period there have been very large changes in the use of inputs.

Table 9 below indicates the pattern and type of feedingstuff purchased by farmers. It excludes animal feed consumed on the farm where grown and direct intra-farm purchases and sales (primarily oats, barley and potatoes). The changes in purchases of inputs year by year are very large and reflect a complex play of factors – factors that revolve around the relationship between feed prices and expected product prices and cash constraints. In some years this takes the form of purchases of cattle feed to supplement grass and grass products where weather has affected grass growth. The decision in this case represents a choice between selling cattle at current prices and feeding cattle given feed prices and expected future cattle prices. For poultry, pigs and dairy cattle (where feed concentrates can be used to increase milk yields) the decisions are essentially similar. A narrowing of the product/feed price ratio will tend to reduce feed inputs.

Table 10 indicates the pattern and quantities of fertiliser inputs into agriculture. The very large variation of recent years in fertiliser inputs are clear. Table 10 indicates the particular products and highlights where changes have been greatest. Fertiliser inputs have effects on output not only in the year in which they are applied but also in subsequent years. It is not

Table 8: *Volume of agricultural output, 1972-1981*

	1973	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*	*Average 1972-81*
Gross output[1] % change	0.7	1.7	5.9	−4.3	9.4	6.5	−0.8	0.1	−1½	1¾
Livestock % change	−0.2	4.2	6.0	−11.0	6.0	4.6	−1.6	0.1	−3	½
Livestock products % change	8.5	−2.0	5.6	7.5	7.6	11.7	2.0	−1.0	−½	4¼
Inputs of farm materials	10.8	−9.8	−6.9	15.0	8.3	18.5	18.8	−12.6	4¼	4½
Feedstuffs % change	5.5	−13.0	2.2	13.2	7.7	15.6	24.4	−13.7	5	4½
Fertilisers % change	25.2	−4.0	−20.5	20.7	8.5	24.2	11.6	−11.2	3¼	5¼
Net output[1] % change	−1.9	6.0	10.7	−10.2	9.9	1.9	−9.5	7.6	−3¼	1
Gross output[1] 1975 = 100	92.8	94.4	100	95.7	104.7	111.5	110.6	110.7	109	–
Inputs of materials 1975 = 100	119.1	107.4	100	115.0	124.5	147.5	175.2	153.2	160	–
Net output[1] 1975 = 100	85.2	90.3	100	89.8	98.7	100.6	91.0	97.9	95	–

[1]Including stock changes.

Table 9: *Production of compound feeding stuffs (000 tonnes) 1972-81*

	Cattle feed	*Pig feed*	*Poultry feed*	*Miscellaneous*	*Total*	*% change*
1972	237.9	605.3	261.1	89.2	1180.9	4.0
1973	291.2	588.0	269.1	90.9	1225.1	3.7
1974	285.5	487.2	251.9	80.0	1104.1	-9.8
1975	333.8	392.8	237.0	72.3	1036.0	-6.2
1976	430.9	479.6	253.8	88.9	1253.2	21.0
1977	564.6	474.9	267.4	114.4	1418.4	13.2
1978	821.6	486.8	249.0	108.7	1666.1	17.5
1979	1126.6	538.3	270.5	127.7	2063.3	23.8
1980	906.5	505.9	268.0	110.6	1791.0	-13.2
1981	1013.2	490.0	262.8	119.9	1885.9	5.3

Table 10: *Fertiliser consumption (000 tonnes)*

	N	*P*	*K*
1971/72	96.7	76.6	117.7
1972/73	129.5	90.3	153.6
1973/74	129.7	84.2	150.4
1974/75	133.0	50.5	93.1
1975/76	152.7	58.7	120.2
1976/77	166.7	65.2	141.6
1977/78	230.5	76.1	170.4
1978/79	263.6	80.3	183.8
1979/80	247.5	68.0	157.0
1980/81	275.1	63.1	150.3

possible to determine whether and to what extent the growth in fertiliser usage has been due to an increased usage by farmers who traditionally used fertiliser or to an increase in the number of farmers using fertiliser. Fertiliser usage is a response to fertiliser price, expected fertiliser efficiency and expected future product prices – where the period over which expectations apply is much longer than in the case of feed and thus more uncertain. In the short-term, usage can vary and tends to if income levels are poor, without necessarily affecting output in the short run. The degree of fertiliser efficiency may not be as well known to farmers as is

feed efficiency – it is possible to over-apply fertiliser with zero or negative output effects whereas it is in general not usual to overfeed animals.

Given technical efficiency of feed and fertiliser, the relative prices of final products and inputs are important. Table 11 summarises the position with regard to output and input prices. Input prices include other inputs besides feed and fertiliser – these latter being material inputs. The differences between output prices and input prices, even at this level of aggregation, are very large and clearly must have been responsible for fluctuations in input usage and through this in output.

In looking at the growth in gross output in relation to the growth in inputs it would be a mistake to conclude that inputs were inefficiently used. Over the past 3-4 years weather conditions have been extraordinarily bad for farming, compared with previous years. Increased input usage may have been simply an attempt to counteract the effect of adverse weather conditions on grass growth and milk output. In 1980 for instance in spite of a reduction in the volume of farm materials the worsening of the input price/output price ratio led to a reduction in net income.

In National Accounts terms we are concerned with Income Arising in Agriculture. Table 12 summarises the data. It should be noted that the concept of income arising in agriculture includes as income various subsidies and excludes rates on land, which are treated as a cost as are interest

Table 11: *Output and input prices % changes 1972-1981*

	1973	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*
Total Output Prices	30.7	1.4	28.0	25.7	22.4	13.1	5.9	-2.7	18.9
Livestock	29.6	-7.3	28.2	32.5	20.5	18.3	4.2	-3.3	22.5
Milk	24.7	19.4	28.3	11.7	32.0	8.5	4.4	-0.7	13.9
Crops	38.9	12.7	32.2	25.0	13.0	-3.0	20.8	-5.5	12½
Input Prices	–	–	–	15.7	21.6	4.2	12.6	14.5	14.8
Feed	40.4	30.9	4.8	20.1	29.6	2.0	11.7	4.0	9.8
Fertiliser	8.8	36.4	57.2	2.8	9.3	6.0	9.6	19.3	11.1

Source: Agricultural Output and Input Price Indices (CSO). Discontinuity in Series in 1975 – input prices and milk prices derived from actual expenditures and receipts and volumes.

Table 12: *Income arising in agriculture*

	1972	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*
Income arising in agriculture £m	314.3	395.7	367.0	518.8	581.0	794.1	888.9	793.1	740	890
Family farm income £m	287.2	366.5	333.8	479.9	538.7	747.1	838.9	739.1	678	825
Wages and salaries £m	27.1	29.2	33.2	38.9	42.3	47.0	50.0	54.0	62	65
Income arising in agriculture % change	37.7	25.9	-7.3	41.4	12.0	36.7	11.9	-10.0	-6.7	20
Consumer prices	8.7	11.3	17.0	20.7	18.0	13.6	7.6	13.2	18.2	20

payments. Furthermore as it is a measure of value added no allowance has been made for interest payments by farms in their capacity as enterprises. Conventionally, as income arising in agriculture is primarily income from self employment, the figures represent both value added and household income from farming. If income arising to family farms is treated solely as an income concept it is clear that there have been very large changes in farm incomes in nominal terms. Nominal incomes fell in 1974 and again in 1979 and 1980. In 1981 a recovery in nominal incomes to the 1978 level occurred. Real incomes have similarly been extremely variable, declining in 1974, 1979 and 1980 and remaining at the 1980 level in 1981. However, by 1981 real agricultural income was 37½ per cent below the 1978 peak. Interestingly enough the 1981 figure in real terms is identical to that of 1971, prior to entry to the EEC. (The 1972 figure would be inappropriate given that market access to the then EC for cattle was available – pushing up cattle prices and farmers' incomes. Also milk prices domestically were raised prior to entry to benefit from higher support prices.) These comparisons exclude changes in numbers engaged in agriculture and make no allowance for differences between whole-time and part-time farmers.

There have, however, been very large increases in the indebtedness of the farming community to financial institutions and with interest rates generally in the range 12-18 per cent over the period it is clear that net income from farming was less than that given in Table 8. Unfortunately there is some ambiguity in the available data for indebtedness. If the data for farmers' indebtedness to financial institutions are compared with data on loans for productive purposes on farms in the Farm Management Survey 1980 of An Foras Talúntais, it appears that indebtedness as measured by the former is much greater than that measured by the latter. The difference may be due to farmers' borrowings from financial institutions to finance activities outside farming. From the point of view of the individual farm as an enterprise, profitability and net income are derived from considering interest on borrowing for productive purposes on farms. From the point of view of farmers' disposable income the wider measure of indebtedness is appropriate, though interest receipts and other income, however derived, are important additions to disposable income. Unfortunately we have no data on the net financial indebtedness of farmers.

Whatever about the statistical difficulties of the net indebtedness position there can be little doubt that for some farmers the servicing of present levels of borrowing is difficult, if not impossible, even where borrowings were applied for productive purposes on farms. If investment in any period were profitable, then an unanticipated worsening of the output price/input price ratio could cause severe financial difficulties – the more so if farms

were achieving optimum economies of scale in the previous period. Similarly if borrowings were used to finance land purchase, land prices relative to the anticipated output price/input price ratio are relevant. It would be interesting to see loan proposals from farmers over time in financial institutions' records. Finally, where loans were applied to areas outside the farm proper, as with housebuilding, or consumer durable purchases, there could be debt service difficulties because incomes from farming are depressed.

In addition to the data given in the previous tables, there is some information on Gross Capital Formation in agriculture. The available data indicate that gross investment in agriculture in recent years (1975-1979) remained at very high levels – averaging about ⅓ of income arising. It is thus surprising that net output in volume terms has not increased by rather more – the average growth 1972-1981 amounts to only 0.6 per cent. Indeed, the slow growth in net output is doubly surprising in the face of the very large increase in the application of fertiliser and the increase in feeding stuff over that whole period. It suggests that returns from investment, fertilisers and feed might be very low and this, coupled with a deterioration in the output price/input price ratio would explain the poor income growth and the financial difficulties now being faced by the farming community.

In this section an attempt has been made to look at the growth and income performance of agriculture over the period 1972-1981. The principal characteristic that emerges is the degree of fluctuation in (i) gross output, inputs and hence net output, (ii) output prices, input prices and the output price/input price ratio and (iii) income arising in agriculture. The cause of fluctuation in prices – the impact of EEC price controls, variations in exchange rates and variation in supply to the market, have not been considered.

Industry

The average annual rate of growth in volume terms in value added in industry was 4.3 per cent between 1972 and 1981. The period encompasses the two recessions – of 1974/75 and 1979/80 when output in industry fell by 6.9 per cent and 3 per cent respectively. Within the industrial sector as a whole there was a quite different experience at different sub-sectoral levels with regard to the timing and extent of both recession and recoveries. Individual sub-sectors also reflected long-term trends – changes in demand, changes in relative cost and prices and changes in the basic supply position as new foreign firms started production.

The actual output experience in manufacturing by sub-sector in the period 1972-1981 is summarised in Table 13. The data from 1976 are based

Table 13: *Volume of production by major industrial group 1972-81 % change*

	1973	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*	*1981/73*
Food	6.2	1.9	1.9	3.6	9.8	6.8	0.9	-2.6	-2.6	26.3
Drink and Tobacco	10.6	4.2	1.0	0.0	-0.2	8.3	4.6	0.8	3.3	28.3
Textiles	7.5	-3.4	-11.5	16.0	8.2	1.1	4.3	-10.0	-0.8	-1.7
Clothing and Footwear	2.3	-1.8	-10.0	-1.0	0.8	-2.0	-2.4	-4.3	-2.4	-21.8
Wood and Furniture	-3.2	-3.6	-5.7	13.4	-4.0	-0.7	-4.6	-9.6	-1.4	-12.9
Paper and Printing	-4.6	-2.6	-10.0	3.0	8.1	5.4	1.7	3.5	-4.1	3.3
Chemicals	34.7	4.0	-3.8	25.0	15.6	22.7	17.0	-8.0	11.4	125.2
Structural Clay	23.2	1.9	-7.4	8.0	4.4	9.7	11.1	-9.1	-3.1	17.1
Metals and Engineering	13.0	5.9	-7.4	17.0	13.2	6.4	5.0	5.0	10.1	61.6
Miscellaneous	28.9	15.0	-13.0	21.0	15.5	4.4	20.1	1.7	-7.2	46.2
Total manufacturing	11.8	2.6	-4.3	10.2	9.1	7.8	5.8	-2.0	2.9	35.7

on the NACE system of classification with 1973 = 100. The data to 1976 are based on the previous system of classification and sectors are not directly comparable.

Over the period from 1973 there has been very rapid structural change in manufacturing. Output in the Chemicals sector more than doubled, while output in the Clothing (including leather and footwear) sectors declined by a fifth. Output in the Wood and Furniture sector declined by an eighth. Both these latter sectors have been more or less in continuous decline over the period, though there was a very large increase in output in wood and furniture in 1976. At a more detailed sectoral level the differences between sectors are very marked, as Table 14 illustrates. The data at this disaggregated level reveal the diversity of experience in industry over a reasonably long period. The particular development by sector can be explained partly by reference to investment by sector.

Tables 15 and 16 reproduces data from the IDA annual reports 1973-1980. The data refer only to new investment projects where approval for grants was made by the IDA and covers both new foreign and new domestic

Table 14: *Volume of production by selected minor industrial sector % change 1973-1981*

	% Change	*% Total output*
Mineral oil refining	-39.0	0.3
Chemicals	131.9	10.5
Production and preliminary processing of metals	-33.9	1.3
Office and data processing equipment	1423.6	2.3
Motor vehicles	-31.4	2.0
Dairy products	43.5	5.4
Processing preserves of fruit and vegetables	-14.7	0.8
Sugar and sugar confectionery	-2.0	3.7
Wool	-17.9	1.7
Knitting	-32.4	1.6
Leather	-34.1	0.6
Footwear	-31.3	1.0
Clothes	-16.3	3.3
Paper and paper products	-12.3	2.6
"Other manufacturing"	+196.8	0.5
Total		37.0

Table 15: *New foreign investment: Sectoral analysis of projects approved by the IDA (£ 000)*

Category	*1973/74*		*1974* *		*1975*		*1976*		*1977*		*1978*		*1979*		*1980*	
	Fixed Asset Investment	*IDA Grant Commitment*	*Fixed Asset Investment*	*IDA Grant Commitment*	*Fixed Asset Investment*	*IDA Grant Commitment*	*Fixed Asset Investment*	*IDA Grant Commitment*	*Fixed Asset Investment*	*IDA Grant Commitment*	*Fixed Asset Investment*	*IDA Grant Commitment*	*Fixed Asset Investment*	*IDA Grant Commitment*	*Fixed Asset Investment*	*IDA Grant Commitment*
Food, Drink and Tobacco					6,016	1,739	375	50	6,592	1,636	20,166	5,974	2,207	721	2,858	1,147
Clothing, Footwear			51	24	313	125	1,058	1,105	75,317	21,913	17,619	4,750	1,945	1,364	8,341	3,024
Textiles			92,305	18,110	16,375	5,993					7,613	3,298	2,789	1,164	13,218	5,404
Wood and Furniture			256	90	177	62	–	–	–	–	5,569	2,106	–	–	–	–
Chemicals			29,334	2,867	38,331	3,009	10,060	1,396	34,294	5,312	5,039	1,246	14,487	4,674	27,693	13,232
Clay and Cement			1,644	710	950	283										
Metals and Engineering			20,582	7,296	19,913	5,689	34,232	14,847	198,763	18,643	55,045	22,862	148,296	70,344	153,305	53,535
Paper and Printing					14	7							886	414	9,648	3,760
Plastics									1,743	604	1,677	670	10,702	3,373	5,551	2,450
Services							1,555	2,090	2,041	2,713		2,030	492	1,690	5,266	5,803
Other			8,692	5,217	22,170	9,964	6,863	2,213	12,625	5,591	36,025	15,734	25,823	11,006	49,159	7,558
Total	212,700	47,900	152,854	34,315	104,258	26,871	54,143	21,701	331,375	56,412	150,042	58,670	208,805	95,186	278,952	97,318

*The 1974 figures are from April to December.

Table 16: *New domestic industry projects by sector approved by the IDA (£ 000)*

Category	*1973/74*		*1974**		*1975*		*1976*		*1977*		*1978*		*1979*		*1980*	
	Fixed Asset Investment	*IDA Grant Commitment*	*Fixed Asset Investment*	*IDA Grant Commitment*	*Fixed Asset Investment*	*IDA Grant Commitment*	*Fixed Asset Investment*	*IDA Grant Commitment*	*Fixed Asset Investment*	*IDA Grant Commitment*	*Fixed Asset Investment*	*IDA Grant Commitment*	*Fixed Asset Investment*	*IDA Grant Commitment*	*Fixed Asset Investment*	*IDA Grant Commitment*
Food, Drink and Tobacco			17,890	4,935	13,093	2,990	18,515	4,384	8,328	1,929	18,590	3,642	39,332	9,309	56,770	8,597
Clothing, Footwear			281	72	1,178	394	2,146	927	6,776	2,486	2,406	387	4,615	2,288	3,798	1,617
Textiles			2,659	964	1,713	385	1,497	544	5,903	2,370	7,011	3,179	5,486	1,400		
Wood and Furniture			1,014	345	1,262	402	896	361	742	323	1,624	622	7,745	2,951	3,697	1,332
Chemicals			46,371	5,498	4,281	900	18,108	6,683	273	82	26,937	7,071	27,047	7,449	15,946	3,329
Clay and Cement			292	73	4,936	754	—	—	1,965	665	17,763	9,977	3,166	1,036	913	285
Metals and Engineering			3,608	1,213	10,303	3,837	12,291	4,049	42,667	13,990	36,016	14,904	45,429	16,906	35,367	11,923
Paper and Printing			1,217	308	800	254	4,622	1,514	1,898	509	7,637	2,494	9,385	2,786	13,520	3,678
Plastics									3,268	1,160	1,873	637	8,692	2,874	3,985	1,183
Other			3,450	1,343	1,296	556	1,420	361	1,814	930	907	327	6,209	2,301	14,172	4,932
Total	32,700	9,500	76,870	14,751	38,862	10,672	59,495	19,823	73,634	24,444	120,764	43,740	157,106	49,300	148,169	37,277

*The 1974 figures are from April to December.

industry. The figures for Fixed Asset Investment refer to planned investment by firms on the projects for which grant approval was given – and such investment would, of course, be spread over the lifetime of projects. For new foreign firms there has been a concentration in recent years in the Metals and Engineering sector. For domestic industry this same sector has been relatively important as is the food sector. In Table 17 the data in Tables 15 and 16 are aggregated and the relative importance of investment in each sector is seen.

In Diagram 1 the pattern of quarterly movements in output of manufacturing, seasonally corrected, in the 1974/75 recession and in the later recession are compared. The first quarter of 1974 and the first quarter of 1980 marked peak levels of output. In the 1974/75 recession output declined, over five quarters, by 9.8 per cent and then grew to the final quarter of 1976 when output declined by 1 per cent. Output was above the previous peak by the second quarter of 1976. In the decline from the first quarter of 1980 the fall in output was 7.4 per cent but spread over three quarters. Output grew up to the fourth quarter of 1981 when a slight decline occurred, and was just marginally below the previous peak.

Global figures for manufacturing are a bit misleading as the timing of the recession has differed very markedly between sectors. The availability of monthly data since July 1975 has made it possible to identify turning points by sector a bit more precisely (Table 18). For some sectors in long-term decline turning points are somewhat artificial.

The decline between sectors has been very unequal. The largest single decline was in the Chemicals sector where output fell by 20 per cent in the period from April 1980 to November 1980 – an annual rate of 35 per cent. However, output picked up markedly thereafter, though it weakened again in the third quarter of 1980. This contrasts with the experience in Clothing and Footwear where output has continued to decline from December 1979 to the latest available data – though the absolute level of the decline at 8.2 per cent is very much less than in the case of the Chemicals sector.

In this section we have concentrated on looking at the output experience in manufacturing industry over the period 1972-1981. The picture that emerges is one of extreme variability between sectors. In some sectors output declined over the whole period whereas in others the increase has been very marked. The effects of the two recessions by sector are also quite different. In particular with the fall in output in 1980 the differences arose with regard to the timing of the output fall, the duration of the fall and finally the extent of the fall. Comparing the aggregate experience between the 1974/75 recession and the present recession the decline in

Table 17: *Investment intentions by sector % of total fixed asset investment 1974-1980*

	*1974**	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*
Food, Drink and Tobacco	7.8	13.3	16.6	3.7	14.3	11.4	14.0
Clothing, Footwear	0.2	1.1	4.1	21.7	9.3	1.8	5.9
Textiles	41.3	12.6			3.5	2.3	
Wood and Furniture	0.5	1.0	0.8	0.2	2.7	2.1	0.9
Chemicals	33.0	29.8	24.8	8.5	11.8	11.4	10.2
Clay and Cement	0.8	4.1	–	0.5	6.6	1.2	1.2
Metals and Engineering	10.5	21.1	40.9	59.6	33.6	52.9	44.2
Paper and Printing	0.5	0.6	4.1	0.5	2.8	2.8	5.4
Plastics	–	–	–	1.2	1.3	5.3	2.2
Services	–	–	1.4	0.5	0.5	0.1	1.2
Other	5.4	16.4	7.3	3.6	13.6	8.8	14.8
Total	100	100	100	100	100	100	100

*Based on data from April to December.

Diagram 1: Output in Manufacturing 1974/75 - 1980/81

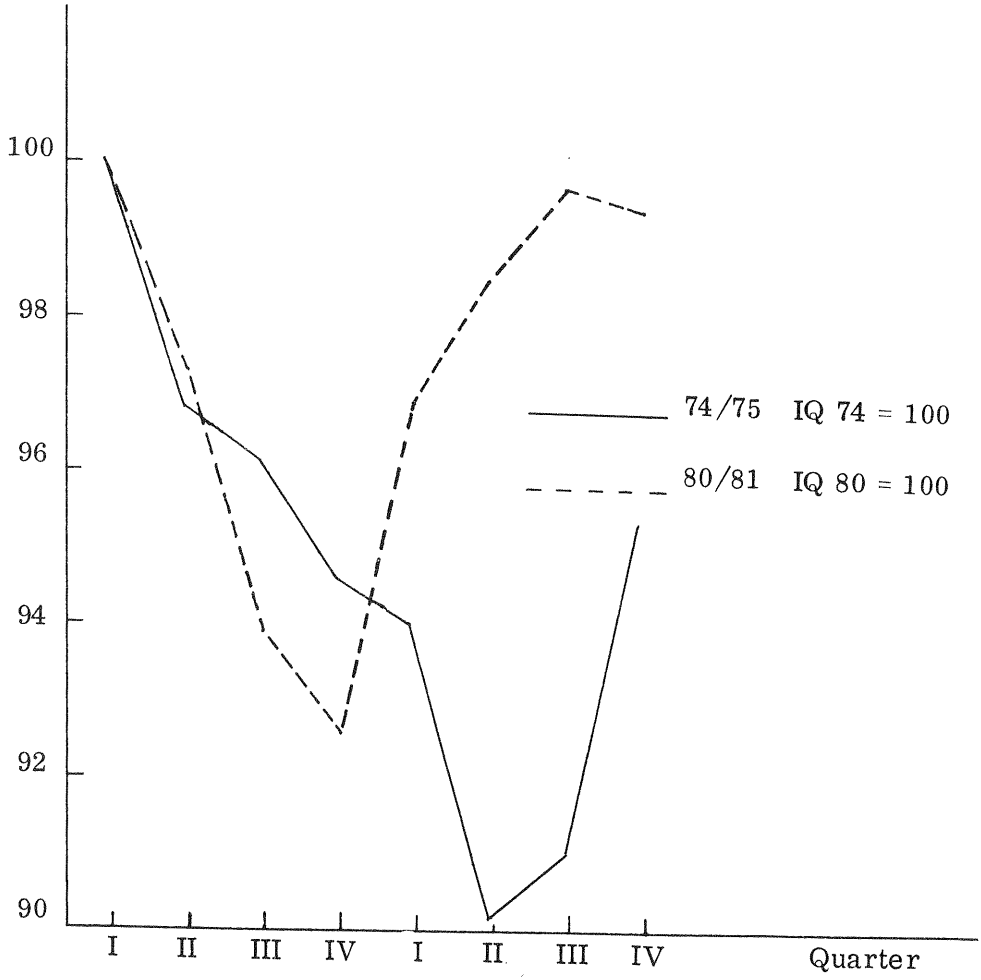


Table 18: *Output in manufacturing by sector 1979-1981*

Sector	*Peak*	*Trough*	*Percentage change from peak to trough Actual*
Non-Metallic Minerals	Sept. '79	Dec. '80	-17.2
Chemicals	April '80	Nov. '80	-20.0
Metals and Engineering	March '80	July '80	-1.0
Food	Dec. '79	Nov. '80	-5.4
Drink and Tobacco	Nov. '79	July '80	-2.5
Textiles	Oct. '79	Sept. '80	-15.3
Clothing and Footwear	Jan. '79	n.a.*	-3.2*
Timber and Wooden Furniture	Aug. '79	Sept. '80	-15.1
Paper and Printing	June '80	April '81	-5.1
Miscellaneous	Sept. '80	June '81	-5.1
Total	Dec. '79	Nov. '80	-7.6

*No turning point. n.a. = not available.

output from peak to trough was about the same, though in the latter case the trough was reached much more quickly than in the first recession.

Building and Construction

The rate of growth in output over the period varied considerably. In 1974 and 1975 output declined. However, by 1977 output was just 1½ per cent below the 1973 peak. In 1978 and again in 1979 the rate of growth was very large, being 15¼ and 17¼ per cent respectively. In 1980 however, output declined by 6 per cent and there was a slight recovery in 1981.

Public capital expenditure exerts a major influence on the Building and Construction sector. This influence comes directly, for instance through the local authority house building programme, and indirectly, for instance through local authority house loans and grants. Direct expenditure is relatively straightforward as it appears in output, but indirect expenditure is more problematical. For instance loans through lending agencies may be used to finance factory purchase – of factories already in existence – and may not lead to any increase in output in building and construction. There may also be problems in timing where public funds released for programmes lag behind the actual activity. Bearing these provisos in mind Table 20 below presents data on total gross output in the Building and Construction sector and expenditure in the Public Capital Programme affecting that

Table 19: *Output in Building and Construction*

	1972	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*
Gross Output £m 1975 prices	461.5	511.1	476.4	460.4	473.2	504.1	581.0	681	640	655
of which Dwellings	193.3	219.2	242.3	209.7	212.6	228.8	265.4	294	–	–
Roads	19.9	21.6	23.4	19.3	14.5	19.9	24.3	27	–	–
Others	248.3	270.3	210.7	231.4	241.1	255.4	291.3	360	–	–
Gross Output Volume % change	–	10.7	-6.8	-3.4	2.8	6.5	15.3	17.2	-6	2

NIE 1979 and own estimates

Table 20: *Public capital expenditure affecting building and construction*

	1975	*1976*	*1977*	*1978*	*1979*	*1980*	*1981**
1. Gross Output							
Building and Construction £m	460.4	555.4	680.3	875.8	1215	1390	1675
% Change		20.6	22.5	28.7	38.7	14.4	20.5
2. Expenditure in PCP affecting							
Building and Construction £m	285.2	312.0	388.0	486.0	632.5	855.3	1118.0
% Change		9.4	24.4	25.2	30.1	35.2	30.7
3. $=\frac{2}{1}$ %	61.4	56.2	57.0	55.5	52.1	61.5	66.7
4. Implicit Price Index							
Building and Construction							
% Change	—	17.4	14.9	11.7	18.4	21.7	17.7

*Estimate

sector. In 1976 public expenditure affecting Building and Construction fell in real terms by about 7 per cent but total output grew by 2.8 per cent. Since then there have been very significant increases in real expenditure by the State affecting this sector – the increases being 8.3 per cent, 12.0 per cent, 10.0 per cent, 11.0 per cent and 11.0 per cent in the years 1977-1981 respectively. Unfortunately it is difficult to be certain to what extent State expenditure affecting the Building and Construction sector is discretionary and reflects deliberate decisions by government rather than an automatic response through existing programmes to private sector investment decisions. The data do, however, suggest that, in 1978 and 1979 when total output rose by 15.3 and 17.2 per cent respectively, the Public Capital Programme operated to add to growth rather than to reduce it. Against this both in 1980 and 1981 the Public Capital Programme expenditure was countercyclical.

In this discussion of output in the Building and Construction sector an attempt has been made to highlight the variability of rates of growth in output.

Services

The final category of output making up Gross Domestic Product at factor cost is the Service sector. This accounts for more than 50 per cent of GDP but is characterised by much poorer data than are available for other sectors. Table 21 summarises the available data distinguishing between (i) distribution, transport and communication, (ii) public administration and defence and (iii) other domestic. The services sector as a whole did not experience a fall in output in any year over the period. However, both distribution, transport and communication, and public administration and defence recorded falls in output in one of the years. In the former case the decline was in 1975 and reflected the general weakening of activity accompanying the 1974/75 recession. It is estimated that this sector may have had a small decline in output in 1980, again in response to and reflecting the general level of activity.

An examination of the data in Table 21 suggests that, as with Industry, the sub-sectors of the Services sector are extremely variable.

Employment and Unemployment

In the previous section the position with regard to output has been covered in detail. In this section the concern is with changes in the level of employment, unemployment and participation rates over the whole period. Table 22 below summarises the relevant data.

Table 21: *Output in Services % Change 1972-1981*

	1973	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980**	*1981**	*Average 1972-81*
Distribution etc.	8.8	1.3	-1.8	2.8	6.3	7.0	3.8	0	1¼	3¼
Public Administration	5.8	6.4	4.7	1.8	-0.5	4.1	7.5	5	1¾	4
Other Domestic	4.8	2.9	2.8	4.2	3.8	7.0	5.8	2	1½	3¾
Total	6.4	2.8	1.3	3.4	4.1	6.6	5.3	2	1½	3¾

*Estimate

Table 22: *Employment and unemployment 1971-1981 (mid-April)*

	1971	*1972*	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*
Employment in Agriculture (000's)	258	252	245	241	237	232	228	226	223	220	215
Employment in Industry (000's)	317	315	334	351	337	325	236	350	365	372	362
Employment in Services (000's)	455	472	481	487	498	507	519	534	557	571	564
Total employment	1030	1039	1060	1077	1073	1064	1083	1110	1145	1163	1141
Unemployment (000's)	50	57	52	53	73	90	89	85	74	74	108
Labour force (000's)	1080	1096	1112	1130	1146	1154	1172	1195	1219	1237	1249
Unemployment %	4.6	5.2	4.7	4.6	6.4	7.8	7.6	7.1	6.1	6.0	8.6
Population over 15 (000's)	2047	2081	2118	2155	2194	2233	2267	2299	2338	2363	2388
Participation rate %	52.8	52.5	52.4	52.2	51.7	51.7	51.7	52.0	52.1	52.3	52.3
Net migration in year to April (000's)	–	+9	+14	+16	+19	+16	+9	+7	+17	−4	−5

Source: J.J. Sexton "The Changing Labour Force" and own estimates.

Over the period 1971-1981 total employment increased by 111 thousand, with employment in Industry rising by 45 thousand, in the services sector. by 109 thousand but with agricultural employment falling by 43 thousand. Within the period the effects on employment of the two recessions can be seen. In the earlier recession total non-agricultural employment fell between April 1974 and April 1975 and again between April 1975 and April 1976. In the later recession a fall in non-agricultural employment occurred from April 1980 to April 1981, and present estimates point to a worsening of the position to April 1982. In 1975, 1976 and 1977 the participation rate fell to 51.7 per cent from 52.2 per cent in 1974. The lack of new job opportunities and the fall in employment contributed not only to the rise in unemployment but also to the fall in the participation rate as potential new entrants onto the labour market sought outlets elsewhere, e.g., in higher education. With the increase in employment in 1978 and 1979 the participation rate rose again. Interestingly enough the revisions to the population estimates necessitated by the results of the 1979 Census imply that there was a net inflow of migrants in the period of the first recession. At the time it was believed that there was a marginal net outflow in the year to April in 1977 and 1978. However, the preliminary results of the 1981 Census indicate that there was a net outflow of about 9 thousand persons between April 1979 and April 1981. Part of this difference in experience may be due to the very high level of unemployment in the second recession.

The figures in Table 22 for unemployment are based on a Labour Force Survey definition of unemployment (excluding first time job seekers). Strictly speaking data only exist for 1975, 1977 and 1979 based on sample surveys. For other years the data were derived by interpolation and adjustment of existing data to conform as closely as possible to Labour Force definitions. A result of the revision is that the level of unemployment over the whole period is very much lower than the previous measures suggested. The rate of unemployment was consequently less – the rate in 1971 now being estimated at 4.6 per cent compared with the previous estimate of 5.8 per cent. However, the differences are somewhat greater in 1977 – the previous estimate was 9.2 per cent, compared with the revised figure of 7.6 per cent. What emerges is the very sharp increase in unemployment in the first recession from 4.6 per cent to 7.8 per cent of the labour force between April 1974 and April 1978, and the rapid increase again between April 1980 and April 1981 when the rate went up from 6.0 to 8.6 per cent. By April 1982 the rate is estimated at 10 per cent, though it is by no means certain that this will be the peak (using annual data) as 1976 was. Thus, there are some differences between the two recessions

as going into the second recession the rate of unemployment was higher, the increase in the rate has been greater, and the peak has almost certainly not been reached yet.

Finally, attention should be drawn to the growth in non-agricultural employment. Table 23 gives the percentage change in total non-agricultural employment.

Inflation

The period under review was characterised by high and extremely variable inflation. Both recessions were characterised by a general rise in prices, in marked contrast with earlier recessions, where weakness in demand tended to be accompanied by a reduction in inflation rates. The situation in Ireland was by no means unique. The increase in inflation in both recessions was a widespread phenomenon -- though there were very large differences between countries. For Ireland, at least up to 1979, the dominant influence on inflation here was the relationship between Ireland and the UK. This arose given

(i) the maintenance of a fixed exchange rate with sterling
(ii) that UK is the dominant trading partner
(iii) exports and imports constitute such a large proportion of activity in goods and services and
(iv) demand patterns for non-tradeable goods and services tend to be somewhat similar for a variety of cultural and historical reasons.*

Up to 1979 there was a closer relationship between inflation in Ireland and inflation in the UK than between Ireland and other countries as a result of the above influences. With the change in the exchange rate regime and the variation in the exchange rate since, the direct relationship between the inflation rates is broken but the other factors still operate. As a consequence the inflation rate here reflected not only inflation in the UK but also changes in the exchange rate between sterling and the Irish pound. If goods were homogeneous and if markets worked perfectly then there would have been switching away from the UK as a source of imports towards sources where inflation was lower. These conditions have rarely been satisfied in real life. Indeed if they were then UK inflation should

*J. Durkan (1978) "The Irish Economy: The Recent Experience and Prospective Future Performance" in B.R. Dowling and J. Durkan (Editors) *Irish Economic Policy: A Review of Major Issues* Dublin: ESRI.

Table 23: *Non-Agricultural Employment 1971-1981 % change*

1972	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*
1.9	3.4	2.7	-0.1	-0.4	2.8	3.4	4.3	2.3	-1.8

Table 24: *Inflation rates*

	1963/1973	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*
Ireland[1] % change	6.5	11.6	15.7	22.3	18.8	12.5	7.5	13.4	18.3	20½
UK[1] % change	5.2	8.7	17.2	23.6	15.6	15.2	8.9	12.7	16.0	11
Sterling/IR£ Exchange	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9664	.8862	.80
% change	—	—	—	—	—	—	—	-3.6	-8.1	-9.7
OECD[2]	4.6	7.8	13.4	11.3	8.6	8.9	8.0	9.8	12.9	

[1] Consumption Deflator
[2] Consumer Price Index

have been very much lower than it turned out.

Table 24 summarises comparative inflation rates – using consumer prices in each case.

Over the period there have also been changes in relative prices. Table 25 summarises the data by broad category.

Table 25: *Price changes by category, per cent, 1972-1981*

	Food	*Fuel and light*	*Other*	*CPI*	*Constant tax Price Index*
1973	16.5	7.1	9.3	11.4	–
1974	14.7	51.0	15.2	17.0	–
1975	21.5	16.3	21.1	20.9	–
1976	16.5	13.3	15.1	18.0	–
1977	16.4	19.8	11.8	13.6	13.5
1978	10.0	3.6	6.9	7.6	8.9
1979	14.8	14.3	12.4	13.2	12.6
1980	10.7	41.7	19.8	18.2	15.0
1981	15.0	27.2	22.2	20.4	16.0
1972-1981	253.4	445.3	245.5	266.5	–

As is readily apparent the relative price of fuel and light has increased dramatically over the whole period – the relative price index increasing by almost 50 per cent – a deterioration of 4.5 per cent per annum. Of course, the time horizon over which such a calculation is made is important as the data period to end 1981 is still indicating a rise in the relative price of energy, and this could fall back, as in 1978. However, it should be noted that even in 1978 when the relative price of energy had fallen it was still more than 15 per cent higher than in 1973. Even with a fall in the relative price of energy this year the period from 1978-1982 will still witness a major rise in energy prices.

Over the whole peiod relative food prices were roughly constant. There were, of course, differences from year-to-year – the differences being most marked in 1973 and 1980 and 1981. In these latter two years relative food prices fell by just over 10 per cent.

External Balance

While the notion of external balance is reasonably clear, viz., the maintenance of a target exchange rate in the medium term without official intervention (except for seasonal or one-off events) the precise measure-

ment of external balance is more difficult – not least because of the different circumstances confronting different countries. For some countries the situation with regard to the balance of payments on current account is the relevant variable, for others the basic balance i.e., the balance on current account plus private capital flows, is important, while for developing economies, dependent on official aid, the relevant variable may be the basic balance plus official transactions or the level of the reserves.

For Ireland further complications arise because of the nature of the industrial development pursued here. To the extent that new foreign enterprise is attracted to Ireland the balance of payments deficit on current account will worsen initially. This happens on two fronts, that relating to the investment project and that relating to the firm as a going concern. If we consider first the investment aspect, the machinery and equipment required for the investment will invariably be imported directly, and local expenditure will have direct and indirect import requirements. If the new investment is financed wholly by capital inflows then, of course, the impact on imports is cancelled by the private capital inflows. However, new foreign investment is rarely wholly financed by capital inflows. Generally some finance is provided through capital grants, and in addition the domestic banking community will seek to provide facilities in the form of loans etc., to new firms. Thus the effect of new foreign investment is generally to worsen the current account initially without a corresponding capital inflow. The second aspect of new firms i.e., new firms as going concerns is also important. In general new firms have been export oriented. Such firms require stocks of finished goods and raw materials in addition to materials for current production for sale. Thus in the period when output in a new firm is increasing up to a desired level there will be a tendency for its imports of materials to run ahead of exports. If exports are expanding rapidly then the gap could widen if the growth in exports has been correctly anticipated. Obviously the extent to which both factors operate depends on the resource base, on the existence of a capital goods producing sector and the availability of domestically produced materials for new industry.
It is clear that any simple measure of external balance, such as the current account deficit, is not going to capture these aspects of Irish development. There is still some benefit in looking at the balance of payments on current and capital account. Table 26 summarises the relevant data for 1972-1981.

The amount of direct foreign investment is not substantial in relation to the deficit over the whole period for which we have data. Furthermore it is almost entirely matched by private capital outflows. The largest single element on the capital side is Government capital inflows. This covers not only direct borrowing by the Central Government denominated in foreign cur-

Table 26: *The Balance of Payments 1972-1981 £m.*

	1972	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*
Current Account Deficit	48.4	82.3	280.2	6.0	157.1	155.2	200.3	726.7	725	1300
Direct Investment	12.7	21.6	21.9	71.5	96.1	78.1	195.7	164.5	n.a.	n.a.
Other Private Capital	-25.0	61.0	126.1	-78.8	-61.2	-170.0	-310.4	-154.4	n.a.	n.a.
Government Capital	22.3	29.0	138.5	159.4	296.8	198.8	342.0	318.1	1095	1220
Commercial Banks	84.1	-26.2	53.0	31.4	93.7	268.2	12.4	81.4	n.a.	n.a.
Other	5.4	0.0	0.8	3.1	11.2	25.3	11.8	39.9	n.a.	n.a.
External Reserves	-51.1	-3.1	-60.1	-180.6	-279.5	-245.2	-51.2	+277.2	-370	+180

(- = a rise)
Source NIE 1979.
n.a. = not available.

rencies but also the take up of Government stock by non-residents.

By convention the capital side of the balance of payments has been seen as financing the current account deficit. The situation is more complex than this as the size of the current account deficit is related to the capital account. For instance if private foreign direct investment fell to zero this would be reflected in a fall in the current account deficit – on the lines indicated above. A failure of the government to borrow abroad could be reflected in either of two ways:

(i) A reduction in the level of the external reserves if the current payments deficit were maintained – with the finance being provided by the Central Bank and no crowding out of the private sector. The extent to which this can go on is limited by the reserves.

(ii) A reduction in the current payments deficit because of a fall in domestic demand. This fall in demand could come about in several ways. For instance the Government could cut expenditure to a level consistent with what could be financed domestically at current interest rates. Alternatively Government could maintain expenditure through domestic borrowing with interest rates rising to the level required to raise the funds domestically. Even if there were no crowding out of the corporate sector (since the corporate sector could borrow abroad) the rise in interest rates would affect household behaviour, leading to an increase in the savings rate. The adjustment to the current account would then come through private sector demand.

It is clear in looking at the question of external balance that the situation is by no means straightforward. The relevant question for Ireland is: Is the level of the current account sustainable given the level of reserves – alternatively is the level of government borrowing sustainable?

In the July 1981 *Quarterly Economic Commentary* an analysis of this question was presented. This is reproduced below:

"The existence of a payments deficit is in itself not necessarily a problem – unless there are clear losses of competitiveness. Whether or not a problem exists, assuming no loss of competitiveness, depends entirely on those factors on the demand side which lead to import levels being in excess of exports. It is possible to conceive of a variety of situations where the payments deficit reflects (i) new foreign investment financed directly by private capital inflows; (ii) investment by domestic firms financed by private bank capital inflows; (iii) investment by the State

financed by State borrowing. If in these cases the investment proves profitable in a national sense then there will be increases in output financing interest charges. Under these circumstances there is no particular problem for the economy in the existence of a Balance of Payments deficit. The situation is somewhat different if the external payments deficit is not matched by direct investment increasing the capacity of the economy to service the debt. The situation at present is that the external deficit is higher than can be sustained by the level of exports and new foreign investment and that the level of reserves and the exchange rate are being maintained by Government external borrowing.

Government external borrowing is, of course, only part of total government borrowing. Given the nature of the expenditure being financed by borrowing it is unlikely that there will be major returns to the Exchequer. Of the budgeted borrowing of around £1650 million this year almost one-half represents finance for current consumption. There will be no sustained revenue from this. Of the remainder it is not immediately clear that all the projects will generate a return to the Exchequer – even when the return is interpreted in the widest sense. Some projects may properly be considered pure replacement of worn out assets. If we were to assume that corresponding to Government external borrowing only there was no increase in the productive capacity of the economy then within a very short space of time the Balance of Payments position would deteriorate sharply under the impact of rising interest charges abroad.

An attempt has been made to show this using a very simple numerical example which takes 1981 as a base (Table 27). It is assumed that fiscal policy is neutral. Neutrality in this case is defined as fiscal policy providing no stimulus or contraction to the economy over that already there in 1981. The precise content of the assumption, taken in conjunction with the point above that exteranl borrowing does not increase the productive capacity of the economy, is that interest payments abroad are financed by borrowing abroad while domestic interest payments are generated by the projects. A further assumption is that foreign private direct investment remains at present levels. A consequence of these assumptions is that X-M remains a roughly constant proportion of GDP but that net factor payments continue to rise. The change in net factor payments from year-to-year depends on the previous year's Balance of Payments current deficit and rises not only with respect to Government borrowing but also with respect to other net capital inflow. In framing the table it is assumed that GDP would grow by 2 per cent per annum with the GDP deflator rising by 15 per cent per annum. The interest rate on foreign borrowing is 12 per cent and the exchange rate is assumed constant. Real interest rates

Table 27: *The Evolution of External Debt*

	GDP	Net factor payments			GNP		X-M[1]		Other current transfers	Current Balance of Payments deficit		Govt. Borrowing abroad		Other Capital Inflows		Reserves	
	£m	£m	%GDP	% current external deficit	£m	% GDP	£m	% GDP	£m	£m	% GNP	£m	% GNP	£m(i)	£m(ii)	£m(iii)	£m(iv)
1980	8345	−125	1.5	16.7	8220	98.5	−1140	13.7	515	−750	9.1	583	7.1	963		1345	
1981	10075	−200	2.0	14.3	9875	98.0	−1700	17	510	−1400	14.2	1000	10.1	475		1575	
1982	11800	−370	3.1	20.7	11430	96.9	−2000	17	585	−1785	15.6	1270	11.1	545	880	1605	1785
1983	13850	−585	4.2	25.9	13265	95.7	−2350	17	675	−2260	17.0	1595	12.0	625	1140	1565	2260
1984	16250	−855	5.3	29.6	15395	94.7	−2760	17	730	−2885	18.7	1985	12.9	720	1525	1385	2885
1985	19050	−1200	6.3	33.4	17850	93.7	−3235	17	840	−3595	20.1	2450	13.7	830	1855	1070	3595

(i) Real terms.
(ii) Required to maintain reserves equal to deficit.
(iii) Resulting from constant real non-government capital inflow.
(iv) Equal to deficit.
[1]Exports of Goods and Services (X) less Imports of Goods and Services (M).

are thus assumed negative over the period. This has the effect of holding down the level of net factor payments. The assumed growth rate is reasonable given the assumptions with regard to fiscal policy and new foreign investment and given the international situation. A higher growth rate does not alter the situation if fiscal neutrality is maintained.

The assumptions are fairly stark. The consequences in terms of the external deficit, GNP and the reserves are equally so. The external deficit continues to rise under the impact of the growth in net factor payments abroad. By 1985, of the £2450 million external borrowing by Government £700 million represents borrowing to pay the increased interest since 1981. In the absence of other large capital inflows the level of reserves will begin to fall in money terms – their adequacy in terms of imports, the external deficit, current interest payments abroad and the external debt is clearly declining.

The point of this exercise is to indicate that under present policies the level of Government borrowing and the external payments situation are unsustainable. It is precisely because of this that we have urged dealing with the root of the problem, viz., that corresponding to external and internal borrowing the productive capacity of the economy needs to be built up. This involves the reduction and eventual elimination of the current deficit and rigorous project appraisal. The precise level of borrowing with no current deficit and with project appraisal is unknown."

The analysis concluded that the current payments deficit was unsustainable because of the rise in interest payments abroad on State foreign debt. The rise in interest payments constituted a burden on the society because the debt was being used to finance the current budget deficit and marginal capital expenditure.

The analysis took as given the level of borrowing in 1981. However, this obscures the fact that the debt position in 1981 was not static in relation to previous years. The increase in Government and Government guaranteed debt has been very large in recent years. Table 28 shows the relationship between total official debt dominated in foreign currencies – and the external reserves.

It is clear from Table 28 that there has been a very large increase in net official liabilities in recent years. There is a momentum established that becomes more difficult to reverse, the longer it is allowed to rise.

Table 28: *Government Debt denominated in Foreign Currencies £m 1974-1981*

	1974	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*
External Govt. Debt	360.0	560.0	1039.5	1038.8	1063.8	1542.4	2206.8	3725
External Debt of State Bodies	173.3	200.7	295.7	333.7	327.3	521.7	864.8	1130
External Reserves	495.4	676.0	955.5	1200.7	1251.9	974.7	1346	1473
Net Official Liabilities	37.9	84.7	379.7	171.8	139.2	1089.4	1725.6	3382

Table 29: *Interest Payments abroad on Central Government Debt (£ million) 1979-1982*

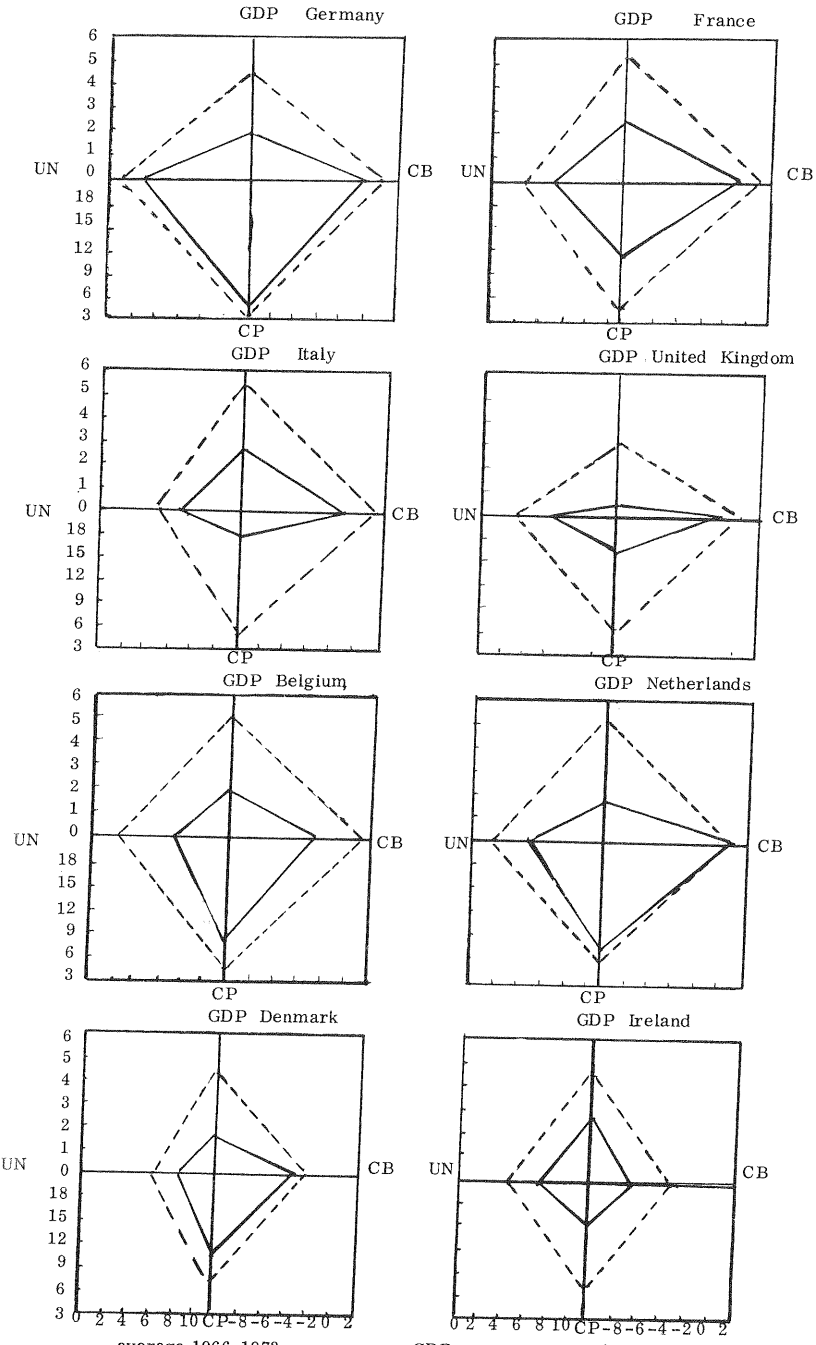
	1979	*1980*	*1981*	*1982*
Interest on Irish Government Stock held by foreigners	69	60	65	65
Interest on Debt denominated in foreign currencies	95	165	250	480
Total	154	225	315	545

Chapter 3

RELATIVE ECONOMIC PERFORMANCE

It is useful to place the economic performance of the Irish economy over the past number of years in the context of developments in other countries. The experience of eight European economies, including Ireland under the headings of growth, inflation, unemployment and current external balance over two periods 1974-1981 and the preceding eight years is summarised below (Diagram 2). The upper vertical axis in each box shows the annual average rate of increase in GDP with the magnitude increasing up from the intersection with the horizontal axis. The lower vertical axis depicts average annual increases in consumer prices with the magnitude diminishing down from the intersection with the horizontal axis. The horizontal axes to the left and right of the vertical show unemployment and current external balance as a proportion of GDP respectively.The scales on these axes are drawn so that unemployment and the magnitude of deficits on the current balance increase the closer one moves towards the intersection with the vertical. This configuration yields two quadrangles for each country summarising the performance under the four headings in each of the two periods mentioned above. The further are the corners of each quadrangle from the intersection of the two axes the better the performance in terms of higher growth, lower inflation, lower unemployment and smaller external deficit. The nearer the corners of each quadrangle are to the origin the worse is the performance in terms of the four variables mentioned. As the scales are the same for each box the diagram enables cross country comparisons to be made as well as comparisons of individual countries' performance between the two time periods. It is evident that with the exception of the Netherlands, where the outcome for the current balance has been marginally better in the most recent period com-

Diagram 2 Comparative Economic Performance In Selected Countries



GDP : average annual growth
UN : average unemployment rate
CP : average annual rate of increase in CPI
CB : current external balance as per cent of GNP

pared with the earlier one, the experience of all countries has been that performance under all four headings in the recent period has fallen inside (a deterioration) that of the earlier.

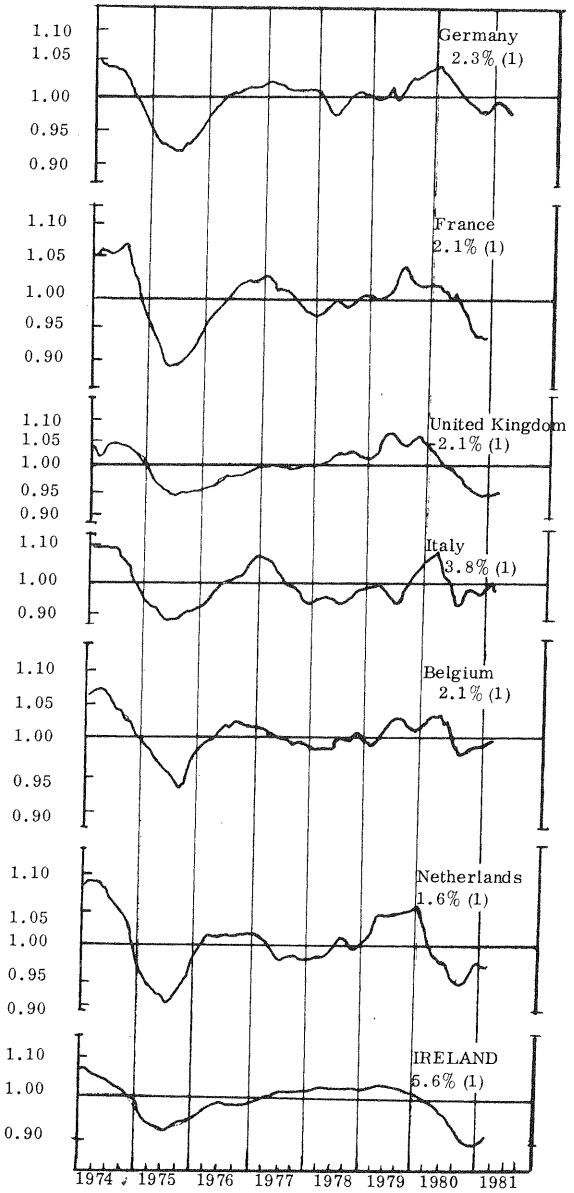
However, the deterioration has not in general been symmetrical with reference to the various headings, indicating that performance has not deteriorated to the same degree for each variable. For example, in the case of Germany the deterioration, in the most recent period, of the current balance and inflation performance compared with earlier years has not been significant. While the recorded unemployment performance has also held up well allowance must be made for the fact that Germany lost significant numbers of migrant workers during this time. The experience of the Netherlands parallels closely that of Germany. It appears that in the United Kingdom, excepting the beneficial impact of oil on the current balance, economic performance has deteriorated most sharply compared with earlier years. A feature of the Irish experience has been the evenness of the deterioration across the various headings; performance has not been nearly maintained at the level obtaining in the earlier period by reference to any of the four criteria portrayed. The reduction in growth has been about average but the worsening of the current balance position is matched only in Belgium and the absolute performance under that head in the recent years is poorer than in that country. The relative deterioration in inflation is matched in the United Kingdom and is slightly greater in Italy whose absolute performance in the recent period also is marginally worse than Ireland's. With regard to unemployment there has been a greater relative deterioration in Belgium and the Netherlands than here and the former country is estimated to have a marginally worse absolute performance than Ireland's with unemployment averaging 7.1 per cent compared with 6.8 per cent respectively in the 1974-1981 period.

Turning to the cyclical response of the Irish economy compared with that of other countries (Diagram 3) a more consonant picture emerges for the period since 1974 judging from manufacturing output data. All of the economies portrayed display coincident turning points both as regards downturns and upswings reflecting, undoubtedly, the close interdependence of economic activity among trading partners. Moreover the cyclical deviation from trend has been about comparable in magnitude across the countries shown. For Ireland the fall from peak to trough between early 1974 and mid-1975 was more mild than in some countries but recovery was slower than in these same countries. In the most recent period of recession, covering the period from the last quarter of 1979, the downturn in Ireland, in general, has been more steep, though only barely so.

A more engaging feature of Irish manufacturing output performance is

Diagram 3 Cyclical Movements in Selected Countries

Index of Manufacturing Production
(ratio to trend)



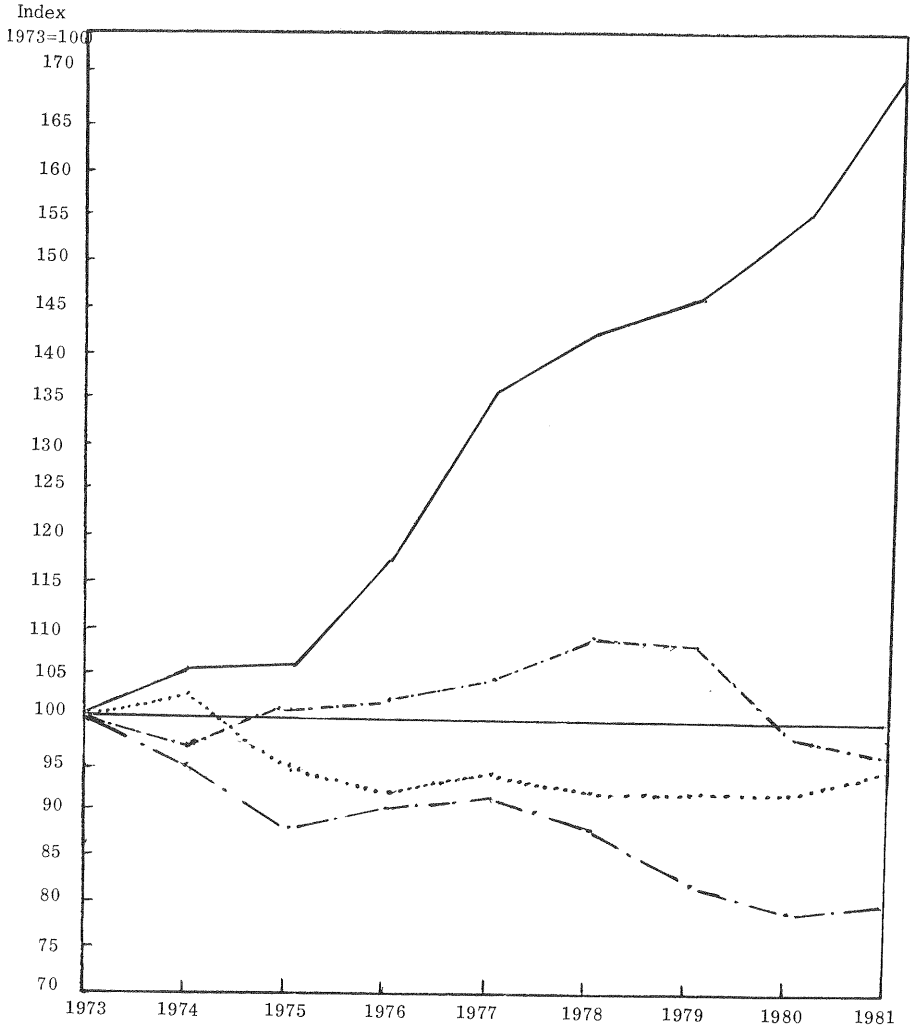
(1) Annual trend growth over last five years

Source: Main Economic Indicators, OECD, Paris.

the fact that the annual trend growth over the past five years exceeds, by more than a factor of two that of most of the other countries shown, the rate of increase being about 5½ per cent compared with around 3¾ per cent in Italy, the next fastest. This difference in performance owes much, it is felt, to Ireland's sustained favourable relative manufacturing export performance over the past number of years. This probably reflects, mostly, the supply side influence of new firms coming on stream rather than demand factors affecting existing firms. Measuring export performance as the difference between export growth and the expansion of export markets, the best performance, based from 1973, of the eight economies examined is recorded by Ireland, whose exports have consistently penetrated foreign markets. Diagram 4 shows this performance alongside that of Italy the next best of the other countries, Belgium the weakest of the others, and Germany whose performance lies in between. Over the period examined it appears that infiltration of markets was most rapid between 1975 and 1977 and following some slowing down in the next two years, there was further acceleration in the two years to date. The performance of most of the other countries reveals that, for the most part, export growth has been falling short, increasingly, of the expansion of export markets.

While the rapid growth of manufacturing exports probably explains why Ireland has enjoyed a more rapid growth in manufacturing output in recent years compared with other countries, it raises questions as to how such a relatively rapid deterioration occurred in Ireland's external balance. There are doubtless a multiplicity of reasons which would require a fuller investigation to evaluate; but it is possible to point to certain of the more obvious factors. First, the base from which the manufacturing export growth occurred was small, accounting for only 42 per cent of exports in 1973, so that although percentage growth rates were significant the contribution of those exports to the balance of payments position would not be as significant as might be thought. More significantly, the export performance must be set against the pattern of the terms of trade over the period. This reveals an unfavourable pattern since 1973, relative to other countries; the initial fall in 1974 was exceeded only in Italy and unlike most other economies there was continued deterioration in 1975. The pattern thereafter stabilised until 1979 when, in line with other countries, there was further deterioration, which is thought to have continued in 1981. This has resulted in Ireland experiencing the most adverse movement of terms of trade among the countries considered. Diagram 5 compares movements of the terms of trade for Ireland with that of the United Kingdom, the most favourable of the eight countries compared, Denmark, the least favourable of the

Diagram 4 Relative Export Performance[1] in Selected Countries 1974-1981



1. Relative Export Performance equals export growth minus growth of export markets. Data for Ireland refer to manufacturing exports and for other countries industrial exports.

———— Ireland ..... Germany

—·—·—·— Italy

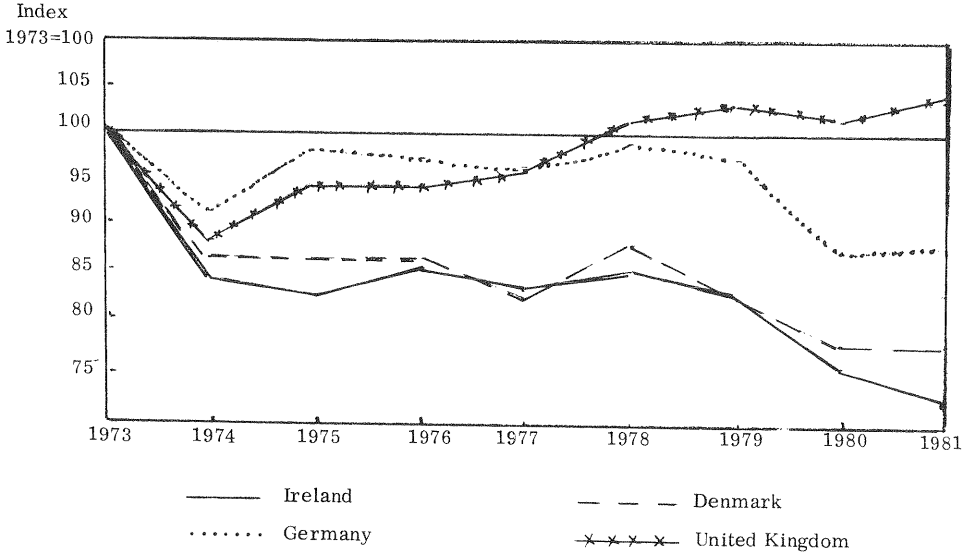
——·—— Belgium

Sources: Economic Outlook; OECD, Paris

Trade Statistics of Ireland, Stationery Office, Dublin

others and Germany. Moreover, the impact of a given deterioration in the terms of trade on the balance of payments here would be expected to be greater than in most of the other countries considered since the Irish economy is more open, in terms of the percentage of GNP traded internationally, and because of the relatively unfavourable composition of trade with imports exceeding exports here in the base year.

Diagram 5 Terms of Trade Index for Selected Countries 1974-1981



Sources: Monthly Bulletin of Statistics, United Nations, New York.
Trade Statistics of Ireland, Stationery Office, Dublin.
Economic Outlook, No. 29, July 1981, OECD, Paris.

Chapter 4

DEMAND MANAGEMENT RESPONSE 1972-1981

In what follows there is a brief discussion of the stance of demand management policies over most of the decade of the 'seventies and to date under the headings fiscal, monetary and incomes. It need hardly be remarked that the issue of policy performance is a major one and while a comprehensive assessment is desirable it is beyond the scope of the present study to provide one. Rather the concern here is to conduct an analysis focusing on the demand stabilisation properties of the policy stance. Accordingly, such important matters as the re-distributive or allocative efficiency aspects of policies are not dealt with. Nor is the developmental orientation of policies considered. At Ireland's present stage of development this, understandably, is an important policy consideration and a study of policy from this perspective would of itself be worthwhile. Apart from exploring the supply side influence of public investments over the years such a study could focus attention in the various supply side effects of current (as opposed to capital) fiscal measures introduced to date. Furthermore, it is believed, that the contribution of certain important developments in relation to incomes policy could most appropriately be evaluated from this perspective. For example, the attempt at integrating national pay increases with certain changes in broad categories of social expenditure initiated under the First National Understanding may have been a more important contribution to development policy than to demand management.

Aside from these omissions there are inherent problems even within the narrow perspective from which attention is focused. The most important perhaps concerns the global nature of the deteriorations in the terms of trade and the associated recessions of the 'seventies. For the industrial

world as a whole these adjustments represent a permanent loss of resources to oil producing countries. No amount of counter cyclical policy could avoid this, though it can influence the domestic consequences for inflation, unemployment and external balance. Accordingly, the criteria by which demand management policies are adjudged must be relative to others experiencing the same external shock. However, policy objectives of countries will invariably be different reflecting national priorities concerning such variables as unemployment, inflation, and balance of payments adjustment. All this is to say that there are no hard and fast objective standards against which to evaluate performance.

Finally, there are problems posed by the fact that policy formation is a continuous and interrelated process. This makes discussion and comment of the individual components rather difficult. For example, the influence of fiscal policy on monetary developments is so dominant that it could be argued that criticism of monetary policy would be more appropriately addressed as an issue of fiscal policy. Similarly the influence of taxation measures on income formation creates problems in evaluating the separate performance of these aspects of demand management.

Fiscal Policy

There are a number of approaches which can be used to analyse the effects of fiscal policy. Two important studies, dealing with the period 1960-1970, Norton (1975) and 1967-1978, Dowling (1978), have already been undertaken in relation to the Irish economy.* The former used a small purpose built model to evaluate fiscal policy effects while the latter focused on an analysis of Potential Output Borrowing Requirements. It is beyond the scope of this study to provide a further comprehensive analysis although this would be desirable. However, a limited exercise has been undertaken covering the period 1972-1981. The approach involves the use of a large scale macro-model a feature which although explicitly recognised by Dowling as desirable was unavailable to him at the time. In this respect the present undertaking represents a methodological advance on that of Dowling.

The analysis is carried on at two levels. In the first the concern is with

*A number of studies have been made of other countries. An interesting example which has appeared since the present exercise was undertaken and relating to the United Kingdom is contained in D. Savage, "Fiscal Policy 1974/75-1980/81: Description and Measurement", *National Institute Economic Review*, No. 99, February 1982. The measurement approach used is broadly similar to that employed in the present study.

the fiscal impact of each budget, considered as a separate decision, while in the second the concern is with the overall thrust of fiscal policy since 1972. In the first case the analysis is concerned with measuring the impact effect of successive budgets by estimating what level on average various macro-economic variables would have assumed in the year of the budget had it been *neutral* and comparing this with the *estimated* level of these variables given the actual budget measures. Neutral in this context is defined as a situation in which all indirect tax rates, tax bands, tax allowances and rates of subsidies are indexed and in which there is no change in the volume of public authorities current or capital expenditures. In the second case the approach is to assume neutrality as defined above over the whole of the period 1972-1981, keeping the volume of government expenditures constant *at the 1972 level* and indexing indirect tax rates, tax bands, tax allowances and rates of subsidies. The path of selected macro-economic variables is tracked once again using estimated values of each year as starting values for the next, thus giving the exercise a partial dynamic flavour. In this second case by comparing the paths of selected macro-economic variables based on actual and neutral exogenous variables it is possible to obtain an impression of the overall stance of fiscal policy over the whole period. This contrasts with the year-by-year analysis.

At the outset it is as well to recognise that other definitions of neutrality could be constructed.* The purpose of the definition used is to get some sense of the effects of *discretionary* changes undertaken in successive budgets as a means of evaluating the direction of fiscal policy. The definition used is essentially designed for short run analysis. There are major difficulties associated with this concept maintained over the whole of the period 1972-1981 as applied in our dynamic analysis. The convention, in short run analysis, is to treat government consumption expenditure as exogenous yet over the medium term some aspects of such expenditure may be endogenous. The maintenance of a fixed level of government consumption over the whole period may thus have supply side consequences not covered by the analysis. The particular assumption of neutrality used here thus represents a polar case in which the authorities can exercise a degree of discretion which in reality they may, in fact, not have. The other end of the neutrality spectrum would be a definition based closely on what actually happened reflecting a view that government retains little discretion over expenditure or tax rates.

Finally for the purposes of this exercise "outturn" rather than "bud-

*Coincidentally the one used here seems to correspond exactly with that used by Savage, *op. cit.*

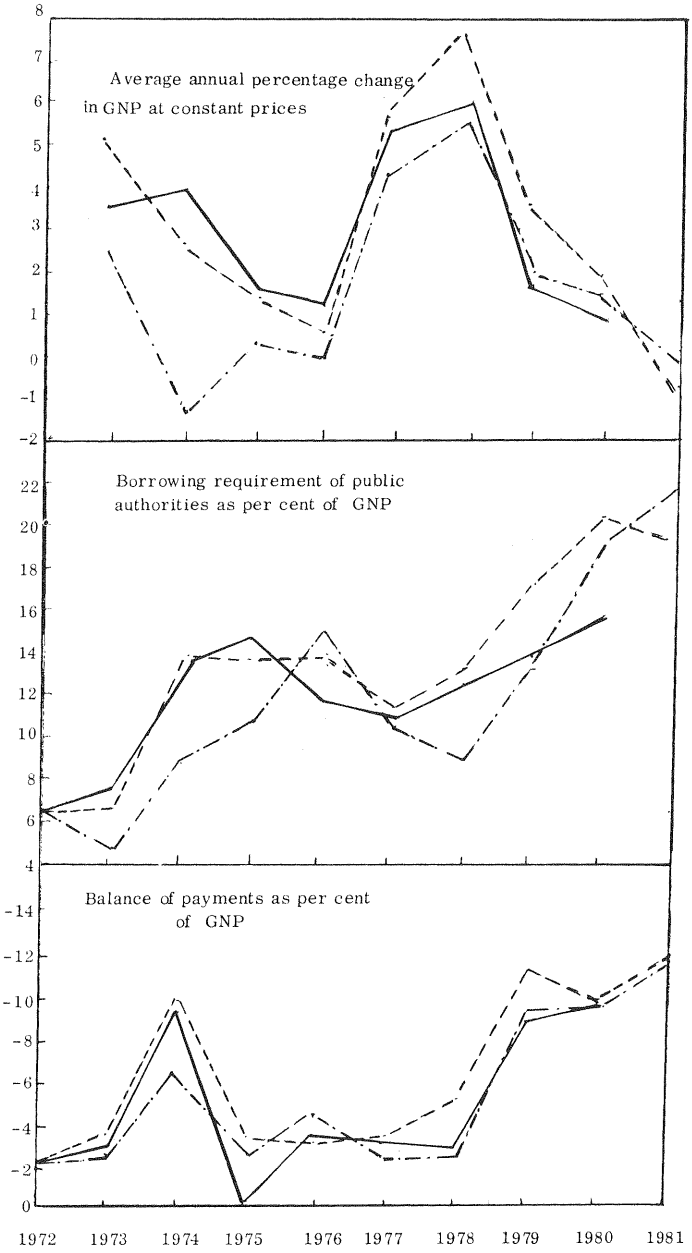
geted" data used to evaluate the effects of fiscal policy. Over some periods expenditures were running below what was budgeted while in later years over-runs in expenditure have become increasingly important. In a comprehensive analysis it would be desirable to examine the effects of over- and under-runs by distinguishing between estimated effects of budgetary outturns and those of budgetary intentions – distinguishing also between the effects of current and capital account changes.

The methodology employs MODEL-80 Fitzgerald and Keegan (1981), a large scale macro-economic model of the Irish economy, to analyse the effects of successive budgets on a variety of macro-economic variables. It needs to be stressed at the outset that there are severe limitations to this model, as indeed there are with most others. In the first instance the tracking performance within the sample period over which it was estimated, 1960-1977, is imperfect and, outside sample, leaves much to be desired. A second major deficiency with the model is that it does not incorporate the most recent national accounts data, which contain significant revisions historically, nor does it contain the revisions to employment statistics arising from the results of the most recent *Census of Population*. Accordingly, the statistical relationships contained within the model are not based on the best available information and, therefore, may in certain cases be fallacious. Thirdly, the model is oriented to the short run and is greatly demand determined. As a result supply side influences are probably not adequately taken into account. Consequently, the most enduring aspects of fiscal policy arising from public investment decisions are likely to be understated in the model simulations.

Turning first to the results of the static simulation (Diagram 6) and comparing the *simulated* actual results with those estimated under neutral assumptions it appears that with the exception of the 1976 budget all other budgets since 1972 have resulted in a higher borrowing requirement, as a proportion of GNP, than would have been the case had a neutral budget been imposed. The most pronounced differences arose in 1974 and in 1978 when the simulated "actual" borrowing requirement exceeded the neutral by an amount equivalent to about 5 percentage points of GNP and 4.7 percentage points of GNP respectively. In other years the difference varied from 3.9 percentage points of GNP (1979) to 0.4 percentage points of GNP (1977).

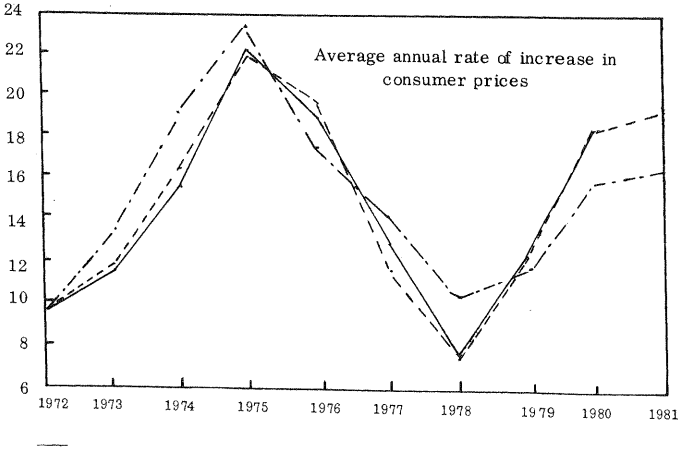
In all years GNP growth under the neutral budget assumption is estimated to have been less than actual growth, including 1976, when the neutral borrowing requirement was greater than that simulated from actual budgetary variables. The reason for this paradoxical outcome for 1976 arises from the particular *composition* of the 1976 budget com-

Diagram 6 Static Simulation of Fiscal Policy 1973-1981



——Actual
– – –Static simulations using actual budgetary variables
—·—·—Static simulations using neutral budgetary variables to base previous year.

Diagram 6 continued. Static Simulation of Fiscal Policy 1973-1981.



—— Actual
- - - Static simulations using actual budgetary variables
—. — Static simulations using neutral budgetary variables to base previous year

pared with the neutral. In that year the actual budget contained a marked shift in expenditure relative to the neutral, towards current expenditure on goods and services and away from both building and non-building investment. These shifts were such that overall the domestic multiplier effects attaching to the former were stronger than the latter giving a greater short-run boost to demand, and a lower balance of payments deficit than under the neutral conditions. However, the shift had an adverse influence on employment compared with the neutral, not surprisingly given the high employment content of building investment. It is also important to stress again that these results constitute impact effects and that the present analysis does not take account of the supply influence on growth in future years of reducing investment spending in the actual 1976 budget compared with the neutral. Were it possible to include this the effect would be to at least reduce the impact of the actual compared with the neutral budget towards a position where the actual budget would appear relatively more contractionary than the neutral. For other years the impact on growth corresponds broadly with the magnitude of

the budget stimulus relative to the neutral position. The strongest impact accrued in 1974 when the budget added about 4 percentage points to growth compared with the neutral stance and again in 1978 when the budget added over 2 percentage points to growth.

The most salient feature of this aspect of the analysis relates, however, more to the direction of policy than to the magnitude of the stimuli. In this regard the most significant feature has been that policy appears to have tended to operate in a pro-cyclical fashion during periods of expansion. For example, in 1973 and again in 1977 and 1978 it seems that fiscal policy was reinforcing the autonomous growth which was underway. During the downturn of 1974/75 policy was strongly counter cyclical as it has been in the most recent recession. However, the extent of the stimulus in most recent years has not been nearly as strong as that in the previous recession. The constraining influence of accumulated borrowing from earlier deficits is probably a major factor behind this result.

With regard to the balance of payments the pattern as between simulated actual and neutral stances parallels closely that of output growth: in all years the actual balance of payments lies above that estimated under neutral conditions with the greatest divergences corresponding to the strongest demand stimuli. Regarding the effects on inflation it appears that up to 1978, with the exception of 1976, the rates of increase in consumer prices would have been greater under neutral conditions than they have actually been while in the three years since the reverse would seem to be the case.

While the foregoing analysis provides some insights into the effects of successive budgets it is rather difficult to gain an overall view as to the cumulative thrust of policy over a period of years. The results of the dynamic simulation (Diagram 7) go some distance to providing this perspective. It appears that the borrowing requirement has, overall, been strongly expansionary compared with the neutral stance with the simulated actual borrowing requirement amounting to 14½ per cent of GNP on average over the period since 1972 compared with a neutral borrowing requirement of under 5 per cent. This has been associated with a rise in GNP well above what would have been the case in its absence. It appears that under a neutral stance GNP would have been in downturn from 1973 to 1976 and again after 1978 were it not for the fiscal stimulus. The sustained boost to demand enabled employment to increase on average by around 1 per cent per annum compared with a broadly unchanged level over the period as a whole under the neutral stand. However, the growth in aggregate demand has resulted in a much worsened balance of payments than would otherwise have been the case. This is especially so over

Diagram 7 Dynamic Simulations of Fiscal Policy 1973 - 1981.

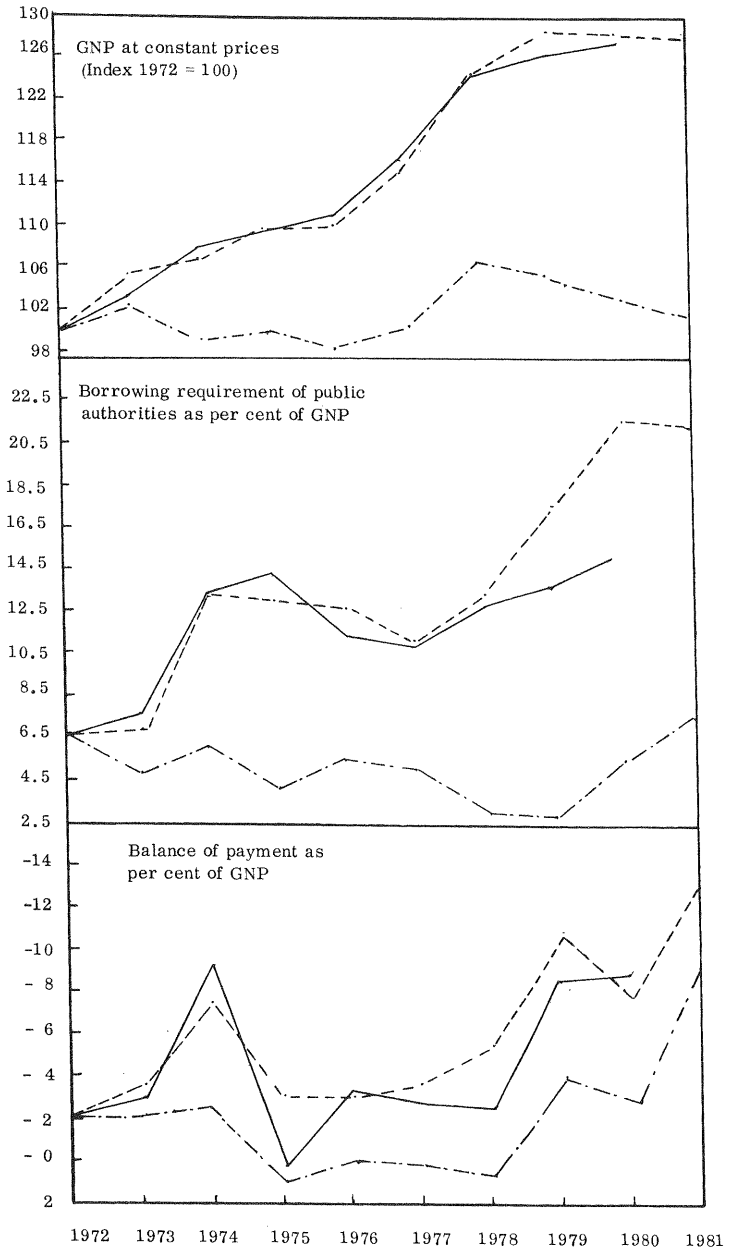
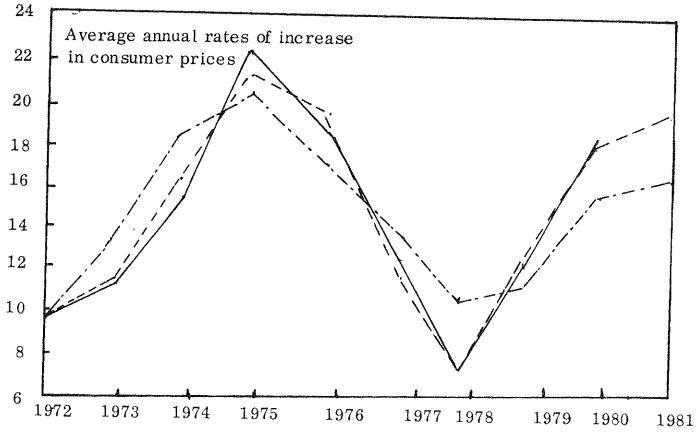


Diagram 7 (Continued) Dynamic Simulation of Fiscal Policy 1973 - 1981



——— Actual
- - - - Dynamic simulation using actual budgetary variables
—.— Dynamic simulation using neutral budgetary variables to base 1972.

the period from 1975 to 1978 when, according to the neutral simulation the current balance of payments would have been about zero and in 1979 and 1980 would have remained at a sustainable level. But in 1981 there would, according to the simulations, have been a marked deterioration in the external accounts to about 9½ per cent of GNP even if a neutral policy stance had been in place over the period as a whole.

To summarise, the results of these model simulations indicate that the overall thrust of fiscal policy since 1972 has been highly expansionary, relative to the neutral definition, even in years when the underlying growth was strong. Viewed from the perspective of demand management these results suggest a pro-cyclical policy in upturns when a counter cyclical stance should have been in place. The principal effect has been to consistently maintain GNP at a much higher level than would otherwise be the case. While this has facilitated employment growth which would not otherwise have taken place, the deterioration in the balance of payments with which these policies have been associated raises questions as to whether the positive results will be durable and whether fiscal policy

Table 30: *Summary of Monetary Policy Announcements 1976-1981*

Year	*Private Sector Credit Guideline (per cent change)*	*Stated Objective of Policy*	*Means of Implementation*	*Private sector credit (per cent change)*	*Outturn Target variable*
1976	No quantitative guideline announced	Accommodate reasonable demand for private sector credit subject to not aggravating inflation		25	
1977	18	To contribute towards an easing in inflationary pressure.		26	CPI 1976 1977 18% 13.6%
1978	20	To facilitate the aim of Government economic policy that the private sector assume a more important role in economic expansion. But recognised that such a rate of increase could adversely influence the reserves	No new measures introduced at time of guideline. In May penal rediscount rates introduced by Central Bank.	33	*Change in External Reserves* December 1977 to December 1978 £51.2 million. December 1977 to June 1978 – £240 million.
Sept 1978/ March 1979	10	To achieve a slowing down in credit which was clearly running ahead of the 20 guidelines.	Tightening of rediscounting policy. Introduction of non interest bearing supplementary deposits.	Sept/March 1978 1979 15	*Change in External Reserves* June 1978 to March 1979 + £177.3 million.
Feb 1979/ Feb 1980	18	The maintenance of reserves adequacy and the protection of the exchange rate. Recognising transitional problems associated with EMS membership domestic credit based on capital inflows were exempted from the guideline and in October 1979 foreign currency lending was also exempted. In November liquidity ratios reduced/with proceeds used to reduce indebtedness of Central Bank.	Supplementary liquidity ratios. 50 per cent deposit requirement on capital inflows through licenced banks suspended.	19	*External Reserves* December 1978 to December 1979 – £277.2 million. Gross increase in foreign currency lending exempt from guideline £129 million.
Feb 1980/ Feb 1981	13	The maintenance of reserves adequacy by external borrowing by both private and public sectors.	Continuation of supplementary liquidity ratios; continued exemption of foreign currency lending from guideline. As from October increases in foreign currency not arranged at that date were no longer exempted from the guideline.	13.4	*External Reserves* December 1979 to December 1980 + £371.3 million. Foreign currency lending Feb 1980/Feb 1981 £323.6 million.
Feb 1981/ Feb 1982	15	Not to seek to achieve adjustment of the balance of payments by means of squeezing private sector credit. Guideline includes foreign currency borrowing.	No additional measures introduced.	15.6	*External Reserves* December 1980 to December 1981 + £127 million. Foreign currency lending February 1981/February 1982 was -£177.7 million.

Source: Annual Reports and *Quarterly Bulletins*. Central Bank of Ireland, Dublin.

should have had greater regard to its role of stabilisation which by now has become compromised by the present levels of borrowing.

It can, of course, be contended that, as the Irish economy has many of the characteristics of a developing economy, the role of fiscal policy should be expansionary notwithstanding the economy's cyclical position. While such an argument may have merit when conducted by reference to capital expenditure growth, it is rather difficult to see how this line of reasoning could apply to the deficit on current government expenditure which has risen from a negligible amount in 1972 to roughly half of total borrowing. Moreover, even if this view is accepted in principle a problem would still be posed by the fact that interest payments must be met on borrowed funds. Accordingly, a position of chronic deficit is not one which could be sustained within this view of fiscal policy.

Monetary Policy

It is well acknowledged that in open economies pursuing a fixed exchange rate regime and where there is near perfect capital mobility the scope of monetary policy is extremely curtailed. However, within a limited sphere the monetary authorities have pursued an increasingly activist role in recent years. (Table 30). This occurred notwithstanding the difficulties posed by the increasing imbalance of the public finances and the even greater resort to monetary financing which accompanied this development. Up to and including 1976 monetary policy was, by and large, passive in nature, seeking as it did to accommodate the demand for credit. From 1977 onwards, however, there has been a limited attempt at setting monetary targets. The Bank, although from time to time critical of developments in the government finances, has accepted these as given and focused attention on the growth in private sector credit. The earliest guideline for this aggregate, provided for an increase of 18 per cent for 1977. The stated purpose was to contribute towards an easing of inflationary pressure. The outturn – a growth in private sector credit of 26 per cent associated wth a deceleration in the rate of consumer price increase from 18 per cent to 13½ per cent – alone would have posed serious problems for continuing to operate credit policy with this objective in mind. However, this apart, it had become recognised by this time that the main adjustment to excessive credit expansion in Ireland would emerge on the external accounts, most especially through outward capital flows but also by facilitating a level of aggregate demand which would sustain a high level of imports. Accordingly from 1978, until perhaps last year, the focus of monetary policy centred increasingly on the implications of credit developments for the external reserves.

For 1978 a guideline of 20 per cent was announced. The purpose was to facilitate the Government's expansionary policies although it was explicitly recognised that such a rate of credit creation in conjunction with the prospective level of Government monetary financing could lead to a fall in reserves. However, as the level of reserves were high by reference to the number of months imports which they covered – 4.7 months at December 1977 – it was felt that some reduction could be tolerated. In the event private sector credit growth proceeded rapidly from the outset of 1978 and by May had risen at a seasonally adjusted annual rate of 34 per cent. Associated with this development was a fall in the external reserves of £240 million in the first half of the year. Liquidity conditions tightened and in having recourse to the Central Bank to meet their liquidity requirements commercial banks were faced with a penal element in the rediscount rate. In addition, the Bank tried to exercise its powers of moral suasion with the banks. However, credit growth continued to expand rapidly.

In October a supplementary guideline of 10 per cent for the six months to March 1979 was introduced. More importantly a number of positive steps were taken to moderate the growth in credit. These comprised a strengthening of the policy of rediscounting, an increase in the primary ratio of Industrial Banks, specific constraints on banks that exhibited very rapid increases in lending to the private sector, and a limit of 5 per cent on personal lending. Notwithstanding, credit exceeded the supplementary guideline by 5 percentage points. However, towards the end of 1978 exceptional factors had intervened. Prospective EMS membership was resulting in some switching of credit away from the UK to domestic sources, which boosted demand for Irish pound credit. But exceptional sales of Government securities to non-residents and other capital inflows resulted in the reserves for 1978 as a whole rising by £51 million to stand equivalent to 4.1 months imports.

The guideline for 1979 continued the objective of maintaining reserves adequacy, an aim which was regarded by the Bank as especially relevant in the context of successful EMS membership. The permitted rate of growth of private sector credit of 18 per cent in the twelve months to mid-February 1980 represented a considerable slowdown on the 33 per cent rate of increase recorded in the previous year. With a view to easing transitional problems associated with the early stages of EMS membership, especially the switching of credit lines from external to domestic sources, which would be associated with capital outflows and reductions in reserves, domestic credit based on capital outflows was exempted from the guidelines. Compliance with the guideline was largely achieved. The calling of

supplementary deposits by the Bank from commercial banks exceeding the guideline assisted the achievement of the target for credit. And the growth of foreign currency lending by domestic banks of £129 million contributed to the external reserves. Nevertheless, for the year as a whole, there was an overall fall in reserves of £277 million, equivalent to a reduction in import cover from 4.1 months at end 1978 to 2.4 months at end 1979. Indeed for most of 1979 domestic liquidity conditions were such that the commercial banks, in general, needed to have substantial recourse to the Central Bank – their indebtedness rose by over £310 million in the twelve months to December 1979 – in order to be able to maintain their lending. The principal reason for the tightness arose from the fact that the balance of payments deficit associated with the implementation of the target was significantly greater than the forecast for the external accounts on which the initial guideline was based.

In the course of 1980 the monetary authorities were concerned not to introduce a deflationary bias to economic policy but at the same time to ensure reserves adequacy. The guideline of 13 per cent which was about achieved, for the twelve months to mid-February 1981, coupled with the continuation of the exemption of foreign currency lending from the guideline, was designed so as to induce the private sector to have recourse to external financing which would support the external reserves. As economic activity slowed during 1980 so too did the private sector's demand for credit, which increased by only 4.7 per cent in the first half of the credit policy year. Interest rate differentials between Ireland and abroad favoured foreign currency borrowing which accounted for 3.4 percentage points of this increase, or £153 million. In the second half of the year demand accelerated, somewhat influenced to some extent by easing of interest rates especially from June, itself the result of easier liquidity conditions. The latter emerged as the external reserves, stable during the first half of 1980, began to rise under the influence of substantial overseas borrowing by semi-state bodies who placed the proceeds on deposits in the Dublin Inter-Bank market and continued strength of foreign currency borrowing by the private sector – in the twelve months to February 1981 such borrowing amounted to over £323.6 million. In the twelve months to December 1980 the external reserves increased by over £370 million and were equivalent to about three months imports at that date.

However, by October 1980 the Bank had become concerned at the extent to which the private sector had incurred short-run external liabilities, and, reserves considerations notwithstanding, foreign currency borrowing not arranged at that date was brought within the guideline. The 15 per cent guideline for the twelve months to February 1982 also includes foreign

currency borrowing. The inclusion of foreign currency borrowing within the private sector guideline should not, however, be interpreted as a statement to the effect that there are no further problems perceived in financing prospective balance of payments deficits. On the contrary, it appears that the Bank reached a point where a policy of balance of payments financing, supported by increased private sector foreign borrowing through the domestic banking system should be indicated to be subsidiary to a policy of balance of payments adjustment, a view which it had been advocating for some time.

The foregoing summary of the operation of monetary policy in recent years illustrates, it is felt, a rapid development in the Bank's approach and in its preparedness to develop new mechanisms of control. The Bank grappled quickly with the fact that, unlike larger closed economies, the main influence of monetary aggregates in Ireland is on the external accounts, rather than the domestic rate of inflation. Over a period when economic policy was primarily concerned to operate in the face of severe balance of payments disequilibria rather than confront this problem it sought consistently to ensure that that part of credit creation which it could influence, i.e., private sector credit, developed in a manner which contributed towards balance of payments funding. In evaluating monetary policy within this narrow interpretation there are, of course, a number of criticisms which can be made. For example, in relation to 1978 the penal element in rediscounting should probably have been resorted to earlier and to a greater extent as should the introduction of supplementary deposits. However, as both these measures were only being introduced at this time it is, to some extent, understandable that they might not be resorted to as fully as would be the case if the Bank had previous experience with such instruments. A more serious criticism would relate to the operation of credit policy over the period of the February 1979 to February 1980 guideline. In 1979 the balance of payments deficit worsened markedly, significantly more so, in fact, than the Bank had anticipated when setting the guideline. Yet even though the circumstances under which the guideline had been established had altered radically there was no attempt to adjust the guideline (downwards) in the course of 1979 in order that a less steep rundown of the reserves might be achieved. Indeed by permitting the banks to have such wide recourse to the Bank to maintain liquidity requirements the monetary authorities sterilised a tightening of credit conditions relative to the guideline provision which the falling reserves would, left to itself, have induced.

Undoubtedly, the Bank's attitude in respect of developments in 1979 was influenced by the transitional problems posed by EMS membership.

However, the experience, it is felt, points to more deep-seated problems in regard to the Bank's role in the context of demand management and the balance of payments constraint. The rapid build-up in short-run external liabilities through private sector foreign borrowing, in the course of 1980, and the inclusion of such borrowing within the credit guidelines from October of that year, is evidence of the Bank's dilemma, even though the counterpart of these borrowings was higher external reserves, than would otherwise have been the case. The fundamental issue relates to the inadequacy of a simple target for the official external reserves as an objective of policy in relation to external balance. The shortcomings are easily illustrated. First, the current balance of payments deficit in relation to GNP has risen sharply over the period when monetary policy was most active, from 2.8 per cent in 1977 to around 13½ in 1981, well above what could be regarded as sustainable over the medium term. Second, the evolution of public finances and the manner of their financing (Table 31) reveals that external borrowing by the Exchequer alone has grown to such an extent that its external liabilities exceeded official external assets by 153 per cent at end 1981. If in addition the external position of semi-State bodies were included as official the position would be worse. In these circumstances the notion of reserves as representing an external asset disappears. Finally, the servicing costs, in terms of interest alone, on these external borrowings have themselves reached a level where they impose a drain on the balance of payments in 1981 of at least £315 million, almost 3 per cent of current GNP.

Most commentators, including the Central Bank, have advocated a policy of balance of payments adjustment rather than attempting to finance an unsustainable external deficit through official external borrowing and induced private foreign funding. The appropriate focus of monetary policy in such a context should be the concept known as Domestic Credit Expansion (DCE) rather than the narrower aggregate of private sector credit.* It is possible to illustrate simply the reasoning underlying this contention using the balance sheet defining the consolidated banking system (Table 32).

*For a discussion of this view, see, for example, O'Leary (1970) and Kelleher (1980).

Table 31: *Summary of Budget Transactions and Government Debt 1974-1981*

	1974[1]	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*
Current budget deficit (£ million)	94.9	258.8	201.4	201.0	397.0	522.0	547.0	802.0
(as per cent of GNP)	3.1	6.9	4.4	3.7	6.2	7.1	6.4	7.8
Exchequer borrowing (£ million)	358.3	601.1	505.6	545.0	810.0	1009.0	1217.0	1722.0
(as per cent of GNP)	11.9	16.0	11.1	10.0	12.6	13.6	14.2	16.8
Proportion of exchequer borrowing externally financed	44.6	27.2	64.0	22.2	34.9	45.5	47.9	72.9
Total external government debt outstanding. End Year, (£ million)	360.0	566.6	1039.5	1038.8	1063.9	1542.4	2206.8	3725.0
Official external reserves End Year (£ million)	495.4	676.0	955.5	1200.7	1251.9	974.7	1346.0	1473.0
Months import cover	3.7	4.9	5.0	4.7	4.1	2.5	3.0	2.7
Ratio of foreign debt outstanding to reserves	0.73	0.84	1.09	0.87	0.85	1.58	1.64	2.53

[1] 1974 comprises one quarter 1973/74 plus April-December 1974

Sources: Budget Statements, Stationery Office, Dublin
Quarterly Bulletin, Central Bank of Ireland, Dublin

Table 32: *Consolidated Balance Sheet of the Banking System (£ million)*

	31 December 1980	*31 December 1981*
Liabilities		
1 Currency	660.4	737.3
2 Current Accounts	831.2	877.1
3 Deposits	4447.7	5415.5
MONEY SUPPLY (M3)	5939.3	7029.9
4 Government Deposits	138.2	129.9
5 Net External Liability	879.2	961.3
6 Acceptances	16.2	15.1
7 SDR Allocation Account	36.5	47.2
8 Capital and Reserves	688.7	962.3
9 Other Liabilities	645.7	705.9
TOTAL	8343.8	9851.6
Assets		
10 Non Government Lending	5050.7	6053.6
11 Government Lending	1465.7	1602.7
12 Official External Reserves	1346.0	1473.1
13 Premises	142.1	187.8
14 Other Assets	339.3	534.4

Source: Annual Report 1982. Central Bank of Ireland, Dublin.

According to this:

$$M3 = NGL + BLG + R - NNDL - NEL \quad (1)$$

where M3 is the broad money supply (items 1 + 2 + 3);

NGL is bank lending to non-government sector (item 10);

BLG is bank lending to government adjusted for changes in government deposits with the Central Bank (items 11 – 4);

R is the external reserves (item 12);

NNDL are net non-deposit liabilities of the banking system

(items 6 + 7 + 8 + 9 – 13 – 14);

and NEL is the net external liability of domestic banks (item 5).

Consider changes in the variables in (1)

i.e., $$\Delta M3 = \Delta NGL + \Delta BLG + \Delta R - \Delta NNDL - \Delta NEL \quad (2)$$

The change in reserves (ΔR) is itself given as follows

$$\Delta R = BOP + GEB + PCI + NEL \quad (3)$$

where BOP is the current balance of payments position

GEB is Government external funding

PCI is non-bank private sector capital inflows and

NEL is the net external liability of licensed banks.

Now substituting (3) into (2) gives

$$\Delta M3 = \Delta NGL + \Delta BLG + GEB - \Delta NNDL + BOP + PCI \quad (4)$$

or with $DCE = \Delta NGL + \Delta BLG + GEB$

$$\Delta M3 = DCE - \Delta NNDL + BOP + PCI \quad (5)$$

where DCE stands for domestic credit expansion and is equal to bank lending to the non-government sector plus monetary financing of the Exchequer.

According to this the change in the money supply is identically equal to the level of DCE net of non-deposit liabilities and the position on the current balance and private capital accounts of the balance of payments. In these circumstances if there is a desired balance of payments objective in relation to the private capital account, for example, that the former should be capable of being financed by the latter, this implies that the growth in DCE must be equal to that which can be financed by the rise in the money supply and the increase in net non-deposit liabilities.

However, given that this has not been the approach it is not surprising that the recent experience (Table 33) has been in marked contrast to these conditions. DCE net of changes in net non-deposit liabilities has been much greater than the growth in M3, and increasingly so, associated with which there has been a marked deterioration in the current balance and a sharp rise in net foreign liabilities of Government and banks.

While it may be clear from the above analysis that a DCE target would be the most appropriate to monitor an economy seeking to adjust to a sustainable balance of payments position a number of qualifying remarks need to be made. In the first instance the formulation contained above represents balance sheet identities and as such say nothing of the behaviour pattern which underlies them. Thus setting a DCE target to achieve a balance of payments deficit which could be financed by long-term private capital inflows says nothing about how the domestic economy will adjust to the target. For example, attempting a DCE target in the face of continuing growth of monetary financing of the Exchequer would imply a massive deflation of private sector demand with, *ceteris paribus* severe

Table 33: *DCE, Money Supply and the Balance of Payments (£ million) 1975-1981*

Year to December	*Bank lending to non-Government sector (Change)*	*Bank lending to Government*[1] *(Change)*	*Government external financing*[2]	*Domestic credit expansion*	*Net non-deposit liabilities (Change)*	*Government and bank net foreign borrowing*[3]	*Current balance of payments*	*Non-bank private capital inflow*[4]	*M3 (Change)*
	(1)	*(2)*	*(3)*	*(4) = (1) + (2) + (3)*	*(5)*	*(6) = (7) + (8)*	*(7)*	*(8)*	*(9) = (4) − (5) + (6)*
1975	236	79	254	569	82	−96	−6	−90	391
1976	381	−38	324	667	175	−136	−157	+21	356
1977	535	82	121	738	148	−110	−155	+45	480
1978	881	189	283	1353	127	−271	−200	−71	955
1979	875	215	459	1549	−7	−761	−727	−34	795
1980	700	299	583	1582	159	−528	−700	+172	895
1981	1003	145	1255	2403	103	−1210	−1310	+100	1090

[1] Net of changes in Government deposits with the Central Bank. Minus denotes net increase in Government deposits.
[2] Government foreign borrowing plus sales/purchases of securities to/from non-residents.
[3] Government and bank net foreign borrowing refers to Government external financing less the change in the official external reserves, and the change in the net external liability of licensed banks respectively. Minus denotes net borrowing.
[4] Defined as change in the official external reserves less current account balance less Government external financing less net foreign borrowing by banks.

Source: Budget Statements, Stationery Office, Dublin.
Quarterly Bulletins, Central Bank of Ireland, Dublin.

consequences for the level of employment. And even with a high degree of co-ordination of fiscal and monetary policies there would be a costly adjustment of the domestic economy unless accompanied by positive policies to deal with structural aspects of the current external disequilibrium. However, unless such a co-ordinated approach, accompanied by the appropriate policies to encourage switching of resources into the export sector is pursued, the monetary authorities will continue to be constrained in their potential role in regard to assisting the achivement of external balance.

Incomes Policy

A major difficulty with evaluating incomes policy arises in regard to choosing the appropriate criteria against which performance is to be measured. The Agreements themselves are not very helpful in this regard. Even the National Understandings dating from 1979, which attempted most fully to harmonise pay awards with other aspects of economic policy were imprecise as to the perceived role of pay policy in the context of the overall demand management stance. This is not surprising given the institutional framework within which successive national pay deals have evolved. That framework arose following rapid growth of pay in the wake of the craftsmen's dispute of 1969. It is based on free collective bargaining in which two parties have predominated: employers (including government as employer) and employees. Unlike some other countries, where centralised bargaining has developed more fully, the central organisations of the social partners are not responsible for the enforcement of the terms of particular agreements. This has enabled a "two-tier" system to develop involving, in addition to the basic terms of agreements, local bargaining for further increases, often, it needs to be stressed, falling within the broad terms of national negotations but sometimes lying outside these. This aspect represents a further complication when attempting to evaluate performance.

The first significant effort by Government, as manager of the national economy, at concerting the focus of the social partners came in 1976 when it was agreed in Clause 22 of the interim Agreement for that year that as a preliminary to negotiations in the Employer-Labour Conference both sides would participate in discussions with members of the government on economic and social strategy for the following two years. The discussions commenced with a Tripartite Conference in September covering the availability of resources, employment, welfare, prices, public revenue and expenditure and all forms of income. While the discussions proved abortive they established the notion of what could be termed as "integrated" pay

Table 34: *A Summary of National Pay Awards 1974-1980*

Year	*(months) Duration*	*Phase*	*Pay Increase*
1974	12 January 1974 -March 1975[1]	1 (6)	Either 9 per cent on the first £30 of basic pay, 7 per cent on the next £10, 6 per cent on the next £10 and 5 per cent on remainder, together with 60p a week *or*, if greater £2.00 a week.
		2 (6)	3½ per cent plus 60p a week (there was a cost-of-living threshold increase amounting to 1 per cent for every 1 per cent rise above 10 per cent in the CPI between November 1973 and November 1974. (The increase amounted to 10 per cent)
1975	12 April 1975 - March 1976	1 (3)	8 per cent (i.e., CPI increase November 1974 to February 1975). Minimum increase £2
		2 (3)	Amount of CPI increase February to May 1975, subject to a minimum increase of 4 per cent and a maximum of 5 per cent. (Increase payable was 5 per cent, the CPI rose by 6.1 per cent over the period.) Minimum increase £1.
		3 (3)	Amount of increase in CPI between May and August 1975. (No increase payable, the CPI falling by 0.1 per cent as a result of subsidies introduced as part of a supplementary budget introduced in June)
		4 (3)	Amount of increase in CPI between August and November 1975 (Increase payable 2.8 per cent.)
1976	7 April 1976 - October 1976	–	3 per cent of basic pay plus £2 per week, subject to a maximum of £5 per week *or* £3 per week if greater.
1977	14 November 1976 -December 1977	1 (10)	Three months pay pause followed by 2½ per cent of basic pay plus £1 per week, subject to a minimum of £2 and a maximum of £4.13 per week.
		2 (4)	2½ per cent of basic pay plus £1 per week subject to a minimum increase of £2 and a maximum of £4.23 per week.
1978	15 January 1978 - March 1979	1 (12)	8 per cent of basic pay or £3.50 per week.
		2 (3)	2 per cent of basic pay.
1979[2]	15 April 1979 - June 1980	1 (9)	9 per cent of basic pay subject to a minimum of £5.50 per week.
		2 (6)	2 per cent plus 1 per cent for each 1 per cent rise in the CPI above 7 per cent between November 1978 and November 1979, subject to a maximum of 5 per cent. Thereafter, 60p for each 1 per cent rise in the CPI above 12 per cent between November 1978 and November 1979 subject to a maximum increase of £2.40 *or* £3 per week if greater. (The rate of increase in the CPI between November 1978 and November 1979 was 16 per cent. The amount payable was about 10 per cent.)
1980[2]	15 July 1980 - Sept. 1981	1 (9)	One month pay pause followed by 8 per cent of basic pay plus £1 per week.
		2 (6)	7 per cent of basic pay. In the event of the CPI figure for the period May 1980 to February 1981 exceeding 10 per cent the Employer Labour Conference undertook to meet to examine the position.

[1] The Agreement nominally lasted for 12 months but agreements starting between 1 January 1974 and 31 March 1974 remained in force until 31 March 1975. Employees covered by such agreements were compensated by the payment of lump sums ranging from £40 to £80.

[2] Over and above the purely pay provisions both National Understandings also contained commitments in relation to job creation targets and in both cases provided specific measures to assist in the achievement of these targets. In addition both understandings provided for additional Government expenditures in the areas of health and social welfare.

Source: *National Pay Agreement* (successive issues)
National Understanding for Economic and Social Development (successive issues)
The Wage Rounds: A Summary, FUE, December 1981.

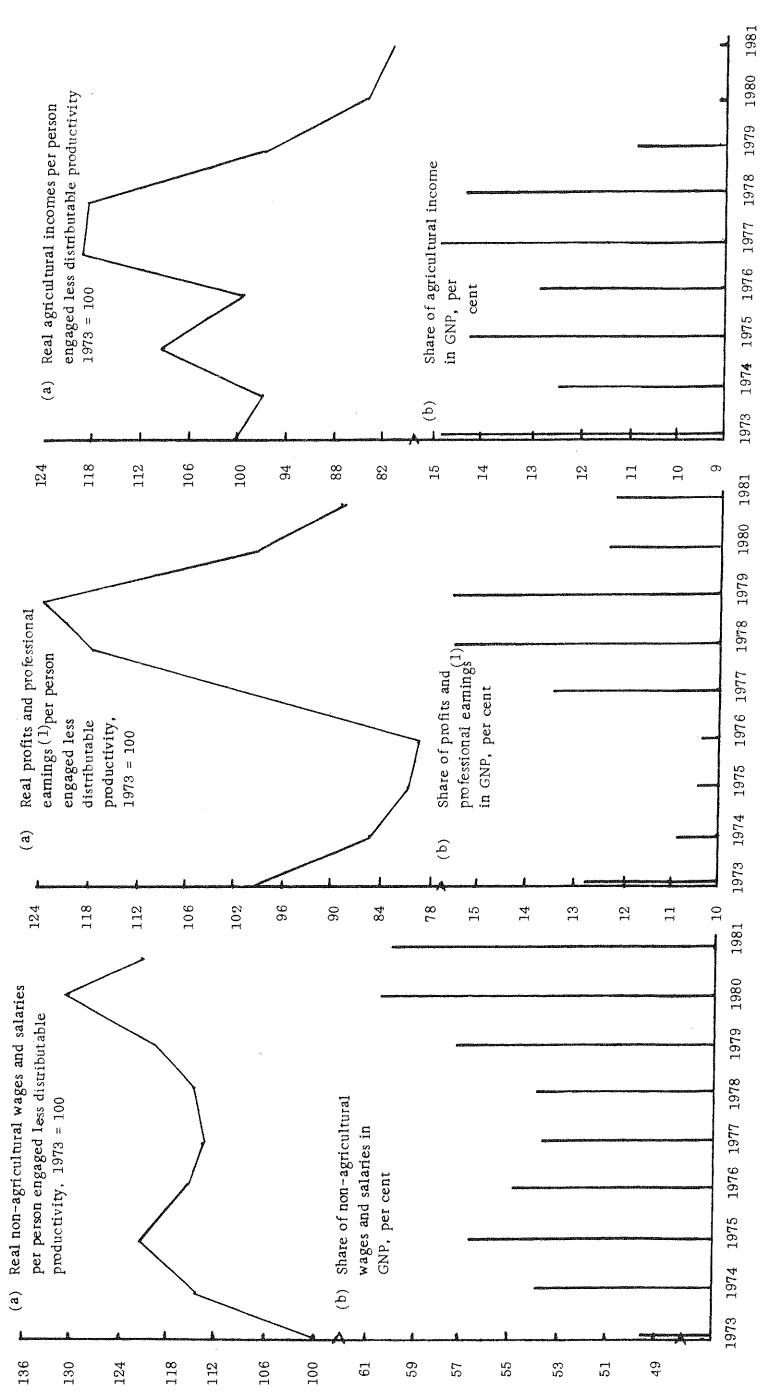
deal. This idea was pursued in 1979 and again in 1980 with the negotiating of *National Understandings for Economic and Social Development*. These sought to provide an integrated programme in the areas of employment, pay, taxation and social expenditure.

However, the role of pay policy in relation to securing the broad objective of demand management policy – growth and employment creation, subject to balance of payments, inflation and public finance constraints, was not articulated. Rather the pattern of pay was to be determined by reference to criteria which sought to compensate wage earners fully for rises in the consumer price index, make additional provisions in respect of productivity, or "other local special factors" and lower-paid workers. The same criteria, however, operated under the 1974 and 1975 Agreements. It does not, therefore, appear that the instigation of the more integrated National Understandings had any significant impact on the criteria used to evaluate pay increases compared with the earlier 1974-1975 Agreements.

Indeed compared with the National Pay Agreements of 1976-1978, none of which contained indexation provisions, the approach under the National Understandings would appear to simply reflect a reversal in the stance of policy from one in which there was greater emphasis placed on containing cost increases to one which, once again, stressed the importance of maintaining living standards. In examining performance here, the most useful perspective may be to evaluate the implications of the timing of these shifts in emphasis and their appropriateness. In Chapter 5 the issue of incomes policy is dealt with further but there the analysis focuses on associating pay developments with various institutional experiences in different countries.

The 1974 NPA proved considerably more difficult to negotiate than its predecessors given the background of accelerating inflation. It was for this reason that indexation provisions were introduced. But, as already discussed, that year saw a major shift in Ireland's terms of trade. As (adverse/favourable) movements in the terms of trade represent a real transfer of resources (to/from) abroad they are akin to shifts in productivity effectively reducing or boosting the nation's command over real resources. The manner in which these effects get transmitted to the domestic economy centres on domestic price movements. As the terms of trade move unfavourably import prices accelerate beyond the rate of increase in export prices. This faster rate of increase induces an inflationary impulse to the domestic economy as higher import prices feed through primarily to the prices of final demand components. This leads to a reduction in the real purchasing power of income, effectively until real income is reduced in line with real resources. But clearly if one group insulates itself from such movements

DIAGRAM 8 REAL INCOME PRODUCTIVITY AND FACTOR SHARES 1973 - 1981



(1) Adjusted for stock appreciation and financial services

Source: National Income and Expenditure 1979, Stationary Office, Dublin.

the burdens of adjustment elsewhere in the economy will be greater. An attempt to portray these mechanisms has been made (Diagram 8). The approach used involves relating the per capita real income of non-agricultural employees, non-agricultural employers and self-employed and income earners in the agricultural sector to the broadest definition of productivity i.e., GNP adjusted for the terms of trade, per person engaged. In deriving real income the GNP deflator, which reflects the price movements of all domestic output, would seem to be the most appropriate since this analysis is focusing on the shares of national output being appropriated by various groups of income earners.

It appears from this analysis that the real income of non-agricultural wage and salary earners grew relative to overall productivity growth from 1973 to 1975, declined slightly thereafter to about 1978 and accelerated again until last year. The coincidence of indexation provisions in National Pay Agreements to CPI movements with adverse movements in the terms of trade are probably an important influence in explaining this pattern. Such movements as already noted will directly result in accelerating consumer price inflation and will simultaneously reduce productivity growth. If wage and salary income is indexed to these rates of price increase then, to the extent that the consumption deflator rises faster than that of total output, this category will experience an increasing command over domestic resources. Moreover the fact that, at the same time, these resources will be being diminished by the terms of trade effect will tend to reinforce the growth of real wages and salaries per person engaged relative to other categories of output producers whose income is not insulated against terms of trade movements by indexation arrangements. The pattern of real income growth of non-agricultural employers and self-employed and agricultural income earners is broadly in line with this expectation. As the real wage productivity gap widened after 1973 there was a downward adjustment of real non-agricultural profits and professional earnings relative to overall productivity. They continued to rise in 1979 even though real wages and salaries relative to productivity expanded, but in that year real agricultural incomes fell significantly. In 1980 the continued growth of real wages and salaries relative to overall productivity was associated with falls in the real income of the other categories relative to overall productivity.

The share of income of each of the categories in GNP (Digram 8, lower panel) follows closely the pattern of real wage/income in relation to productivity. By 1980 the share of non-agricultural wages and salaries had risen to a peak of almost 61 per cent compared with just under 50 per cent in 1973 and probably fell back slightly in 1981. Profits and professional

earnings as measured over the same period remained about the same, declining from 12.8 per cent to 12.5 per cent while the share of agriculture fell from 14.8 per cent to 9 per cent. The implications of these developments are less easy to identify than the mere description of the pattern. There would have been a more significant adjustment to the income shares of employers and self-employed and the agricultural sector had the share of net taxes on expenditure not declined as it did from 13.7 per cent to 9.9 up to 1980 (although this was partly reversed last year to about 11¾ per cent) and had net factor payments abroad not risen as they did by 3 percentage points of GNP (i.e., had the Government not undertaken the foreign borrowing which it did). To the extent that fiscal policy had these effects it mitigated to a degree the consequences which the growth of non-agricultural wages and salaries would have had. Nevertheless, it seems fair to say that the development of factor shares has been in a manner which encouraged the maintenance of existing household spending patterns rather than encourage a switch in resources to investment which might have contributed to a reduction in the external imbalance by simultaneously reducing imports and increasing export potential. It also seems plausible to suggest that the squeezing out of profits in periods when the terms of trade effect has been adverse would have tended to be inimical to a policy of employment maintenance. Of course, it is recognised that of itself a shift in favour of profits is no guarantee of additional investment is of the type required to generate additional exports. Specific policy measures might be required to assure that outcome. But it is hard to conceive of how such a shift could be achieved in the face of a falling profit share.

An obvious question thrown up by the analysis would appear to be whether or not the appearance of indexation provisions in National Pay Agreements during periods when the terms of trade were moving unfavourably is coincidental or not. To judge from the circumstances of the negotiations leading up to the 1974 NPA it appears that a number of factors favoured the development of indexation from the standpoint of both parties. From the viewpoint of Unions the background of accelerating inflation and diminishing real growth made the idea of full proportional* indexation (fixed* indexation provisions had already been contained in the 1970 and 1972 NWAs) an attractive one. For employers the same prospects, and the attendant fear that these circumstances could lead to a wages explosion together with the fact that indexation would only

*Fixed indexation is defined as a fixed cash increase per percentage point rise in the price index. Full proportional indexation is defined as giving a one for one percentage point wage increase for each one per cent increase in the price index. (See O'Brien 1981).

apply above a threshold – 10 per cent – and would be payable *ex post* secured their acceptance. Secondly, as O'Brien (1981) notes, by 1974 a substantial measure of coincidence of termination dates had been achieved which enabled a common indexation base period for all bargaining groups to be used, thus facilitating the implementation of such provisions. It thus appears that for 1974 at any rate the move to proportional indexation was seen by all parties to facilitate the orderly development of wages at a time of accelerating domestic and international inflation. The issue of the appropriate price index or terms of trade effect was not discussed in regard to the question of indexation.

The matter was rather different in 1975. A discussion document circulated to a special delegate conference of the ICTU in December 1974 contained a number of propositions which influenced Unions' attitudes to indexation. First it stated that:

> . . . the escalator clause neutralised the effect of wage increases on inflation . . . and avoided the necessity to secure in wage increases either advance compensation for future price increase, which were incalculable, or compensation for past price increases, which had already become part of the existing pattern of income distribution (See O'Brien (1981), p. 97).

Second, it urged rejection of the propositions that import price effects should be ignored for the purpose of indexation. Third, it used the term "conflict inflation" to describe the current inflationary environment on the grounds that it reflected intersectoral pressure for increased incomes shares. The latter, it noted, arose from the oil producers' policies and from the levelling up of Irish agricultural prices to European levels (i.e., movements in the terms of trade). Last, it argued categorically that there should be no retreat from the full indexation achieved in the final stage of the NWA 1974. These statements indicate clearly an awareness of the nature of the terms of trade problem at the time it was occurring and of a stance which rejected the possibility of wage earners bearing any part of the real income adjustment which was implied. What is most surprising though, is that this stance was effectively acceded to in the 1975 NWA which provided for *ex post* indexation at quarterly intervals even though the escalator payment under the NWA 1974 amounted to 10 per cent. O'Brien (1981) quotes from the FUE's Annual Report for 1975 which cites its reasons for acceptance as follows:

> The concept of indexation which found expression in the NWA 1975 was implicit in the policy enunciated by the Government in

its November 1974 White Paper (*A National Partnership*). The Central Bank also suggested though in a different context, that pay increases of the same order of magnitude as price increases in the previous quarter could gradually reduce the rate of price inflation (See O'Brien (1981), p. 119).

While the action of employers is ultimately a matter for themselves it does appear that the Government's commitment to retaining the concept of NWAs conflicted with the adjusting of income shares. The result was to further reinforce the tendencies of 1974 and to increase the task of bringing about a distribution of income which would have been more in keeping with the achievement of positive adjustment to the loss of output implied by the unfavourable shift in the terms of trade.

After 1975 Government policy changed, a process of adjustment in income growth did occur and by 1978 this had resulted in a marked increase in the share of entrepreneurial income and although the wage share had fallen from its peak of 1975 it too was well above the 1973 level (Diagram 8) while the share of agriculture was only slightly less than in that year. The return in the National Understanding of 1979 to indexation – which comprised a combination of provisions giving proportional and fixed cover against certain rates of increase in the CPI – was not motivated by any anticipation of a further terms of trade loss which might occur. Rather its inclusion was aimed at securing a pay deal which it was felt was consistent with the Government's inflation target of 7 per cent for the year. The fact that the second oil price shock occurred with its attendant further deterioration of the terms of trade at a time when the pay provisions of the National Understanding contained a degree of indexation was fortuitous.

The responses to this second episode of a deteriorating terms of trade position can really only be judged from the behaviour under the subsequent National Understanding. Its reference to indexation was, in the end, non-committal, simply stating that if inflation exceeded 10 per cent between May 1980 and Feburary 1981 the Employer Labour Conference would meet to examine the position. This was agreed, however, only after the most protracted negotiations which included two breakdowns and two Government interventions. In the event while inflation exceeded the above limit no further payments were agreed to within the framework of the negotiated Understanding.

What emerges from this brief analysis is that the terms of trade effect and its implications have been understood by the parties to successive wage negotiations since 1974. Despite this little in the way of a consensus

as to the appropriate manner by which income shares should be adjusted in periods of recession, induced by external price shocks, emerged. Viewed from this perspective it is felt that perhaps the greatest prospect offered by central pay bargaining: the opportunity to achieve positive adjustment to external imbalance in the context of achieving national economic objectives did not materialise.

Chapter 5

INCOMES POLICY: SOME CROSS COUNTRY PERSPECTIVES

Introduction

The previous part presented an appraisal of incomes policy as articulated in Ireland throughout the last decade. Here the scope of the discussion is broadened somewhat to embrace the experience of a selected number of other OECD countries with incomes policy during the 1970s. To this end we examine, on the one hand, the institutional characteristics of such policies and, on the other, the extent to which they have been successful as judged by a common set of criteria. Drawing together these two strands of the analysis we outline some conclusions regarding the relationship between them. Specifically we address ourselves to the question of whether the success of incomes policies (where they have been successful) owes anything to the institutional basis on which they have been grounded and, if so, which institutional features in particular have been most conducive to the achievement of that success.

It should be emphasised at the outset that the analysis is primarily conceived as a contribution to the ongoing discussion of incomes policy in Ireland and as such is designed to identify the broader relationships between the relevant data as an aid to policy prescription and design rather than to quantify meticulously the conduits and parameters of causation. Much of our analysis therefore is exploratory and suggestive in nature. Moreover our conclusions are tentative ones and are aimed at providing a framework within which a broad strategy for incomes policy might be evolved, rather than a detailed and definitive summary of cause and effect.

There are a number of reasons for submitting such a cautious evaluation

of what follows. The most important and fundamental of these resides in the fact that our analysis attempts to correlate data of a numerical kind (primarily, the relationship between real wages and productivity) with data of an essentially qualitative kind concerning the institutional features of incomes policies. Whereas the former set of data is amenable to objective quantification and subject only to errors of measurement and errors arising from data deficiencies, the latter data are not quantifiable in anything like the same sense and are subject to errors of judgement and interpretation. Any attempt to correlate the two sets of data is consequently a problematical exercise and our own attempt to do so must be viewed in the light of these comments.

Another reason for striking a cautionary note springs from the level of aggregation at which the analysis is carried out. In what follows we focus exclusively on the economy as a whole. Obviously a very high degree of aggregation is involved here and this in itself subjects the analysis to some shortcomings which are elaborated on in the main body of the analysis. Furthermore by focusing on the macro-economy, developments at the sectoral level are not analysed. To the extent that different sectors of the economy are characterised by different adjustment processes to the real wage – productivity relationship an analysis which subsumes such intersectoral differences in a broad level of aggregation may ignore important facets of the income distribution process. This again is a point which we elaborate on in a later section. However, it is not a problem which is within the ambit of this paper to resolve.

Conceptually we may usefully distinguish between three elements involved in the development of an incomes policy. The first of these is the identification of policy objectives. The second is the framing of a set of rules or guidelines for governing the evolution of incomes and the third element concerns devising a set of institutions the purpose of which is to operationalise the guidelines. The content of this part embraces these three elements and its organisation is as follows. First the principal objectives of an incomes policy, with particular emphasis on locating such a policy in a growth context, are identified. Next, a model of functional income distribution is developed in some detail. This is intended to serve the dual purpose of providing a set of guidelines for the evolution of factor incomes at the aggregate macro-level and providing a set of criteria for evaluating the performance of the 10 OECD countries covered. The model itself revolves around the relationship between real wages and productivity. Then the discussion is extended to treat of the various adjustment mechanisms which come into play if the guidelines posited by the model are not in fact followed. Following this we present and analyse the empirical evi-

dence for the countries surveyed. Then we discuss the institutional features of incomes policy and draw up a crude typology of incomes policies as pursued in the 10 countries. Finally we present our conclusions on the relationship between the institutional features of incomes policies and economic performance.

The Objectives of Incomes Policy

An incomes policy may be deployed towards the attainment of any subset of a great number of economic or social objectives, although perhaps with varying degrees of plausibility. The most enduring feature of incomes policies, however, is that they represent concerted attempts to alter the pattern of income distribution from what it would otherwise be. Generally speaking, therefore, whatever other targets it may aim at, an incomes policy will typically seek to secure a more equitable inter-personal distribution of income and/or attain some desired structure of income distribution as between the two principal factors of production, labour and capital. In this discussion it is the latter distributional goal which will command our attention.

Pre-occupation with the functional distribution of income is readily rationalised. Basically it springs from a recognition that the achievement of sustained economic growth requires the process of income distribution between labour and capital to generate a sufficiently large surplus over and above labour and raw material costs which is available to expand the productive capacity of the economy. In an essentially capitalist economy the surplus is called profit. In a centrally planned or labour-managed economy the nomenclature is different. Whatever its name, the magnitude of this surplus will be an important determinant of the amount of investment undertaken which in turn provides the locomotive of economic growth and the means for expanding employment.

Notwithstanding the long-run implications for the realisation of macro-targets of the outcome to the income distribution process, the two main protagonists in that process, trade unions and employers, will typically have divergent and, in the former case, shorter-term objectives. Trade unions are typically interested in safeguarding if not improving the living standards of their members. Employers if not concerned with profit maximisation in the short-term are interested in maintaining/improving the competitive position of their firms and in bringing about wage restraint as a means of doing so. The process of wage and salary determination, therefore, is primarily a struggle over factor shares between labour and capital, the outcome of which determines the extent of realisation of the

broader macro-objectives already alluded to. There is reason to believe that an income determination process which is the exclusive preserve of trade unions and employers will yield an outcome which depends largely on their relative bargaining strengths and which therefore, only fortuitously serves the objectives of increasing output and employment or reducing inflation.

The argument above would suggest that the process of functional income distribution left to itself may not generate an investible surplus of sufficient magnitude to provide for steady and rapid growth of the economy. Indeed the pattern of distribution which emerges may lead to underemployment of resources, particularly labour, high rates of inflation and sluggish or sub-zero growth. The adoption of incomes policy as a means of regulating factor shares is motivated by the desire to avoid such outcomes and is informed by the acknowledgement that there exists "an interdependence between the growth of output on the one hand and the distribution of income between wages and profits on the other . . ." Kregel (1979). Moreover a central issue which needs to be confronted in designing an incomes policy is the question of how an awareness of this interdependence and, in particular, an awareness of how the achievement of macro-objectives is facilitated or hindered by the outcome of the struggle over factor shares, can be grafted onto the incomes determination process. We return to this question later in our discussion of institutional features.

Although the key criterion for determining the success of an incomes policy must ultimately be the extent to which it contributes to economic growth at high levels of resource utilisation two shorter term ancillary criteria have also been identified. They are the degree in which the policy (a) improves the living standards of employees and (b) minimises cost increases and thereby maintains or improves the cost competitiveness of firms. Bearing these two considerations in mind permits us to focus on the role of government.

The government may decide to reconcile the otherwise intractable conflict between competitiveness maintenance and standard-of-living maintenance by reducing taxation. In the event of such a tactic being unaccompanied by a reduction in government expenditure, its adoption will mean that labour market peace is purchased at the expense of an increased budget deficit and a deterioration in the balance of payments. Neither of these outcomes can be considered desirable in the context of the overall objectives of expanding the productive capacity of the economy and achieving sustained economic growth since neither advances these objectives. Fiscal concessions on the part of a government faced with the alternative of industrial unrest represent nothing more than a transferring of the adjust-

ment problem to the public sector. Moreover in as much as the problem is resolved by increasing public sector indebtedness the solution must eventually be financed out of increased taxation. Consequently any definition of the "success" of incomes policy should be broadened to preclude the emergence of either an increased budget deficit or a deterioration in the balance of payments on foot of the government's input into the incomes policy.

The foregoing discussion strongly implies that the improvement of industrial relations or the maintenance of labour market peace cannot properly be regarded as the ends of incomes policy although they may provide a means towards the attainment of those ends. Specifically the deployment of fiscal concessions as a device designed to facilitate moderation in wage settlements provides only a temporary respite and contributes nothing to permanently increasing the investible surplus discussed earlier.

So far we have discussed the role of incomes policy in ensuring that the income distribution process generates a sufficiently large investible surplus. However, it must be recognised that the existence of such a surplus does not necessarily guarantee that it will be productively invested. Wage moderation, all other things equal, will increase profitability but the additional profits may be distributed in dividends or directed towards other areas where they do not contribute to expanding productive capacity. Consequently an incomes policy may need to incorporate mechanisms whereby this outcome is avoided. As Kregel (1979) contends "a wages policy cannot be justified independently of an investment policy to assure the full utilization of the economy's productive capacity and labour force". In sum, even assuming that wage moderation necessarily increases profitability (a proposition which involves making fairly restrictive assumptions about raw material costs, non-wage labour costs and so on) such moderation is not a sufficient condition for increased investment and productive capacity. In so far as these are the ultimate aims of an incomes policy such a policy must ensure that the conduit of causation runs not just from wage restraint to profitability but right through to the undertaking of productive investment projects.

Real Wages and Productivity

Having outlined what we consider to be the appropriate objectives of incomes policy we now seek to identify a set of guidelines for the evolution of factor incomes which would best serve these objectives.

As our point of departure we select a very simple model of factor income distribution at the industry or sectoral level which we subsequently

modify in the light of certain shortcomings. It is intended to develop this modified model for the economy as a whole, at which aggregate macro-level it provides us with a ground-rule for the evolution of factor incomes and a criterion by which to evaluate the performance of the 10 OECD countries which we discuss later.

The simple model in question focuses on the relationship between real wages and productivity and proposes that to maintain equality of growth between profits and wages (constancy of factor shares), money wages per employee must increase in accordance with the growth of productivity and the growth of output prices. In algebraic terms, the following relationship should hold:

$$\hat{w} = \hat{p} \cdot \hat{q} \quad (5)$$

where w represents average nominal wages, p the price of output and q productivity. The symbol $\hat{}$ over a variable indicates the ratio of the variable's value in the current period to its value in the immediately preceding period. Manipulation of equation (5) allows us to express the relationship in two alternative ways: real wages should grow in line with productivity ($\hat{w}/\hat{p} = \hat{q}$) or, unit wage costs should grow in line with the price of output ($\hat{w}/\hat{q} = \hat{p}$).

The relationship embodied in equation (5) may be regarded as providing both a positive and a prescriptive theory of factor shares. It qualifies as a prescriptive theory to the extent that it identifies the "scope that exists for wage increases, that "scope" being predicated on the proposition that maintaining constancy of factor shares between labour and capital is the "desired" outcome of the wage determination process. Such an outcome may be the desired one on the grounds that its attainment minimises labour market conflict or obviates the adjustments to prices and employment which other outcomes necessitate, or because it generates a level of profitability or investible surplus which is in some sense optimal from the point of view of continued economic growth. With regard to the latter point it should be emphasised that the relationship between factor shares and economic growth will depend upon the precise nature of the underlying production function faced by the economy. This is not a topic which we address in the paper.*

*It is important to distinguish between the share of profits in total factor remuneration and the return on capital. In effect the definition of profitability implicit in factor share analysis is "profit per unit of output" which is the product of the rate of return on capital (r) and the capital-output ratio ($\frac{K}{Q}$). From the point of view of providing an incentive for investment and thus generating sustained economic growth the

It is, however, as a positive theory that the simple model outlined above is richest in inferences. For the model, as a positive theory, postulates that if wage increases are *ex ante* greater than productivity growth and the growth in output prices certain adjustments will take place to bring about equality between the two sides of the equation. Firms will either increase the price of their output, thereby reducing the growth in the real wage ($\hat{w}/\hat{p}$) or they will shed labour in an attempt to induce an endogenous increase in productivity. Either way constancy of factor shares will be restored, the difference now being, of course, that the restoration of this equilibrium will have occurred at the expense of either a higher rate of inflation or a lower level of output, or a combination of both. Under these circumstances the original wage settlement will not be conducive to the maintenance of full employment of existing resources nor will the level (as distinct from the share) of profits that emerges be sufficient to finance a high and steady level of economic growth through investment.

In summary then the model proposes not that wage settlements should be reached which have the effect of bringing about the same rate of growth in the income accruing to labour and capital respectively (since the inevitable restoration of equilibrium guarantees this outcome anyway) but that wage settlements should be reached which bring about constancy of factor shares at an increasing rate of resource utilisation.

We now turn our attention to refining the simple model to capture the influence of variables which it ignores and to extend its use to the aggregate macro-level. Three principal modifications are called for: (a) the definition of wages; (b) the incorporation of raw material costs; (c) the definition of productivity and the appropriate measure of employment to be adopted. These issues are now discussed in turn.

(a) The Definition of Wages

Wages and salaries represent both a cost of production and the income received by labour. Typically, however, no precise symmetry exists between the costs directly incurred by firms in employing labour on the one hand, and the remuneration received by employees on the other. This asym-

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relevant variable is r. However it is not possible to draw inferences about the evolution of r from information on the functional distribution of income alone – information on the capital-output ratio is required also. Thus a decline in the profit share in total factor remuneration does not necessarily mean that the rate of return on capital has declined. However Sachs (1979) presents evidence which indicates clearly that profitability as measured by r moved in close parallel with factor shares over the 1962-76 period for all economies surveyed.

metry is compounded when the nominal magnitudes are converted into real terms.

From the point of view of employers w in equation (5) should be defined as nominal *labour* costs per employee. As such it should ideally include all non-wage labour costs incurred by employers. In practice, however, many of these costs are either difficult to identify or not readily quantifiable. For the purposes of this discussion then labour costs are defined to include employers' contributions to social insurance funds and private pension funds only, in addition to wages and salaries. From the viewpoint of employees the appropriate definition of income is wages and salaries per employee net of such payroll taxes levied on employers, at least to the extent that these are not perceived by employees as part of their remuneration. Indeed from the employees' perspective it may be more appropriate to focus on their average *disposable* income, that is to net out both income tax and social security contributions paid by them also. The validity of this exercise depends upon whether labour unions are assumed to bargain in terms of disposable income or not.

As becomes more apparent in the empirical analysis later on the distinction between labour costs and employee income is of some importance. In particular the existence of employers' social insurance contribution is likely to provide a source of tension in the wage bargaining process if these contributions are growing more rapidly than total wages and salaries and if employees are unwilling to discount such increases in their wage claims.

It is also necessary to acknowledge that different price deflators are generally employed in measuring employee income and labour costs respectively in real terms. The price deflator used by employees to translate nominal into real income is typically the consumer price index (CPI) or a variant thereof. From the employers' point of view the appropriate deflator is the relevant output price index. At the macro level the most suitable such index is the implicit GDP deflator.* There is, of course, no reason why the CPI should grow at the same rate as the output price index for an individual firm or industry. Similarly, although the degree

*Throughout the analysis the implicit GDP deflator used is that of GDP at market prices. Whereas it may be considered preferable to use the implicit deflator of GDP at factor cost, the fact that our economy-wide productivity measure is based on real GDP at market prices requires that we use the corresponding deflator for purposes of consistency. Two consequences follow from this choice: (i) we have not been able to isolate the effect of net indirect taxes in the analysis and (ii) the differential growth as between the CPI and the implicit GDP deflator employed does not reflect the evolution of net indirect taxes.

of correspondence between the two indices might be high especially over the long run, the CPI will only fortuitously track the GDP deflator from year to year. This point becomes more readily apparent when it is remembered that the GDP deflator includes export prices but not those of imports whereas the CPI includes import prices but not those of exports. For this reason a deterioration in the terms of trade will, *ceteris paribus,* increase the CPI by more than the GDP deflator.

In sum then, an increase in employers' social insurance contributions in excess of the growth in wages and salaries or an increase in the CPI relative to the GDP deflator will constitute two sources of dichotomy of perception as between real labour costs to employers and real labour income to employees. In other words, under such circumstances a given nominal wage rise will imply a greater increase in real labour costs than in the purchasing power of wages and salaries.

(b) Raw Material Costs and the Terms of Trade

The model as developed so far implies that the entire difference between labour costs and sales revenue will accrue as profit of some sort. But, it is quite possible for real labour costs to grow at the same rate as productivity and at the same time induce a declining, increasing or constant profit share. Profitability, therefore, is not uniquely determined by the interaction between labour costs, output prices and productivity but also by other production costs, in particular, in the present context, by unit raw material costs. In other words profitability or, more accurately, profit per unit of output is influenced by the evolution of output prices relative to raw material input prices – the terms of trade – as well as unit labour costs.

Whereas transforming our model of the income distribution process to incorporate such terms of trade movements as are confronted by the individual firm or industry would be a difficult exercise because of data deficiencies at this level of aggregation, this is not the case for the macroeconomy. If we focus on the economy as a whole as our production unit the problem of correcting for the terms of trade is an eminently tractable one. The output of the economy or at least that part of its output which passes through the "factory gates" is readily identifiable as its exports, while the corresponding raw material inputs are represented by its imports. The ratio of input to output prices is therefore indicated by the ratio of import to export prices. In extending our model to the economy as a whole we accordingly define productivity in such a way as to capture the terms of trade effect.

Turning to the question of the appropriate adjustment to be made

for the terms of trade there are many such adjustment formulae and an extensive literature has sprung up around this topic. Most however are variations on two basic prototypes: (i) the first requires the revaluation of imports in terms of export prices. Essentially this is an output or productivity oriented measure of the terms of trade effect. It involves replacing M/P_m by M/P_x in the identity for real national product*:

$$Y = C/P_c + I/P_i + G/P_g + X/P_x - M/P_m$$

(ii) the second adjustment involves revaluing exports in terms of import prices. This is a disposable income oriented measure of the terms of trade effect where X/P_x is substituted by X/P_m in the above identity. The selection of one method over the other depends on the nature of the analysis being carried out. Since our purpose is to construct some measure of economy-wide productivity, the first method is the more appropriate. It is worth pointing out that, in the case of countries with a deficit on external account, the first adjustment yields a larger terms of trade effect than the second.

(c) The Appropriate Measures of Employment

A third and crucial methodological point concerns the measure of employment to be adopted in calculating productivity, on the one hand, and average real employee income or labour costs, on the other. Here, it is necessary to distinguish between two principal employment measures: (i) total employment i.e., total of all persons gainfully occupied in the economy; (ii) dependent employees i.e., total employment less self-employed, entrepreneurs etc., and to consider the relationship between them. This distinction would be of little consequence at the firm or industry level, but is of considerable importance for the economy as a whole.

In resolving this problem regard must be had to the data sources being used and the definitions employed in apportioning income between economic agents and factors of production. Our principal data source is the "National Accounts of OECD Countries", where the relevant variable "compensation of employees" is defined in such a way as to exclude the

*Standard notation is employed here: Y, C, I, G, X and M represent the value of National Income, Private Consumer Expenditure, Investment, Net Current Government Expenditure, Exports and Imports respectively in current market prices. The P's with appended subscripts represent the appropriate price deflators.

income of the self-employed.* If the proportion of self-employed labour declines over time – a not unlikely occurrence given, *inter alia*, the increased participation of the public sector in the economies and over the time-span under scrutiny – we would expect the growth of aggregate employee compensation as defined to be more rapid than the growth of GNP. Equally we would expect the growth of aggregate employee compensation in real terms to outstrip the growth of real GNP *ceteris paribus*. The extent to which the former exceeds the latter would simply be a reflection of the declining numbers of the self-employed or the growth of public sector employment.

Two methods of dealing with this problem have been adopted in studies similar to this one. Sachs (1979) estimates an imputed income for the self-employed and adds this to aggregate employee compensation as defined in the OECD National Accounts. Consequently his employee compensation variable includes all income accruing to economic agents in the economy in respect of their labour input into the production process. Schelde-Andersen (1979) does not impute an income to the self-employed but, in order to correct his analysis for the changing ratio of dependent employees to total employment, he uses an index of total employment to derive his measure of productivity and an index of the number of dependent employees to estimate average compensation per employee. Both methods will yield the same results and inferences about profitability if the average income of the self-employed grows at the same rate as the average income of dependent employees.

Given the very considerable difficulties involved in estimating imputed income for the self-employed particularly for such a large number of countries as this study covers we have chosen to follow the methodology used by Schelde Andersen.

We are now in a position to gather together the points made under the three headings above by expressing equation (5) in terms of economy wide concepts first from the viewpoint of employers and secondly from the viewpoint of employees. The following system of simple equations sets out the relevant relationships:

$$\hat{l} = \hat{p} \cdot \hat{q} \tag{6}$$

$$\hat{w} = \hat{p}_c \cdot \hat{q} \tag{7}$$

*The actual definition is: "All payments by resident producers of wages and salaries to their employees, in kind and of cash, and of contributions, paid or imputed, in respect of their employees to social security schemes and to private pension, family allowance, casualty insurance, life insurance and similar schemes".

where:

$$\hat{l} = \alpha \hat{w} + (1 - \alpha)\hat{s} \quad (8)$$

$$\hat{p}_c = (1 + x)\hat{p} \quad (9)$$

In this system of equations the notation is as follows:

- l : Total employee remuneration (inclusive of employers' social security contributions) divided by the number of dependent employees.
- p : the implicit GDP deflator (at market prices).
- q : real GDP (at market prices) adjusted for the terms of trade and divided by total employment.
- w : total wages and salaries divided by the number of dependent employees.
- p_c : the consumer price index.
- s : employers' social security contributions.
- α : the proportion of total employee remuneration accounted for by wages and salaries.
- x : a parameter which expresses the relationship between the CPI and the GDP deflator.

According to equation (6) employers' desired outcome is such that real labour costs grow in line with productivity i.e. $\hat{l}/\hat{p} = \hat{q}$ while employees desire that their real income should grow according to equation (7) i.e. $\hat{w}/\hat{p}_c = \hat{q}$. It can readily be proven that if $\hat{s}$ exceeds $\hat{l}$ and/or $\hat{p}_c$ is greater than $\hat{p}$, then the outcomes desired by employers and employees are mutually inconsistent.* In other words if employers' social security con-

*If the outcome of wage negotiations is that desired by employees viz. $\hat{w} = \hat{p}_c \cdot \hat{q}$ from equation (7) and, $\hat{l} = \alpha\hat{w} + (1 - \alpha)\hat{s}$ from equation (8) then we have:
$\hat{l} = \alpha(\hat{p}_c \cdot \hat{q}) + (1 - \alpha)\hat{s}$ which, given equation (9): $\hat{p}_c = (1 + x)\hat{p}$ becomes:
$\hat{l} = \alpha(1 + x)\hat{p} \cdot \hat{q} + (1 - \alpha)\hat{s}$. The ratio of real labour cost growth to productivity growth is therefore:

$$\alpha(1 + x) + (1 - \alpha)\frac{\hat{s}}{\hat{p} \cdot \hat{q}}$$

This expression will equal unity if $x = 0$ and $\hat{s} = \hat{p} \cdot \hat{q}$. For values of x greater than zero and $\hat{s}$ greater than $\hat{p} \cdot \hat{q}$ the gap will be correspondingly unfavourable from the point of view of capital.

tributions grow at a rate in excess of total employee remuneration and/or the CPI increases more rapidly than the GDP deflator real labour costs will grow faster than productivity (and the share of profits in factor income will fall) provided that the growth in employees' nominal incomes is sufficient both to safeguard their purchasing power *and* fully compensate them for productivity growth. Conversely, under the same conditions, if nominal wages grow in such a way as to obviate the emergence of a gap between the growth of real labour costs and productivity their increase will not be enough to maintain the purchasing power of employee incomes *and* compensate employees for improved productivity. Here the share of wages in factor income will fall.

From the perspective of underwriting steady economic growth through the generation of a sufficiently large investible surplus it is equation (6) which provides the key. Thus, if the economy has sustained a terms of trade loss and equation (6) indicates the desired situation with regard to the evolution of profits the broad macro objectives discussed earlier can only be advanced if real wages are sufficiently flexible to allow under-compensation for CPI increases and productivity growth together.

The Adjustment Problem

The distinction between *ex ante* and *ex post* equality of real wages and productivity has already been discussed. Before moving on to the empirical analysis of the evidence for the 10 OECD countries covered we propose to amplify this discussion somewhat. In particular we outline the adjustment mechanisms which are likely to come into play in the face of an *ex ante* gap between real labour cost growth and productivity growth in three sectors of the economy: the exposed sector; the private sheltered sector and the public sector. In broad terms there are three adjustment mechanisms whereby *ex post* equality between $\hat{l}$ and $\hat{p} \cdot \hat{q}$ can be restored in the event of $\hat{l}$ exceeding $\hat{p} \cdot \hat{q}$ *ex ante*. These are: (i) an increase in the rate of inflation of output prices ($\hat{p}$); (ii) an endogenous increase in productivity ($\hat{q}$) brought about by reducing employment and: (iii) an endogenous increase in productivity brought about by reducing unit raw material costs.

(i) An increase in $\hat{p}$: According to the conventional theory of the small open economy (SOE) which postulates the existence for such an economy of an infinitely elastic demand curve for its output of tradable goods, firms operating in the exposed sector of the economy can only effect an increase in $\hat{p}$ in the event of a currency devaluation. The scope for using a devaluation as an effective adjustment mechanism, however, is more or less constrained by the extent and speed with which the con-

comitant increase in the price of import feeds through to the general price level and to wages. Allowing for some relaxation of the basic assumption underlying SOE theory some firms in the tradable goods sector may be able to increase $\hat{p}$ in the absence of a currency devaluation but at the expense of reducing demand and output.

Constraints on using price as the means of adjustment are also in operation in the other sectors of the economy although perhaps not in as binding a way. In the private non-tradables sector there exists the immediate constraint of non-zero price elasticity of demand. In the public sector an increase in $\hat{p}$ effectively means a further increase in taxes or an increase in public sector borrowing for most of this sector's output. Ultimately, in any event, increasing $\hat{p}$ provides at best, a temporary respite from the problems posed by an *ex ante* gap between the growth of real labour costs and the growth of productivity since the resultant price increases will feed a wage-price spiral of accelerating inflation and/or lead to the generation of an unsustainable position of the public finances. Eventually the latter problem can be resolved only by increasing taxation relative to government expenditure, which will in turn feed back into the wage bargaining process.

(ii) Reducing employment: It is important to recognise in regard to the reduction of employment that labour is not an entirely variable factor of production for the individual enterprise. Moreover labour costs are not an entirely variable production cost in the sense that an x per cent reduction in labour inputs does not necessarily lead to an x per cent reduction in labour costs. The validity of the first point is established with reference to the existence of legislation on employment protection, contractual obligations and so on, which together comprise a set of institutional constraints on labour shedding at the margin for firms. On the second point which has been treated extensively in the literature, (see, for example, Schelde-Andersen (1979) and Costrell (1981)), the evidence suggests that a significant and rising proportion of total labour costs comprises what are essentially overhead labour costs such as expenditures on training, personnel etc. For these reasons reducing employment as a means of redressing the gap between $\hat{l}$ and $\hat{p} \cdot \hat{q}$ may either be extremely difficult or, where possible, may not be successful since the endogenous increase in $\hat{q}$ may be largely offset by an endogenous increase in $\hat{l}$ resulting from the fact that overhead labour costs are now spread over a smaller number of workers. One implication of the foregoing is that, to the extent that continuous adjustments to employment at the margin by an individual firm is rendered impossible or ineffectual as a means of restoring equilibrium, large dis-

crete adjustments may take place instead. In other words closures of entire plants may occur rather than piecemeal redundancies in the workforce.

There are of course additional and essentially political constraints on the public sector shedding labour, particularly where the commitment to full employment or the maintenance of existing employment levels is a strong one. Indeed under such circumstances the Government will not only feel constrained to maintain public sector employment at current levels but to absorb those made redundant in other sectors of the economy as well. At the very least, to the extent that labour-shedding is the adjustment mechanism resorted to in the private sectors of the economy aggregate unemployment payments will increase, aggregate demand will increase relative to supply and as Söderström and Viotti (1979) have shown, the result will be a deterioration of both the balance of payments and the exchequer finances.

(iii) Reducing unit raw material costs: Inasmuch as enterprise enjoy limited/no monopsony power in the market for raw materials, the price of raw materials remains outside their control. The reduction of unit raw material costs may consequently be viably effected only by reducing the input-output ratio for raw materials. This may be difficult for technical reasons – the nature of the production function facing the firm concerned may approximate the fixed input-output variety. Hence reduction in raw materials usage may in certain circumstances imply a reduction in output and have correspondingly little effect on closing the gap between real labour cost growth and that of productivity. At the macro-level, whereas an economy cannot control the price of its raw material imports, it may be in a position to reduce the negative effect on productivity brought about by a terms of trade deterioration by reducing the quantity of such imports.

Our brief discussion of the adjustment problems posed by the emergence of a real wage-productivity gap provides some useful guidelines for interpreting the empirical evidence presented in the next section. In the first place the *observed* relationship between the growth of real labour costs and of productivity is not necessarily the same as the *ex ante* relationship. Equalisation over time of real labour cost growth and the growth of productivity may be achieved by reductions in employment and output or by accelerating inflation. Moreover government policy may be such that adjustment is achieved at the expense of a deterioration of the Exchequer's finances and/or a worsening of the balance of payments either

through the deployment of fiscal concessions in an attempt to buy industrial peace at unchanged levels of employment in the non-government sector or through engaging in what Söderström and Viotti (1979) have called an "ultra-Keynesian" policy whereby government counterbalances labour-shedding in the private sector by correspondingly increasing employment in the public sector. Consequently the behaviour of real labour costs *vis-à-vis* productivity does not provide a sufficient criterion for evaluating the success of incomes policy. Regard must be had to the background against which labour market equilibrium is attained.

A second point pertains to the question of adjustment lags. Adjustment is unlikely to take place instantaneously. Typically we might expect adjustment to a real wage-productivity gap to be spun out over 1-2 years as enterprises engage in labour-hoarding or display inertia in changing their pricing rules and so on. In the event of a gap of significant magnitude being a more protracted phenomenon, this may be evidence of a serious structural imbalance in the economy, or severe disequilibrium in the labour market sustained either by institutional constraints or perhaps by the use of widespread labour subsidies by Government. Anticipating the results presented in the next section, Belgium is a striking example of an economy in which the growth of real labour costs has continuously outstripped that of productivity with no evidence of effective adjustment taking place.

The Empirical Evidence: Presentation and Analysis

Our analysis covers ten OECD countries including Ireland. Six of these are members of the EEC – Belgium, France, Germany, the Netherlands, the UK and Ireland. The remaining four: Austria, Finland, Norway and Sweden were selected primarily because of their quite distinctive approach to incomes policy.

In the diagrams below the results of our analysis of the real wage-productivity relationship are presented in graphical form. For each country the evolution of four magnitudes is tracked: real labour costs per employee; real income per employee; productivity adjusted for the terms of trade and unadjusted productivity. The derivation of each of these reflects the arguments made in our outline of the model above. Precise definitions, details of sources and other explanatory notes are appended to the charts themselves. In order to evaluate the macro-economic background against which real wages and productivity evolved, Table 35 sets out for each of the countries the principal relevant indicators of economic performance: real GNP growth, unemployment, inflation, the balance of payments and the state of exchequer finances.

Chart 9: Real Wages and Productivity For Selected Countries

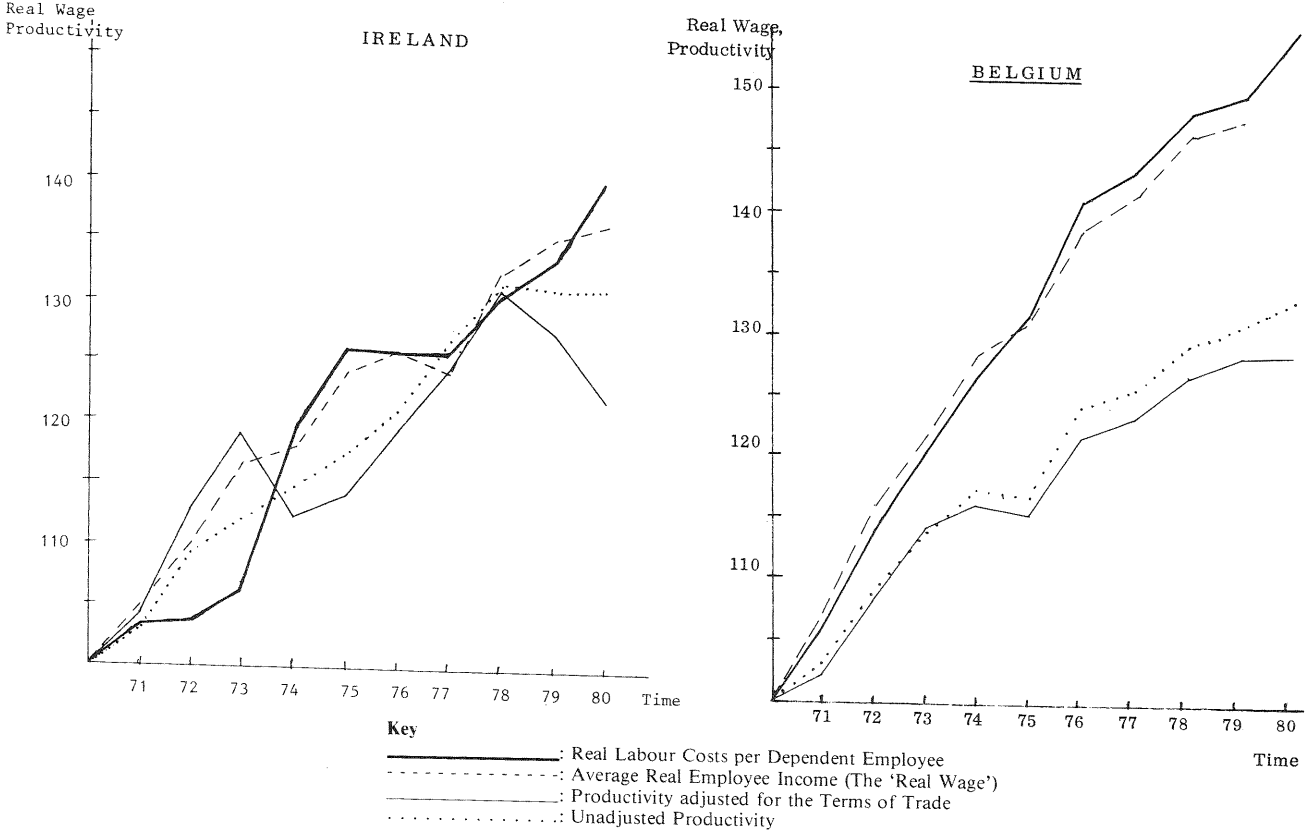


Chart 9: Real Wages and Productivity For Selected Countries

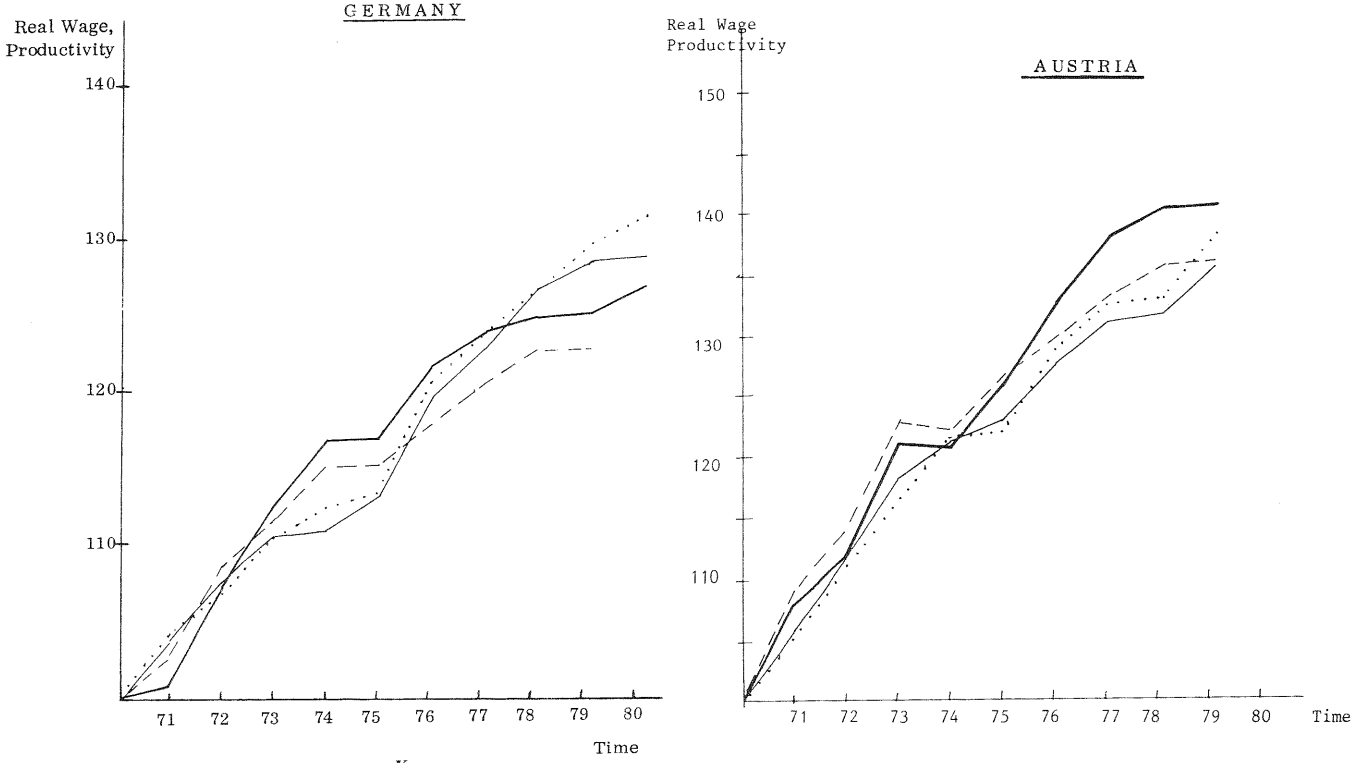
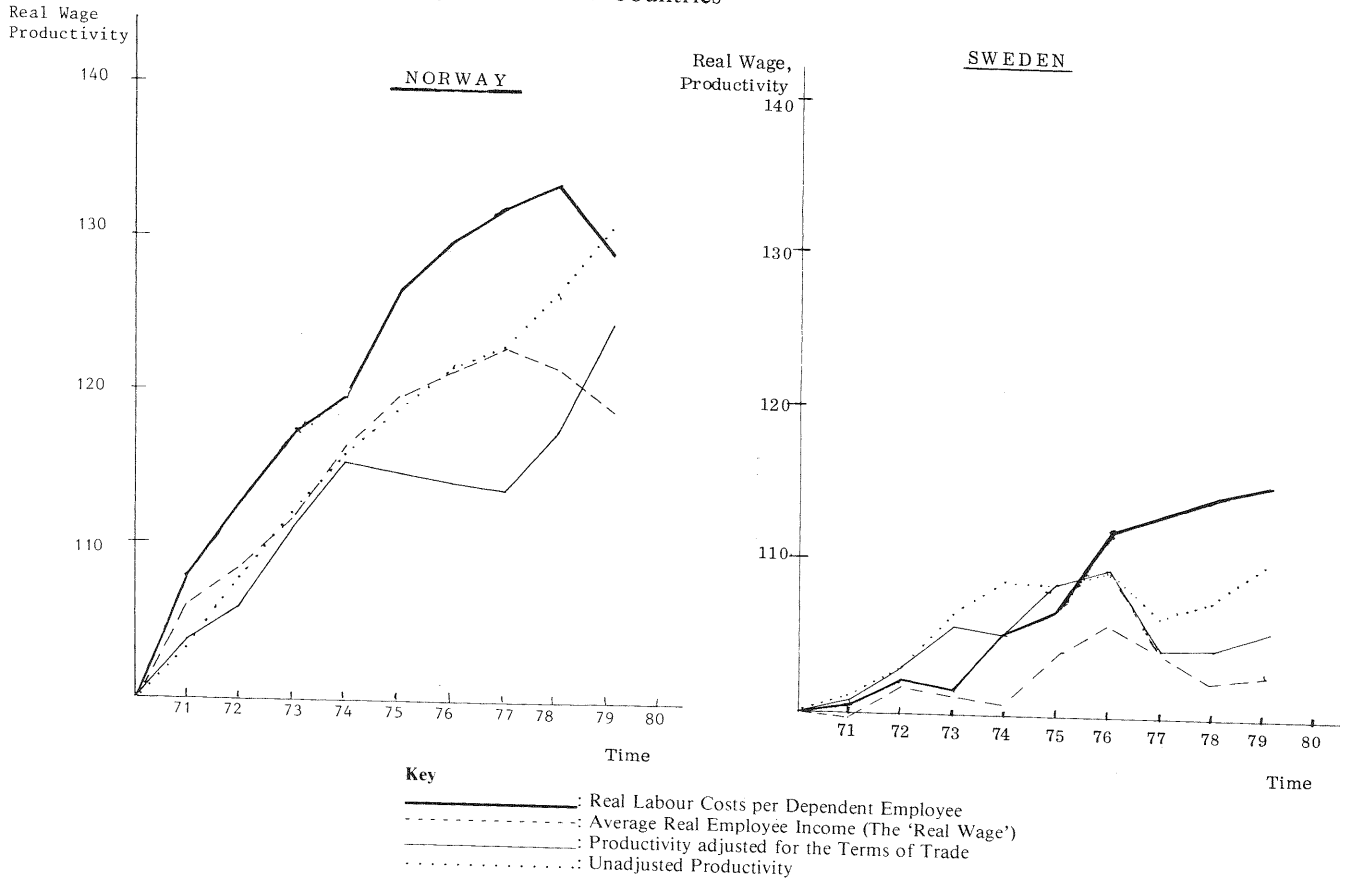


Chart 9: Real Wages and Productivity For Selected Countries



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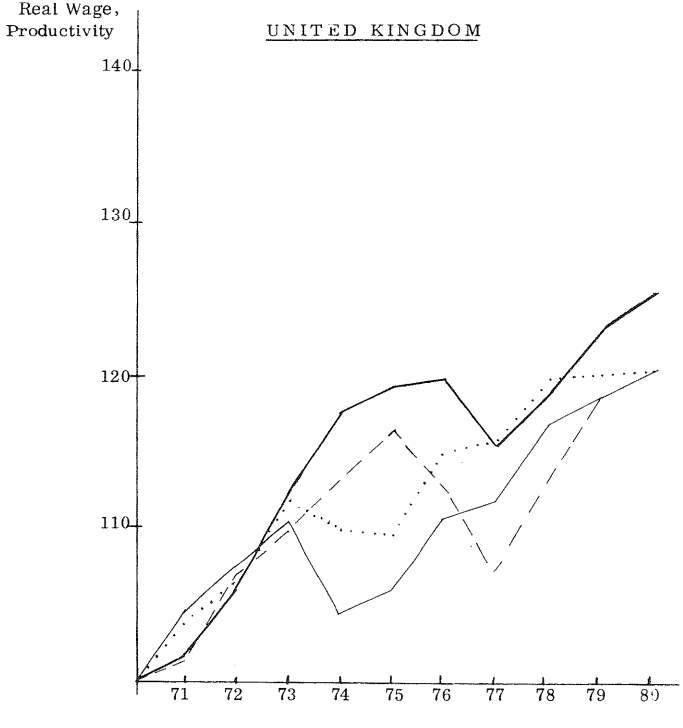
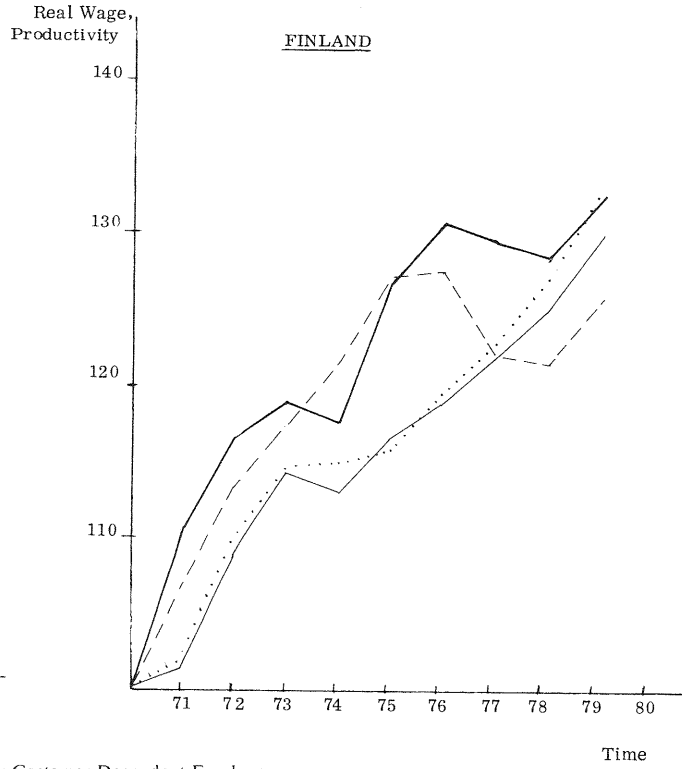


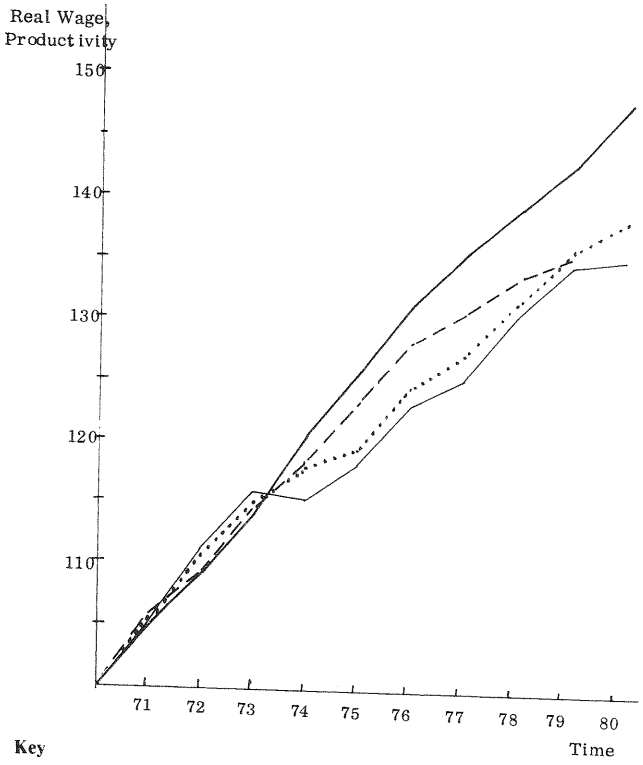


Key

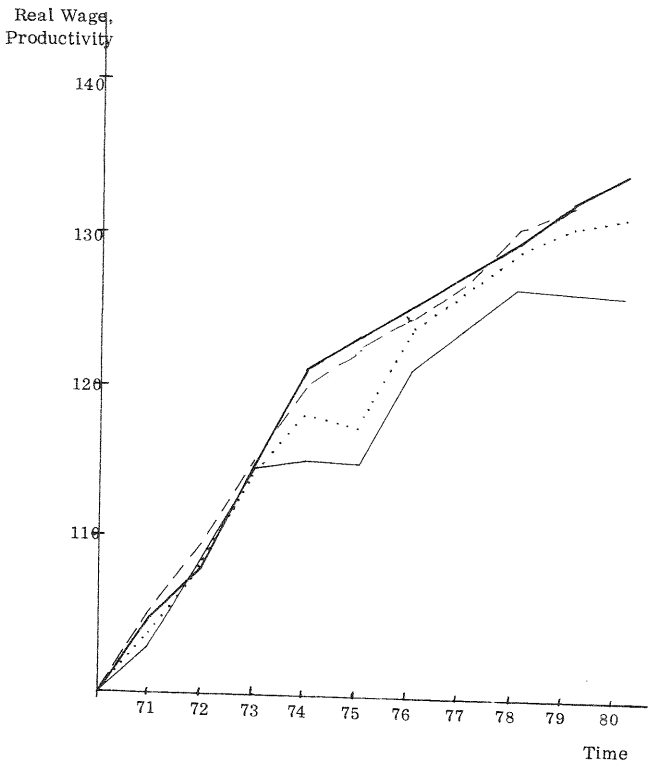
——————: Real Labour Costs per Dependent Employee
- - - - - - - - - - - - - - : Average Real Employee Income (The 'Real Wage')
——————: Productivity adjusted for the Terms of Trade
. . . . . : Unadjusted Productivity

Chart 9: Real Wages and Productivity For Selected Countries

FRANCE



NETHERLANDS



Key

———————: Real Labour Costs per Dependent Employee
- - - - - - - - - - - - - -: Average Real Employee Income (The 'Real Wage')
———————: Productivity adjusted for the Terms of Trade
. . . . . .: Unadjusted Productivity

Notes on Charts

(i) Real Labour Costs per Dependent Employee: Total remuneration of employees inclusive of employers' contributions to social security funds and private pension funds, deflated by the implicit GDP deflator and divided by an index of dependent employees.
(ii) Average Real Employee Income: Total wages and salaries deflated by the CPI and divided by an index of dependent employees.
(iii) Adjusted Productivity: Real GDP divided by an index of total employment and corrected for the terms of trade.
(iv) Unadjusted Productivity: Real GDP divided by an index of total employment.

All the above indexed to the base 1970 = 100.0.

Sources

(i) "NATIONAL ACCOUNTS OF OECD COUNTRIES": OECD, (PARIS), 1981.
(ii) "LABOUR FORCE STATISTICS 1962-1979": OECD, (PARIS), 1981.
(iii) "INTERNATIONAL FINANCIAL STATISTICS – YEARBOOK": IMF, 1981.
(iv) "NATIONAL INCOME AND EXPENDITURE – 1979": CSO, (DUBLIN), 1981.
(v) "EUROPEAN ECONOMY": European Commission, (BRUSSELS), Nov. 1981.

Notes

(i) Social security figures for Austria are inclusive of employees' contributions.
(ii) Estimates of GDP, Terms of Trade, Employment and Employee Remuneration for 1980 for the following countries: France, Germany, Netherlands, UK and Belgium are derived from "EUROPEAN ECONOMY".

Table 35: *Indicators of Relative Economic Performance: 1970-1980*

Country	*Real GNP/GDP*	*Unemployment As % of Labour Force*		*Consumer Prices*	*Balance of Payments Surplus (+)/Deficit (−) as % of GNP*			*Government Finances Surplus (+)/Deficit (−) as % of GNP*		
	average growth 1970-'80 (%)	*average 1970-1980*	*change 1980 over 1970 (per cent points)*	*average increase 1970-'80 (%)*	*1970-'73*	*1974-'77*	*1978-'80*	*1970-'73*	*1974-'77*	*1978-'80*
Austria	4.2	1.9	−0.5	6.1	−0.4	−2.9	−3.2	−1.7	−3.8	−3.7
Belgium	3.4	6.8	+8.9	7.0	+2.9	+0.3	−2.7	−2.8	−4.6	−7.1
Finland	3.9	3.8	+3.0	10.4	−2.0	−4.4	−0.5	+1.2	−0.6	−2.3[1]
France	3.8	3.5	+5.1	9.3	−0.1	−1.2	−0.1	+0.3	−1.1	−0.8[2]
Germany	3.1	2.9	+3.1	4.9	+0.6	+1.3	−0.4	−0.3	−2.2	−1.9
Ireland	3.7	9.5	+3.1	11.7	−3.2	−4.0	−7.1	−5.9	−11.7	−14.6
Netherlands	3.2	3.5	+4.8	7.0	+1.0	+2.3	−1.4	−0.5	−2.6	−4.2
Norway	4.4	1.0	+0.3[3]	8.6	−2.3	−9.6	−3.3	−2.6	−4.4[4]	n.a.
Sweden	2.2	2.0	+0.6[5]	9.0	+0.7	−2.5	−2.2	−1.5	−2.0	−6.5[6]
UK	1.9	4.4	+4.2	13.0	+0.6	−1.7	+0.5	−1.4	−5.2	−5.2

Sources: IMF – International Financial Statistics, Yearbook (1981); OECD – Main Economic Indicators (various issues)
Notes: (1) 1978-'79; (2) 1978; (3) change 1980 over 1971; (4) 1974-'76 (5) change 1979 over 1970; (6) 1978-'79.

To facilitate interpretation of the results some comments are appropriate at this stage. First, given our definition of real labour costs and real income per employee respectively, differences between the evolution of these two variables are due to (a) divergence between the growth of the CPI and the GDP deflator for the country concerned and, (b) differences between the rate of increase in employers' social security contributions and the aggregate wage and salary bill. In particular if real labour costs grow more rapidly than real employee income this implies that the CPI has grown more rapidly than the GDP deflator and/or that employers' social insurance contributions have increased relative to aggregate wages and salaries. In turn the CPI may grow more rapidly than the GNP deflator because of (a) a deterioration in the terms of trade and (b) the fact that the two indices have a different coverage of goods.

Secondly, differential rates of growth as between adjusted and unadjusted productivity reflect movements in the terms of trade. In the event of a deterioration in the terms of trade adjusted productivity will fall relative to productivity unadjusted. The converse is true of a terms of trade improvement. A related point pertains to the connection between the terms of trade and the behaviour of the CPI *vis-à-vis* the GDP deflator. Bearing in mind the composition of these two price indices it is to be expected that consequent on a terms-of-trade deterioration the CPI will *ceteris paribus* increase more rapidly than the GDP deflator. Again, all other things equal, we would expect as a result that the growth of real labour costs would outstrip that of real employee income. Of course all other things will typically not be equal: in particular, social insurance payments by employers and other prices which feed into the GDP deflator but not into the CPI may change in such a way as to either exacerbate or ameliorate the potential for an emerging real costs – real income dichotomy inherent in a terms of trade deterioration.

The criterion deployed in evaluating the behaviour of wages is that they evolve in such a way that real labour costs move in line with adjusted productivity. However, there are a number of other identifiably and conceptually different possibilities which are now briefly outlined.

The first of these is that *real labour costs* might grow in line with *unadjusted productivity*. Here, the gap between the growth of real labour costs and adjusted productivity reflects the terms of trade effect and emerges because of a failure to adjust to disturbances in the terms of trade. A second possibility is that *real income per employee* may move in line with *adjusted productivity*. Under such circumstances the emergence of a real labour cost-productivity gap will be associated with the existence of differential growth rates as between the CPI and the implicit GDP deflator

and/or a high rate of increase in employers' social insurance contributions relative to aggregate wages and salaries. In other words, the existence of this type of gap is attributable to a dichotomy of perception between employers and employees of real labour costs and real labour income respectively. A third possibility is that *real employee income* might move in tandem with *unadjusted productivity*. Here the gap will have a twofold source: failure to adjust to the terms of trade and the costs-income dichotomy of perception.

The fourth possibility is that the emergence of a gap between real labour costs and adjusted productivity might not be fully explained by the above factors at all. This might occur for instance because of the government's policy *vis-à-vis* income taxation where trade unions successfully seek full compensation from employers for tax increases. This source of divergence is outside the scope of the present analysis to identify because the requisite data are not available on a comparable cross country basis. However, a study by the OECD (1978) documents evidence which supports the hypothesis of successful disposable income bargaining by trade unions. A good example of real labour cost growth outstripping that of adjusted productivity for reasons other than the terms of trade effect or a dichotomy of perception between income and costs is provided by the Belgian case (see Diagram 9). The Irish case too displays symptoms of the same malaise. This might be referred to as a "pathological" real labour cost-productivity gap.

The evidence suggests the existence of a considerable diversity of experience among the countries surveyed. At one end of the spectrum the behaviour of real labour costs in Austria and Germany indicates that throughout the period their evolution closely tracked that of adjusted productivity. Indeed, in Germany from 1970 to 1980 real labour costs actually grew less rapidly than productivity by some 2 per cent – the ratio of growth in the former to growth in the latter being 0.983 – while in Austria the increase in real labour costs exceeded that of productivity from 1970 to 1979 by just over 3 per cent. However, this outcome in the German case would appear to have been facilitated by a significant rise in the unemployment rate from less than 1 per cent in 1970 to 3.8 per cent in 1980 and an associated deterioration in the balance of payments which went into deficit for the first time in the decade in 1979 (0.7 per cent of GNP) and further worsened in 1980 at 2 per cent of GNP, whereas in Austria the unemployment rate in 1980 was, in fact, lower, at 1.9 per cent than it had been in 1970 when it registered 2.4 per cent, and neither its balance of payments nor the state of its exchequer finances deteriorated significantly relative to Germany over the decade.

In marked contrast is the experience of Belgium. Here, throughout the

decade the growth of real labour costs has signally failed to bear any relation whatever to that of productivity such that by 1980 the ratio of real labour cost growth to productivity growth was 1.209 i.e., real labour costs had grown some 21 per cent more rapidly. This development was accompanied by a large deterioration on the balance of payments which went steadily from a surplus of 2.8 per cent of GNP in 1970 to a deficit of 4.4 per cent in 1980, a steady worsening of the government finances which were in deficit to the tune of 8.7 per cent of GNP in 1980 compared with 1.8 per cent in 1970 and a quadrupling of the unemployment rate which stood at 11.8 per cent in 1980 as against 2.9 per cent in 1970.

In terms of the magnitude of the gap at end period between real labour costs and adjusted productivity growth, the countries closest to the German and Austrian experience have been Finland, Norway and the UK where the real labour cost-productivity gaps (measured as the ratio of growth in the former to growth in the latter) are respectively: 1.019, 1.038 and 1.045. At the other end of the spectrum Ireland, France and Sweden are located with respectively, "gaps" of 1.190, 1.095 and 1.094. For the Netherlands the "gap" is 1.061. (It should be noted that in the case of the three Scandinavian countries and Austria the figures refer to 1979.) It needs to be pointed out of course that a simple cross-country comparison of the end-period results is not altogether illuminating since it suppresses information about what has been happening during the decade (see diagram). Moreover some countries have been subject to what might be termed "mitigating circumstances" in that the evolution of their terms of trade and/or non-wage labour costs has been such as to render the equalisation of real labour costs and productivity growth very difficult. Consideration of such 'mitigating circumstances', however, need not cut across our comparison of Austria, Germany and Belgium since neither the terms of trade nor the growth of non-wage labour costs constituted a serious problem for these economies during the 1970s.

Turning to the relationship between the growth in real income per employee and productivity growth the diversity of experience across countries is equally pronounced. All countries, however, have one feature in common, namely, the fact that throughout the period from 1970 to the latest year for which the requisite data are available (1980 for Ireland and 1979 for all other countries covered) real labour costs have grown more rapidly than real employee income. The net result is that for four countries viz. Finland, Germany, Norway and Sweden real employee income grew by less than productivity, the relevant ratios being 0.968, 0.953, 0.945 and 0.975 respectively. In the UK both grew at the same rate. In Austria, France and the Netherlands real employee income grew

slightly more rapidly than productivity -- the ratios here being 1.024, 1.005 and 1.043 respectively. Belgium and Ireland, as in the previous case exhibit quite enormous differentials between real income and productivity growth. In the former real income per employee grew by 15 per cent more rapidly (1970-1979) while in Ireland the corresponding margin was 16 per cent for 1970-1980.

Examination of the above figures for the *real income* – productivity gap in conjunction with the figures previously presented on the gap between *real labour costs* and productivity provide some useful insights into the role played by the growth of employers' social insurance contributions (and, to a limited extent, that played by the differential growth of the CPI relative to the overall GDP deflator). Table 36 sets out the relevant data. It sets out figures on the increase in the CPI, the GDP deflator, social insurance payments by employers (inclusive of their contribution to private pension insurance) and the total wages and salaries bill. In the fifth column we set out the proportion of total employee remuneration accounted for by employers' social security contributions in 1970.

All countries have experienced throughout the period an increase in employers' social insurance contribution relative to aggregate wages and salaries. The differential growth rates are particularly marked in the case of the Scandinavian countries, the UK and Ireland. However, in the latter two, and especially Ireland, the contribution which the increase in social security payments have made to the increase in overall labour costs has been relatively insignificant, the reason being that their share in total employee remuneration has been quite small (9 per cent for the UK and 3 per cent for Ireland as of 1970). Indeed, although in Ireland these social insurance contributions rose by well over 1,000 per cent from 1970 to 1980 and wages and salaries by something more than 500 per cent in the same period, the proportion of total employee remuneration which they accounted for by 1980 was only 5.2 per cent.

In contrast, as the diagrams demonstrate, the problem posed apropos social insurance contributions in the Swedish and Norwegian cases, has been particularly acute. Thus, whereas in both Sweden and Norway a significant unfavourable gap had by 1979 emerged between real labour costs and productivity, but particularly in the former, in neither country had the growth in aggregate wages and salaries been sufficient to compensate employees for inflation *and* productivity growth. Both countries, but again Sweden especially, provide quite remarkable evidence against the proposition that real wage rigidity is responsible for declining profitability (and by extension increasing unemployment). In Sweden, from 1976 through 1978, the real wage (real income per employee) declined sig-

Table 36: *Wages and Salaries, Inflation and Employers' Social Insurance Contributions, 1970-'79*

	Increase in CPI	*Increase in GDP Deflator*	*Increase in Employers Social Insurance Contributions*	*Increase in Wages & Salaries*	*Employers' Social Insurance Contributions As Percentage of Total Employee Remuneration*	
	1970-'79 (%)	*1970-'79 (%)*	*1970-'79 (%)*	*1970-'79 (%)*	*1970*	*1979*
Austria	73.0	71.9	252.8	174.8	9.4	11.7
Belgium	90.7	89.6	207.2	197.0	13.9	14.3
Finland	159.7	169.2	420.0	269.7	13.3	17.8
France	121.4	120.4	287.6	230.5	24.2	27.2
Germany	55.8	59.1	158.1	104.0	15.2	18.5
Ireland*	259.8	259.3	1,106.1	506.9	2.7	5.2
The Netherlands	90.3	98.0	218.8	161.3	19.3	22.6
Norway	102.1	95.4	330.8	794.9	10.3	14.4
Sweden	112.5	124.8	494.4	144.6	13.1	26.8
UK	205.9	205.5	414.5	259.1	9.1	12.5

*Irish data refer to period 1970-1980.

Source: "National Accounts of OECD Countries, 1962-1979", Vol. II, Paris, 1981.

nificantly, despite which the growth of real labour costs outstripped that of productivity by a wide margin. The same holds for Norway in 1977-'78 and Finland 1976-'78 where real employee income fell by 4.5 per cent and real labour costs by only 1.5 per cent. In summary, the Scandinavian experience as captured by our analysis suggests the existence of some willingness on the part of workers to moderate wage demands in order to safeguard profitability and thereby economic performance. However, the evidence also suggests that government policy with regard to social insurance contributions has been inimical to the achievement of these macro-economic aims in that wage-restraint has not been accompanied by a corresponding reduction in the growth of labour costs. It would be of considerable interest to extend the analysis to the role of income tax but this exercise will have to await further research.

So far our discussion has concerned itself with the decade of the '70s as a whole (principally with the position at end-period *vis-à-vis* our base year) and the impact of government taxation policy as articulated through employer social insurance levies. Another factor which demands some detailed discussion is the terms of trade. Turning to Table 37 where figures on adjusted and unadjusted productivity are presented the first feature to notice is that not all countries have been equally affected by terms of trade

Table 37: *Productivity and the Terms of Trade, 1970-'80*

	(1) Adjusted Productivity (1970 = 100)	*(2) Unadjusted Productivity (1970 = 100)*	*(3) Ratio of (1) to (2)*
Austria	135.5	137.9	0.983
Belgium	128.4	133.1	0.965
Finland	129.9	133.1	0.976
France	135.3	138.6	0.976
Germany	128.9	131.4	0.981
Ireland	122.3	131.7	0.929
The Netherlands	126.7	131.5	0.963
Norway	124.5	131.0	0.950
Sweden	105.5	110.0	0.959
UK	120.3	120.5	0.998

Notes: (i) Column (1) is productivity adjusted for the terms of trade.
(ii) Column (3) indicates the extent to which terms of trade movements have reduced productivity growth.

movements. Some countries indeed have been virtually insulated from terms of trade effects taking the period as a whole.* As judged by the third column of Table 37 this observation characterises the experience of the UK in particular where terms of trade movements over the period 1970 to 1980 have resulted in adjusted productivity growing by only 0.2 per cent less rapidly than unadjusted productivity and to a lesser extent of Austria and Germany where the growth of productivity is reduced by less than 2 per cent when allowance is made for terms of trade developments. Other countries have been decidedly more vulnerable on this score, notably Ireland and Norway where the ratios of adjusted to unadjusted productivity growth are 0.929 and 0.950 respectively. Looking at sub-periods of the decade it emerges that all countries (except Norway) suffered a terms of trade loss in 1974 on foot of the oil price increases of that year. Here, Ireland and the UK were particularly seriously affected as can be gauged from the charts by the fall in adjusted productivity relative to unadjusted productivity. This phenomenon was repeated for all countries except the UK and Norway in 1979 with the second major oil price increase. In fact both the UK and Norway enjoyed terms of trade gains in that year since both were by then oil producing countries.

Another useful way of appraising terms of trade developments is to distinguish between once-and-for-all terms of trade shocks and movements which are either more random or sustained in one direction. In terms of our graphical analysis a terms of trade deterioration of the once-and-for-all variety would manifest itself in the adjusted productivity line falling quite sharply relative to the unadjusted one and subsequently moving parallel to the latter but at a lower level than before. A sustained deterioration occurs when subsequent to the initial terms of trade loss the adjusted productivity line diverges further from the line on the graph depicting unadjusted productivity. Where the initial loss is subsequently redressed by a favourable evolution of the terms of trade the gap between the two productivity lines will be eliminated. Although terms of trade movements have generally been so diverse in nature over time as to militate strongly against a neat classification of countries' experiences, some good examples of the above types of behaviour can be pointed out. Ireland is, for instance, a country which has experienced once-and-for-all shocks from the terms of

*The observed effects of terms of trade movements in this type of analysis will depend on the base year chosen. In selecting 1970 as the base year distorted interpretations of the subsequent impact of terms of trade movements are minimized since 1970 was a year in which the terms of trade remained fairly constant for the countries surveyed.

trade since 1973: a single period loss was registered in 1974, and another marked deterioration occurred in 1979 and 1980. In the intervening period there was a clear but gradual improvement in the terms of trade.

In Ireland despite the very large influence which the terms of trade loss exerts on productivity there is little evidence that either real employee income or real labour costs have moved in a way which would counteract the effect of terms of trade deteriorations on profitability. Thus in the period 1978-'80, a period which saw adjusted productivity decline by almost 10 per cent real labour costs rose by 7.5 per cent and real employee income by 3.3 per cent.

Norway provides an example of a country which has experienced terms of trade losses sustained over a comparatively protracted period viz, 1974 to 1977. This episode in Norwegian economic history provides an interesting case study of a wage determination process which signally failed to adjust to the terms of trade deterioration. From 1974 to 1977 real employee income evolved almost exactly in tandem with *unadjusted* productivity, the gap between this real wage measure and *adjusted* productivity therefore being almost entirely attributable to the terms of trade loss.

A similar, though graphically not quite so obvious, set of developments characterised wage behaviour is Sweden through the period 1973-'78, a period during which the terms of trade loss meant that adjusted productivity rose by 3 per cent more slowly than its unadjusted counterpart. At the same time real employee income and unadjusted productivity grew at roughly the same rate – a shade over 1 per cent.

The experience of the UK throughout the 1970s exemplifies a situation where an initial terms of trade loss is subsequently redressed by favourable developments. The UK economy having sustained a large deterioration in the terms of trade in 1974 had by 1980 eliminated the gap between adjusted and unadjusted productivity growth – this subsequent improvement being in large part due to the discovery of North sea oil and occurring dominantly in the years 1978-'80.

Generally speaking, throughout the period, five of the countries reviewed have not experienced serious problems with the terms of trade: Austria, Belgium, Finland, France and Germany. In consequence the terms of trade have not impinged as a significant complicating factor in the wage bargaining/determination process. The corollary is, of course, that, for these five countries, any gap which has emerged between real labour costs and adjusted productivity cannot legitimately be put down to a failure on the part of their respective economies to adjust to the terms of trade. Where such gaps have, in fact, emerged we must look to other factors for their source. We have already suggested that in the Finnish case non-wage labour

costs have played a significant role. This would appear to hold true in the case of France as well. It most certainly is not true of Belgium which displays all the symptoms of a pathological problem.

In contrast, the other five countries in our sample have had to confront sizeable terms of trade complications at some stage during the decade, or are currently in a position where they need to do so. Of these, the problem for Ireland (as of 1980) and for Norway (as of 1979) are the most pressing. The most recent evidence for the UK suggests that their earlier and quite large terms of trade problems have been resolved in the sense that they no longer exacerbate the problem of equalising real labour cost growth and that of productivity at the aggregate macro level. Here, the real labour cost-productivity gap as of 1979 was predominantly attributable to the relative growth of non-wage labour costs (see diagram). We would expect, given the current economic policies being pursued in the UK that the data for 1981 would show some reduction of the gap. The Netherlands problems as of 1980 seem to have been primarily rooted in the terms of trade since up to 1979 real labour costs and real employee income had grown very much in line with each other. Norway as of 1979 faced severe complications on two fronts: terms of trade losses and the relative increase of non-wage labour costs *vis-à-vis* wages and salaries. These complications however had been to some extent mitigated by downward flexibility in real wages. The same basic argument applies to Sweden. In other words, as has already been pointed out the objectives and otherwise favourable consequences of real wage flexibility have been cancelled by Government policy in respect of employers' social security contributions. Ireland's problems as of 1980 can partly be explained by a failure to adjust to the terms of trade and partly (although to a very small extent) by the growth of non-wage labour costs. A very considerable portion of the gap between real labour costs and adjusted productivity must be put down to a phenomenon of the same pathological variety as in the case of Belgium.

Incomes Policy: Institutional Features

We suggested at the beginning of this analysis that the outcome of the wage bargaining process will only fortuitously be conducive to the realization of broad macro-economic aims under certain circumstances. In particular, it was pointed out that if the process of incomes determination is the exclusive preserve of the social partners, i.e., employers and trade unions, the results may do considerable violence to the objectives of inflation control, employment generation and sustained economic growth. This will especially be the case where the social partners pursue their

respective sectional interests and where trade unions' objectives are of an essentially short-term orientation being concerned primarily with the protection of their members' living standards rather than the protection and expansion of employment. We have also suggested that to avoid this outcome some means must be found whereby an understanding and recognition of how various wage settlements (and *ex ante* patterns of functional income distribution) impinge on the performance of the macro-economy can be grafted onto the income determination process itself. It is worth pointing out at this stage, however, that for this to occur the involvement or intervention of government is neither a necessary nor a sufficient condition. (We refer to the role of government as a regulating agent in the wage determination process. The government as an employer is by definition active in this process.) Nevertheless for most of the countries concerned some participation by government has been deemed desirable.

What follows is first an attempt to develop a crude typology of incomes policy, as articulated in the countries we have examined, in which we characterise these policies according to their salient features throughout the 'seventies with reference to seven criteria. The criteria employed are elaborated on below. We lay no claims to them being exhaustive. Furthermore it should be borne in mind that the extent to which the wage determination process in any one country conforms to the way in which it is categorised is approximate and largely judgemental. Secondly, we attempt to correlate the characteristics as laid out in Table 38 with the empirical evidence reported above. The material on which our classification is based draws heavily on Addison (1979 and 1981) and to a limited extent on Robinson (1973). Finally, our working definition of incomes policy is one which embraces the "no policy" option where government involvement is negligible or non-existent.

The institutional arrangements underpinning incomes policy may be located at any point on a spectrum which extends from an entirely *laissez-faire* approach, on the one hand, to a fully integrated system of centralised negotiations on the other. The first approach whereby the free and unfettered interplay of market forces is allowed full rein would typically involve bargaining at industry or plant level with no input on the part of Government in laying down guidelines or engaging in moral suasion. Within this framework negotiations would be conducted purely with a view to safeguarding the interests of the individual firms and workforces involved and the outcome would reflect the relative strengths of the two parties in advancing their respective interests as they perceive them.

An integrated centralised system in contrast would involve employers, unions and most significantly government, participating in an attempt to

Table 38: *Main features of income policies in selected countries 1970-80*

Country	*(1) Focus of negotiation*	*(2) Extent of participation*	*(3) Orientation*	*(4) Existence of common frame-work of analysis*	*(5) Political climate*	*(6) Nature of compliance*	*(7) Orientation of trade unions*
Austria	Decentralized	Bilateral	Permanent	Yes	Favourable	Voluntary	Solidaristic
Belgium	–	–	Temporary	No	Unfavourable	–	Economistic
Finland	Centralized	Tripartite	Temporary	No	Unfavourable	Voluntary	Economistic
France	Negotiations fail	–	Temporary	No	Unfavourable	Mandatory	–
Germany	Decentralized	Bilateral	Permanent	Yes	Favourable	Voluntary	–
Ireland	Centralized	Tripartite	Temporary	No	Favourable	Voluntary	Economistic
The Netherlands	Negotiations fail	–	Temporary	No	Unfavourable	Mandatory	–
Norway	Centralized	Tripartite	Permanent	Yes	Favourable	Voluntary	Solidaristic
Sweden	Centralized	Tripartite	Permanent	Yes	Favourable	Voluntary	Solidaristic
UK	–	–	Temporary	No	Unfavourable	–	Economistic

bring about an economy wide "social consensus". Within this type of framework the micro-objectives of safeguarding the profitability of individual enterprises and the living standards of individual workforces are replaced by macro-objectives pertaining to the performance of the economy as a whole. Moreover, negotiations would not focus merely on the levels of wage settlement and the concomitant distribution of factor income but would embrace elements, if not the full gamut, of government economic and social policy. Here, broadly speaking, the government would play two roles *qua* government: (i) assisting in the development of a consensus with regard to the objectives of incomes policy and the means whereby these could be advanced and (ii) developing its budgetary policy and broader economic policy in such a way as to facilitate wage settlements which advance the agreed objectives. At the same time government as an employer would be obliged to pursue a public sector pay policy consonant with whatever wage norms are laid down for the rest of the economy and the aims of the broader incomes policy.

Obviously, both the spirit and thrust of the second type of approach are very much different to those which characterise the first. In essence, an integrated "social consensus" approach is based on the principle of subordinating sectional interests to some broad set of socio-economic objectives. This being the case a prerequisite for the successful pursuit of this type of policy would seem to be the identification of the objectives to be pursued. This exercise *in itself* requires the achievement of a strong element of consensus between the social partners since incomes policy could address itself to the attainment of a wide range of goals which may be mutually exclusive or, at least, inimical to each other. A further prerequisite, given a consensus with regard to objectives, would seem to be the adoption of some common framework for analysing the workings of the macro-economy and evaluating the influence exerted by different levels of income settlements on the outturn for important macro-aggregates.

We now turn to Table 38 where the main features of incomes policies are laid out. Some of the cells in this table are empty either because of lack of information, as in the case of Belgium or because the country's experience of incomes policy throughout the period has been so varied as to defy adequate categorisation – the UK being a good example of this (see Tarling and Wilkinson (1977)). Furthermore, with reference to some criteria, a particular country's experience cannot meaningfully be defined at all or cannot be defined consistently with its classification by another criterion.

The interpretation of Table 38 is as follows. By the "focus of negotiation" we mean whether wage settlements are characteristically arrived at through

local or central bargaining. Negotiations do not, of course, dichotomise quite so neatly in practice. On the one hand, a centralised arrangement in the very strictest sense degenerates into statutory controls stringently applied across the board and might occur either in the absence of a serious attempt to negotiate an outcome or because such negotiations break down entirely. Moreover, the conclusion of centralised negotiations need not preclude subsequent negotiations at local level aimed at an additional settlement. Conversely, where negotiations are conducted at the plant or industry level, the existence of solidaristic wage bargaining across the economy and/or Government guidelines on pay, however feebly articulated, will add more than a "local" dimension to the outcome. Notwithstanding these caveats the predominant focus of negotiations for the respective countries has been as set out in the table. In France and the Netherlands, negotiations at whatever level have typically come unstuck, the result being the imposition of government controls on wages and prices. Belgium and the UK are problematical cases by this criterion, the latter because the focus of negotiation has changed so frequently throughout the period and the former because an almost institutionalised and pervasive indexation mechanism has been frequently supplemented by further, locally negotiated wage increases of considerable magnitude. In both Austria and Germany settlements have been negotiated principally at the local level while in the Scandinavian countries and Ireland negotiations have been conducted largely at a centralised level.

The second column of the table entitled "Extent of Participation" distinguishes between cases where wage negotiations have been conducted by the social partners alone with a minimal or tangential input by Government (bilateral) and cases where the Government has played a direct role in the negotiations proper either by highly visible participation in the formulation of guidelines or by offering budgetary concessions in addition to its inevitable role as an employer itself (tripartite). According to this definition only two reasonably clearcut examples of bilateral negotiations emerge: Austria and Germany and only three of the tripartite variety: Finland, Norway and Ireland, although it must be said that developments in Sweden towards the end of the period indicate that tripartism has begun to characterise the situation there also. Moreover, in Austria, the use of "tax-wage bargains" has not been entirely redundant. Because of the prevalence of statutory controls in both France and the Netherlands it is not possible to make any meaningful comments on the extent of participation in either country. Similarly, we eschew the categorisation of the UK and Belgium by this criterion, the former for reasons already mentioned and the latter because of the lack of information.

Column three categorises incomes policies by their orientation. By a "temporary" orientation is meant a policy the primary purpose of which is to respond to unfavourable economic conditions which present themselves at a particular point in time (often identified as an "emergency"), the role of which is perceived as a disposable adjunct to other demand management policies rather than a fully integrated part of such policies and the perspective of which is essentially short-run. In this scheme of things the participation of Government might be sporadic or variable in intensity depending on the prevailing economic climate. An incomes policy which is thus basically ad hoc in nature is likely to lead to considerable so-called "re-entry" problems. In contrast, an incomes policy with a "permanent" orientation typically addresses itself to long-term structural problems and the imperatives of economic growth, is incorporated into a planning framework rather than a stabilisation context and lays down rules or guidelines for the evolution of incomes over a long time horizon. Such a policy will not generate "re-entry" problems – there is no foreseeable "re-entry" – since it is continuously applied and articulated. Only three countries display an approach to incomes policy which could be termed "permanent" on this basis: Austria, Norway and Sweden. Austria is probably the best example of the three – see OECD (1982). It is worth pointing out that in the case of Norway and Sweden, the permanent orientation of their respective incomes policies was more visible during the first than the second half of the decade. Both countries operated incomes policies strongly inspired by the Scandinavian model of inflation developed by Aukrust (1970, 1977) and Edgren, Faxen and Odhner (1973), the policy prescriptions inferred from which were long-run in nature. Events in the mid-'70s rendered this model less satisfactory than previously as a model of the inflationary process and its prescriptive implications for incomes policy less robust.* The current Norwegian approach to incomes policy is enshrined in the Skanland Report of 1973 which lays down, as a guiding principle the following:

> Incomes policy must be of a long-term nature, so as to consolidate what has already been achieved and to permit attainment of (its) targets, for example, income distribution which has a longer-term horizon.

*In particular, the Scandinavian model of inflation treated tradable goods as one homogeneous entity thus suppressing the distinction between imports and exports and consequently abstracting away terms of trade effects. In a period when movements in the terms of trade were of such magnitude and importance as they were to Norway and Sweden during the 1970s a theory grounded on such assumptions is likely to prove deficient in modelling the inflationary process and in providing an analytical framework for the development of incomes policy.

The existence of a common framework of analysis is represented by a situation where the social partners have (a) evolved a shared set of objectives for incomes policy (or, more generally, the income distribution process); (b) a common model for evaluating the interaction of the relevant economic variables and (c) an agreed strategy for pursuing the policy objectives. A particular requirement here is that employers and trade unions both recognize the consequences for the achievement of macro-economic goals of different outcomes of the income distribution process and, indeed, the implications for the future of individual enterprises when bargaining takes place at the local level. This has been a recurring theme in our discussion. The achievement of this type of consensus may or may not require an active role on the part of government. Germany is a good example of a country which has enjoyed a high level of such consensus without overt government intervention. We would submit indeed that the German experience has probably obviated any need for a formal incomes policy. In Austria, such a common framework of analysis would also appear to exist though with considerably greater input on the part of government than in the German case. Similar remarks apply to Norway and Sweden. It is significant that in the case of both Norway and Sweden, the touchstones of their respective incomes policies for most of the 'seventies – the Aukrust Report (1977) in Norway and that of Edgren, Faxen and Odhner (1973) for Sweden – represented initiatives inspired by government with the full approval of the social partners, the analysis being carried out and the final analytical framework and proposals being developed by groups of economic experts derived in large part from the trade unions and employers' federations. The UK's "Social Contract" which extended from 1974 to 1979 was also an approach to incomes policy which attempted to incorporate a shared set of objectives and a common approach to economic development into the wage negotiations process.

Turning to the question of political climate in the countries concerned it must be recognised that this is a particularly thorny issue to resolve in a typology. It has to do not only with the stability of Government and the orientation of political parties but also with the orientation of the social partners, particularly the trade union movement which we discuss below. However, it does seem reasonable to suggest that the existence of weak or unstable governments will not be conducive to the evolution of a successful policy on incomes. Moreover where the orientation of the major political parties strongly mirrors class divisions in society this will be a factor which impinges on both the credibility and effectiveness of government incomes policy initiatives when a particular party is in power. Taking these considerations into account five countries would appear to have exhibited

political conditions favourable to the implementation of incomes policy throughout the period: Austria, Germany, Ireland, Norway and Sweden. Belgium, Finland and the Netherlands with a multiplicity of small parties and the consequent predominance of weak coalition governments of short duration have displayed unfavourable political conditions. The UK and France where the dominant political cleavage mirrors to a large degree the conflict over factor shares also possess an unfavourable political climate.

Finally, we turn to the question of the orientation of the trade union movement. Here we locate the experience of the countries concerned in terms of an "economistic – solidaristic" dichotomy. A trade union movement whose objectives are "economistic" in nature is defined as one which is largely concerned with "bread-and-butter" issues relating to pay, taxes and disposable income and whose interest is in maximising the immediate advantage of its members in these areas to the exclusion of longer-term objectives. In contrast where organised labour is willing to abstain from using its full bargaining power in wage negotiations in return for influence in overall economic policy and where it perceives the potential for an advantageous trade-off between short-term income maximisation and more long-term acquisiton of power, we describe the orientation of the trade unions as "solidaristic". A solidaristic orientation, it has been argued (see Goldthorpe (1981)), is more likely to prevail where a long and strong tradition of left-wing politics exists and where feelings of class solidarity are resilient enough to supplant sectional interests on the part of individual unions as the overriding guiding principle in negotiations. Economistic bargaining would appear to have characterised the bargaining strategy of trade unions in Belgium, Finland, Ireland and the UK whereas bargaining of the solidaristic variety has been very much in evidence in Austria, Norway and Sweden.*

*"Solidaristic wage bargaining" is in fact the description applied by most commentators to the bargaining strategy of trade unions in Sweden. But as Meidner (1978) points out the outcome was in one important respect very much at variance with the objectives of the trade unions. Thus, by operating in collective bargaining according to the principle of "equal pay for equal work" across the workforce rather than the principle of "ability to pay" on the part of the individual enterprise, the trade unions found themselves unwittingly strengthening the profitability of already highly profitable firms, without any guarantee that the additional profits would be productively re-invested. The trade union response to this dilemma in Sweden has been to press for the institutionalisation of such guarantees through employee investment funds.

Meidner encapsulates the essence of the "solidaristic" orientation in the preamble to his 1978 book (*op. cit.*). He identifies three aims for the trade union-sponsored study of employee investment funds: "(1) To complement the wage policy based on the principle of solidarity: (2) To counteract the concentration of wealth which stems from industrial self-financing: (3) To increase the influence which employees have

Conclusions: Institutions and Performance

Correlating the institutional features of incomes policy with economic performance is a difficult exercise for reasons alluded to earlier. Our remarks in the section on incomes policy objectives suggested that the criterion by which the success of incomes policy could be adjudged is the extent to which such a policy contributes to sustained economic growth at high levels of employment qualified by the condition that the achievement of these primary objectives does not occur at the expense of either a deterioration in Government finances or a deterioration in the balance of payments. Moreover, in our discussion we have accorded first-order importance in determining whether these outcomes will be arrived at to the *ex ante* relationship between real labour costs and productivity.

Although the problem of maintaining equality of growth between real labour costs and productivity will be exacerbated by unfavourable developments in the terms of trade and excessive growth in employers' social security contributions, *inter alia*, there is reason to believe that a well designed incomes policy may contribute substantially to resolving the concomitant adjustment problems. Turning to Table 38 we would submit that the essential ingredients of an effective incomes policy are that it have a permanent orientation and that it be based on the existence of a common framework of analysis. Ultimately the prospects for designing such a policy will depend on the political climate of the country concerned and the orientation of trade unions.

Whereas there can be no deterministic relationship between the institutional features of incomes policy and economic policy because monetary and fiscal policy also have an important role to play, the arguments presented above would indicate that there should be an identifiable correspondence between the two. In particular economies whose incomes policies conform with the model we have identified as ideal should have performed well during the reference period, and economies with incomes

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over the economic process". (*op. cit.* p. 15) He goes on to acknowledge that: "The objectives we have set out are . . . identifying something much more pervasive than a trade union concern alone . . . We are conscious of certain conditions which set the scene for us . . . First and foremost among them there is the demand for full employment or, jobs for everyone. . . . Closely related to this is the demand for *a high level of capital formation*; indeed this is an essential condition for high and rising employment". (Emphasis in the original). Finally, to complete the picture of a solidaristic orientation he states: "Another important stipulation is that any attempts to meet our three main objectives should be *neutral with respect to costs, wages and prices.* A measure of distributive policy which imposed a cost burden on enterprises could conceivably be shifted on to prices and be inflationary without at the same time achieving any real redistributive effect". (Again emphasis in the original, p. 17.)

policies not conforming with this model should have performed badly.

As has already been pointed out, in Austria and Germany real labour costs and productivity have moved closely in tandem over the period, helped admittedly by the relative insulation of these economies from unfavourable developments in the terms of trade.* On balance, as Table 35 illustrates, this has occurred in the context of good economic performance. Both economies have experienced reasonably steady growth (at a high level in the Austrian case), low inflation and low unemployment. Compared with the other countries in our sample the deterioration in Austria's balance of payments over the period has been moderately large but the relative deterioration in its Government finances has been small. In the case of Germany both its balance of payments and the state of its Government finances have deteriorated to a lesser extent than most other countries surveyed. Incomes policy in both Austria and Germany as outlined in Table 38 exhibit to a great extent, albeit in different contexts, the features which we have isolated as crucial to their viability. In both countries there is considerable evidence of the existence of a common framework of analysis. In the Austrian case this is institutionalised at the macro-level in various consultative and decision-making forums which embrace the social partners and Government. In the case of Germany the common framework is operative at a more micro-level, through industrial partnership schemes and a highly developed system of industrial democracy. In both countries the net result is to give a permanent orientation to the institutions underpinning the income distribution process.

Norway and Sweden too display many of the features regarded as desirable in their approach to incomes policy. Again the orientation of such policies is a permanent one and a common framework of analysis appears to exist. None the less the economic performance of these two countries has been mixed and the evidence on the success of incomes policy points to ambiguous conclusions: growth in Norway has been high but Sweden has performed relatively poorly in this regard (see Table 35); inflation has been moderately high and variable; both have experienced significant deteriorations in their balance of payments – Norway particularly so during the middle period of the decade. In contrast both

*As Frisch (1981) points out any terms of trade shocks experienced by Austria have been successfully absorbed in the income distribution process: "In the recent years the need for wage moderation has been accepted by the social partners and the inevitable terms of trade loss caused by the oil price rise was not offset by higher nominal wage agreements. The incomes policy reflected in wage moderation has been an important factor in enabling the domestic economy to absorb relatively smoothly the 'second oil-shock' without a major loss of employment" (*op. cit.* p. 33).

countries have performed extremely well in terms of controlling unemployment. In 1980 the unemployment rate was 1.2 per cent in Norway as against 0.9 per cent in 1971 while in Sweden unemployment had reached 2.1 per cent by 1979 compared with 1.5 per cent in 1970. Coupled with the picture which emerges from our analysis of the relationship between real labour costs and productivity the evidence would suggest that the maintenance of full employment has been the overriding priority of successive Norwegian and Swedish governments and that they have played a very active role in clearing the labour market. Thus the state of the government finances has deteriorated markedly in both countries: the exchequer borrowing requirement in Sweden amounted to 7.7 per cent of GNP in 1979 compared to 1.8 per cent in 1970; in Norway it had reached 5.8 per cent in 1976 (the latest year for which data are available) as against 3 per cent in 1970.

The experience of Norway and Sweden in the presence of incomes policies seemingly ideally designed to overcome the adjustment problems which the economies confronted during the '70s, is not readily explicable. There can be little doubt that terms of trade movements played a powerful part in influencing their respective performances. Both countries, but Norway in particular, experienced adverse terms of trade movements of considerable magnitude during the decade. For Norway the evidence points to the conclusion that wage settlements did not adjust to the terms of trade loss (real employee income moved almost exactly in line with *unadjusted* productivity for much of the period). Moreover, events in both countries – Sweden in particular – have been complicated by the growth of employers' social insurance contributions. In sum it seems, that whereas a common framework of analysis existed in both countries, the model of the economy which underpinned this analysis was deficient to the extent that it did not acknowledge explicitly the impact of the terms of trade or the growth of non-wage labour costs. However, there is some evidence that incomes policy exerted a favourable impact on the growth of *real employee income* to the extent that Norway and Sweden are amongst the few countries in our sample which have at some stage registered significant real wage falls: Norway by some 4 per cent from 1977 to 1979; Sweden by about 3 per cent from 1976 to 1979.

In marked contrast to the experience of Austria and Germany has been that of Belgium and Ireland. In both the latter countries a common framework of analysis has been lacking and incomes policies, though perhaps more or less continuous areas of endeavour on the part of the respective governments, have been characterised by their ad hoc temporary nature. Moreover successive Governments in both countries would appear to have

bowed entirely to the economistic demands of trade unions, in Belgium through elevating indexation as the main instrument of incomes policy and in Ireland through the extensive deployment of fiscal concessions as a means of facilitating wage settlements. Diagram 9 demonstrates real labour costs have grown at a rate considerably in excess of productivity in both countries, especially in Belgium, as has real employee income. Part of this divergence is attributable to movements in the terms of trade and part to the evolution of non-wage labour costs but it is clear that these factors taken together leave much of the divergence unexplained. These developments have been taking place against a background of unfolding economic crisis for both countries: extremely high unemployment (11.8 per cent in Belgium in 1980 as against 2.9 per cent in 1970; 10.3 per cent in Ireland in 1980 compared with 7.2 per cent in 1970); and deteriorating positions on both the balance of payments and the Government finances. In Belgium the balance of payments was in deficit to the extent of 4.5 per cent of GNP whereas a surplus of approximately 3 per cent was recorded on average over the period 1970 to 1973. The exchequer borrowing requirement at 8.7 per cent of GNP in 1980 was seven percentage points higher than in 1970. Ireland's balance of payments deficit registered 9 per cent in 1980 compared with 4 per cent in 1970 and an average of 3.2 per cent over the period 1970-1973. Furthermore the exchequer borrowed the equivalent of 15 per cent of GNP in 1980 as against 6.3 per cent in 1970.

France and the Netherlands as already pointed out are countries in which policy on incomes has found expression in extensive reliance on stringent wage and price controls throughout the decade. The outcome in terms of economic performance has not been entirely encouraging. As the relevant charts indicate real labour cost growth in both economies has substantially outstripped that of productivity since 1973, acutely so in France. Much of the divergence in both cases can be attributed to the terms of trade and the growth of non-wage labour costs. In terms of unemployment both economies have performed poorly, the unemployment rate in France being 5.1 percentage points higher in 1980 than in 1970 and in the Netherlands 4.8 points higher. Moreover, despite price controls France has experienced high rates of inflation. To counterpoint these unfavourable developments attention should be drawn to performance on the balance of payments since both countries have managed to exercise effective control on this front, particularly France where the balance of payments deficit averaged no more than 0.1 per cent of GNP 1978-80, compared to a small surplus in 1970-73. Similar remarks apply to the state of the exchequer finances in France.

In conclusion it is worth pointing out that we do not wish to make

inflated claims about the importance of incomes policy. Indeed, the empirical evidence presented does not allow such claims. In particular it is necessary to acknowledge that incomes policy is only one of a set of policies which is at the disposal of an economy to adopt. The importance of fiscal, monetary and industrial development policies is undoubted. Moreover certain facets of an economy are outside the ambit of incomes policy to tackle: demographic structure and change, industrial structure, vulnerability to world influences and so on. Nevertheless, it is difficult to escape the conclusion that the high performance of economies such as Austria and Germany owes something to the evolution of labour costs and productivity and by extension to the institutional arrangements which underpin the relationship between these two variables. Equally difficult to discount is the correspondence between poor economic performance on the part of Belgium and Ireland and the real labour cost-productivity relationships which have evolved in these economies.

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