ISSN 0376-7191

The
Economic and Social Research Institute

QUARTERLY ECONOMIC COMMENTARY

by

T. J. BAKER, S. SCOTT,
T. P. QUINN

APRIL 1987

QUARTERLY ECONOMIC COMMENTARY

APRIL, 1987

T. J. BAKER, S. SCOTT,
T. P. QUINN

Copies of this paper may be obtained from The Economic and Social Research Institute (Limited Company No. 18269), (Registered Office) 4 Burlington Road, Dublin 4.

Price IR£12.50 per copy or IR£40 per year

T. J. Baker is a Senior Research Officer, S. Scott is Assistant Research Officer and T. P. Quinn is a Research Assistant of The Economic and Social Research Institute. The *Commentary* has been accepted for publication by the Institute, which is not responsible for either the content or the views expressed therein.

Printed by Mount Salus Press Limited, Bishop Street, Dublin 8

CONTENTS

SUMMARY

On the assumption that the major Budget targets are adhered to, it seems likely that the 1987 growth in GNP will be a little over 1 per cent. Employment will continue to fall in 1987, so that unemployment will probably rise further, even with emigration remaining high. Inflation will again be very low by historical standards at about 3 per cent, and the balance of payments should improve, with the current account deficit falling to around 1¼ per cent.

The undoubted short-term deflationary effect of the Budget in 1987 is compensated by the improvement it brings to the prospects for future years. The reduction in the 1987 Exchequer borrowing requirement has been a major contributory factor in the fall in domestic wholesale interest rates which has already taken place, and which is expected to continue further. The impact of lower interest rates, when the decline spreads fully to retail interest rates, will be relatively minor in 1987, although both consumption and private investment could be encouraged in the second half of the year. Given normal time lags, a considerable response can be expected during 1988, provided progress continues to be made in correcting the public finances. However, there is insufficient evidence concerning the size of the response to lower real interest rates for it to be safe to rely on this as the sole mechanism for a revival of growth in 1988. An active medium-term development strategy to encourage private investment and to improve the quality and marketing of export goods and services is also necessary. It is too early to appraise the moves already announced in these fields, but in their intentions at least they are consistent with a coherent medium-term recovery strategy of encouraging economic growth within the constraint of a restrictive fiscal regime.

As for several years past, the major uncertainty is whether the key fiscal aim of restraining the growth in the public service pay-bill can be achieved in practice. Unless it is, the improvements in employment and in living standards now foreseeable for future years will be severely jeopardised, as investors' confidence is undermined and interest rates tend once more to rise. Limiting the pay-bill can be achieved either by reducing the numbers employed or by restricting the rise in average pay rates. The choice between these methods is essentially political, but, as the former will inevitably entail cuts in the standard of services offered to the public as well as increasing unemployment, the latter seems economically preferable and more equitable.

While the determination of the government will be crucial in achieving the necessary outcome, the leaders and members of unions and other pressure groups also have a vital role. Through adopting a longer time-horizon, and responding to the positive aspects of the medium-term strategy by moderating their short-term demands for the next 18 months or so, they would be serving their own best interests, as well as the needs of the country.

ESTIMATED NATIONAL ACCOUNTS 1986

A: Expenditure on Gross National Product

	1985 Preliminary £m	1986 Estimated £m	Change in 1986 £m Total	Change in 1986 £m Volume	Change in 1986 % Total	Change in 1986 % Price	Change in 1986 % Volume
Private Consumer Expenditure ...	9797	10292	495	147	5	3½	1½
Public Net Current Expenditure ...	3290	3570	280	55	8½	6¾	1¾
Gross Domestic Fixed Capital Formation	3597	3472	– 125	– 93	– 3½	– 1	– 2½
Exports of Goods and Services (X) ...	10740	10335	– 305	208	– 3¾	– 5¾	2
Physical Changes in Stocks	177	124	– 53	– 48			
Final Demand	27601	27793	192	269	¾	– ¼	1
less:							
Imports of Goods and Services (M) ...	10347	9707	– 640	145	– 6¼	– 7¾	1½
GDP at market prices	17254	18086	832	124	4¾	4	¾
less:							
Net Factor Payments (F)	1992	2032	40	152	2	– 5¾	7¾
GNP at market prices	15262	16054	792	– 26	5¼	5½	– ¼

B: Gross National Product by Origin

	1985 Preliminary £m	1986 Estimated £m	Change in 1986 £m	Change in 1986 %
Agriculture, Forestry, Fishing ...	1346	1280	– 66	– 5
Non-Agricultural: Wages, etc. ...	9323	9823	500	5¼
Other	3189	3363	174	5½
less:				
Net Factor Payments	1992	2032	40	2
National Income	11866	12434	568	4¾
Depreciation	1600	1680	80	5
GNP at factor cost	13466	14114	648	4¾
Taxes less subsidies	1796	1940	144	8
GNP at market prices	15262	16054	792	5¼

C: Balance of Payments on Current Account

	1985 Preliminary £m	1986 Estimated £m	Change in 1986 £m
X—M	393	628	235
F	– 1992	– 2032	– 40
Net Transfers	1050	1075	25
Balance on Current Account ...	– 549	– 329	220
as % of GNP	– 3½	– 2	1½

FORECAST NATIONAL ACCOUNTS 1987

A: Expenditure on Gross National Product

	1986 Estimated £m	1987 Forecast £m	Change in 1987 £m Total	£m Volume	% Total	% Price	% Volume
Private Consumer Expenditure ...	10292	10704	412	103	4	3	1
Public Net Current Expenditure ...	3570	3730	160	– 54	4½	6	– 1½
Gross Domestic Fixed Capital Formation	3472	3590	118	17	3½	3	½
Exports of Goods and Services (X) ...	10335	10935	600	415	5¾	1¾	4
Physical Changes in Stocks	124	143	19	19			
Final Demand	27793	29102	1309	500	4¾	3	1¾
less:							
Imports of Goods and Services (M) ...	9707	10057	350	233	3½	1	2½
GDP at market prices	18086	19045	959	267	5¼	3¾	1½
less:							
Net Factor Payments (F)	2032	2164	132	95	6½	1¾	4¾
GNP at market prices	16054	16881	827	172	5¼	4	1

B: Gross National Product by Origin

	1986 Estimated £m	1987 Forecast £m	Change in 1987 £m	Change in 1987 %
Agriculture, Forestry, Fishing ...	1280	1318	38	3
Non-Agricultural: Wages, etc. ...	9823	10290	467	4¾
Other	3363	3597	234	7
less:				
Net Factor Payments	2032	2164	132	6½
National Income	12434	13041	607	5
Depreciation	1680	1764	84	5
GNP at factor cost	14114	14805	691	5
Taxes less subsidies	1940	2076	136	7
GNP at market prices	16054	16881	827	5¼

C: Balance of Payments on Current Account

	1986 Estimated £m	1987 Forecast £m	Change in 1987 £m
X—M	628	878	250
F	– 2032	– 2164	– 132
Net Transfers	1075	1070	– 5
Balance on Current Account ...	– 329	– 216	117
as % of GNP	– 2	– 1¼	¾

COMMENTARY

The International Economy

General

Concern about the imbalances in the world economy has intensified in recent months. In particular, the trade imbalance between the USA on the one hand and Japan and the other Pacific-rim countries on the other shows little sign of correcting itself in response to the massive exchange rate movements of the past two years. In these circumstances, the prospect that initial protectionist moves by the USA will develop into a lasting trade dispute with Japan cannot be ruled out. In the meantime, the US dollar seems likely to remain under considerable pressure, and there is a strong possibility that US interest rates will be forced upwards.

Despite its own threats of trade sanctions against Japan, Europe is only indirectly involved in these major trans-Pacific tensions. However, the combination of a weak dollar and rising US interest rates could further retard European growth, already rather weaker than expected. So far as prospects for the second half of 1987 and for 1988 are concerned, much would appear to depend on whether the international accord on exchange rate target zones can survive the current pressure, and whether a convincing economic *rapprochement* can be reached between the US and Japan.

The US Economy

Although it is now two years since the dollar commenced its depreciation, there is still no clear indication that the US balance of payments is improving. Import volumes continue to grow, and the increase in the volume of manufactured exports has been very small. There are many partial explanations of this lack of response to a major exchange rate stimulus. The profit margins of Japanese exporters were so high when the dollar was at its peak that they were able to cut margins substantially to remain competitive; many of the smaller Asian countries allowed their currencies to fall most of the way with the dollar; and the weakness of world investment has restricted the market for some of the goods in which the US is most competitive. Nevertheless, none of these is convincing as a total explanation, and it is hard to avoid the conclusion that there are structural problems in US industry which could take several years to correct.

In the shorter term, the economic indicators of domestic activity in the US remain mixed. On balance, it now seems likely that the growth in GNP in 1987 will be similar to the 2½ per cent recorded in 1986. Price inflation could rise from 2 per cent in 1986 to about 3½ per cent in 1987, reflecting the past depreciation of the currency and the partial recovery in the oil price. Unemployment is expected to remain relatively low at rather under 7 per cent. Although there is little sign of a significant improvement in the current account balance of payments deficit in 1987, progress is still expected to be made in reducing the other major imbalance, the current budget deficit. Provided that the process of reducing the budget deficit continues fairly smoothly into 1988, it seems possible that any increase in interest rates which may be forced during the remainder of 1987 could prove temporary. A combination of moderate economic growth, inflation of under 4 per cent, reasonably stable interest rates and a slowly improving external balance does not appear basically impossible, but whether the volatility of the currency markets will permit such a gradual amelioration of current problems must be open to question.

The European Economy

Personal consumption is continuing to grow in most European countries, but at a rather slower pace than had been expected. With exports from Europe restricted by the weakness of the dollar and the investment cutbacks in oil-producing countries, and with investment within Europe failing to respond vigorously to the increase in consumer demand, forecasts of 1987 growth rates are tending to be revised downwards in many European countries.

Unless fiscal policies are relaxed in the major continental countries, the EEC growth rate now seems likely once more to average about 2½ per cent, much the same as in 1985 and 1986. Inflation is certain to remain low, although not quite as low as in 1986, and there is unlikely to be any significant reduction in the high Community rate of unemployment. Because the annual growth rate is low, it does perhaps possess the virtue of sustainability, and yet another year of modest expansion could result in 1988, but with little prospect of bringing the EEC unemployment rate towards single figures.

At least so far as 1987 is concerned, the UK is likely to grow faster than the EEC average. This is not entirely due to the normal election-year loosening of fiscal and monetary policy. Indeed, although such a policy relaxation has taken place over the past twelve months, the process has been more restrained than might have been expected. A major factor in the improvement in the UK's economic prospects has been that UK trade volumes, unlike those of the US, have responded quickly and positively to the depreciation of the currency since early 1986. The modest appreciation in the past three months seems unlikely to reverse this trend, so that it now appears that the continuing consumer boom can be accommodated without much deterioration in the balance of payments during 1987.

The fact that both price and, especially, pay inflation are running at considerably higher levels in the UK than in most of the major continental EEC nations could lead to renewed balance of payments worries, or a further depreciation of sterling during 1988. However, for 1987 it seems more likely that sterling will remain strong, and that, with or without entry to the EMS, UK interest rates could continue to fall from their current high levels.

The Rest of the World

With the passing of the Japanese Budget, after a protracted legislative process, it seems probable that a moderate fiscal stimulus will be given to the

Japanese economy in the remainder of 1987. Whether this will suffice to maintain the growth rate, in the face of falling export values, in terms of yen, and the chronically high Japanese propensity to save, is less certain. Moreover, if external pressure to make the Japanese market more accessible to imports of finished goods proves at all effective, it could add another downward influence on the Japanese growth rate, especially in 1988.

From the viewpoint of non-raw-material-exporting developed countries, the nature of the Japanese response to the emerging trade disputes with the US and Europe is probably more important than the actual growth rate of the Japanese economy. One potentially beneficial reaction to the growing strength of protectionist feeling in the US and Europe could be some switch in the balance of Japanese overseas investment in favour of direct productive investment within the blocs concerned at the expense of the recent concentration on investment in financial instruments.

While US trade sanctions are currently aimed principally at Japan, their existence obviously poses a threat to all the newly industrialised exporting countries of Asia. Their prospects over the next eighteen months therefore rest on political as much as on purely economic developments and are consequently difficult to forecast. Precautionary motives could stimulate many of them, like Japan, towards establishing some productive capacity within Europe and America.

With OPEC so far largely succeeding in its aim to stabilise oil prices at around $18 per barrel, income in oil producing countries should recover significantly from the nadir of 1986, although the renewed decline of the dollar has limited the effective rise in the price of oil. Given that the process of adjusting to the 1986 fall in income is incomplete in many producer countries, and the uncertainty about future oil prices, it seems unlikely that improved incomes will result in a major surge in spending on imports during 1987.

The problems of third-world debtor countries are set to continue throughout 1987, with commodity prices remaining low, and the decline in international interest rates apparently abated. The weakness of the dollar could be helpful in some cases, but few of these countries themselves possess currencies which are strong enough to have appreciated against the dollar. Despite talk of unilateral debt repudiation or interest limitation, it seems probable that the majority of cases will continue to be treated through agreed re-scheduling processes, and that 1987 will pass without any action which will seriously damage the international banking system.

The Context for Ireland

As should be clear from the foregoing discussion, the international economic outlook is far from settled, and any predictions must be treated with caution. However, Europe is emerging as probably the most stable economic area over the next year or so. This suggests that the major markets for Ireland's manufactured exports should remain reasonably buoyant for the rest of 1987 and into 1988. Within Europe, UK demand is growing particularly rapidly, so that for 1987 at least some of the more traditional Irish industries could be operating in a favourable environment.

As was pointed out in the previous *Commentary,* conditions on the foreign

TABLE 1: Short-term International Outlook

Country	GNP % Change		Consumer Prices % Change		Hourly Earnings % Change		Unemployment Rate %		Budget Deficit as % of GNP		Current Account Balance as % of GNP	
	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987
United States	2½	2½	2	3½	3	3¼	7	6¾	3½	2¾	−3¼	−3¼
Canada	3	2½	4¼	4	3½	4¾	9¾	9½	5½	4¾	−1½	−1
Japan	2¼	2½	¾	0	3½	2½	2¾	3¼	1¼	1½	4¼	3¾
West Germany	2½	2¼	−¼	¾	3¾	3¼	7¾	7¾	1	1	3½	2½
France	2	2	2¼	2½	4	3	10½	11	2¾	2¾	½	¼
UK	2¼	3	3½	4½	8	7	11¾	11¼	3	2¾	0	−¼
Italy	2¾	3	6	4	7½	7	11¼	11½	12½	11¾	1	½
Belgium	2	2	1¼	1½	3	2¼	11¼	11¼	9½	7½	3¼	4
Denmark	2¾	½	3¼	2¾	4¼	5½	7¾	8½	−3	−2½	−5¼	−3
Netherlands	1½	1½	0	−1	2	1¾	13½	13	6½	6¾	4¼	3½
Sweden	2¼	1¼	4	4	7	5	2½	2¾	1	¾	1¼	1
Total (OECD)	2½	2½	2¾	3	4	4	8½	8¼	3¼	3	−¼	−¼
Ireland	−¼	1	3¾	3¼	6¼	5½	18¼	19	8½	7½	−2	−1¼

Sources: OECD, IMF, NIESR, European Economy, London Business School *Economic Outlook.*

exchange markets can change quickly and dramatically. At that time sterling as well as the dollar was under severe pressure, placing some strain on even the new Irish parity in the EMS. Since then, of course, sterling has appreciated significantly, and no longer automatically reflects fluctuations in the dollar. In the meantime the dollar itself has depreciated further, while the yen has appreciated against most other currencies. The current structure of EMS parities looks more secure than in the early months of the year. Provided international measures succeed in preventing a major new slide in the value of the US dollar, the present broad pattern of exchange rates could persist until the end of the year, and this is the assumption made in preparing the forecasts in this *Commentary.*

It should be noted that the present pattern is quite favourable to Ireland. Compared with the 1986 average, competitiveness has been significantly improved against all major continental currencies, and marginally improved against sterling. Compared with the second half of 1986 the improvement against sterling has also been significant. While the weak dollar has damaged Irish competitiveness in the US *vis-à-vis* domestic suppliers, most other exporters to that market have experienced an even greater currency appreciation. Moreover, the benefits of a weak dollar in terms of low import prices and reduced interest payments on a substantial proportion of the external debt almost certainly outweigh the possible disadvantages to a number of exporters.

It now seems unlikely that US interest rates will decline during 1987, and increases are much more likely. Interest rates in other countries, however, seem unlikely to increase, and further reductions appear possible in Europe, and particularly London. Thus, while not much relief can be looked for in 1987 in the level of interest rates applying to the external national debt, overseas influences on the level of domestic interest rates could well be downwards.

In spite of the uncertainties surrounding the future growth of world trade, it still appears that international fixed investment is growing in volume, providing Ireland with an opportunity to increase the level of foreign direct investment in industry and related services. If the speculation that precautionary motives might prompt more Asian companies to establish facilities within the EEC proves correct, then the prospect for overseas investment in the Irish economy could be good for the next few years, almost irrespective of the actual rate of growth of total world trade.

THE DOMESTIC ECONOMY

General

Despite the growing uncertainties in the international environment, it remains probable that it will be conducive to a reasonable growth rate in the Irish economy in 1987. However, it is domestic factors which seem likely to determine the actual growth achieved.

The Budget introduced by the incoming government was significantly more deflationary than expected. By itself, the objective of reducing the exchequer borrowing requirement from over 13 per cent in 1986 to under 11 per cent of GNP could act as a powerful depressant, reducing GNP by about 2 per cent from the notional level it would have reached with no cut in the borrowing requirement, and by almost 1 per cent compared with the Fine Gael draft Budget on which the forecasts in the previous *Commentary* were based.

However, because the Budget represents a major step in the adjustment necessary to restore the public finances to a viable condition, it should produce favourable results in the medium term which will eventually outweigh the direct short-term deflation. At the time of writing, wholesale interest rates have already fallen by over 2 per cent from their pre-budget peak. Provided there are no major external shocks, they should decline further over the coming months, enabling significant reductions in retail interest rates. Allied to improving business confidence, also resulting from the Budget strategy, this could help to stimulate private investment substantially, although the effects of this are likely to become apparent in 1988 rather than 1987.

In the forecasts presented in this *Commentary*, it is assumed that the Budget targets will broadly be met, although some variations in the composition of both revenue and expenditure seem possible. It is further assumed that the central budgetary feature of restraining the growth in the public service pay bill can be achieved without provoking any strikes serious enough to have a lasting macro-economic effect.

Exports

Visible exports recovered quite sharply in the last four months of 1986, and this recovery appears to be continuing in the early months of 1987. However, both 1985 and 1986 showed a strong export performance in the first quarter, followed by a pronounced weakness during the summer months. Whether this second or third quarter decline will be avoided in 1987 is a key question in forecasting not only exports but also the general economic outlook for the year.

So far as manufactured exports are concerned, there appears no reason to expect a summer deterioration this year. The 1985 shake-out of the electronics industry is unlikely to be repeated in the near future, while the temporary difficulties affecting the chemical industry in 1986 seem to have been overcome. With new capacity due to the come into production during 1987, it is thus reasonable to expect substantial volume growth in the exports of the modern industries. The expansion in UK consumption, allied to a slightly more favourable real exchange rate, could enable some increase in exports of the more traditional branches of manufacturing industry. Allowing thus for a gradual improvement on the level of exports achieved in the first quarter of the year, an improvement of about 5 per cent in the volume of manufactured exports seems a fairly conservative forecast for 1987 as a whole. Average prices are likely to be slightly higher than in 1986, although considerable variations between industries are expected.

Other industrial exports should continue the volume growth exhibited in 1986, although drink exports to Northern Ireland may be reduced if the Border restrictions on re-import prove effective. After their very steep fall in 1986 it seems possible that metal ore prices will stabilise in terms of Irish pounds this year, and that average prices for the category as a whole could show a marginal increase.

As always, agricultural exports are difficult to predict, both because of weather induced uncertainties concerning the volume of agricultural production and because the balance between exporting output and placing it in stock is liable to major fluctuations. Given the apparent determination of the EEC Commission to limit the size of intervention stocks, it seems probable that a higher proportion of output will be exported in 1987 than in the past few years. However, there is likely to be a reduction in the quantity of milk and beef available, so that the volume of exports could show a small decline. With the price of dairy products increasing in Irish pound terms, the value of agricultural exports could be little changed from the 1986 level.

On the basis of these projections, visible trade is forecast to rise by 3½ per cent in volume and by 5¼ per cent in value. One consequence of assuming that a higher proportion of agricultural output will be directly exported is that there should be a sharp decline in overseas storage of intervention stocks. This could lead to a substantial reduction in the balance of payments adjustment of export figures. Thus merchandise exports, in balance of payments terms, could increase by 4 per cent in volume and 5¾ per cent in value, as shown in Table 2.

TABLE 2: Exports of Goods and Services

	1985 £m	% Change Volume	% Change Value	1986 £m	% Change Volume	% Change Value	1987 £m
Agricultural	1781	1¼	− ½	1770	− 2	0	1770
Manufactured	6280	3¼	− 2¾	6103	5	7	6530
Other Industrial	1556	4¼	− 9	1417	2¾	3	1460
Other	126			98			110
Total Visible	9743	2¾	− 3¾	9388	3½	5¼	9870
Adjustments	− 216			− 212			− 170
Merchandise Exports	9527	2¾	− 3¾	9176	4	5¾	9700
Tourism	691	− 11	− 7½	640	6½	9½	700
Other Current Receipts	522	3	− ½	519	2	3	535
Exports of Goods and Services	10740	2	− 3¾	10335	4	5¾	10935

Tourism suffered a major reverse in 1986, which had a significant effect on the economy as a whole. The prospects for 1987 appear much brighter, provided there are no extraneous shocks to deter international travel. It is still too early to assess the effects of reduced travel costs between the UK and Ireland. Allowing for only a moderate impact from the lower fares, and for a substantial rather than a dramatic recovery in US overseas holiday travel, an increase of about 9½ per cent in the value of tourist earnings is a reasonable forecast for 1987.

With a small rise in other service exports, total exports of goods and services could increase by about 4 per cent in volume in 1987. This would be about double the rate achieved in 1986, with the improvement due largely to more buoyant manufactured exports and to the tourist recovery. The change in the value of exports should be more striking, with an increase of 5¾ per cent replacing the decline of 3¾ per cent in 1986, as prices rise slightly after their heavy fall last year.

Stocks

Farm stocks fell by a massive £85 million in 1986, as cattle numbers were severely reduced. A much smaller fall in farm stocks, perhaps £25 million, is expected in 1987. Although the dairy herd will continue to decline, the 1986 reduction in the numbers of other cattle is unlikely to be repeated, and there could be some increase in sheep and on-farm cereal stocks.

Despite Community efforts to check the rise in intervention stock levels, there was a substantial increase in such stocks, particularly of butter, during 1986. With a more vigorous programme of disposals, and a lower level of milk and beef production, there is unlikely to be a significant increase in intervention stocks in 1987. Indeed, an actual fall in intervention stock levels cannot be ruled out, but at this stage it appears more reasonable to predict a small increase.

Until sub-annual estimates of non-agricultural, non-intervention, stocks become available, it is virtually impossible to track the movements in such stocks between the annual surveys undertaken by the CSO. On the basis of the increase in the volume of imports in the fourth quarter, it is assumed that industrial stock levels, including work in progress, grew slightly faster in 1986 than in the previous year. It must be conceded, however, that this estimate is liable to considerable error, the magnitude of which could well affect the estimated growth rate of the economy as a whole. For 1987 it is assumed that there will be a further modest increase in industrial stock building as industrial output expands and as the prospect of rising prices in the following year provides some incentive to bring purchases forward.

TABLE 3: Stock Changes

	1985 £m	Change in Rate £m	1986 £m	Change in Rate £m	1987 £m
Livestock on Farms	−31	−54	−85	+60	−25
Irish Intervention Stocks[1]	105	−24	81	−71	10
Other Non-agricultural Stocks	103	+25	128	+30	158
Total	177	−53	124	+19	143

[1]Including subsidised private storage.

Fixed Investment

Total fixed investment fell in both value and volume terms in 1986, with the decline in building being particularly acute. Entering 1987 it seemed as if investment in building and construction might stabilise this year, allowing the expected upturn in machinery and equipment investment to result in the first significant volume increase in total fixed investment since 1981. However, the curtailment in the public capital programme announced in the recent Budget, and in particular the ending of various house and improvement grant schemes, ensures that there will be another substantial decline in the volume of building investment in 1987. Despite the expected reduction in domestic interest rates, it now seems likely that the volume of building investment could fall by about 3½ per cent in 1987.

TABLE 4: Gross Fixed Capital Formation

	1985	% Change		1986	% Change		1987
	£m	Volume	Value	£m	Volume	Value	£m
Building and Construction	1521	−5½	−1½	1500	−3½	0	1500
Machinery and Equipment	2076	− ½	−5	1972	3½	6	2090
Total	3597	−2½	−3½	3472	½	3½	3590

Investment in machinery and equipment still seems set to expand in 1987, largely because of the increase in approvals recorded by the IDA during 1986. However, the post-Budget prospects for slower domestic growth could inhibit some types of investment previously expected, and so the forecast volume increase in machinery and equipment investment has been revised downwards to 3½ per cent. As Table 4 shows, this implies a marginal increase of ½ per cent in the volume of total fixed investment, and a rise of about 3½ per cent in value terms. Lower interest rates, specific incentives, and improved confidence should lead to a significant upturn in 1988.

Consumption

Although the retail sales index showed an increase of only 1.9 per cent in the value of retail sales in 1986, it is thought that the value of total personal consumption rose by about 5 per cent. The index itself was depressed by the absence of visiting tourists, while non-retail forms of expenditure on housing, foreign travel, cross-border shopping and various services all grew sharply. In total it is thought that consumer spending rose faster than personal disposable income, implying a significant reduction in the personal savings ratio. This would be reasonable, as the introduction of the deposit interest retention tax tended to reduce specifically that part of net income which is liable to be saved.

With this factor less pronounced in 1987, it is assumed that there will be only a marginal further fall in the personal savings ratio in 1987. Thus with personal disposable income likely to rise by a little under 4 per cent, an increase of 4 per cent in the value of personal consumption appears a reasonable forecast for the year. The personal consumption deflator will be about 3 per cent, so that the volume increase in personal consumption is forecast at 1 per cent. Unlike 1986, it seems probable that this will be fully reflected in the retail sales index, which could even increase more rapidly if tourist numbers recover, and if there is a significant reduction in cross-border shopping.

It is a telling illustration of the state of the economy that the most buoyant category of expenditure in 1986 was public authorities' net expenditure on current goods and services, or government consumption. This is estimated to have grown by 8½ per cent in value terms, largely due to a 6¾ per cent price rise, mostly reflecting pay increases.

Provided that budgetary targets are met, the value of net government consumption in 1987 should increase by about 4½ per cent, little more than half the 1986 rate. Even with a pay freeze until the end of the year, the deflator is expected to be about 6 per cent, implying a fall in the volume of net consumption of about 1½ per cent. This is to be achieved in part through a reduction in the numbers employed in the public service, and in part through the levying of new and increased charges for various services, which conventionally are treated as a reduction in net expenditure rather than an increase in revenue.

Final Demand

On the basis of the estimates already discussed, the volume of final demand is believed to have increased by about 1 per cent in 1986. Falls in fixed investment and stockbuilding partly offset modest increases in consumption and exports. Due to the fall in the price of exports and of imported capital goods, the deflator for final demand was marginally negative, so that the value increase was only ¾ per cent.

For 1987 a more normal configuration of final demand is forecast, although the volume growth remains low at 1¾ per cent. Consumption, both private and public, and fixed investment will be held down by the tighter fiscal stance, while the predicted growth in exports and stocks is modest by historical standards. Prices are expected to rise by about 3 per cent, so that the value increase in final demand is forecast at 4¾ per cent.

Imports

The volume of visible imports rose marginally in 1986 following a recovery in the final months of the year. When allowance is made in the balance of payments adjustment for increased cross-border shopping, the rise in the volume of merchandise imports reached about ½ per cent. The massive increase of over 20 per cent in the volume of Irish tourism abroad raised the increase in the volume of imports of goods and services to about 1½ per cent. However, because of the very large fall in average import prices, reflecting both currency movements and the weakness in the international price of commodities, especially oil, the value of merchandise imports declined by 8 per cent and of imports of goods and services by 6¼ per cent.

This price decline is not expected to be repeated in 1987, and average prices for the year are forecast to be about 1 per cent higher than in 1986. Thus the small increase in the volume of imports which can be expected in response to the rise in final demand is likely to be reflected in an increase in import values.

As Table 5 shows, all categories of imports are likely to increase in volume, except for agricultural inputs where lower cattle numbers, a reduced arable acreage and, it is to be hoped, better weather, should lead to some reduction from the 1986 level. A fairly cautious allowance has been made in the forecast balance of payments adjustment for a reduction in cross-border retail

TABLE 5: Imports of Goods and Services

	1985 £m	% Change Volume	% Change Value	1986 £m	% Change Volume	% Change Value	1987 £m
Capital Goods	1253	- ½	- 4¾	1192	4	5½	1258
Consumer Goods	2318	7	½	2332	3	4	2425
Intermediate Goods:							
Agriculture	455	5	- 5	432	- 4	- 5	410
Other	5376	- 3	- 13½	4648	3¼	4¼	4845
Other Goods	30			26			30
Total Visible	9430	¼	- 8½	8630	3	4	8968
Adjustments	- 58			- 14			- 62
Merchandise Imports	9372	½	- 8	8616	2¼	3½	8906
Tourism	399	20¼	24½	497	3	6	527
Other Services	579	1¼	3¼	594	3	5	624
Imports of Goods and Services	10347	1½	- 6¼	9707	2½	3½	10057

purchases, and this allowance has been partly offset by increasing the forecast for some types of direct imports. Given the reduction in cross-channel transport costs, it is possible that tourism abroad will grow more rapidly than projected here. However, after the very large rise last year, it seems more probable that there will be only a small increase in 1987.

Balance of Payments

On the basis of the export and import forecasts, the visible trade surplus is forecast to increase from £758 million in 1986 to £902 million in 1987. This is a much smaller increase than between 1985 and 1986 when there was a considerable terms of trade gain. The surplus on trade in goods and services in 1987 is forecast at £878 million, compared with £628 million in 1986 and £393 million in 1985.

For most of 1986, net factor flows remained relatively static, before growing sharply in the final quarter. For the year as a whole the increase in the value of net factor flows was only 2 per cent. A faster rise can be expected in 1987, with the absence of further significant falls in international interest rates, no further improvement in the exchange rate configuration, and some renewed growth in profit expatriation. Although forecasts in this area tend to be subject to a considerable margin of error, the projection of a 6½ per cent increase in net factor payments appears reasonable, and is consistent with other aspects of this *Commentary*.

Despite earlier predictions of a substantial reduction, transfers from the EEC during 1986 rose slightly, leaving total net transfers from abroad some £25 million higher than in 1985, at £1,075 million. At present there is no reason to expect a substantial change in this level in 1987, and a figure of £1,070 million is accordingly included in the balance of payments forecast.

Due principally to the fourth quarter upturn in factor payments, and to unexpectedly high December imports, the total balance of payments deficit on current account was significantly higher than estimated in the previous *Commentary*. The preliminary CSO Estimate places the total current deficit at £329 million, or 2 per cent of GNP. The forecast for 1987 is for a current deficit of £216 million or 1¼ per cent of GNP. The most worrying aspect of the figures is the very large unexplained residual of £1,566 million 1986. The speed with which this residual grew, especially during the winter of 1985-86, and the large fluctuations from quarter to quarter suggest that unrecorded private capital movements, mainly in the form of the leading and lagging of trade payments, must account for the bulk of the increase. However, the possibility that part of the residual represents unrecorded current flows, and that consequently the true current deficit is somewhat higher than the recorded level, cannot be entirely dismissed.

Because the nature of the residual is not properly understood, it is difficult to make confident predictions as to how it is likely to behave in 1987. If the general interpretation is correct, that it largely resulted from speculative and precautionary moves due to fears of possible exchange rate movements, the slippage from fiscal targets and political uncertainty during 1986, then the residual should be significantly lower during 1987. Although some uncertainty always exists, the general prospect with regard to both the fiscal and the exchange rate situation is much more stable at present than for most of 1986. It is thus reasonable to expect sufficient reduction in the residual in the coming months to improve liquidity on the Irish money markets, and thus to permit a fall of at least 3½ per cent in wholesale interest rates from their mid-March levels. Indeed, these interest rates have already fallen significantly. Although data on the underlying financial flows are not yet available, it seems certain that the residual outflow has been drastically reduced, if not reversed, since the middle of March.

Output

The increase of about ¾ per cent in GDP in 1986 represents a small rise in industrial output, offset by substantial falls in agricultural and building production, and near stagnation in service output. Lower levels of construction will again depress GDP growth in 1987, as will the cutback in public services. However, industrial production should grow slightly faster, and both agriculture and tourism can be expected to recover from their 1986 declines, so that total output growth is expected to double to 1½ per cent in 1987.

Agriculture

According to preliminary estimates, the volume of gross agricultural product fell by 7.7 per cent in 1986, reflecting a fall of 2.2 per cent in gross output combined with a large increase in inputs of feeding-stuffs. Both the fall in gross output and the increase in feed imports can largely be attributed to the second successive year of exceptionally poor weather.

A return to average weather conditions in 1987 will not lead to a major recovery in the volume of gross agricultural output. Arable acreage would appear to have declined again, so that even a substantial improvement in yields would result in only a moderate increase in crop production. More important, milk production will be constrained by the existence of a tight superlevy quota, while cattle output will decline due to the reduction in the number of milk cows. Thus, at best, the volume of gross agricultural output might remain at roughly the same level in 1987 as in 1986. However, with feed inputs reduced sharply, the volume of gross agricultural product, the value added in agriculture, could increase by about 2 per cent in 1987.

Industry

The volume of production in manufacturing industry rose by 2.8 per cent in 1986. For most of the year output was more or less static, at a level just below the seasonally corrected quarterly peak which had been reached as long ago as the fourth quarter of 1984. However, a recovery in chemicals and renewed expansion in office and data processing machinery combined to lift manufacturing production to a new peak in the fourth quarter, some 3 per cent higher than the previous best.

If the 1986 fourth quarter level were to be maintained 1987, it would result in an annual increase of 3.4 per cent in the index of production in manufacturing industry. Despite the disappointments of the past two years, when manufacturing output, in line with exports, fell away in the summer months, it seems reasonable to expect that exports and production will continue to grow during 1987. Firms responding to the CII/ESRI Business Survey appear more confident than a year ago, and comparative costs more favourable. It thus seems that the annual increase in manufacturing production could approach 5 per cent. Production in other industries could increase rather more slowly than in manufacturing, so that a rise of about 4 per cent in the index for all industries seems a reasonable forecast.

Due to the Budget measures, there has been a sharp downward revision in the forecast for investment in building and construction. Even allowing for the continuation for some months of a high level of house repairs classified as consumption in the National Accounts, it seems probable that the total output of the building industry could fall by about 3 per cent in 1987. On this basis, the volume of production in the total industrial sector is forecast to increase by about 2½ per cent in 1987.

Services

Although no official estimates are available for the output of the service sector in 1986, it seems clear that a large fall in the volume of tourism offset an increase in the volume of public services, leaving the output of the service sector as a whole more or less stagnant.

This pattern is likely to be reversed in 1987, with the volume of public services scheduled to fall significantly, while tourism is expected to recover. The post-Budget downward revision in forecast consumption is likely to limit the growth of other private services. In total, the volume increase in service output seems likely to be about ½ per cent in 1987.

Employment

If the output forecasts are of the correct order of magnitude, it seems inevitable that the level of employment will continue to fall during 1987. The dynamics of agricultural employment in relation to output are not clear, but there seems no good reason to suppose that the long-term decline in the number engaged will be interrupted in 1987, although the fall may be a little less severe than in the past two years.

The forecast increase of 4 per cent in industrial production in 1987 would, at first sight, seem compatible with either a stabilisation or even a small increase in industrial employment. However, the composition of the output increases, with most of the growth occurring in the modern manufacturing industries, suggests that there will be a substantial rise in overall output per head and that industrial employment will remain slightly below the 1986 average. The revised forecast for a reduction in building output clearly implies a further loss of jobs, so that the average level of total employment in the industrial sector seems likely to be significantly lower than in 1986.

Employment in services will be subject to various conflicting influences. The expected recovery in tourism should lead to a considerable increase in jobs in that sector, although these seem likely to be mainly of a seasonal nature. On the other hand, the Budget measures clearly imply a significant reduction in average public service employment in 1987, as well as limiting growth in private services to a rate which could well be lower than the annual increase in labour productivity in that sector. On balance, little change in the annual average of total service employment in 1987 seems the most realistic forecast.

On the basis of these projections, the average number at work in 1987 would fall by about 13,000, or 1¼ per cent, as shown in Table 6. The implications of such a fall in employment for the level of unemployment depend on developments with regard to labour force participation and emigration. Assuming a continuing reduction in participation rates, but a reduced rate of emigration in the first half of the year, the total labour force might decline by about 2,000 in 1987 on an annual average basis. This compares with falls of about 10,000 in both 1985 and 1986. In this case, average unemployment on a labour force basis would increase by about 11,000 to 245,000, which would correspond to an average Live Register total of 248,000 in 1987.

TABLE 6: Employment and Unemployment

	A: Mid-April Estimates '000				
	1984	1985	1986	1987	1988
Agriculture	181	169	161	155	150
Industry	319	305	296	289	285
Services	604	600	600	598	595
Total at work	1104	1074	1057	1042	1030
Unemployed	204	225	230	245	245
Labour Force	1308	1299	1287	1287	1275
Unemployment Rate %	17.9	17.3	17.9	19.0	19.0
Live Register	214	228	232	250	247

	B: Annual Averages '000			
	1984	1985	1986	1987
Agriculture	175	167	158	153
Industry	311	301	293	286
Services	602	600	599	598
Total at work	1088	1068	1050	1037
Unemployed	217	227	234	245
Labour Force	1305	1295	1284	1282
Unemployment Rate %	16.6	17.5	18.2	19.1
Live Register	214	231	236	248

Incomes

In 1986 the favourable movements in relative prices in agriculture mitigated the fall in the volume of gross agricultural product. In 1987 price movements are likely to remain favourable, but only slightly, so that the volume improvement of 2 per cent in gross agricultural product could result in an increase of about 3 per cent in incomes arising in agriculture, forestry and fishing.

Non-agricultural wages, salaries and pensions are estimated to have risen in aggregate by a little under 5½ per cent in 1986. Average earnings are believed to have increased by about 6¼ per cent, offset by a reduction of almost 1 per cent in the number of employees.

As in the past two years, there is likely to be a considerable spread in the size of pay increases between firms in the private sector. On average, however, increases in private sector earnings are likely to be lower than in 1986, reflecting both the reduced rate of price inflation over the past 18 months and the narrow margins of firms competing with UK suppliers. Thus, although some settlements will be much larger, the increase in average private sector earnings is expected to be about 5 per cent.

There will also be considerable divergences between the pay increases received by different groups of public service employees, depending on whether or not they have received any special awards. When allowance is made for salary scale drift and promotions, average public service earnings are due to increase by about 6½ per cent in 1987, even assuming no new general or special pay increases. Thus, average earnings of all employees seem likely to increase by over 5¾ per cent. However, the total number of employees is forecast to fall by about 1 per cent, leaving the projected rise in aggregate earnings at 4¾ per cent.

Estimates of other non-agricultural incomes are subject to a considerable margin of error, as the latest official figures relate to 1984. However, both income from self-employment and household receipts of interest, dividends and rents seem likely to have risen substantially in 1986, the former because of wider margins in many forms of trading and the latter because interest rates were high and dividends buoyant during the year. The increase is expected to be smaller in 1987 but will probably remain higher than that in employee earnings.

Current transfer payments rose by about 7 per cent in 1986, with both benefit levels and the number of recipients of State transfers increasing significantly. With lower inflation the level of benefits is due to rise more slowly in 1987, while the growth in the number of recipients will be partly offset by the Budget restrictions on qualification and the reduction in pay-related benefits. Allowing for some rise in the average number on the Live Register, an increase of about 5 per cent in total current transfers to households appears likely.

As Table 7 shows, these projections for different types of income result in an estimated increase in gross personal income of 5 per cent in 1986, and a forecast increase of 4¾ per cent in 1987. Direct personal taxes increased by 9¾ per cent in 1986 and are budgeted to rise by 9½ per cent in 1987. However, on the income forecasts made here, this seems as if it may be a little too high a projection, and a direct tax increase of 9 per cent may be a more realistic forecast.

TABLE 7: Personal Disposable Income

	1985	Change		1986	Change		1987
	£m	%	£m	£m	%	£m	£m
Agriculture, etc.	1352	−5	−66	1286	3	38	1324
Non-Agricultural Wages, etc.	9337	5¼	501	9838	4¾	468	10306
Other Non-Agricultural Income	1630	8½	139	1769	6½	115	1884
Total Income Received	12319	4¾	574	12893	4¾	621	13514
Current Transfers	3143	7	222	3365	5	168	3533
Gross Personal Income	15462	5¼	796	16258	4¾	789	17047
Direct Personal Taxes	3322	10	329	3651	9	329	3980
Personal Disposable Income	12140	3¾	467	12607	3¾	460	13067
Consumption	9797	5	495	10292	4	412	10704
Personal Savings	2343	−1¼	−28	2315	2	48	2363
Savings Ratio	19.3%			18.4%			18.1%

On this basis, personal disposable income could be expected to increase by about 3¾ per cent in 1987, much the same as in 1986. Moreover, in both years a considerable proportion of the increase in direct taxation is in the form of receipts from the deposit interest retention tax. By its nature this tax is likely to affect the level of savings directly, by reducing the amount of accrued interest credited to accounts, and can thus be expected to lower the personal savings ratio. It appears as if the savings ratio may have fallen by almost 1 percentage point in 1986. Allowing for a much more modest fall, of about ¼ point, in 1987, would imply an increase of some 4 per cent in the value of personal consumption in 1987.

Consumer Prices

The consumer price index rose by 3.4 per cent in the year to February 1987. This was lower than the annual increase of 3.9 per cent in 1986, although, as expected, it was higher than the 3.2 per cent recorded in the year to November 1986. The relatively large quarterly rise of 1.8 per cent between November and February can be attributed mainly to an increase in mortgage interest rates, indirect tax rises, and the abolition of the remaining food subsidies. All these factors are of a temporary nature, and much slower quarterly increases in the index can thus be expected for the remainder of the year.

Although the time path is unlikely to be smooth, it is reasonable to project an average quarterly increase in the index of about ½ per cent over the next three quarters. This would result in a November to November increase in the consumer price index of almost 3½ per cent, and an annual average increase of just below 3¼ per cent.

Public Finances

The shortfall in achieving public finance targets in 1986 appears in retrospect to have been due largely to special factors, rather than to any systematic under-performance. On the revenue side, three-quarters of the total shortfall was in non-tax revenue, mainly reflecting the problems posed by Dublin Gas. With regard to expenditure, the overrun included considerable weather-related agricultural outlays, although the other major factor of unbudgeted special pay increases could be regarded as systematic.

In considering the prospects for the 1987 fiscal targets, the possibility of further unexpected contingencies cannot, of course, be overlooked. However, provided that any such temporary phenomena are either neutral or minor in their effects, the Budget forecasts appear consistent with the assumptions on which they are based. The detailed forecasts in this *Commentary* seem to differ somewhat from those which implicitly underlie the Budget calculations, so that if these forecasts are correct composition of revenue would be slightly different from the Budget estimates. In particular, revenue from direct taxes would be a little below Budget, but this would be offset by higher indirect tax revenue due to a sharper recovery in tourism and a greater response from the restrictions on cross-border shopping. The total revenue provided for in the Budget would appear to be consistent with the macro-economic forecasts in this *Commentary*.

The more uncertain side of the fiscal equation concerns expenditure. This *Commentary* is based on an acceptance of the expenditure Estimates as an accurate projection of government spending in 1987. This means that it shares the general Budget assumptions, and in particular assumes that the public service pay bill can be held to its target level of £2,813 million. At the time of writing, this still appears a reasonable assumption to make, but it is by no means certain that it can be translated into the actual outcome for 1987. However, it should be borne in mind that the proposed limit depends not merely on the avoidance of any further increases in pay rates during the year, but also on the effects of much tighter controls on recruitment and replacement of personnel in the wider public service. Initial reports suggest that such controls are being applied very vigorously. Some relaxation can be expected later in the year, either as part of a wider forward-looking agreement or simply due to operational requirements, but nevertheless the possibility cannot be excluded that total public service numbers will be reduced further than assumed in the Estimates. Thus the uncertainty concerning the pay bill is symmetrical rather than one-sided, and acceptance of the official estimate does not represent the optimistic extreme of the range of possibilities.

If the major fiscal targets are achieved, or even if there is, in the event, a slippage of up to about £50 million, this will represent a major step towards correcting the public finances. Although it is obvious that further steps will need to be taken in the ensuing years, it seems likely that the financial markets will continue to react favourably towards evidence that real progress is being made in relation to the 1987 borrowing requirement. So long as it is perceived that there is determination to meet the targets, and in particular that there is no significant weakening with regard to the public service pay bill, then the tendency will persist for the differential of Irish interest rates over those in neighbouring countries to narrow. Whether this results in a significant further reduction in actual interest rates depends also, of course, on other factors, such as the trend in international interest rates and on movements in the sterling/deutschemark cross-rate. However, on reasonable assumptions concerning these external factors, it seems possible that Irish interest rates could fall by at least another 1 per cent over the coming months, and that the all too familiar increase in the closing months of the year can be avoided in 1987.

General Assessment

The post-Budget forecast suggests that after two years of stagnation, 1987 could see a small rise of just over 1 per cent in GNP. It seems inevitable that this low growth rate will be accompanied by a further fall in employment, with unemployment continuing to increase and emigration remaining high. On the positive side, inflation will again be very low, the balance of payments on current account should improve further, and a substantial reduction should be made in the exchequer borrowing requirement.

One vital assumption underlying the forecast is that the Budget limits on expenditure will be adhered to, and that they will be accepted, however grudgingly, by the interest groups most affected. No allowance has been made for the effects of prolonged strikes in key sectors of the public service or the semi-State sector. Whether this assumption proves justified depends in part on the willingness of trade unions and other groups to take a long-term view of their members' interests, and in part on the perceived determination of the government and its skill in presenting its case. If prolonged major strikes do take place, they will obviously make the short-term outlook for the economy even less favourable than forecast here. However, conceding excessive demands to avoid or curtail strikes would not merely preclude the meeting of the 1987 Budget targets. Far more seriously, it would call into question the government's determination to make further fiscal progress in 1988, and could undermine the financial market's confidence in the management of the economy.

Were this to happen, the modest further reduction in domestic interest rates forecast for the remainder for 1987 could be reversed. While higher interest rates might have a relatively minor effect within 1987, their influence on economic performance in 1988 could be substantial. Indeed, given that the whole aim of current economic strategy is to correct the present economic imbalances so that a sustainable growth in employment and incomes can be resumed in future years, the policy dilemmas facing both government and the leaders of interest groups can be sensibly discussed only in a longer-term framework. The effects of decisions taken over the next few months will be unimportant within 1987 itself, but crucial to prospects for the next few years.

Future Prospects

The 1987 Budget is designed to make a useful contribution towards restoring the exchequer borrowing requirement to a tenable level, and thus stabilising, or better still reducing, the long-term debt/GNP ratio. However, an equally severe reduction in the borrowing requirement will be necessary in 1988 and some reduction in 1989, if stabilisation is to be achieved during this decade. Such reductions would bring the borrowing requirement to around 7½ per cent of GNP, which would seem to be about the maximum level compatible with sustained economic growth.

The arguments in favour of this strategy have been well rehearsed. The sooner the level of new borrowing is brought into line with the normal growth of revenue, the sooner one powerful force making for ever higher current budget deficits will be neutralised. Moreover, the sooner this is achieved, the lower the level of aggregate taxation, or the less the cuts in non-interest expenditure which will be necessary to accomplish it. Provided that foreign borrowing is reduced along with the total, the drain of resources out of the country in overseas interest payments should cease to grow as a proportion of national output, and could begin to decline.

Apart from these fiscal and resource benefits, a rapid reduction of the borrowing requirement is also expected to result in a substantial reduction in the differential between Irish and overseas interest rates. Although a strict crowding-out theory of interest rate determination cannot be applied to an economy as open as Ireland's, there seems little doubt that sufficient restrictions remain on capital flows to and from Ireland for the theory to possess some relevance. Also the attitude to fiscal deficits common to potential lenders both within the country and abroad is such as to engender a strong relationship between the size of the borrowing requirement and domestic interest rates.

Of course, there are other important influences on the level of Irish interest rates, the most important being the international level and market expectations of future exchange rates. Thus no precise relationship can be established between the borrowing requirement and the likely actual level of interest rates. However, it does remain true that interest rates will tend to be lower the smaller the borrowing requirement and the faster its perceived reduction. Equally, a strong exchange rate policy, backed up by an anti-inflationary general economic policy, will also exert a downward pressure on domestic interest rates, although the market may take a considerable time to accept the reality and effectiveness of such a policy.

While the current economic strategy should therefore result in interest rates being lower than they would be under a softer policy, it is impossible to predict the actual level they will reach in 1988. At the same time there are insufficient data on which to base firm projections of the response of productive private investment to any given level of nominal or real interest rates. Thus it is possible to hope that falling interest rates will stimulate sufficient private investment in 1988 and 1989 to offset most, or all, of the recessionary influence of further reductions in the Budget deficit. Unfortunately, it is not possible to predict with confidence just how great the response will be.

Nevertheless, the simple fiscal imperative is so strong that there seems to be no alternative to continuing the strategy of reducing the borrowing requirement severely in the next two years, despite this uncertainty concerning the investment response. What the uncertainty does suggest is that an automatic private response to lower interest rates should not be treated as the sole mechanism for providing economic growth and employment over the next few years. Structural policies, such as measures to improve the quality and marketing of Irish goods and services, a re-allocation of government spending towards economically productive areas, and such initiatives as could stimulate private productive investment without sacrificing revenue, must also be considered.

The working out and implementation of structural growth policies might also help to resolve the inevitable difficulties which will be involved in achieving the centre-piece of the medium-term strategy, namely the further cutting of the borrowing requirement. It is worth restating the obvious points that this requires total revenue to increase by about 4 per cent more than total expenditure in 1988, and that this will involve a substantial transfer of income from individuals and companies to the State in the form of revenue paid or incomes forgone.

The scale of this necessary transfer is such that it is unlikely to be obtainable from any single source, and that simultaneous action will be needed with regard to revenue, capital expenditure and current expenditure. The more widely the sources of the transfer are spread, the less will be the impact on any particular sector, while the mere presence of a broad spread should lessen resistance to each specific measure.

With regard to revenue, there appears to be a consensus that existing rates on the major taxes of excise duties, VAT and PAYE income tax are already too high and should certainly not be further increased. While the economic evidence for this contention appears to be somewhat patchy, its political force cannot seriously be questioned. However, even with the constraint of unchanged or lower tax-rates on these major taxes, there would appear to be scope for a significant increase in total real revenue. One source for such an increase is the permanent one of a broadening of the effective tax base, through the more realistic determination of the taxable income of farmers and other self-employed, and through the phasing out of a number of unnecessary tax allowances to corporate enterprises. The other potential source of increased revenue is the temporary, but none the less useful, one of improving the collection of revenue already due under the existing tax regime. There seems little doubt that strong action in these two areas could make a useful contribution to revenue in 1988 and 1989, providing that the necessary work of installing new procedures and re-deploying resources, where necessary, is undertaken during 1987.

Whatever success is achieved in increasing revenue in 1988, it seems inconceivable that it would be sufficient in itself to bring about the desired reduction in the borrowing requirement. Further action will also be necessary with regard to expenditure. With more time available to examine projects, and with existing contractual obligations coming to an end, the volume of public capital spending can be expected to be reduced considerably in 1988, especially in the area of social infrastructure. The employment effects of reduced capital construction expenditure make it a relatively unattractive area for economies, but it is difficult to see how such economies can be avoided with regard to projects which yield no direct economic returns.

Even with substantial cutbacks in the public capital programme and increased real revenue, it will remain necessary to hold the current price growth of current expenditure well below the growth in nominal GNP if the borrowing targets are to be achieved in 1988 and 1989. Unless there are unexpectedly favourable movements in international interest rates or exchange rates, or unless domestic interest rates drop faster and further than expected, the cost of servicing the national debt will rise by more than nominal GNP next year. This obviously intensifies the need to restrict discretionary current expenditure.

With the secular rise in the number of pensioners and other long-term welfare beneficiaries likely to continue, and a further increase in unemployment all too probable, there will be a tendency for social welfare expenditure also to exceed the rate of growth of nominal GNP. This tendency might, of course, be offset by further restrictions on benefit qualifications, failure to fully index benefit rates, or other measures to limit social welfare spending. These are essentially political decisions, but it is difficult to envisage cuts in social welfare holding such spending very much below the growth of nominal GNP. Certainly only a minor contribution to the total reduction needed in net current expenditure can be expected from the area of social welfare.

After the imposition of charges for health and other services in the 1987 Budget, it is not clear how much scope exists for reducing net expenditure in this manner in the next two years. Similarly, although some reduction might be possible in purchases of goods and in the total of current subsidies, it does not seem plausible that sufficient savings can be made in these miscellaneous forms of net expenditure to provide the necessary check to the growth of total current spending.

This leaves the public service pay bill as an area which must inevitably contribute to the overall savings, if the economic strategy is to succeed. The direct public service pay bill amounts to one-third of total current expenditure. If indirect pay costs are included, the total pay element accounts for about half of non-interest current spending. Since 1981, the rise in the direct public service pay bill has exceeded the growth in nominal GNP in every year except 1984, and thus has militated strongly against the achievement of a lasting reduction in the nominal current budget deficit over that period. If the next two years are to see borrowing reduced to a sustainable proportion of GNP, then it appears inescapable that, alongside other measures, the growth in the public service pay bill must be restricted to a rate significantly below that in nominal GNP. As it seems likely that nominal GNP will grow by about 5 or 6 per cent over the next two years, this implies an annual rise in the pay bill of no more than 3 or 4 per cent, compared with 7.7 per cent in 1986 and a forecast 5½ per cent in 1987.

Given that normal salary scale and promotion drift adds over 1 per cent per annum to the pay bill, and that the later phases of existing special agreements, if they are paid, would add considerably more, any new pay increases, general or special, would need to be balanced by corresponding cuts in the number employed if this target is to be met.

Clearly, the balance to be sought between restraining pay levels and cutting numbers is essentially a political choice, in which difficult decisions will have to be made both by government and by the leaders and members of the unions concerned. Economically, the arguments would appear to be heavily weighted in favour of pay restraint rather than job cuts. In the first place, pay restraint would be more efficient than job cuts in reducing the net deficit, because there would be no need for consequential social welfare payments. In the second place, as the 1987 cuts are beginning to demonstrate, job losses in most cases result in a curtailment of services or a reduction in standards. There would not appear to be large areas of the public service which are overstaffed to the extent where employment can be reduced without effect on output. Also, it is to be hoped that the services offered by the public service will start to be improved again in a few years' time, and the existence of an adequate work-force at that time will certainly assist the process. Finally, if numbers are to be curtailed principally through recruitment bars and the non-renewal of short-term contracts, the sacrifices will be concentrated by age and by intended profession. While this is mainly a matter of equity, and thus of political rather than economic judgement, it is economically relevant to note that a further erosion of job prospects for the young and newly qualified could have consequences for the rate of emigration and for the future availability of skilled personnel.

If the required curbing of the growth in the public service pay bill is to be achieved largely through severe restraint on pay levels, it would obviously be better if this can be done through agreement rather than confrontation. It is within this context that the government's principal task of persuasion could be made considerably less difficult if there is convincing evidence that the issues of tax broadening and collection are being realistically tackled and that growth strategies are being implemented beyond the hope that falling interest rates alone will create jobs. Above all, however, there is a heavy responsibility on sectional leaders, initially in the unions but eventually in all such groups, to extend their own and their members' time horizons. Short-term "success" in evading their members' share of the necessary fiscal adjustment will delay the resumption of economic growth and make the ultimate adjustment needed even greater. Willingness to accept a reasonable share of the adjustment over the next two years could permit employment to start rising within that period, and will certainly improve the prospects for their members and their children over the ensuing decade.

STATISTICAL APPENDIX

	Output Indicators				Employment		Output per Head	
	1	2	3	4	5	6	7	8
	Manufacturing	Transportable Goods	Electricity Output	Cement Sales	Manufacturing	Transportable Goods	Manufacturing	Transportable Goods
	1980 = 100	1980 = 100	G.W.H.	000 Metric Tons	000's	000's	1980 = 100	1980 = 100
1981	102.7	101.6	10767	1812.5	222.5	234.2	105.0	103.7
1982	104.6	103.6	10792	1486.1	215.3	226.0	110.5	109.6
1983	112.6	111.1	11039	1382.4	202.5	212.6	126.4	124.9
1984	126.7	125.1	11424	1298.4	196.3	205.9	146.8	145.2
1985	130.1	126.8	11919	1233.2	189.0	197.6	156.5	153.4
1986	133.8	130.4	12466	1147.9	185.4	193.5		
1987								
Quarterly Averages or Totals								
1984 I	120.2	117.1	3136	271.5	197.4	206.7	138.5	135.4
II	133.8	133.9	2672	366.3	196.8	207.5	154.6	154.2
III	117.9	118.5	2562	350.0	196.9	206.4	136.2	137.2
IV	135.1	130.9	3054	310.6	194.2	202.8	158.2	154.3
1985 I	132.2	128.1	3259	241.3	189.3	197.9	158.8	154.7
II	137.8	134.4	2818	350.4	188.9	198.6	165.9	161.7
III	119.4	117.1	2705	333.1	189.2	197.5	143.5	141.7
IV	141.7	127.8	3137	308.3	188.4	196.5	158.8	155.4
1986 I	132.5	127.6	3356	205.0	185.0	192.9	162.9	158.1
II	139.2	135.7	2996	319.1	185.4	194.5	170.7	166.7
III	124.7	123.0	2814	330.6	186.5	194.3	151.8	151.1
IV	138.8	135.2	3300	293.2	184.7	192.2		
1987 I								
II								
III								
IV								
Quarterly Averages or Totals Seasonally Corrected								
1984 I	120.5	118.8	2853	336.6	198.7	208.6	137.9	136.1
II	126.1	126.0	2813	329.3	197.5	207.2	145.2	145.3
III	125.7	123.8	2858	319.5	195.8	205.1	146.0	144.3
IV	134.3	131.2	2903	312.6	193.3	202.5	158.0	154.8
1985 I	132.7	130.2	2960	303.5	190.6	199.8	158.3	155.7
II	130.2	126.7	2962	314.9	189.6	198.3	156.2	152.7
III	127.3	122.4	3015	303.5	188.1	196.3	153.9	149.0
IV	130.8	128.0	2991	308.7	187.7	196.2	158.5	155.9
1986 I	133.2	129.9	3044	259.6	186.3	194.7	162.6	159.5
II	131.5	127.9	3146	286.8	186.0	194.1	160.8	157.5
III	132.9	128.4	3136	301.0	185.4	193.1	162.7	164.2
IV	138.3	135.6	3151	292.0	184.0	191.8		
1987 I								
II								
III								
IV								

Unemployment	Prices						
9	10	11	12	13	14	15	
Live Register Av. Monthly	Consumer Price Index	Agricultural Price Index	Import Unit Value	Export Unit Value	Terms of Trade	Price of Stocks + Shares	
000's	Nov. 1982 = 100	1980 = 100	1975 = 100	1975 = 100	1975 = 100	1975 = 100	
127.9	82.4	117.7	232.4	208.4	89.7	219.9	1981
148.2	96.5	127.5	249.4	231.5	92.8	179.9	1982
192.7	106.6	135.4	261.1	251.9	96.5	223.7	1983
214.2	115.8	139.4	286.5	273.0	95.3	296.1	1984
230.6	122.0	135.6	293.2	280.6	95.7	316.8	1985
236.4	126.7	135.2				489.8	1986
							1987

Quarterly Averages or Totals

215.2	112.9	146.6	281.5	266.0	94.5	309.6	1984 I
210.8	115.5	150.0	283.7	269.8	95.1	314.9	II
212.6	116.9	135.6	294.3	276.6	94.0	280.7	III
218.1	117.7	134.4	297.9	283.3	95.1	279.1	IV
232.8	119.9	140.7	297.3	280.3	94.3	284.7	1985 I
226.5	121.5	140.2	300.6	288.0	95.8	289.4	II
231.8	123.3	133.1	298.0	289.9	97.3	333.3	III
231.2	123.5	134.3	289.7	282.7	97.6	359.8	IV
238.7	125.4	140.8	279.0	270.0	96.8	426.8	1986 I
231.8	126.9	139.1	266.0	268.4	100.9	508.5	II
235.1	127.1	131.4	266.7	267.5	100.3	509.5	III
240.0	127.4	134.5	266.8	265.5	99.5	514.6	IV
252.1	129.7						1987 I
							II
							III
							IV

Quarterly Averages or Totals Seasonally Corrected

208.9	113.0	143.8	No Seasonal Pattern	No Seasonal Pattern	No Seasonal Pattern	No Seasonal Pattern	1984 I
212.8	115.2	146.1					II
215.6	116.7	138.0					III
219.6	118.2	138.2					IV
226.3	120.0	138.1					1985 I
228.6	121.2	136.5					II
234.8	123.1	135.6					III
232.7	124.2	138.1					IV
232.3	125.3	137.5					1986 I
234.0	126.6	135.2					II
237.5	126.8	135.1					III
241.9	128.1	138.1					IV
245.7	129.6						1987 I
							II
							III
							IV

	Money Earnings Weekly Averages		Real Earnings		Consumption Indicators		
	16	17	18	19	20	21	22
	Manufacturing	Transportable Goods	Manufacturing	Transportable Goods	New Cars Registered	Retail Sales Value	Retail Sales Volume
	1973 = 100	1973 = 100	1982 = 100	1982 = 100	Total	1980 = 100	1980 = 100
1981	373.8	372.6	108.2	107.7	104645	118.3	99.4
1982	419.1	419.8	103.6	103.6	72603	129.4	94.0
1983	468.3	469.2	104.8	104.8	61094	137.0	90.5
1984	523.8	525.1	107.9	108.0	55893	145.8	89.4
1985	563.0	563.5	110.0	109.9	59592	155.9	91.0
1986	601.7				58705	158.8	90.5
1987							

Quarterly Averages or Totals

1984 I	502.3	503.0	106.2	106.1	19263	139.8	87.9
II	518.5	523.8	107.1	108.0	18443	143.9	88.6
III	528.2	528.1	107.9	107.5	11708	143.5	87.4
IV	546.0	545.6	110.7	110.4	6479	155.8	93.7
1985 I	541.8	542.0	107.8	107.7	19914	147.6	87.5
II	561.6	565.4	110.3	110.4	19200	153.2	89.8
III	566.8	566.3	109.7	109.2	13287	155.2	90.1
IV	581.6	580.3	113.4	113.3	7197	167.6	96.6
1986 I	578.5	577.7	110.1	109.7	19177	155.2	88.8
II	596.9	603.3	112.2	111.6	17663	154.5	88.2
III	608.1	613.6	114.3		13896	157.3	89.8
IV	623.3				7233	168.3	95.1
1987 I							
II							
III							
IV							

Quarterly Averages or Totals Seasonally Corrected

1984 I	509.1	511.1	107.5	107.7	13357	141.6	88.9
II	517.8	518.6	107.2	107.2	15429	146.2	90.3
III	528.0	529.4	108.0	107.8	13533	145.4	88.5
IV	540.3	541.6	109.0	109.1	13105	148.0	88.9
1985 I	548.6	549.8	109.1	109.1	13928	150.0	88.9
II	561.6	560.2	110.1	110.1	15805	155.7	91.4
III	566.4	568.1	109.8	109.9	15338	157.4	91.3
IV	575.3	575.7	110.5	110.4	14739	158.9	91.4
1986 I	585.6	585.6	111.5	111.3	13497	157.9	90.3
II	596.7	597.8	112.5	110.9	14413	156.9	89.8
III	607.5	615.6	114.4		15998	159.7	91.1
IV	616.5				14972	159.4	90.0
1987 I							
II							
III							
IV							

Government			Monetary Developments				
23	24	25	26	27	28	29	
Current Revenue	Current Expenditure	Current Deficit	Money Supply M3	Licensed Banks Domestic Credit Government	Licensed Banks Domestic Credit Non-Gov.	External Reserves	
£m	£m	£m	£m End Period	£m End Period	£m End Period	£m End Period	
3973	4796	823	n.a.	1277.4	n.a.	1473.1	1981
4908	5896	988	7291.9	1564.7	6655.1	1594.0	1982
5711	6671	960	7697.4	1775.6	7493.8	2014.8	1983
5952	6991	1039	8473.9	2247.9	8127.6	2101.2	1984
6331	7615	1284	8924.8	2514.1	8441.1	2271.9	1985
6709	8088	1379				2205.3	1986
							1987
Quarterly Totals			Monthly Totals				
1290	1719	429	7697.4	1831.2	7512.5	2117.7	1984 I
1516	1684	169	7934.1	2142.4	7724.4	1952.0	II
1457	1715	258	8161.6	2223.0	7938.4	1875.0	III
1688	1873	185	8473.9	2247.9	8127.6	2101.1	IV
1325	1981	656	8438.9	2166.3	8151.0	2632.5	1985 I
1635	1792	157	8545.0	2319.1	8291.7	3124.8	II
1562	1838	277	8639.4	2421.6	8206.8	3009.6	III
1809	2004	195	8924.8	2514.1	8441.1	2271.9	IV
1416	2056	640	8567.5	2510.1	8730.6	2232.8	1986 I
1735	2052	317	8449.5	2354.6	8596.7	2296.5	II
1591	1844	253	8677.0	2277.8	8744.7	2116.4	III
1967	2136	169				2205.3	IV
1476	2171	695					1987 I
							II
							III
							IV
Quarterly Totals (S.C.)			Monthly Totals (S.C.)				
1448	1669	221	No Seasonal Pattern	No Seasonal Pattern	No Seasonal Pattern	No Seasonal Pattern	1984 I
1490	1687	197					II
1507	1809	302					III
1493	1832	339					IV
1511	1917	406					1985 I
1594	1796	202					II
1614	1951	337					III
1597	1950	353					IV
1628	1987	359					1986 I
1685	2061	376					II
1642	1959	317					III
1738	2077	339					IV
1703	2097						1987 I
							II
							III
							IV

	Visible Trade Indicators					Exchange Rates	
	30	31	32	33	34	35	36
	Imports (Value)	Exports (Value)	Trade Surplus (Value)	Imports (Volume)	Exports (Volume)	Effective Index	Sterling
	£m	£m	£m	1975 = 100	1975 = 100	Dec. 1971 = 100	Per IR£
1981	6578.4	4777.6	– 1800.8	166.0	158.3	67.75	0.8002
1982	6816.2	5691.4	– 1124.7	160.3	169.8	67.35	0.8125
1983	7366.8	6943.8	– 422.0	165.3	190.2	65.13	0.8222
1984	8912.2	8897.4	– 14.6	182.6	225.2	62.26	0.8134
1985	9430.5	9743.3	312.5	188.7	239.9	62.41	0.8234
1986	8629.9	9386.8	756.9			66.65	0.9147
1987							
Monthly Averages							
1984 I	744.5	654.4	– 90.1	186.3	203.8	62.58	0.7951
II	714.9	769.8	54.9	177.4	236.5	62.56	0.8097
III	710.5	722.7	12.2	170.0	216.6	61.86	0.8143
IV	801.3	819.0	17.7	189.3	239.7	62.04	0.8352
1985 I	820.0	800.4	– 19.6	194.4	236.6	61.95	0.8590
II	807.2	855.8	48.6	189.3	246.2	61.44	0.8075
III	740.9	795.3	54.4	175.0	227.5	62.15	0.7959
IV	775.2	796.1	20.9	188.6	233.3	64.11	0.8324
1986 I	732.8	762.5	29.7	185.0	234.6	66.60	0.8966
II	723.3	786.6	63.3	191.4	243.1	67.34	0.8976
III	666.9	753.3	86.4	176.1	233.6	66.44	0.9148
IV	754.2	826.0	71.8	199.0	258.0	66.22	0.9497
1987 I	739.0	773.6	34.6				
II							
III							
IV							
Monthly Averages. Seasonally Corrected.							
1984 I	709.6	684.3	– 25.3	177.7	214.9	No Seasonal Pattern	No Seasonal Pattern
II	705.5	733.1	27.6	174.7	227.5		
III	759.2	733.5	– 25.7	179.9	218.1		
IV	795.6	812.1	16.5	190.9	234.2		
1985 I	794.8	836.1	—41.3	185.6	249.6		
II	797.5	817.7	20.2	185.5	239.2		
III	779.8	810.2	30.4	183.8	227.4		
IV	768.4	782.3	13.9	194.2	227.1		
1986 I	711.8	800.7	88.9	179.1	243.3		
II	715.5	754.8	39.3	188.7	233.0		
III	700.1	763.2	47.7	186.4	237.6		
IV	748.1	809.8	61.7	197.4	255.3		
1987 I	717.8	812.4	94.6				
II							
III							
IV							

THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE

Books:

Economic Growth in Ireland: The Experience Since 1947 — Kieran A. Kennedy and Brendan Dowling
Irish Economic Policy: A Review of Major Issues — Staff Members of ESRI (eds. B. R. Dowling and J. Durkan)
The Irish Economy and Society in the 1980s (Papers presented at ESRI Twenty-first Anniversary Conference) — Staff Members of ESRI
The Economic and Social State of the Nation — J. F. Meenan, M. P. Fogarty, J. Kavanagh and L. Ryan
The Irish Economy: Policy and Performance 1972-1981 — P. Bacon, J. Durkan and J. O'Leary
Employment and Unemployment Policy for Ireland — Staff Members of ESRI (eds. Denis Conniffe and Kieran A. Kennedy)
Public Social Expenditure — Value for Money? (Papers presented at a Conference, 20 November 1984) — Staff Members of ESRI
Medium-Term Outlook: 1986-1990. No. 1 — Peter Bacon
Ireland in Transition: Economic and Social Change since 1960 — Kieran A. Kennedy (Editor)

Policy Research Series:

1. *Regional Policy and the Full-Employment Target* — M. Ross and B. Walsh
2. *Energy Demand in Ireland, Projections and Policy Issues* — S. Scott
3. *Some Issues in the Methodology of Attitude Research* — E. E. Davis *et al.*
4. *Land Drainage Policy in Ireland* — Richard Bruton and Frank J. Convery
5. *Recent Trends in Youth Unemployment* — J. J. Sexton
6. *The Economic Consequences of European Union — A Symposium on Some Policy Aspects* — D. Scott, J. Bradley, J. D. FitzGerald and M. Ross
7. *The National Debt and Economic Policy in the Medium Term* — J. D. Fitzgerald

Broadsheet Series:

1. *Dental Services in Ireland* — P. R. Kaim-Caudle
2. *We Can Stop Rising Prices* — M. P. Fogarty
3. *Pharmaceutical Services in Ireland* — P. R. Kaim-Caudle assisted by Annette O'Toole and Kathleen O'Donoghue
4. *Ophthalmic Services in Ireland* — P. R. Kaim-Caudle assisted by Kathleen O'Donoghue and Annette O'Toole
5. *Irish Pensions Schemes, 1969* — P. R. Kaim-Caudle and J. G. Byrne assisted by Annette O'Toole
6. *The Social Science Percentage Nuisance* — R. C. Geary
7. *Poverty in Ireland: Research Priorities* — Brendan M. Walsh
8. *Irish Entrepreneurs Speak for Themselves* — M. P. Fogarty
9. *Marital Desertion in Dublin: and exploratory study* — Kathleen O'Higgins
10. *Equalization of Opportunity in Ireland: Statistical Aspects* — R. C. Geary and F. S. Ó Muircheartaigh
11. *Public Social Expenditure in Ireland* — Finola Kennedy
12. *Problems in Economic Planning and Policy Formation in Ireland, 1958-1974* — Desmond Norton
13. *Crisis in the Cattle Industry* — R. O'Connor and P. Keogh
14. *A Study of Schemes for the Relief of Unemployment in Ireland with Appendix* — R. C. Geary and M. Dempsey; E. Costa
15. *Dublin Simon Community, 1971-1976: an Exploration* — Ian Hart
16. *Aspects of the Swedish Economy and their relevance to Ireland* — Robert O'Connor, Eoin O'Malley and Anthony Foley
17. *The Irish Housing System: A Critical Overview* — T. J. Baker and L. M. O'Brien
18. *The Irish Itinerants: Some Demographic, Economic and Educational Aspects* — M. Dempsey and R. C. Geary
19. *A study of Industrial Workers' Co-operatives* — Robert O'Connor and Philip Kelly
20. *Drinking in Ireland: A Review of Trends in Alcohol Consumption, Alcohol Related Problems and Policies towards Alcohol* — Brendan M. Walsh
21. *A Review of the Common Agricultural Policy and the Implications of Modified Systems for Ireland* — R. O'Connor, C. Guiomard and J. Devereux
22. *Policy Aspects of Land-Use Planning in Ireland* — Frank J. Convery and A. Allan Schmid
23 *Issues in Adoption in Ireland* — Harold J. Abramson

Geary Lecture Series:

1. *A Simple Approach to Macro-economic Dynamics* (1967) — R. G. D. Allen
2. *Computers, Statistics and Planning-Systems or Chaos?* (1968) — F. G. Foster
3. *The Dual Career Family* (1970) — Rhona and Robert Rapoport
4. *The Psychosonomics of Rising Prices* (1971) — H. A. Turner
5. *An Interdisciplinary Approach to the Measurement of Utility or Welfare* (1972) — J. Tinbergen
6. *Econometric Forecasting from Lagged Relationships* (1973) — M. G. Kendall
7. *Toward a New Objectivity* (1974) — Alvin W. Gouldner

8. *Structural Analysis in Sociology* (1975) — Robert K. Merton
9. *British Economic Growth 1951-1973: Success or Failure?* (1976) — R. C. O. Matthews
10. *Official Statisticians and Econometricians in the Present Day World* (1977) — E. Malinvaud
11. *Political and Institutional Economics* (1978) — Gunnar Myrdal
12. *The Dilemmas of a Socialist Economy: The Hungarian Experience* (1979) — János Kornai
13. *The Story of a Social Experiment and Some Reflections* (1980) — Robert M. Solow
14. *Modernisation and Religion* (1981) — P. L. Berger
15. *Poor, Relatively Speaking* (1983) — Amartya K. Sen
16. *Towards More Rational Decisions on Criminals* (1984) — Daniel Glaser
17. *An Economic Analysis of the Family* — Gary S. Becker

General Research Series:

1. *The Ownership of Personal Property in Ireland* — Edward Nevin
2. *Short-Term Economic Forecasting and its Application in Ireland* — Alfred Kuehn
3. *The Irish Tariff and The E.E.C.: A Factual Survey* — Edward Nevin
4. *Demand Relationships for Ireland* — C. E. V. Leser
5. *Local Government Finance in Ireland: A Preliminary Survey* — David Walker
6. *Prospects of the Irish Economy in 1962* — Alfred Kuehn
7. *The Irish Woollen and Worsted Industry, 1946-59: A Study in Statistical Method* — R. C. Geary
8. *The Allocation of Public Funds for Social Development* — David Walker
9. *The Irish Price Level: A Comparative Study* — Edward Nevin
10. *Inland Transport in Ireland: A Factual Study* — D. J. Reynolds
11. *Public Debt and Economic Development* — Edward Nevin
12. *Wages in Ireland, 1946-62* — Edward Nevin
13. *Road Transport: The Problems and Prospects in Ireland* — D. J. Reynolds
14. *Imports and Economic Growth in Ireland, 1947-61* — C. E. V. Leser
15. *The Irish Economy in 1962 and 1963* — C. E. V. Leser
16. *Irish County Incomes in 1960* — E. A. Attwood and R. C. Geary
17. *The Capital Stock of Irish Industry* — Edward Nevin
18. *Local Government Finance and County Incomes* — David Walker
19. *Industrial relations in Ireland: The Background* — David O'Mahony
20. *Social Security in Ireland and Western Europe* — P. R. Kaim-Caudle
21. *The Irish Economy in 1963 and 1964* — C. E. V. Leser
22. *The Cost Structure of Irish Industry 1950-60* — Edward Nevin
23. *A Further Analysis of Irish Household Budget Data, 1951-52* — C. E. V. Leser
24. *Economic Aspects of Industrial Relations* — David O'Mahony
25. *Psychological Barriers to Economic Achievement* — P. Pentony
26. *Seasonality in Irish Economic Statistics* — C. E. V. Leser
27. *The Irish Economy in 1964 and 1965* — C. E. V. Leser
28. *Housing in Ireland: Some Economic Aspects* — P. R. Kaim-Caudle
29. *A Statistical Study of Wages, Prices and Employment in the Irish Manufacturing Sector* — C. St. J. O'Herlihy
30. *Fuel and Power in Ireland: Part I. Energy Consumption in 1970* — J. L. Booth
31. *Determinants of Wage Inflation in Ireland* — Keith Cowling
32. *Regional Employment Patterns in the Republic of Ireland* — T. J. Baker
33. *The Irish Economy in 1966* — The Staff of The Economic and Social Research Institute
34. *Fuel and Power in Ireland: Part II. Electricity and Turf* — J. L. Booth
35. *Fuel and Power in Ireland: Part III. International and Temporal Aspects of Energy Consumption* — J. L. Booth
36. *Institutional Aspects of Commercial and Central Banking in Ireland* — John Hein
37. *Fuel and Power in Ireland: Part IV. Sources and Uses of Energy* — J. L. Booth
38. *A Study of Imports* — C. E. V. Leser
39. *The Irish Economy in 1967* — The Staff of The Economic and Social Research Institute
40. *Some Aspects of Price Inflation in Ireland* — R. C. Geary and J. L. Pratschke
41. *A Medium Term Planning Model for Ireland* — David Simpson
42. *Some Irish Population Problems Reconsidered* — Brendan M. Walsh
43. *The Irish Brain Drain* — Richard Lynn
44. *A Method of Estimating the Stock of Capital in Northern Ireland Manufacturing Industry: Limitations and Applications* — C. W. Jefferson
45. *An Input-Output Analysis of the Agricultural Sector of the Irish Economy in 1964* — R. O'Connor with M. Breslin
46. *The Implications for Cattle Producers of Seasonal Price Fluctuations* — R. O'Connor
47. *Transport in the Developing Economy of Ireland* — John Blackwell
48. *Social Status and Inter-Generational Social Mobility in Dublin* — Bertram Hutchinson
49. *Personal Incomes by County, 1965* — Miceal Ross

50. *Income-Expenditure Relations in Ireland, 1965-1966* — John L. Pratschke
51. *Costs and Prices in Transportable Goods Industries* — W. Black, J. V. Simpson, D. G. Slattery
52. *Certain Aspects of Non-Agricultural Unemployment in Ireland* — R. C. Geary and J. G. Hughes
53. *A Study of Demand Elasticities for Irish Imports* — Dermot McAleese
54. *Internal Migration in Ireland* — R. C. Geary and J. G. Hughes
with Appendix — C. J. Gillman
55. *Religion and Demographic Behaviour in Ireland* — B. M. Walsh
with Appendix — R. C. Geary and J. G. Hughes
56. *Views on Pay Increases, Fringe Benefits and Low Pay* — H. Behrend, A. Knowles and J. Davies
57. *Views on Income Differentials and the Economic Situation* — H. Behrend, A. Knowles and J. Davies
58. *Computers in Ireland* — F. G. Foster
59. *National Differences in Anxiety* — Richard Lynn
60. *Capital Statistics for Irish Manufacturing Industry* — C. W. Jefferson
61. *Rural Household Budget Feasibility Study* — Sile Sheehy and R. O'Connor
62. *Effective Tariffs and the Structure of Industrial Protection in Ireland* — Dermot McAleese
63. *Methodology of Personal Income Estimation by County* — Miceal Ross
64. *Further Data on County Incomes in the Sixties* — Miceal Ross
65. *The Functional Distribution of Income in Ireland, 1938-70* — J. G. Hughes
66. *Irish Input-Output Structures, 1964 and 1968* — E. W. Henry
67. *Social Status in Dublin: Marriage, Mobility and First Employment* — Bertram Hutchinson
68. *An Economic Evaluation of Irish Salmon Fishing, I: The Visiting Anglers* — R. O'Connor and B. J. Whelan
69. *Women and Employment in Ireland: Results of a National Survey* — Brendan M. Walsh assisted by Annette O'Toole
70. *Irish Manufactured Imports from the UK in the Sixties: The Effects of AIFTA* — Dermot McAleese and John Martin
71. *Alphabetical Voting: A Study of the 1973 General Election in the Republic of Ireland* — Christopher Robson and Brendan M. Walsh
72. *A Study of the Irish Cattle and Beef Industries* — Terence J. Baker, Robert O'Connor and Rory Dunne
73. *Regional Employment Patterns in Northern Ireland* — William Black and Clifford W. Jefferson
74. *Irish Full Employment Structures, 1968 and 1975* — E. W. Henry
75. *An Economic Evaluation of Irish Salmon Fishing II: The Irish Anglers* — R. O'Connor, B. J. Whelan and A. McCashin
76. *Factors Relating to Reconviction among Young Dublin Probationers* — Ian Hart
77. *The Structure of Unemployment in Ireland, 1954-1972* — Brendan M. Walsh
78. *An Economic Evaluation of Irish Salmon Fishing, III: The Commercial Fishermen* — B. J. Whelan, R. O'Connor, and A. McCashin
79. *Wage Inflation and Wage Leadership* — W. E. J. McCarthy, J. F. O'Brien and V. G. Dowd
80. *An Econometric Study of the Irish Postal Services* — Peter Neary
81. *Employment Relationships in Irish Counties* — Terence J. Baker and Miceal Ross
82. *Irish Input-Output Income Multipliers 1964 and 1968* — J. R. Copeland and E. W. Henry
83. *A Study of the Structure and Determinants of the Behavioural Component of Social Attitudes in Ireland* — E. E. Davis
84. *Economic Aspects of Local Authority Expenditure and Finance* — J. R. Copeland and Brenadan M. Walsh
85. *Population Growth and other Statistics of Middle-sized Irish Towns* — D. Curtin, R. C. Geary, T. A. Grimes and B. Menton
86. *The Income Sensitivity of the Personal Income Tax Base in Ireland, 1947-1972* — Brendan R. Dowling
87. *Traditional Families? From Culturally Prescribed to Negotiated Roles in Farm Families* — Damian F. Hannan and Louise Katsiaouni
88. *An Irish Personality Differential: A Technique for Measuring Affective and Cognitive Dimensions of Attitudes Towards Persons* — E. E. Davis and Mary O'Neill
89. *Redundancy and Re-Employment in Ireland* — Brendan J. Whelan and Brendan M. Walsh
90. *A National Model of Fuel Allocation A Prototype* — E. W. Henry and S. Scott
91. *A Linear Programming Model for Irish Agriculture* — Robert O'Connor, Miceal Ross and Michael Behan
92. *Irish Educational Expenditures Past, Present and Future* — A. Dale Tussing
93. *The Working and Living Conditions of Civil Service Typists* — Nóirín O'Broin and Gillian Farren
94. *Irish Public Debt* — Richard Bruton
95. *Output and Employment in the Irish Food Industry to 1990* — A. D. O'Rourke and T. P. McStay

96. *Displacement and Development: Class, Kinship and Social Change in Irish Rural Communities* Damian F. Hannan
97. *Attitudes in the Republic of Ireland relevant to the Northern Ireland Problem: Vol I: Descriptive Analysis and Some Comparisons with Attitudes in Northern Ireland and Great Britain.* E. E. Davis and R. Sinnott
98. *Internal Migration Flows in Ireland and their Determinants* J. G. Hughes and B. M. Walsh
99. *Irish Input-Output Structures, 1976* E. W. Henry
100. *Development of Irish Sea Fishing Industry and its Regional Implications* R. O'Connor, J. A. Crutchfield, B. J. Whelan and K. E. Mellon
101. *Employment Conditions and Job Satisfaction: The Distribution, Perception and Evaluation of Job Rewards* Christopher T. Whelan
102. *Crime in the Republic of Ireland: Statistical Trends and their Interpretation* David B. Rottman
103. *Measure of the Capital Stock in the Irish Manufacturing Sector, 1945-1973* R. N. Vaughan
104. *A Study of National Wage Agreements in Ireland* James F. O'Brien
105. *Socio-Economic Impact of the Construction of the ESB Power Station at Moneypoint, Co. Clare* R. O'Connor, J. A. Crutchfield and B. J. Whelan
106. *The Financing of Third-level Education* A. C. Barlow
107. *An Input-Output Analysis of New Industry in Ireland in 1976* E. W. Henry
108. *Social Insurance and Absence from Work in Ireland* Gerald Hughes
109. *The Distribution of Income in the Republic of Ireland: A Study in Social Class and Family-Cycle Inequalities* David B. Rottman, Damian F. Hannan and Niamh Hardiman, Miriam M. Wiley
110. *The Economic and Social Circumstances of the Elderly in Ireland* B. J. Whelan and R. N. Vaughan
111. *Worker Priorities, Trust in Management and Prospects for Workers' Participation* Christopher T. Whelan
112. *The Impact of Energy Prices on the Irish Economy during 1973-1981* E. W. Henry
113. *Schooling and Sex Roles: Sex Differences in Subject Provision and Student Choice in Irish Post-Primary Schools* D. Hannan, R. Breen and B. Murray, D. Watson, N. Hardiman, K. O'Higgins
114. *Energy Crops, Forestry and Regional Development in Ireland* Frank J. Convery and Kathleen Dripchak
115. *Aggregate Supply, Aggregate Demand and Income Distribution in Ireland: A Macro-sectoral Analysis* John Bradley and Connell Fanning
116. *Social Mobility in the Republic of Ireland: A Comparative Perspective* Christopher T. Whelan and Brendan J. Whelan
117. *Attitudes towards Poverty and Related Social Issues in Ireland* E. E. Davis, Joel W. Grube and Mark Morgan
118. *A Study of New House Prices in Ireland in the Seventies* Ian J. Irvine
119. *Education and the Labour Market: Work and Unemployment among Recent Cohorts of Irish School Leavers* Richard Breen
120. *Payroll Tax Incidence, the Direct Tax Burden and the Rate of Return on State Pension Contributions in Ireland.* Gerard Hughes
121. *Crime Victimisation in the Republic of Ireland.* Richard Breen and David B. Rottman
122. *A Medium-Term Analysis of Fiscal Policy in Ireland: A Macroeconometric Study of the Period 1967-1980.* John Bradley, Connell Fanning, Canice Prendergast and Mark Wynne
123. *The Irish Wealth Tax — A Case Study in Economics and Politics* Cedric Sandford and Oliver Morrissey
124. *Aspects of Freight Transport in Ireland.* Jack Short
125. *Small-Scale Manufacturing Industry in Ireland.* Kieran A. Kennedy and Tom Healy
126. *Irish Medical Care Resources: An Economic Analysis.* A. Dale Tussing
127. *Employment in the Public Domain in Recent Decades* Miceal Ross
128. *Multisector Modelling of the Irish Economy with Special Reference to Employment Projections* E. W. Henry
129. *Subject Availability and Student Performance in the Senior Cycle of Irish Post-Primary Schools* Richard Breen
130. *A Statistical Analysis of the Irish Electoral Register and its Use for Population Estimation* Gary Keogh and Brendan J. Whelan
131. *The Population Structure and Living Circumstances of Irish Travellers: Results from the 1981 Census of Traveller Families* David B. Rottman, A. Dale Tussing and Miriam M. Wiley
132. *Smoking, Drinking and Other Drug Use Among Dublin Post-Primary School Pupils* J. W. Grube and M. Morgan
133. *A Study of the Bovine Tuberculosis Eradication Scheme* R. O'Connor