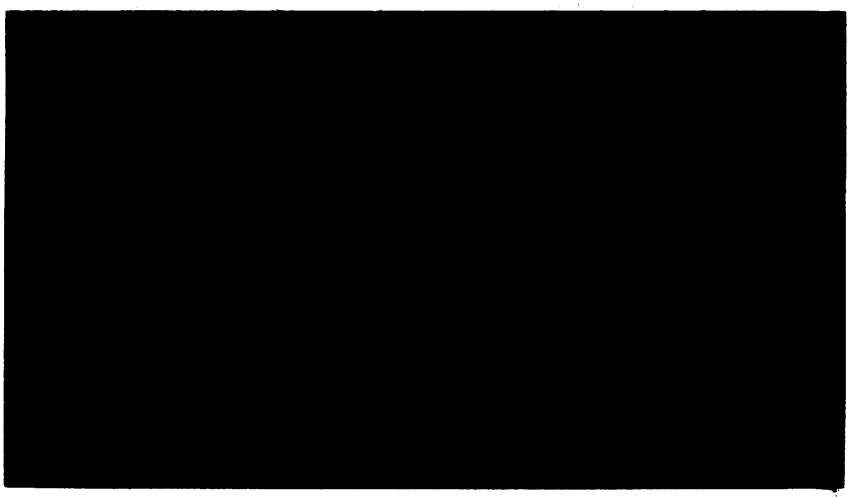
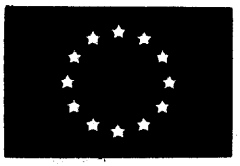
COUNTRY STUDIES

COMMISSION OF THE EUROPEAN COMMUNITIES
DIRECTORATE-GENERAL FOR ECONOMIC AND FINANCIAL AFFAIRS





COUNTRY STUDIES*

Number 6 Sept. 1991

Ireland

Directorate-General for Economic and Financial Affairs

* Country studies are the result of internal analysis of the economic situation of the respective member country; they are made on the responsibility of the Directorate-General for Economic and Financial Affairs of the Commission of the European Communities.

II/354/91-EN This document exists only in English

Table of Contents

EXECUTIVE SUMMARY 1

Part I
IRELAND : MACROECONOMIC ADJUSTMENT AND STRUCTURAL REFORM . . .3

0. Introduction 3

1. Convergence of the Irish economy with the rest of the Community 3

2. The budgetary stabilisation post 1987 . . .5

3. Structural constraints on economic performance 7

4. Macroeconomic policies and problems in the approach to EMU 9

5. Conclusions 13

Part II
SPECIAL TOPICS 14

Chapter 1
Ireland's Budgetary Stabilization 1981-90 .14

0. Introduction 14

1. A successful budgetary stabilisation. . .14

1a. The drift towards unsustainability 1981-1986. 14

1b. A change in macroeconomic and budgetary policy regime. 15

1c. The process of budgetary adjustment. . .15

2. The Irish experience as a model for budgetary adjustment. 16

2a. The macroeconomic framework. 16

2b. A public finance framework. 17

2c. The two phases of stabilisation: a comparison. 17

2d. The discretionary element of Ireland's stabilisation. 20

3. An expansionary fiscal contraction? . . 21

4. General lessons for budgetary stabilisation. 22

5. Whither budgetary policy in Ireland? . . 22

5a. Reasons for accelerated consolidation. . 23

5b. Tax reform and the consolidation effort. 24

6. Conclusions. 25

APPENDIX A 26

APPENDIX B 28

Chapter 2
Unemployment and the Irish Labour Market **30**

0. Introduction. 30

1. A costly disinflation 1981-86. 30

2. Slow labour market response to economic recovery 1987-90 30

3. The nature of the Irish unemployment problem. 32

3a. Theoretical considerations. 32

3b. The NAIRU in Ireland. 33

3c. An eclectic interpretation? 33

4. Possible determinants of Irish unemployment. 34

4a. Structural aspects 34

4b. Cyclical aspects. 35

4c. Supply-side aspects. 36

5. Conclusions. 39

Chapter 3
The Catching-up Process in Ireland 41

0. Introduction. 41

1. The catching-up process. 41

2. Ireland's catching-up performance 1960-90. 42

3. Prospects for catching up within EMU. . .45

3a. Possible constraints implied by economic union. 45

3b. Possible constraints implied by monetary union. 46

4. Catching up and the Irish development strategy. 46

5. Catching up and fiscal transfers. 48

6. Conclusions. 50

Appendix A 51

Chapter 4
Monetary and Exchange Rate Policy in Ireland 52

1. Instruments of monetary policy and liquidity ratios 52

2. Conduct and stance of monetary policy . 53

2.1 The hard currency option 53

2.2 The achievement of stabilization 53

2.3 Credibility and exchange-rate competitiveness 53

Chapter 5
Developments and Issues in Irish Financial Markets 56

0. Introduction 56

1. Structure of Irish financial market 56

2. Recent innovations 59

3. Exchange controls 59

4. Some issues outstanding 60

Table of Graphs and Tables

Part I

Graph 1: Current account adjustment . . . 3

Graph 2: Inflation convergence 3

Graph 3: Catching-up process 5

Graph 4: Net borrowing and primary balance of general govt. 6

Graph 5: National debt as % of GDP . . . 6

Graph 6: Short-term interest rate differentials 10

Graph 7: Nominal exchange rates 10

Graph 8: Real GDP growth, IRL vs UK . . 11

Graph 9: Inflation rates, IRL vs UK 11

Part II

Graph 1.1: Net borrowing and primary balance of general govt. 15

Graph 1.2: National debt as % of GDP 15

Table 1: Receipts and Expenditure of General Government 16

Table 2: Stability conditions in the Irish public debt ratio 1974-90 18

Graph 1.3: "Stability Gap", 1974-90 19

Graph 1.4: Contributions to annual change in national debt/GDP ratio 19

Graph 1.5: Cyclically-adjusted primary balance 21

Graph 1.6: National debt/GDP ratio 1981-2000 23

Table 3: Estimated debt ratio in year 2000 with varying assumptions of primary balance, interest rate and growth rate. 24

Table 4: Timescale for reduction in debt ratio to about 60% under varying assumptions of the actual primary balance, interest rate and economic growth rate. 24

Chapter 2

Graph 2.1: Real GDP and employment growth 1981 - 90 30

Table 1: Sectoral composition of employment, 1981-89 31

Graph 2.2a: Male and female employment growth, 1981 - 89 31

Graph 2.2b: Male and female unemployment rates 31

Graph 2.2c: Male and female participation rates 1981 - 88 31

Graph 2.3: Employment growth in Ireland and EC12 31

Table 2: Natural Increase in Population and Net Migration, ...32

Table 3: Estimated Labour Force Flows by Age Groups 1986 to 2005, ...34

Graph 2.4: Gross and net wage 36

Graph 2.5: Per capita transfers vs consumption-wage and implicit trend in replacement ratio 36

Chapter 3

Graph 3.1: Catching up EUR4 vs EUR8 . . . 42

Graph 3.2: Catching up within EUR4 42

Graph 3.3: Investment/GDP ratio in Ireland . 43

Graph 3.4: Catching up in Ireland and the United Kingdom 43

Graph 3.5: Ratio of GDP to GNP in Ireland . 47

Graph 3.6: Comparison of per capita GDP and GNP in Ireland relative to EUR12 47

Graph 3.7: Per capita GDP, GNP and GNDI in Ireland 49

Table A: Annual Breakdown of Expenditure under the Community Support Framework for Ireland 51

Chapter 4

Graph 4.1: Inflation convergence 53

Table 1: Real unit labour costs, total economy (1980=100) 54

Graph 4.2: Short-term interest rate differentials 54

Chapter 5

Table 1: Money and other liquid assets: components 57

Table 2: Indices of bank profitability (1) .57

Table 3: Market concentration and share of foreign institutions, ...57

Graph 5.1: No. of inhabitants per branch . . .58

Table 4: Average costs of a basket of banking services 58

Table of Graphs and Tables

Part I

Graph 1: Current account adjustment . . . 3

Graph 2: Inflation convergence 3

Graph 3: Catching-up process 5

Graph 4: Net borrowing and primary balance of general govt. 6

Graph 5: National debt as % of GDP . . . 6

Graph 6: Short-term interest rate differentials 10

Graph 7: Nominal exchange rates 10

Graph 8: Real GDP growth, IRL vs UK . . 11

Graph 9: Inflation rates, IRL vs UK 11

Part II

Graph 1.1: Net borrowing and primary balance of general govt. 15

Graph 1.2: National debt as % of GDP 15

Table 1: Receipts and Expenditure of General Government 16

Table 2: Stability conditions in the Irish public debt ratio 1974-90 18

Graph 1.3: "Stability Gap", 1974-90 19

Graph 1.4: Contributions to annual change in national debt/GDP ratio 19

Graph 1.5: Cyclically-adjusted primary balance 21

Graph 1.6: National debt/GDP ratio 1981-2000 23

Table 3: Estimated debt ratio in year 2000 with varying assumptions of primary balance, interest rate and growth rate. 24

Table 4: Timescale for reduction in debt ratio to about 60% under varying assumptions of the actual primary balance, interest rate and economic growth rate. 24

Chapter 2

Graph 2.1: Real GDP and employment growth 1981 - 90 30

Table 1: Sectoral composition of employment, 1981-89 31

Graph 2.2a: Male and female employment growth, 1981 - 89 31

Graph 2.2b: Male and female unemployment rates 31

Graph 2.2c: Male and female participation rates 1981 - 88 31

Graph 2.3: Employment growth in Ireland and EC12 31

Table 2: Natural Increase in Population and Net Migration, ...32

Table 3: Estimated Labour Force Flows by Age Groups 1986 to 2005, ...34

Graph 2.4: Gross and net wage 36

Graph 2.5: Per capita transfers vs consumption-wage and implicit trend in replacement ratio 36

Chapter 3

Graph 3.1: Catching up EUR4 vs EUR8 . . . 42

Graph 3.2: Catching up within EUR4 42

Graph 3.3: Investment/GDP ratio in Ireland . 43

Graph 3.4: Catching up in Ireland and the United Kingdom 43

Graph 3.5: Ratio of GDP to GNP in Ireland . 47

Graph 3.6: Comparison of per capita GDP and GNP in Ireland relative to EUR12 47

Graph 3.7: Per capita GDP, GNP and GNDI in Ireland 49

Table A: Annual Breakdown of Expenditure under the Community Support Framework for Ireland 51

Chapter 4

Graph 4.1: Inflation convergence 53

Table 1: Real unit labour costs, total economy (1980=100) 54

Graph 4.2: Short-term interest rate differentials 54

Chapter 5

Table 1: Money and other liquid assets: components 57

Table 2: Indices of bank profitability (1) .57

Table 3: Market concentration and share of foreign institutions, ...57

Graph 5.1: No. of inhabitants per branch . . .58

Table 4: Average costs of a basket of banking services 58

EXECUTIVE SUMMARY

In the course of the 1980s, Ireland has achieved a remarkable macroeconomic adjustment. Having entered the decade with high inflation, a substantial external deficit and deteriorating public finances, the economy has been restored to conditions of nominal stability. Inflation is now among the lowest in the Community, the external account is in surplus and budgetary stabilisation has been attained. Underlying the adjustment has been the emergence of a progressively more coherent macroeconomic policy regime. Exchange rate discipline imposed by membership of the ERM helped to ensure a disinflation of the economy in the first half of the 1980s; a successful fiscal consolidation completed the nominal convergence process towards the end of the decade.

The scale of budgetary adjustment achieved in the past four years has been particularly impressive and has focused international attention on the Irish experience. The fiscal consolidation process can be traced back to 1981 but the degree of adjustment up to 1986 was inadequate to achieve budgetary stabilisation in unfavourable economic conditions. The positive expectations effects of a more credible macroeconomic policy framework adopted after 1987, coupled with an improvement in the external economic environment, laid the basis for the more successful stabilisation effort in the second half of the decade. Net borrowing by general government has been reduced by almost 8% of GDP and a steep upward trajectory in the public debt/GDP ratio has been reversed. While the sustainability of budgetary policy has been restored, fiscal consolidation remains the centrepiece of medium-term economic policy.

As the effects of nominal adjustment fed into the real economy, activity was weak and a severe problem of structural unemployment emerged. Since 1981, the unemployment rate has almost doubled and is now the highest in the Community. The structural nature of Irish unemployment reflects a combination of demographic pressure and the emergence of significant duality in the economy. The rate of natural increase in the labour force is very high by Community standards and the concentration of production in foreign-based capital-intensive manufacturing sectors has tended to exacerbate the shortfall in labour demand relative to supply. The emergence of the robust foreign sector coincided with the "weeding out" of the traditional sectors in the disinflation period, resulting in an important structural shift in the economy. Many of Ireland's growing number of long-term unemployed belong to this traditional cohort of the manufacturing labour force. While employment has recovered strongly in recent years, the improvement has been insufficient to ensure a reduction in unemployment in the absence of high rates of emigration. As emigration flows have virtually stopped in response to recession in the UK and US economies, Ireland's unemployment rate has again begun to climb.

The counterpart of Ireland's nominal adjustment in the 1980s was a period of limited progress in the catching-up process. The rapid catching up achieved through fiscal activism in the late 1970s was the source of the major nominal disequilibria in the early 1980s; catching up was almost completely stalled in the subsequent period of adjustment. More recently, the coincidence of improved internal conditions and the expansion of world trade has facilitated a resumption of an accelerated catching-up process. By 1990, per capita GDP in Ireland relative to the Community average had risen to a high point of 68.6%; however, the weakness of economic performance in 1991 implies little further improvement in the short term.

If an accelerated and balanced catching up in the Irish economy is to be sustained, macroeconomic stabilisation must now be followed by a programme of radical structural reform. Such reform will ensure that national economic policy focuses on the microeconomic measures necessary to improve the productive efficiency of the economy as well as reconciling the pattern of output growth to the factor endowments of the economy. Some improvement will already have been achieved by recent supply-side measures at the national level and increased assistance in the development of physical and human infrastructure through the Community Support Framework 1989-93. However, further reform to ensure a more balanced treatment of labour and capital in economic policy needs to be considered, particularly in the fields of industrial strategy, taxation and labour market policies.

In the context of Economic and Monetary Union, the small and open Irish economy faces both opportunities and challenges. It is important, therefore, that the capacity of the economy to adapt flexibly to changes in its external environment be enhanced. In addition to necessary structural reform, the continued fragility of the public finances must be addressed. While budgetary stabilisation has been achieved, the enormous overhang of public debt remains an important constraint on macroeconomic performance and will weaken the capacity

of the economy to benefit fully from further Community integration. A continued reduction in the public debt/GDP ratio is essential; this will also help to narrow interest rate differentials further and to reduce currently high real interest rates.

The recent success in Ireland's catching-up performance suggests that the direction of Ireland's macroeconomic policy framework is broadly appropriate. To the extent that greater integration reinforces this policy framework and promotes the domestic conditions for growth, the Irish economy can expect to perform well in EMU. This benign view of the synergy between EMU requirements and Ireland's catching-up performance is not without question; disadvantages in terms of scale and technological endowment have been cited as possible impediments to Ireland's success within economic union. While certain sectors in the economy will undoubtedly be threatened by greater integration, there is evidence to suggest that other sectors will thrive. Monetary union per se is less likely to pose serious problems for the Irish economy, provided nominal stability is maintained.

Part I

IRELAND : MACROECONOMIC ADJUSTMENT AND STRUCTURAL REFORM

0. Introduction

By the second half of the 1980s, after several years of very weak growth and rising unemployment, disinflation had been achieved in Ireland and a previously massive current account deficit had been significantly reduced. On the other hand, little progress had been made in rectifying the serious budgetary imbalances and doubts still remained about the possibility of returning to strong and durable growth of activity and employment. Since then, stabilization has been reinforced; significant progress has been made on fiscal consolidation; output and employment have risen more strongly, enabling a resumption of the real convergence process.

These achievements, made possible by the authorities' continued commitment to stability-oriented policies and by the favourable environment, are reviewed in this paper. The paper also stresses the improvements that are necessary and the conditions to be met for Ireland to enjoy success in the approach to EMU. In that respect, increases in potential output and employment and reduction in the currently very high level of unemployment are the main objectives. Reforms in industrial policy, the labour market and the taxation system as well as further financial deregulation will need to be considered.

Nominal stability should continue to be the priority for the macroeconomic policy-mix. The level of the public debt is still an important constraint on economic policy, raising questions about the appropriate targets for the budget deficit. The structure of the balance of payments may suggest a need for higher investment and implies scope for further structural improvement. Meanwhile, monetary policy - in effect the pursuit of exchange-rate policy - has been successful in combining inflation convergence with the maintenance of relatively strong growth.

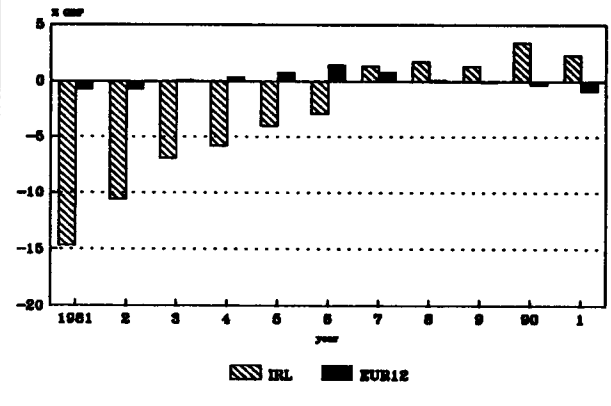
1. Convergence of the Irish economy with the rest of the Community

Substantial nominal convergence achieved in the 1980s...

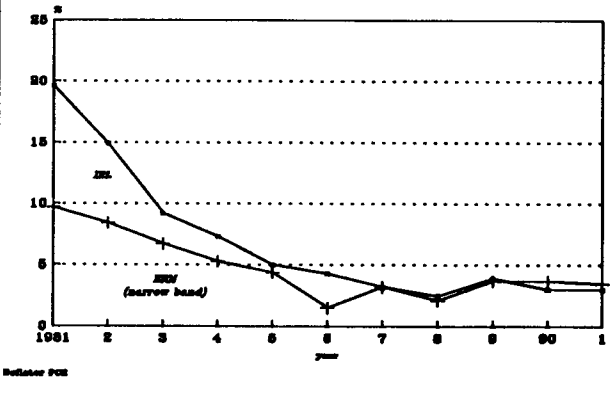
Nominal conditions in the Irish economy had seriously deteriorated by the beginning of the 1980s. Inflation was approaching 20%, the current deficit on the balance of payments was close to 15% of GDP and net borrowing by government was about 13% of GDP. The source of these disequilibria lay in the second oil-price shock and the markedly procyclical fiscal and monetary policies which had operated since the mid-1970s. Efforts to restore nominal stability in the economy began to take effect after 1981 when the real effective exchange rate appreciated under the ERM constraint and demand in the economy was restrained by the perceived need for, and attempts to achieve, budgetary consolidation. As a result, disinflation was practically completed by 1986, helped by the weakness in oil and commodity prices on international markets. Inflation fell to about 2% in 1987 while a small surplus emerged on the current account of the balance of payments.

Inflation and Current Account Convergence

Graph 1: Current account adjustment 1981 - 1991



Graph 2: Inflation convergence 1981 - 1991



...but at a cost of limited progress in real convergence...

As growth in the economy was constrained by the disinflation process and the effects of fiscal consolidation efforts, Ireland's catching-up process stalled. Between 1981 and 1986, per capita GDP did not improve relative to the Community average, while the corresponding trend in per capita GNP was downward. Economic development was characterised by a sharp decline in the investment/GDP ratio as unfavourable conditions curtailed private sector activity and public capital expenditure was consolidated. Moreover, as the labour-intensive traditional sectors of the economy were squeezed by real appreciation of the Irish pound, a high level of structural unemployment emerged.

...and an increasingly worrying debt spiral...

With economic growth well below trend, the automatic stabilisers in operation and real interest rates rising, conditions in the public finances became dynamically unstable despite determined efforts at consolidation. Thus by 1986, net borrowing by general government remained about 11% of GDP and the public debt/GDP ratio had risen to 116.5% of GDP.

So, convergence remained fragile...

By August 1986, the weakness of the economy and, in particular, losses of Irish competitiveness vis-à-vis sterling prompted a unilateral realignment within the ERM. As the public debt problem appeared increasingly intractable and a continued slide in sterling posed a risk of further devaluation, the economy experienced very substantial capital flight. Despite the current account improvement, the overall balance of payments moved into substantial deficit, with a massively negative unidentified residual (about 8% of GDP). Capital outflows led to a fall in the money supply during the course of 1986 and to extremely high interest-rate differentials.

...until policy became more credible.

1987 marked a major shift in expectations. A new political and social consensus[1] radically improved the credibility of budgetary consolidation and the external environment became much more favourable. As credibility in the new policy regime was established, expectations in the economy turned positive and the earlier substantial achievements in nominal convergence facilitated a sharp export-led recovery in the real economy. Exchange rate stability has maintained a low inflation rate and together with the budgetary stabilisation has reduced the risk premium on domestic interest rates to historically low levels. Low inflation has moderated wage growth, while there appears to have been an exceptionally strong productivity performance. The resulting improvement in unit labour costs and lower interest rates has fostered a recovery in private investment. Between 1987 and 1990, investment volume grew by 25% as the investment/GDP ratio rose from below 17% to 18.25% despite a further reduction in public capital expenditure.

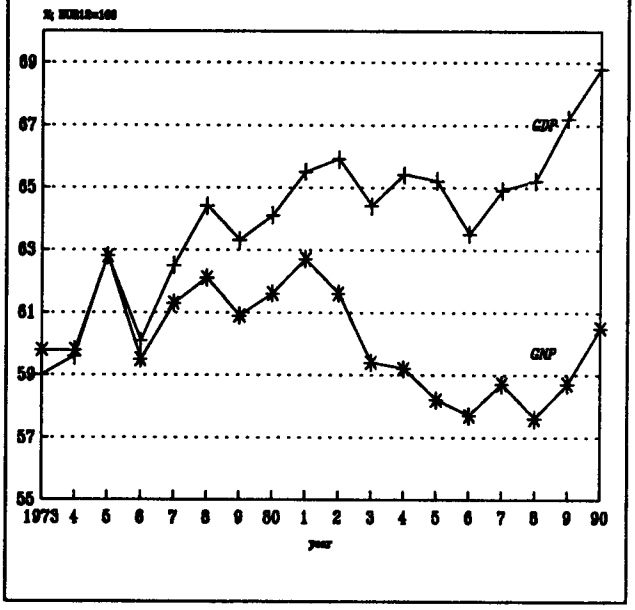
The catching up process has now resumed...

Although economic performance has weakened significantly in 1991, the average annual growth rate in the economy between 1987 and 1990 was 4.8%, according to official GDP statistics. This has resulted in a resumption of the catching-up process; per capita GDP has risen by about 5 points relative to the Community average, while relative per capita GNP has increased by 3.5 points. Initially, the recovery was exclusively export-led; export performance benefited from high external demand and improved competitiveness while import volumes were restrained by weakness in the domestic sectors. However, as investment and private consumption (supported by disposable income increases) have risen, internal demand has become the main impetus to economic growth. In response to higher demand, import growth has returned to more normal rates but the current account on the balance of payments remains in surplus.

As the economy has recovered, there has been a lagged improvement in employment creation. Having virtually stagnated throughout the first half of the 1980s, employment growth moved into line with the Community average of about 1.5% over the two years 1989 and 1990. This rate remains well below the natural rate of increase in the labour force (about 2.5%) but supply pressure on the domestic labour market was eased by the re-emergence of high rates of emigration. As growth in the economy has slowed and recession in the UK and US has reduced emigration flows, domestic labour market conditions have again deteriorated. Employment growth has fallen to a very low level and unemployment has risen to the highest level in the Community.

1 Since 1987, there have been two economic programmes - the Programme for National Recovery (PNR) 1987-90 and the Programme for Economic and Social Progress (PESP) 1991-93 - agreed between government and social partners.

Graph 3: Catching-up process 1973 - 1990



...without loss of nominal stability.

A unique characteristic of Ireland's more recent catching-up performance has been the absence of nominal divergence; the Irish inflation rate is currently below German levels and the current account remains in surplus. The Irish experience differs from that of other catching-up countries (i.e. Spain and Portugal) which have experienced inflationary pressures and external imbalance as growth in the economy has accelerated. The Irish phenomenon can be explained by the initial concentration of economic recovery in the external sector in the period 1987-88 while internal demand was constrained by the impact of fiscal consolidation; since mid-1989, high real interest rates have helped to dampen any inflationary pressures.

During the first part of 1991, slow growth in the economy has reflected a less favourable external environment and the delayed impact of high real interest rates. As growth rates weaken relative to the Community average, further significant progress in the catching up process is unlikely in the short term. Real GDP growth is expected to average 2% per annum in 1991 and 1992, recovering slowly in the medium term. Maintaining recent progress in closing the per-capita GDP/GNP gap is likely to be made even more difficult by an anticipated rise in population as emigration slows down in response to the weakness of labour demand in the UK and USA.

2.The budgetary stabilisation post 1987

In contrast to earlier efforts, intensified fiscal consolidation since 1987 has successfully stabilised the debt ratio...

By 1986, the economic policy debate in Ireland was dominated by the severe disequilibria in the public finances. Sustained efforts at budgetary correction between 1981 and 1986 were inadequate and stabilisation was not achieved. A sharp reduction of about 4.5% of GDP in the primary deficit, mainly through tax increases, had not been sufficient to offset a "snowballing" in debt-servicing costs. Total net borrowing by general government remained stubbornly above 11% of GDP and the public debt/GDP ratio spiralled upwards.

Faced with a looming budgetary crisis, the government intensified the fiscal consolidation effort in a new medium-term fiscal adjustment programme beginning in 1987. This programme was designed to achieve the stabilisation of the public debt/GDP ratio within three years by means of a phased reduction in government borrowing. The burden of adjustment shifted from taxation to public expenditure, because the tax burden had risen substantially in the course of the earlier efforts at budgetary correction; further increases in fiscal pressure risked to be counterproductive.

Although the budgetary adjustment path was not stated, the programme targets were ambitious both in economic and political terms. Stabilisation of the debt/GDP ratio as programmed would necessitate a further sharp improvement in the primary balance; given the medium-term economic prospects at the time, a major consolidation of public expenditure was necessary. In fact, the programme has proved to be remarkably successful and debt stabilisation was realised well ahead of schedule (about mid-1988). Official budgetary targets have been consistently "overachieved" to such an extent that the upward trajectory in the public debt/GDP ratio has been sharply reversed.

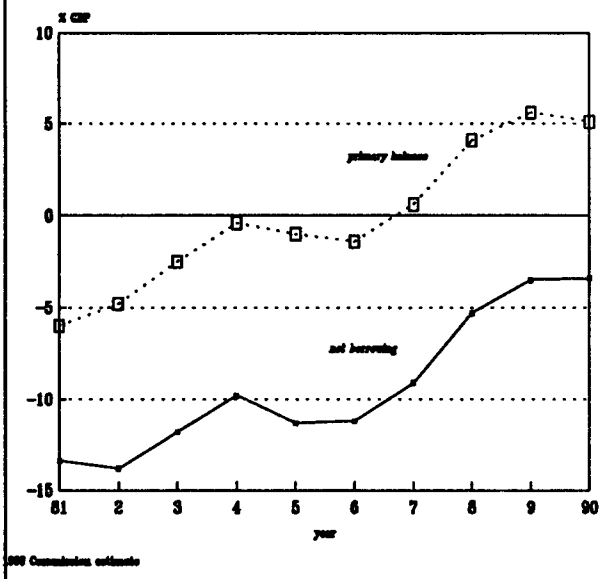
The decline in the debt ratio from a peak of 118.5% of GDP in 1988 to 99.8% in 1990 has coincided with the emergence of a primary surplus of more than 5% of GDP. Total net borrowing by government has been reduced by 8% in terms of GDP, comprising an 11 point reduction in the public expenditure share of GDP and a 3 point reduction in the tax burden[2].Within public expenditure, the largest single target of adjustment has been social uses, on which capital expenditure fell by about 2% of GDP and current expenditure fell by about 3.5% of GDP. Interest payments also fell by about 1.5% of GDP. The trend in the public service wage bill has been restrained through a combination of limited wage control and ra-

2 A notable feature of the budgetary adjustment was an official tax amnesty offered in 1988 to all those owing tax arrears. Initially, the amnesty was expected to raise about IRL 25 million (0.1% of GDP) in financial 1988 but ultimately raised about IRL 500 million (2.5% of GDP).

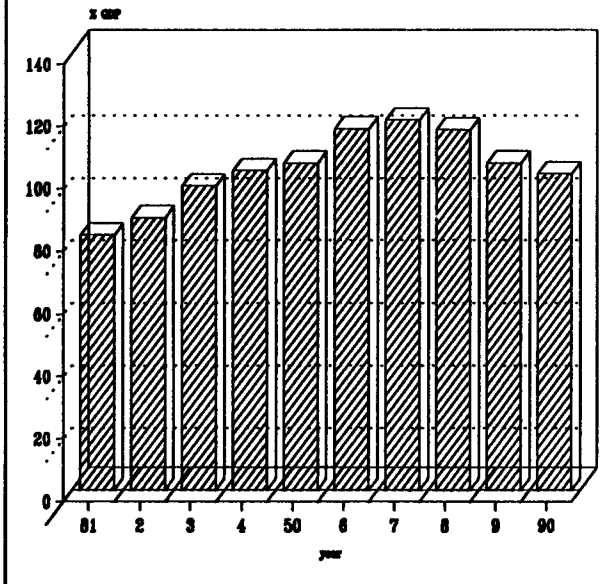
tionalisation of the labour force. Tax relief has been concentrated on labour income where the standard and higher tax rates have been reduced. Expenditure tax rates have also been lowered in anticipation of the completion of the Single Market.

Public borrowing and debt

Graph 4: Net borrowing and primary balance of general govt.



Graph 5: National debt as % of GDP 1981 - 1990



...helped by a positive expectations effect and an improved external environment...

The success of budgetary adjustment post 1986 contrasts very sharply with the failure of efforts in the earlier years of the decade. The scale of adjustment achieved since 1987 has focused attention on the Irish experience as a possible model for general application. In this respect, it is interesting to examine more closely the factors contributing to the spectacular success of the stabilisation effort. (See Annex 1 for more detailed consideration.) In particular, the relative importance of discretionary and non-discretionary elements in the adjustment process must be analyzed. An intuitive approach is to simply contrast the two phases of Ireland's adjustment -

(i) the first phase from 1981 to 1986, in which a substantial budgetary consolidation effort took place but which failed in its stabilisation objective;

and

(ii) the second phase from 1987 onwards, in which stabilisation has been successfully achieved.

- so as to identify the conditions which determined the success of the second phase relative to the first.

The first phase of budgetary consolidation coincided with considerable weakness in the domestic economy; real GDP grew by an average of only 1.5% per annum. As a small open economy, Ireland was particularly affected by the slowdown in world trade in the early 1980s. The external contribution to growth was also constrained by a real appreciation in the punt as part of the domestic disinflation process. In line with international trends, Irish real interest rates turned sharply positive after 1981 further depressing activity in the economy. The budgetary adjustment in this phase was to be achieved through increased taxation so that any associated supply-side response was likely to be negative. Moreover, as stabilisation was delayed the anticipation of a progressively larger fiscal correction was undermining confidence in the economy. As the weakness of external demand and rising international real interest rates fed into the domestic economy, conditions for budgetary stabilisation became increasingly unfavourable. The internal dynamic of the public finances became explosive, as a vicious circle of accumulating debt, rising debt-servicing costs (the effective real rate of interest on public debt rose from -7.2% in 1981 to +3% in 1986) and higher borrowing was set in motion.

In marked contrast, the second phase of budgetary adjustment took place at an ideal point in the economic cycle. External demand was supported by a pronounced upswing in world trade from 1986 and by a stabilisation in the real punt exchange rate as disinflation was completed. As private sector expectations responded positively to the greater coherence in the macroeconomic policy regime, Irish interest rates fell sharply reflecting a narrowing of differentials in response to the new consensus-based budgetary and exchange rate regime and the generalised easing in international monetary conditions.

The focus of budgetary adjustment in this phase was on expenditure so that a less negative supply-side response was to be expected. The recovery in the domestic economy coupled with the favourable external trade environment and reduced real interest rates, induced a stable dynamic in the Irish public finances; this dynamic ultimately facilitated the sharp reversal in the trajectory of the public debt/GDP ratio.

...and also by the earlier stabilisation efforts.

In comparing the discretionary elements of the two phases of stabilisation, the appropriate measure is the cyclically-adjusted primary balance. This measure attempts to remove the impacts of growth, interest rates and exchange rates on the public finance dynamics and so more accurately reflects policy-induced adjustment. The trend in Ireland's cyclically-adjusted primary balance over the period 1981-90 indicates that the underlying stance of fiscal policy in both phases of adjustment has been restrictive but that, in quantitative terms, the discretionary tightening of policy in the first phase of adjustment was probably greater than in the second.

Thus, in assessing the Irish experience of stabilisation it is important to consider the entire period of adjustment since 1981 and not simply the more spectacular phase after 1987. The contrasting response of expectations reflecting qualitative differences (i.e. political/social consensus and greater emphasis on expenditure cuts in the second phase) in the two phases of adjustment was of great importance; however, external factors have clearly played a significant role both in the success of the post-1987 adjustment and in the failure of the earlier efforts. Moreover, the contribution of the substantial discretionary adjustment efforts in the first phase, together with the political/social consensus inspired by the need for even further efforts after 1987, must be fully appreciated when assessing the success of the second phase.

3. Structural constraints on economic performance

Despite successful budgetary stabilisation, the public debt overhang remains an important constraint...

While the crisis in the public finances may have passed, the medium-term constraint of the enormous overhang of public debt remains. Despite a substantial reduction since 1988, the public debt/GDP ratio remains around 100% with a corresponding interest burden of 8-9% of GDP. A priori, it is impossible to determine an optimal public debt/GDP ratio and the pace of reduction in the ratio is probably less important than the trajectory itself. Nevertheless, the sensitivity of the public finance dynamics to a deterioration in the international economic environment lends support to the argument for an accelerated reduction in the public debt/GDP ratio. As discussed later, a fall in the debt burden will reduce the vulnerability of the public finances to external shocks and will release resources which might otherwise be absorbed in financing debt-servicing costs. For these reasons, fiscal restraint is likely to remain a necessary element of the Irish macroeconomic policy mix for some time. Achievement of the official medium-term targets of reducing the public debt/GNP ratio to 100% (about 90% in terms of GDP) by 1993 and to 75% (about 68% in terms of GDP) by 2000 might be seen as a minimum requirement.

...together with high unemployment.

Apart from public finance disequilibria, high unemployment was the principal feature of the Irish economy in the 1980s. The unemployment rate peaked at 18.2% in 1988 but declined to about 15.4% in 1990. While employment has grown over this period, the improvement in unemployment rates was largely attributable to high emigration. This is illustrated by the sharp rise in unemployment in the first half of 1991 which has coincided with the slowdown in emigration due to recession in the UK and USA.

Much of Ireland's high level of unemployment, compared to earlier years, can be traced to structural adjustments in the economy during the 1980s. A policy of industrial modernisation has led to the emergence of a significant duality in manufacturing industry. The manufacturing base is now divided between high productivity, (i.e. capital-intensive) foreign-based sectors and lower productivity (i.e. labour-intensive) traditional sectors. The emergence of the robust foreign-based sectors coincided with a substantial "weeding out" of the traditional sectors in the disinflation period, resulting in an important structural shift in the economy.

The structural transformation of the manufacturing base has facilitated a sustained period of accelerated productivity growth (averaging about 7.5% per annum over the period since 1981)[3]. However, as the modern sectors are capital-intensive relative to the traditional sectors they have replaced, an element of the improved productivity performance has been a significant net reduction in manufacturing employment (-30% 1981-87). A signifi-

3 There is much to suggest that these productivity figures are distorted by transfer pricing activities in the foreign-based sectors of manufacturing. However, it is very probable that substantial productivity gains have been made in Irish manufacturing in the course of the 1980s.

cant number of Ireland's long-term unemployed belong to this displaced cohort of the manufacturing labour force.

There is scope for further structural reform to boost potential output and the employment response to growth...

Structural reform is now essential to consolidate the achievements at the macroeconomic level and will ensure that national economic policy focuses on the microeconomic measures necessary to improve the productive efficiency of the economy. Such improvements should also help to reconcile the pattern of output growth to the factor endowments of the Irish economy, providing the conditions for a sustainable reduction in unemployment. Some improvement will already have been achieved by recent supply-side measures at the national level, particularly in the fields of taxation and financial deregulation. Substantial Community assistance to national efforts in the areas of physical infrastructure and human capital to be provided through the Community Support Framework 1989-93 will also help in this regard. The CSF for Ireland provides for Community assistance averaging between 2% and 3% of GDP per annum over the period 1989-93; the primary focus of the operational programmes underlying the CSF is to enhance Irish export potential (particularly in areas of perceived comparative advantage), to assist in the development of human resources and finally to address locational disadvantages facing the economy. However, there remains considerable scope for complementary adjustments to structural policies at the national level.

...through improvements in industrial policy...

As in all catching-up countries, Ireland's industrial policy reflects the need to foster capital accumulation and technical progress within the productive system. In this way, a sustained improvement in labour productivity can be achieved moving per capita output closer to the Community average. Since the late 1970s, Ireland's policy of industrial modernisation has been based on the attraction of mobile foreign investment to the economy. This type of capital accumulation is particularly attractive as it simultaneously enhances the average efficiency of capital through high levels of embodied technology.

Inward investment to Ireland has risen very substantially since the mid-1970s and has been concentrated in activities characterised by vertical integration and transfer pricing, with substantial profit repatriation (about 8% net of GDP in 1989) a related feature. In this way, the value-added accruing to the domestic economy from inward investment is diluted. The result is a substantial positive differential between GDP and GNP as the income generated in the foreign-based sectors leaks from the economy, and "spillover" effects elsewhere in the economy are reduced. A further consequence of Ireland's policy of industrial modernisation through inward investment has been the emergence of severe duality in the economy. The emergence of a dual economic structure between domestic sectors and the foreign sector reflects an implicit "targeting" of inward investment within industrial policy. Mobile capital is attracted to Ireland by a generous package of capital grant-aid and fiscal incentives. While there is no evidence of formal discrimination between foreign and domestic investment, it is likely that the limited scale of capital investment affordable by most domestic investors, relative to their foreign-based counterparts, explains the relatively poor response to industrial incentives from indigenous sources. In this way, inward investment is effectively favoured over domestic sources within industrial policy.

While the foreign sectors provide a significant share of employment (about 40% of manufacturing and about 8% of total), there has been a shortfall in labour demand from the new manufacturing sectors relative to the labour outflow from the declining sectors. A rising capital/labour ratio is not surprising in the manufacturing base of a catching-up economy. However, the rate of employment creation in the manufacturing sector and the economy as a whole has not been helped by the bias towards capital in the treatment of production factors within industrial and fiscal policy. Meanwhile, as the tax burden on labour income has risen to sustain public finance imbalances, relative factor prices have been further distorted, depressing employment creation in the economy as a whole. This distortion of relative prices will not only have reduced the employment response to growth (by encouraging capital deepening) but will also have penalised entrepreneurship and so further discriminated against indigenous investment activity.

Continued success in the existing industrial policy is likely to result in an increasing weight of foreign relative to domestic investment in the Irish economy. If linkage between the two sectors cannot be improved, the differential between GDP and GNP will widen further. Moreover, as capital intensity in the production process increases but profits continue to leak abroad there is a risk that the employment response to economic growth will be progressively eroded. A more neutral treatment of production factors within industrial/fiscal policy and further measures to improve linkage between the foreign-based and indigenous sectors would help to provide a more balanced development in the economy. In more recent years, Irish industrial policy has moved in this direction (with adjustments to the treatment of capital and payroll taxation and reduced emphasis on grant-aid to fixed assets) but there is scope for further improvement.

...reform in the labour market and the taxation system...

The below-average employment response to output growth combined with demographic pressures suggests serious latent supply pressures in the domestic market

whenever external (mainly UK) demand for labour subsides. On the assumption of zero migration and unchanged participation rates, employment would be required to expand by 2-2.5% per annum to restrain unemployment to its present level. While such growth rates cannot be realistically expected, there is evidence that the employment response to growth in the economy could be improved by labour market reforms. Better quality training, more targeted social welfare payments and the encouragement of more flexible working patterns are all important to improve the operation of the labour market. However, the most obvious requirement in this respect is to reduce the substantial "tax wedge" between the gross and net wage; this wedge acts as a potential disincentive to both labour demand and supply.

The tax relief offered since 1987 has already narrowed the tax wedge to some extent. A further substantial reduction can only be achieved in the context of a global reform of the taxation system. Such reform would need to be largely revenue-neutral and designed to broaden the tax base while reducing effective rates. The main targets for increased taxation to compensate for revenue losses elsewhere would be fixed assets (most notably residential property on which taxes are very low) and zero VAT-rated consumer items. In reducing the tax burden on labour income, the approach adopted by the authorities in recent years has been to concentrate on lowering rates. An alternative approach might be to place greater emphasis on raising the threshold of tax incidence by adjusting bands at unchanged statutory rates. In this way, tax relief could be provided without loss of progressivity in the system.

...and reforms in the financial system.

Much progress has already been made in the removal of exchange controls in Ireland; however, certain of the benefits stemming from liberalisation depend on the complete elimination of controls. In this context, the appropriateness of maintaining residual controls and delaying their removal to 1992 is questionable. In line with capital liberalisation, further improvements in the regulatory framework covering the financial sectors may be required. Ireland has many locational advantages for the international financial Community. As technology advances, peripheral locations will become increasingly attractive relative to more congested centres so long as adequate support in terms of physical infrastructure and human resources is available. In this respect, Ireland is relatively well placed to gain from greater European financial integration.

Internal financial deregulation should be completed by phasing out the compulsory investment by banks in government securities. This liquidity ratio, called secondary, varies between 13% and 25% of banks' relevant resources and, although it has no fundamental impact on banks' competitiveness (being remunerated at market rates) it diminishes to a large extent the productive role of the banking system and risks causing misallocation of resources. In a context where countries compete more and more through their supply-side performance, such distortions may need to be removed.

Similarly, the banks' reserve requirements, which still stand at 8% of their relevant resources, are remunerated at below market rates; thus they are a burden to the banking system and can cause dislocation and disintermediation of funds while serving only a limited monetary function.

4. Macroeconomic policies and problems in the approach to EMU

As emphasized previously, macroeconomic policy in Ireland has achieved very considerable success. Nonetheless, a number of issues remain outstanding. These concern the public finance situation (as shaped both by the debt ratio and the budget deficit), the present very high level of unemployment, the implications of the present structure of the balance of payments, the lessons to be drawn from Ireland's experience in the ERM, and the balance of costs for and benefits to Ireland likely to flow from economic and monetary union.

The debt ratio is still a potential risk...

As a result of the high debt ratio, Irish economic policy remains vulnerable to external developments. A very favourable external environment from 1987 to 1990 helped considerably in first stabilizing and then reducing the debt ratio from a level at which the prospect of debt unsustainability in Ireland was being seriously discussed. A less favourable environment - for instance, a combination of higher world interest rates and slower world growth - could create problems. With the debt ratio in Ireland still close to 100%, any "accidents" on interest rates or the growth rate could threaten to recreate concerns about debt unsustainability.

Precisely such considerations underlie the widely-agreed emphasis on reducing debt ratios in a number of Community countries in advance of EMU, in order to avoid the risk that the markets might anticipate the need for a "bail out". Discussion on a reference value for the debt ratio is not yet concluded but a figure of 60% is being actively considered as the one above which countries would be required to reduce their debt ratios.

Ireland would clearly have some way to go to meet such a figure. The present medium-term budgetary targets in Ireland foresee a reduction of the ratio to 90% of GDP by 1993 and to 68% of GDP by 2000. These targets are challenging; the analysis in Annex I shows that, even if the relationship between real growth rates and real interest rates becomes more favourable than it is at present, a 60% ratio would not be achieved this century without a significant rise in the primary surplus from its already very substantial level of around 5% of GDP.

... and reducing it is becoming more difficult.

What is important is that the downward trajectory of the debt ratio should be clearly maintained. In the short term, this may not be easy. Activity in 1991 is turning out to be weaker than assumed when the budget was framed, and this year's targeted net borrowing of central government (1.9% of GDP) is likely to be overshot, requiring further discretionary adjustments if a desirable trajectory is to be maintained. Given this prospect, it can be suggested that more adjustment should have been aimed at in 1989 and 1990, when growth in the economy was very strong.

The balance of payments does not indicate particular dynamism ...

With respect to the balance of payments, the dramatic improvement in the current account between 1981 and 1986 could be more than accounted for by demand differentials, Irish domestic demand being extremely subdued. Since 1987, a continued if much less dramatic swing taking the current account into surplus, has been accompanied by much livelier Irish demand growth. Export market growth (notably in the UK in 1987-89) is one explanatory factor. However, market shares have also improved (although perhaps by less than might have been suggested by the strong recorded improvement in Irish competitiveness resulting from a sharp acceleration, as depicted by official statistics, in productivity).

The improvement in the public finances has been reflected in the balance of payments by a fall in total official borrowing from abroad over the period since the mid-1980s. However private capital outflows were on a rising trend in the second half of the 1980s. There was a peak in 1989 as capital controls were substantially loosened, leading to portfolio reallocations. The counterpart to this was a very strong inflow of foreign funds into Irish government bonds, allowing the government to retire some previous direct borrowings. In 1990, both private outflows and foreign purchases of Irish government bonds fell back. Nonetheless, net private outflows remain at a very high level. This phenomenon is not entirely consistent with an accelerated catching-up process based upon rapidly rising levels of productivity, which normally would make Ireland, like Spain and Portugal, an attractive location for indigenous investment. The existence of private capital outflows, accompanied by substantial inflows through the banking sector, may suggest inadequate investment opportunities in the indigenous sector.

... and confirms the need for structural change.

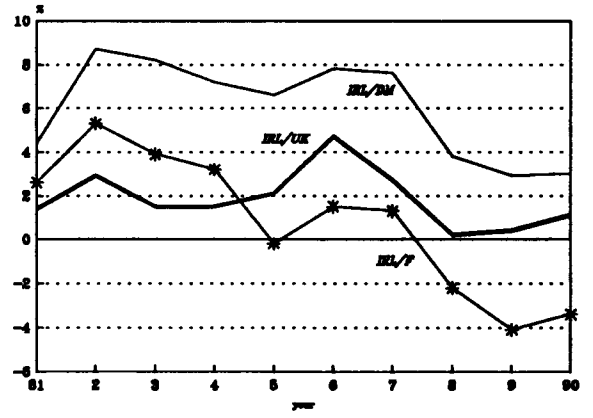
In sum, balance of payments developments can be seen as confirming the need for the structural change; the consequences of such improvements would be to help the process of economic development in Ireland pervade the economy as a whole, stimulating output, employment and domestic demand. Given that the increase in unemployment in 1991 will not be quickly reversed, the need for structural reform is becoming increasingly urgent.

Commitment to exchange rate was subject to early pressures...

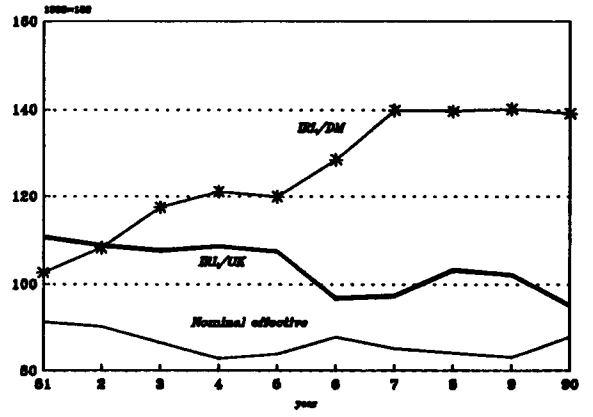
In Ireland, as in several other Community countries, exchange-rate discipline has been the fundamental tool first for achieving disinflation and then for maintaining a high degree of price stability. Ireland's early years in the ERM were heavily influenced by fluctuations in sterling and by excesses in Irish budgetary policy; the Irish pound participated in a number of realignments, including the unilateral realignment of August 1986. Since then, however, the Irish pound has been remarkably stable, helped by the improvement in the budgetary situation and a recovery in output growth.

Interest-rate differentials and nominal exchange rates

Graph 6: Short-term interest rate differentials



Graph 7: Nominal exchange rates 1980 - 1990



Although the January 1987 realignment within the ERM had not involved the Irish pound, expectations of a devaluation persisted at the beginning of 1987 as budgetary adjustment was postponed. However, when a series of credible budgetary measures was taken in Ireland and sterling strengthened, the credibility of the ERM commitment increased, with a significant impact on interest rates. By mid-1987, the Irish markets could ignore a rise in UK interest rates. Since then a negative interest-rate differential has prevailed between Irish and UK short-term rates.

However, in 1989 the strengthening of the DM pulled up the narrow-band currencies against third currencies (sterling and the US dollar among others), and this gave rise to some expectations of a realignment. Short-term interest rates were raised and differentials against the DM and the FF increased in order to counter losses in reserves. More recently, the position of the Irish pound within the ERM has become more comfortable: first the entry of sterling into the ERM has removed a major potential source of instability for the Irish pound; second, the relative weakness of the DM has allowed Ireland, like other narrow-band countries other than Germany, to reduce short-term interest rates. Short-term differentials against the DM now stand at the low level of about 100 basis points.

... but brought stability and laid the basis for growth...

During the period 1987 - early 1990 in particular, commitment to the ERM, combined with budgetary adjustment, brought very substantial benefits to Ireland in terms of the credibility of durable disinflation, and at a time when economic growth was relatively strong. During this period, staying in close contact with the DM provided the authorities with a policy target that was both straightforward and, no doubt, appropriate. On the whole, and in spite of occasional pressures, the hard currency option taken by the Irish authorities seems to have borne fruit. Although it is difficult to assess what the situation would have been if the link with sterling had been maintained, a comparison with the UK shows that Ireland has achieved greater nominal stability and higher growth of GDP in the second half of the 1980s.

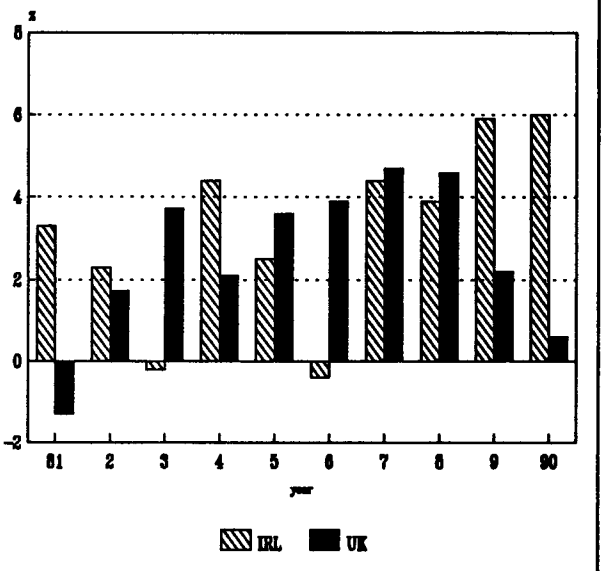
... although at the cost of high real interest rates.

Indeed, the stance of Irish monetary policy has resulted in real interest rates being very high; they became positive in 1981 and climbed to reach very high levels by the 1985-87 period. They fell back to less than 5% in the beginning of 1989 but rose again to over 8%, at the short end, in March 1991.

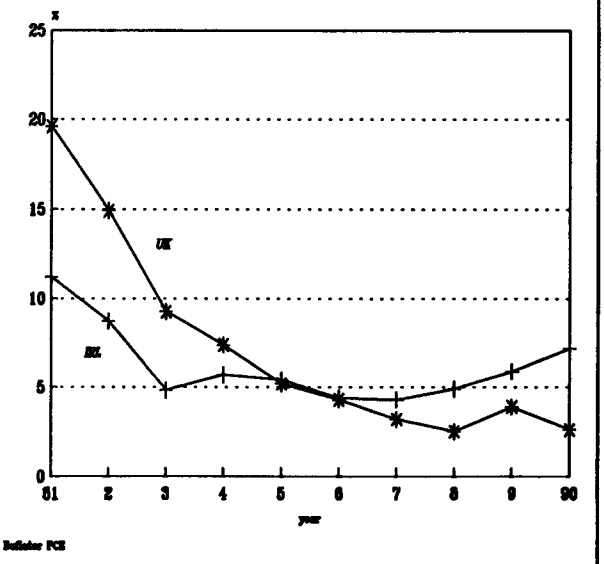
In part, the high level of real rates reflects world capital market tightness, but Irish real rates are among the highest in the Community. The relatively high rates may suggest a problem of perception in the markets. Experience in the ERM would suggest that full credibility is gained only slowly. Although the credibility of the authorities' commitment to the nominal parity within the ERM is stronger than in previous years, financial markets remain to be fully convinced. The risk premium on Irish rates will also reflect the still-high debt ratio which implies vulnerability in the public finances.

Irish and UK growth and inflation performance

Graph 8: Real GDP growth, IRL vs UK



Graph 9: Inflation rates, IRL vs UK



(3)

The prospects in EMU are potentially beneficial...

In the context of economic and monetary union, the small and open Irish economy faces both opportunities and challenges. The recent success in Ireland's catching-up performance suggests that the direction of Ireland's macroeconomic policy framework is broadly appropriate. To the extent that greater integration reinforces this policy framework and promotes the domestic conditions for growth, the Irish economy can expect to perform well in EMU. This benign view of the synergy between EMU requirements and Ireland's catching-up performance is not without question; disadvantages in terms of scale and technological endowment and to some extent its peripheral location have been cited as possible impediments to Ireland's success within economic union. While certain sectors in the economy will undoubtedly be threatened by greater integration, there is evidence to suggest that many other sectors will thrive[4].

The main effect of monetary union will be the elimination of exchange risks. This corresponds to the removal of a barrier and will be particularly beneficial for Irish trade. Indeed, having a distinct currency imposes a greater burden on smaller than on larger countries; this is because smaller countries generally depend more on trade than larger ones and there are relatively few international transactions denominated in their currencies. While imports will similarly benefit from reduced exchange rate risk, Ireland is likely to gain from monetary union as a substantial net exporter .

At the same time, the absence of exchange risks will greatly reduce interest-rate differentials other than those reflecting credit standing and will, as long as the union as a whole is expected to maintain a stability-oriented policy, allow domestic rates to come down. This will be beneficial for investment growth and employment, which are particularly important for Ireland, as it will increase the potential for further real convergence and may reduce unemployment.

Moreover, this reduction in interest rates will lower debt-servicing costs to the budget and will improve the balance of payments through lower interest outflows to outside holders of Irish-pound denominated debt.

The corresponding disadvantage is that Ireland will have to forego the exchange-rate instrument completely and its monetary policy to a very large extent. The existing 2.25% ERM margin still provides a certain degree of protection from monetary shocks coming from the centre of the system or from demand shocks in Ireland itself; this will be lost. At the same time, it is likely that the single monetary policy which will prevail in the monetary union will continue to have an asymmetrical character. It is conceivable that targets could be set primarily with reference to the needs of the major central areas, independently of whether the periphery is in the same phase of the cycle.

... provided nominal stability is maintained.

Nominal stability is essential for the successful passage into the next phase of monetary union. As shown above, inflation in Ireland has already converged; but it is important to maintain this performance.

Another critical condition is the degree of further progress in reducing the debt ratio, the imperative of which was stressed earlier. As argued above, keeping to the government's debt ratio reduction targets is likely, given the missed opportunity to adjust further in 1989 and 1990, to involve some further discretionary budgetary tightening in circumstances of less favourable short-run growth. Such a tightening might, especially as the external environment is now less favourable, be more likely to have the sort of contractionary impact on demand evident in the first half of the 1980s rather than the benign impact of 1987-90. This is precisely because the major progress in taking Ireland away from the brink of debt unsustainability has already been made: savings ratios are already lower than in 1987, and nominal interest-rate differentials are already relatively low; so the potential offsets to the traditional contractionary impact of budgetary tightening are unlikely to play a further major role.

Looking further ahead, an ambition of economic and monetary union must be to provide a framework for structural improvement leading to real income convergence in Ireland. Spanish and Portuguese experience tends to suggest that, to the extent that this ambition is realized that there could be imbalances between supply and demand. However, the impact on output, and thus on inflation and employment, of such disturbances will be greatly attenuated by the very high degree of openness in the Irish economy.

4 See footnote 10 of Annex III.

5. Conclusions

Macroeconomic performance in Ireland has improved dramatically in recent years. The positive expectations inspired by an abrupt change in economic regime in 1987, coupled with an improved external environment, have facilitated a remarkable budgetary adjustment in conditions of strong growth. As a result, stability has now been restored to the public finances. At the same time, earlier progress in reducing inflation has been safeguarded.

While macroeconomic stabilisation has been achieved, the Irish economy advances towards EMU with substantial structural constraints primarily in the form of high unemployment and a heavy public debt overhang. The unemployment problem is largely the outcome of a structural shift in the economy during the 1980s in response to a more open trading environment. In this respect, the incentives deployed as part of the development strategy pursued in recent decades have excessively targeted capital-intensive projects.

If the profile of growth is to be made more consistent with Ireland's factor endowments, the degree of commitment evident in the successful macroeconomic adjustment must be maintained and also be shown on structural reform (particularly in areas such as taxation, industrial policy and training). Some progress has already been made in these areas; however, without a more radical approach to structural reform, the achievements in nominal and real convergence in the last decade will remain fragile and the Irish economy's capacity to address the challenges of EMU will be weakened. Moreover, the structure of the balance of payments suggests a need for higher investment and implies scope for further structural improvement.

Exchange rate discipline has, in spite of occasional pressures, achieved disinflation while the credible policies applied since 1987 have ensured substantial stability of the Irish pound in the ERM. Currently, the ERM commitment has become easier in view of sterling membership. The maintenance of inflation convergence is indispensable in the approach to EMU. However, fundamental for maximizing the benefits and minimizing the risks of greater integration is the degree of further progress in reducing the debt ratio. The present high debt overhang threatens the convergence achievements already made, especially as maintaining the downward trajectory of the debt ratio will be more difficult with weaker growth.

The approaching Union entails the elimination of exchange risks and will allow further reduction in interest rates. Both benefits are especially relevant for smaller and open countries like Ireland. However, as the Commission's Report "One Market, One Money" points out in relation to the regional distribution of the impact of union, there are no a priori grounds for predicting the pattern of relative gains and losses.

Part II

SPECIAL TOPICS

Chapter 1
Ireland's Budgetary Stabilization 1981-90

0. Introduction

For analytical purposes, Ireland's budgetary stabilisation can be divided into two inter-related phases:

Phase 1 (1981-86): which coincided with a disinflation of the economy and in which repeated efforts to consolidate the public finances proved unsuccessful; net borrowing by general government remained stubbornly above 11% of GDP and the national debt/GDP ratio (hereafter referred to as the debt ratio) spiralled to 116,5%.

Phase 2 (1987-90): which coincided with a strong economic recovery and in which budgetary stabilisation has been successfully achieved; net borrowing by general government has been reduced to about 3,5% of GDP and the trajectory in the debt ratio has been sharply reversed, falling below 100% in 1990.

The spectacular budgetary performance in this second phase has focused much international attention on the Irish experience as a possible model for general application. In this respect, the relative importance of the discretionary and non-discretionary elements of Ireland's stabilisation effort is crucial. By comparing the two phases of stabilisation in a formalised framework (IS-LM and theoretical debt dynamics), this annex attempts to identify the key factors underlying the success of the second phase relative to the first. In particular, cyclical fluctuations, movements in interest rates and exchange rate effects are examined so as to isolate and compare the contribution of discretionary fiscal policy to the stabilisation effort in both phases. This analysis attempts to provide a realistic assessment of Ireland's budgetary performance in the 1980s and to identify some general conditions for successful stabilisation. Finally, the medium-term outlook for budgetary policy in Ireland is examined in the context of competing needs for accelerated consolidation on the macroeconomic level and structural reform on the microeconomic level.

1. A successful budgetary stabilisation.

1a. The drift towards unsustainability 1981-1986.

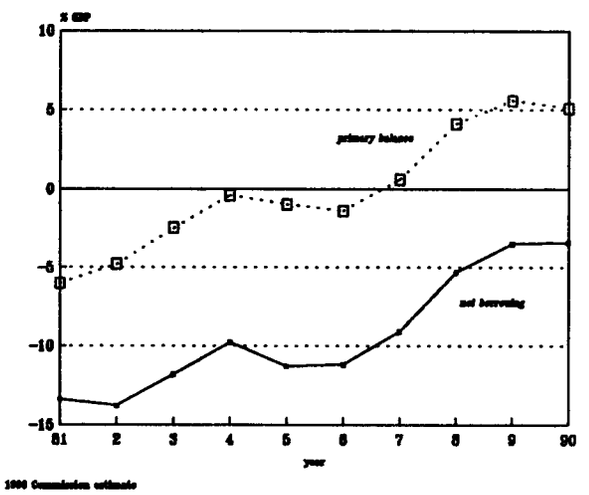
In 1986, Ireland's efforts at macroeconomic stabilisation over the preceding five years were considered to have failed[1]. While inflation had fallen close to the Community average and external balance was largely restored, disinflation had been achieved at a high cost in terms of lost output and high unemployment. Moreover, severe and persistent disequilibria had emerged in the public finances. A budgetary experiment in "pump-priming" the economy from mid-1977[2] had failed spectacularly. An initial improvement in economic growth had not been sustained and nominal instability in the economy had been aggravated as substantial public deficits were increasingly reflected in a widening of the external current deficit. Between 1977 and 1981, net borrowing by general government had more than doubled in terms of GDP and the debt ratio had begun to rise steeply. (See Table 1 for trend in main budgetary aggregates).

As Ireland's procyclical fiscal stance coincided with countercyclical measures elsewhere in the Community, credibility in the parity of the punt within the ERM (from 1979 onwards) was eroded. Deteriorating financial market sentiment was reflected in a widening of the interest rate differential with Germany. By 1981, fiscal consolidation had joined disinflation as a primary focus of macroeconomic policy. Despite a concerted attempt at fiscal consolidation in the next five years, a "snowballing" in interest payments on the rising public debt meant that total net borrowing remained above 11% of

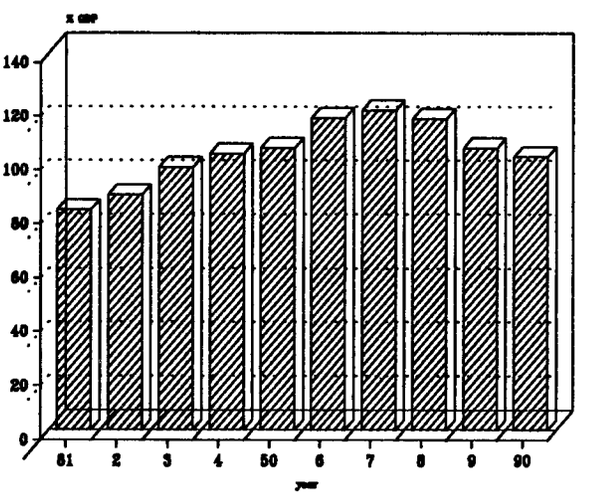
1 See Dornbusch R.:" Credibility, debt and unemployment: Ireland's failed stabilisation". Economic Policy (1989).

2 In 1977, a new government programme had attempted to shift the economy onto a higher trend growth path by means of a massive fiscal stimulus transmitted via reduced taxation, public expenditure and public sector employment creation.

Graph 1.1: Net borrowing and primary balance of general govt.



Graph 1.2: National debt as % of GDP, 1981-90



GDP throughout the period and the debt ratio spiralled to 116,5% (See Graph 1.1 and 1.2).

By 1986, the Irish economy was close to crisis as the public finances drifted towards unsustainability. An appreciation in the real punt/sterling exchange rate during 1986 threatened a further competitiveness squeeze in UK markets. The likelihood of another major rationalisation of labour in the already much depleted traditional (and UK-dependent) sectors of the economy posed a policy dilemma between exchange rate discipline and maintaining competitiveness[3]. The authorities opted for realignment and the value of the punt was unilaterally adjusted downward (by 8%) within the ERM in August 1986[4]. The breach of exchange rate discipline confirmed long-held suspicions in the financial markets concerning Ireland's ERM commitment. The fear of subsequent realignments (as sterling continued to slide) resulted in substantial capital flight[5] and spiralling short term interest rates.

1b. A change in macroeconomic and budgetary policy regime.

Faced with a looming crisis, the new government (elected February 1987) immediately set about reinforcing the macro-economic policy mix. The commitment to ERM parity was reaffirmed and the social consensus, abandoned in 1981, was reactivated. The key elements of the new consensus covering the period 1987-90 were a centralised incomes policy limiting nominal wage growth close to anticipated inflation and a medium-term fiscal programme. The main elements in the fiscal programme were:

a) stabilisation of the trajectory in the debt ratio;

b) stabilisation to be achieved through a phased reduction in net borrowing by government to between 5% and 6% of GDP (from 11,2% of GDP in 1986);

c) consolidation of the borrowing requirement to be achieved by means of a reduction in the share of public expenditure in GDP rather than by an increase in the already onerous levels of taxation;

d) some limited tax relief (to a cumulative value of about 2% of GDP) over the programme period to underpin moderation in wage growth;

e) the real value of total social welfare expenditure to be maintained but with improved targeting of recipients.

1c. The process of budgetary adjustment.

While the programme targets were ambitious and the path of adjustment vague, budgetary stabilisation was rapidly achieved. Indeed, up to last year, budgetary targets had been repeatedly "overachieved" to an extent that the upward trajectory in the debt ratio has been

3 This dilemma was more apparent than real when considered in the context of the previous ineffectiveness of devaluation in the Irish economy with transmission lags in imported inflation very short and no effective incomes policy in operation.

4 A further depreciation of sterling in the latter part of 1986, subsequently reversed the competitiveness gains from the August devaluation.

5 Estimated at about 8% of GDP despite the existence of exchange controls.

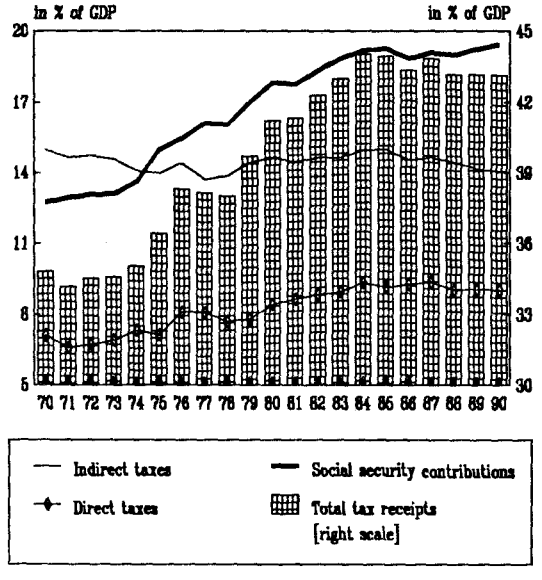
against the background of the current budget deficit. In this respect, France stands out as having one of the best budgetary situations in the Community i.e. the fact that France has a high explicit tax burden does not have a counterpart in much higher expenditures than in most other Community countries.

2.5.2 Company taxation

Since the degree of capital mobility is far higher than the mobility of labour in the integrating European economy, the level of company taxation is crucial to competitive performance. In France corporations are heavily taxed if account is taken of the whole tax burden. In 1989, the overall average tax burden (without social security contributions and net of subsidies) was 10% of value added compared to around 6% in Germany.

The high rate of social contributions may affect not only the operating results of enterprises, but also the disposable income and spending behaviour of households. Until now, it seems that the wage level has compensated for the high level of social security contribution, thus reducing the effect on unit labour costs. However, the non-progressive rates of social contributions and their ceiling system, still existing for pension contributions, penalise low salary earners. The institution of the Cotisation Sociale Généralisée aims to correct this distortion and represents the first step towards a global revision of the financing of the social security system by a widening of the basis of social contributions to capital and non-salary incomes.

Graph 14: Structure of tax receipts



Source: INSEE

2.5.3 Taxation of savings

The Law of Finance of 1989 has substantially revised the taxation of saving in order to make the system consistent with liberalized capital flows and to reduce the tax-induced distortions between financial assets. These new measures have been taken not only to avoid the danger of French saving outflow to abroad, but also to adapt taxation to the new financial products stemming from capital market deregulation.

Previous tax rules have led to financial market segmentation which was inconsistent with an optimal allocation of financial resources. Therefore, the most recent taxation is aiming at the equalization of tax pressure on financial assets. In fact, the income of a large part of French financial saving is not taxed at 18.1% (including 3.1% for social security).

Financial deregulations have led to a progressive decrease in the outstanding amount of savings-bank books (whose interest income is low because it is administered but tax-exempt) at the advantage of competing financial assets, with the same degree of liquidity, but with a higher market yield. The success of monetary SICAV is the proof of this new allocation process by market rules.

Nevertheless, the size of the outstanding savings-bank deposits still remains high, despite this recent dwindling, and the taxation of distributed profits to stock-holders is higher than taxation of interest income on bonds despite the tax credit on dividends. However, this fiscal handicap on share income has been strongly reduced thanks to a tax rate on capital gains equal to that on interest income (18.1%). This measure has led to the development of the "SICAV de capitalisation", which are allowed to transform the distributed dividends on the shares in their portfolio into capital gains.

To facilitate the financing of investment by long-term financial resources, French authorities have created a new tax-exempt asset, le P.E.P. (Plan d'Epargne Populaire), which allows savers to earn a tax-exempt market interest rate against a long term financial engagement. All in all, these fiscal measures are aiming at the development of financial saving and at its more efficient allocation. Nevertheless, some tax induced distortions and rigidities still remain: they should be reduced in order to allow an efficient financing of productive investment.

2.5.4 Direct taxation

Direct taxation of household income was only just over 4% of GDP in 1990. It is an annual tax charged on the total net income of individual households. The progressive tax structure takes account of the dependants in the household (e.g. number of children) and applies to all the various types of income net of deductions, allowances and charges. Income tax revenues grew sharply for 25 years, but slowed down markedly as a result of the series of reliefs introduced in 1985, which brought the top rate of tax down from 65% to 56.8% and extended the system of graduated relief. The effect has been to

take some two million people out of tax altogether, and to reduce the amount of tax paid for a further two million.

In comparison with the other European countries, income tax is of limited importance within the French tax system. This can be explained, firstly, by the low rates charged in the first income brackets (the lowest rate is 5% compared with 25% in the United Kingdom) and second by the narrowness of the tax base. Taking into account allowances and various deductions, the low rates charged in the first income brackets, the system of graduated relief and the exemption from paying small amounts of tax, the tax base is so narrow that many taxpayers do not reach the minimum taxation threshold (48% of French households are tax-exempted).

Because of the high progressivity of the tax tarrif in the very high income groups, only high income earners actually contribute efficiently to tax receipt. In 1986, 1% of households declaring the highest incomes paid 27% of tax and 10% of households paid 64% of tax. The tax rules in force therefore favour low and middle-income taxpayers. However, these conclusions would be qualified if the amount of social security contributions paid was added to income tax.

2.5.5 Indirect taxes

Value added tax (net of VAT receipts transferred to the EC budget) represented 7.4% of GDP in 1990, more than one percentage point less than in 1980. The VAT system has been strongly modified as the number of rates has been reduced from 7 to 3 (5.5%, 18.6%, 22%). Moreover, the French authorities have on several occasions lowered the upper rate, bringing it closer to the normal rate. As the other excise duties are on average slightly below the level of other countries, indirect taxation does not require significant further adjustment in view of the internal market.

Phase 1 (1981-86):

The need for budgetary consolidation in 1981 coincided with a marked slowdown in world trade reflecting a generalised tendency towards disinflationary policies in the wake of the second oil shock. The nominal punt exchange rate was constrained within the ERM narrow band so that compensatory expenditure-switching measures to accompany the fiscal consolidation were largely precluded[6] . Nominal exchange rate parity was squeezing export competitiveness as the domestic disinflation process began to bite and the real effective punt exchange rate was appreciating sharply[7]. In consequence, activity in the economy was constrained by weakness in the external sectors (particularly traditional exporting sectors).

Capital controls had been introduced on entry to the ERM but substantial unidentified outflows since then indicated that these were of only limited effect. International trends, therefore, resulted in a return to positive and rising real interest rates in the Irish economy, further depressing demand and offsetting any limited "crowding in" which might have been associated with fiscal consolidation. The consolidation was to be achieved via increased taxation so that any supply-side effects were likely to be negative. Finally, there is evidence that an anticipation of impending fiscal consolidation (or alternatively an inflationary realignment within the ERM) was depressing economic activity via a negative expectations effect. With economic growth already weakened by the disinflationary environment (domestic and external), unemployment rising and real interest rates turning positive, the conditions for a successful budgetary stabilisation were far from ideal.

In this first phase of stabilisation, the average primary balance required to stabilise the public debt ratio (f^*) over the period 1981-86 had increased significantly relative to earlier years (see Table 2). In the period 1974-80, f^* had averaged at -4,7% of GDP, while in the period 1981– 1986 the average had increased to + 0,5%. Thus, the average primary balance required to stabilise the debt ratio moved from a substantial deficit in the pre-stabilisation period to a small surplus in the first phase of the stabilisation effort. This increase in the primary balance required to stabilise the debt ratio reflected the internal dynamic of the rising debt ratio, exacerbated by the coincidence of low economic growth as world trade declined and rising real interest rates in line with international trends; there was also a significant revaluation effect (reflecting the combined effect of exchange rate movements and the rising level of foreign-currency indebtedness) over the latter period.

TABLE 2: Stability conditions in the Irish public debt ratio 1974-90

Period	f	f^*	f- f^*
1974-80	-4,7	-4,5	-0,2
1981-86	-2,7	+0,5	-3,2
1987-90	+3,8	+0,8	+3,0

Ex post calculations of f^* are made according to the formula

$$f^* = \frac{(i-G)+V}{(1+G)} \cdot b_{t-1}$$

where

i= the implicit nominal interest rate on the debt

G= the growth rate of nominal GDP

V = the ex post stock-flow adjustment in the value of the debt expressed as a percentage of total

This formula differs from the stability condition derived at (2). The stock-flow adjustment variable (V) provides for the valuation effects of exchange rate movements, outstanding balances of general government, discounting etc on the public debt.

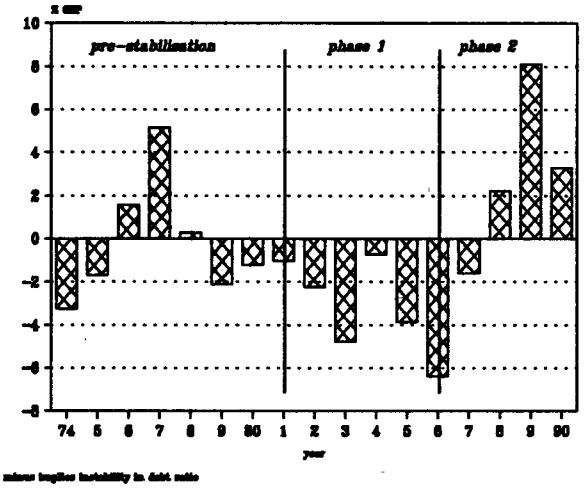
It was essential, therefore, that the primary deficit (6% of GDP in 1981) be sufficiently reduced to compensate. Table 2 indicates that the average primary deficit (f) was indeed reduced over the period but remained below the average(f^*). In consequence, the public debt ratio rose steadily. As the debt ratio rose and the interest rate/valuation - output differential expanded, a progressively larger primary adjustment was necessary to restore stability. Despite the reduction in the primary deficit, the gap between f and f^* (the "stability gap") widened as the budgetary authorities found themselves chasing an accelerating target f^*. (see Graph 1.3).

Graph 1.4 decomposes the growth in the debt ratio into the effects of the primary balance, the interest rate, economic growth and stock-flow effects. A falling contribution from the primary balance in this first phase of stabilisation is evident but the coincidence of a rising interest burden (the "snowballing" effect) and falling growth is reflected in the change of sign in the contribution of the I-G component after 1982. The substantial impact of revaluation (through the stock-flow adjustment) on the debt ratio trajectory is also evident in the years of the two realignments within the ERM - 1983 and 1986.

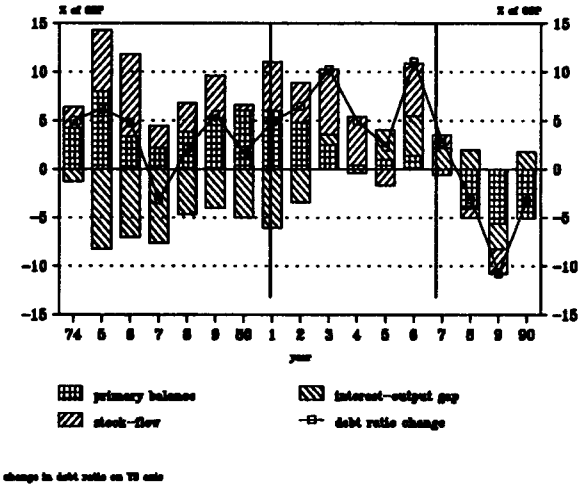
6 Realignment within the ERM was technically possible but was counter to the disinflationary objectives underlying membership of the mechanism. Ireland did not avail of opportunities to devalue in the first four years of ERM membership although devaluations were made in 1983 and 1986.

7 Real appreciation reflected a simultaneous nominal depreciation in sterling and an inflation differential with trading partners within the ERM. However, while the traditional exporting sectors suffered a sharp decline, a buoyant performance by the modern high-productivity (and foreign-based) sectors maintained export volumes at a high level.

Graph 1.3: "Stability Gap", 1974-90



Graph 1.4: Contributions to annual change in national debt/GDP ratio 1974-1980



Phase 2: 1987-1990

Economic conditions in the second phase of Ireland's stabilisation improved considerably as the international economy entered a pronounced upswing. Ireland's disinflation was complete so that real appreciation in the exchange rate had largely stopped. The impact on external demand of accelerating world trade and improved competitiveness would be expected to compensate for any loss of internal demand associated with a further fiscal tightening. In 1987, export volumes increased by more than 13% pushing the external current account into surplus for the first time in a quarter of a century and it has remained in surplus since then.

As credibility in the new consensus-based budgetary and exchange rate regime was rapidly established, there was a positive expectations effect reflected in a narrowing of domestic interest rate differentials. The fall in domestic rates, also facilitated by a generalised easing in international money markets, allowed the benefits of the international economic recovery to be transmitted to the domestic economy. As the consolidation was to be achieved by expenditure reductions facilitating relief in fiscal pressure, some positive supply-side effects were also to be expected. The reduction in income tax over the past four years has supported growth in real disposable income while underpinning the moderate evolution in wages. Finally, as the economy steadily improved, positive expectations intensified and boosted private consumption in particular. In the first half of 1989, this effect was so strong as to suggest that the economy might be overheating but a subsequent tightening of monetary conditions within the ERM averted any difficulties in this respect. Thus, in contrast to the first phase, this second stabilisation phase took place at a very favourable stage in the macroeconomic cycle.

In the context of the debt stability conditions introduced above, we can now examine the anatomy of the spectacularly successful stabilisation in a more formalised manner. The final column of Table 2 indicates the stability conditions in the debt ratio in this phase of adjustment. The fall in the effective interest rate associated with market trends[8], the sharp export-led recovery in economic growth and the limitation of stock-flow adjustments due to improved exchange rate performance are evident from Graph1.4. This favourable coincidence in trends is reflected in the substantially more moderate rise in the average f^* over the period 1987-90 relative to the period 1981-86. The intensified consolidation effort supported by stronger economic growth has simultaneously boosted the primary balance f above f^* yielding a positive stability gap and a declining debt ratio since mid 1988 (see Fig 3). More importantly, the explosive dynamic in the debt ratio, which characterised the first phase of adjustment has been replaced by an opposite dynamic ensuring a steady reduction in the debt ratio over time if the present conditions are maintained.

A comparison:

In comparing the two phases of Ireland's stabilisation, attention should focus on the stability condition $f=f^*$. In both phases, the primary balance f was significantly

8 It should be noted that high domestic interest rates since late 1989, despite historically low levels of inflation, has pushed the real effective interest rate up again.

improved but in phase 1, the improvement in the primary balance was not sufficient to offset the sharp increase in the stabilising balance f^*. In consequence, the debt ratio increased without interruption. In the second phase, the increase in f^* was very modest so that the consolidation of the primary balance was sufficient to stabilise and ultimately reverse the upward trajectory in the debt ratio. Thus, the difference between the two phases would appear to relate more to movements in the stabilising balance f^* than to changes in the primary balance f. While the manner of adjustment (and the underlying political/social consensus) in the second phase will have been important, the most significant positive influence on the determinants of f^* will have come from exogenous factors like favourable world trade and international interest rate developments. This, in turn, suggests that the success of the second phase of stabilisation relative to the first may be less attributable to discretionary fiscal measures than is immediately apparent.

Strictly speaking, the failure of Ireland's first stabilisation phase can be attributed to a policy failure i.e. an inadequate reduction in the primary deficit. This is particularly true in the early years of adjustment when negative real interest rates provided an excellent prospect for stabilisation. Later in this phase, the operation of the automatic stabilisers as the economy slowed and a sharp deterioration in the underlying debt dynamics made narrowing the "stability gap" considerably more difficult. The stabilisation effort was not helped by a heavy reliance on tax increases rather than more extensive cuts in public expenditure[9]. A reduction in the public sector share of output might have induced some compensatory "crowding in" effects (albeit limited due to size of the fiscal multiplier) and induced an expectations-driven recovery in private consumption; the increase in fiscal pressure simply depressed the economy further and eventually encountered diminishing returns. On the other hand, it might also be argued that a more rapid response from the budgetary authorities was not feasible. The primary balance was consolidated by 1,5% of GDP in 1981 and by more than 2% of GDP in 1982 without success in stabilising the debt ratio.

Despite the inadequacies of the fiscal policy response in the first phase, the marked improvement in macroeconomic conditions after 1986 intuitively suggests that cyclical factors have played a very significant role in the successful stabilisation in the second phase. While fiscal policy was again significantly tightened after 1986, the macroeconomic environment in phase 2 was much more conducive to budgetary stabilisation. As a small open economy in the ERM, the capacity of the domestic authorities to influence the real interest rate - output factor (r-g) is limited[10]. In the context of the budgetary stabilisation process, movements in the these determinants are largely non discretionary. The only instrument available to the domestic authorities in directly influencing the stability conditions in the debt ratio is the primary balance f[11]. If the Irish experience is to act as a model of budgetary adjustment, it is this discretionary element of the stabilisation process which is of most interest.

2d. The discretionary element of Ireland's stabilisation.

In comparing the discretionary elements of the two phases of stabilisation attention should focus on the primary balance (f).The appropriate measure of discretionary fiscal policy is the cyclically-adjusted primary balance[12]. This measure abstracts from the impact of growth and interest rates and so will more accurately indicate the extent of the policy-induced adjustment underlying the spectacular figures between 1987 and 1990. The trend in the cyclically-adjusted primary balance is presented in Graph 1.5. Using this measure, the underlying stance of fiscal policy in both phases of adjustment has been clearly restrictive but the discretionary tightening of policy has been much less in the second than in the first.

9 Public investment was reduced substantially in the early years of adjustment (1981-83) but this reflected the termination of specific projects (e.g. the natural gas pipeline, electricity generating plant etc) rather than an activist consolidation effort.

10 Although the differential between domestic and international rates (q) is clearly determined by domestic considerations..

11 The primary balance influences stability conditions in the debt ratio directly through raising/lowering f but also indirectly by raising/lowering f^* via the pace of debt accumulation.

12 Cyclical adjustment of the primary balance for Ireland presents some theoretical difficulties. The cyclical position of the economy is conventionally determined using an Okun co efficient expressing movements in the gap between actual and potential output as a function of the unemployment rate. In the 1987-88 period, the Irish economy was growing very strongly but, contrary to theoretical prediction, unemployment continued to rise. As a result the cyclical adjustment of the primary balance over the second phase of stabilisation is probably somewhat underestimated. Despite the shortcomings in this approach, the use of the cyclically-adjusted primary balance is recommended by Blanchard as the best indicator of discretionary fiscal policy. See Blanchard O. : OECD Working Papers 1990.

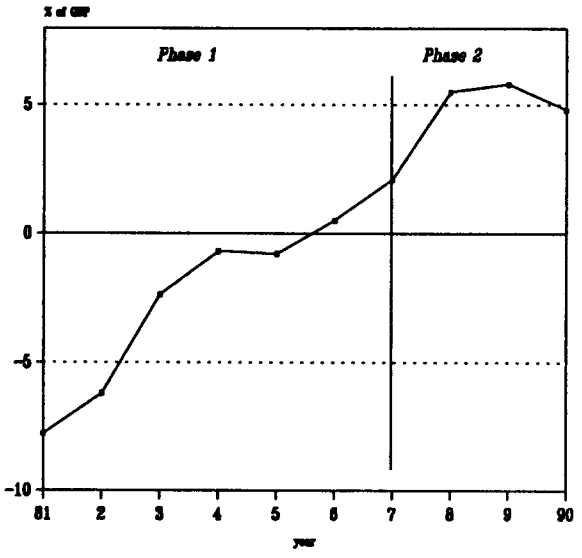
The implication of this result is twofold

i) cyclical factors were indeed very significant in the spectacular success of phase 2 relative to phase 1.

and

ii) much of the basis for the successful stabilisation in the second phase was laid by the discretionary policy adjustment in the earlier less successful phase.

Graph 1.5: Cyclically-adjusted primary balance, 1981-90



3. An expansionary fiscal contraction?

An important aspect of assessing the discretionary element of Ireland's stabilisation effort is the possibility that the consolidation itself may have influenced the economic cycle through "crowding in" and/or positive expectations effects[13]. If so, a cyclically-adjusted primary surplus would tend to understate the effectiveness of consolidation in the second phase relative to the first. Trends in internal demand over the period 1987-90 suggest only a limited negative effect from the further tightening of the fiscal stance. While internal demand declined slightly in 1987, it recovered strongly in the subsequent years and is now the main source of growth in the economy.

The relatively benign impact of the fiscal consolidation on the domestic economy may indeed reflect a positive expectations response to improved budgetary conditions. Undoubtedly, the fall in the share of public expenditure in GDP facilitating a simultaneous reduction in interest rates and fiscal pressure will have induced a positive private sector response. However, the apparent absence of a negative output effect of the fiscal contraction after 1986 will also have reflected the extent to which the further tightening of policy was already anticipated in 1986[14]. The possibility of an imminent budgetary adjustment or an inflationary devaluation impacts negatively on private sector expectations resulting in precautionary savings and higher interest rates induced by capital outflows. The sharp rise in the savings ratio and the substantial capital flight evident after the 1986 punt realignment tends to support this view. The implication is that much of the negative impact of the subsequent adjustment was already being felt in 1986.

The change in budgetary regime acquired immediate credibility restoring the private sector confidence which had been lost particularly towards the end of the first phase. The savings rate remained high in 1987 but private consumption did not fall below its 1986 level. (In the subsequent years private consumption has grown at moderate rates partly reflecting a return to high real interest rates.) Therefore, the notion of an "expansionary fiscal contraction" must be applied with caution to Ireland's stabilisation. The apparently benign macroeconomic impact of the second phase of stabilisation may have reflected the extent to which many of the negative aspects of the consolidation had already been discounted by private agents in the first phase. This would reinforce rather than weaken the conclusion that discretionary (i.e. net of cyclical elements) tightening of fiscal policy was at least as great in the first stabilisation phase as in the second phase which was considerably more successful.

13 Interest in this phenomenon has been revived in recent years. See Giavazzi and Pagano: "An expansionary fiscal contraction: the cases of Denmark and Ireland" Economic Review (1989) and McAleese: "Ireland-The economy is doing well, there is talk of an Irish miracle." Europe-Magazine of the European Community (1989).

14 See Fitzgerald J: " Issues in the National Debt" Economic and Social Review (1986).

4. General lessons for budgetary stabilisation.

The Irish budgetary stabilisation is frequently described as a "miracle". On the basis of the analysis above, this is clearly inaccurate. Much of the budgetary success achieved by Ireland in the second phase (and the lack of success in the first phase) can be attributed to the macroeconomic conditions in which the adjustment took place. This does not detract from the courageous budgetary decisions taken by the national authorities in 1987, when the prospects for the economy looked considerably more gloomy than turned out to be the case. However, it is important to avoid any general conclusion that courageous decisions alone will guarantee a painless budgetary stabilisation. Moreover, the sensitivity of the debt dynamics to cyclical movements in the economy points to the need for continued vigilance in the control of net borrowing even when stabilisation has been achieved.

From this examination of the contrasting phases of Ireland's budgetary stabilisation a number of intuitive observations on the basic requirements for a successful stabilisation can be made:[15]

a) the timing of the stabilisation effort in terms of the economy's growth cycle is crucial to the outcome. If the momentum in the economy is already slowing, the negative impacts of a fiscal consolidation will not be cushioned by growth from other sources. Low growth will further hinder attempts at successful consolidation through the operation of the automatic stabilisers.

b) the interest rate cycle is clearly important for stabilisation. In periods of high real interest rates, implying lower growth in the economy, dynamic stability in the debt ratio will be more difficult to attain. A credible policy to reduce disequilibria in the public finances should reduce risk premia on domestic rates. However, in conditions of free capital mobility, it is international money markets which will ultimately determine the extent to which the effective interest rate on the public debt can be reduced. It is worth noting that despite a substantial narrowing in risk premia in Ireland since 1987, real interest rates remain among the highest in the Community.

c) the pace of adjustment is a further determinant of the success of stabilisation. A front-loading of the stabilisation effort is generally preferable to a more gradualist approach, as the internal dynamic of a rising debt ratio requires a progressively larger adjustment so long as stabilisation is postponed. The Irish experience clearly shows that a deterioration in economic conditions in the course of a more protracted stabilisation effort can rapidly drive the public finances towards unsustainability. A front-loading of the stabilisation effort will also help to establish early credibility in the effort new budgetary regime, which is important to ensure a positive expectations response.

d) the manner of the budgetary adjustment is also important. While the aggregate demand impact of increased taxation may be less[16], experience suggests that in most developed countries a reduction in public expenditure is a superior method of stabilisation. However, the appropriateness of this recommendation will of course depend on the scale of the stabilisation effort required and the existing structure of the public finances. In Ireland's case, an excessive reliance on increased tax pressure in the first phase of stabilisation simply accentuated the slowdown in economic activity and ultimately encountered diminishing marginal returns. The second phase relied exclusively on expenditure reductions which induced a more favourable supply-side response than increasing tax pressure. (To this extent, the choice of expenditure rather than taxation as the adjustment channel may afford the domestic authorities some influence on the stabilising primary balance f^* by positively affecting the real growth rate g.)

5. Whither budgetary policy in Ireland?

The success of Ireland's second phase of budgetary adjustment has completely altered the medium-term outlook for the public finances. On the basis of official documents[17], the current medium-term strategy aims for:

15 Theoretically, a devaluation of the currency will also help to boost short-run external demand in the economy and so to compensate for losses in internal demand arising from the fiscal contraction. It is not included here because the use of expenditure switching as part of a budgetary stabilisation is a delicate operation and may undermine other stability objectives. Firstly, it is important that the devaluation be perceived as a "once-off" adjustment if credibility in the stabilisation programme is not to be undermined. Secondly, in an open economy, a devaluation must be accompanied by some form of incomes control if the competitiveness gains are not to be lost through a wage inflation. Finally, if a substantial proportion of the public debt is denominated in foreign currencies, the impact of revaluation on the debt ratio dynamics should also be considered in the formulation of exchange rate policy.

16 Theoretically, the multiplier impact of a reduction in government expenditure is greater than that of increased taxation because of leakage through savings.

17 The Programme for Government 1989 and the Programme for Economic and Social Progress 1991-93.

a) a reduction in the debt ratio towards 90% by 1993 with a view to a further reduction to below 70% by 2000[18]; this is to be achieved through the elimination of gross dissaving by central government and continued tight control on the level of total net borrowing.

b) continued reductions in income tax rates to a standard rate of 25% (now 29%) and a single higher rate of 48% (now 52%) and a reduction in indirect tax rates (VAT and excise duties) to bring them more into line with those of main Community partners.

c) extension of the existing tax base and further simplification of the taxation system.

d) a commitment to maintain the real value of transfers while continuing efforts to improve targeting. The measures outlined in the recent Programme for Economic and Social Progress are likely to impose a significant additional burden on public expenditure.

This medium-term strategy reflects two parallel but not always compatible objectives for budgetary policy post stabilisation: the need to reduce the debt ratio as quickly as possible for reasons of macroeconomic efficiency and the need to improve microeconomic efficiency through tax reform. The broadly neutral 1991 Budget (with practically no change in programmed borrowing in terms of GDP) reflects a delicate trade-off between these objectives with some reductions in taxation (largely offset by increases elsewhere) and continued tight control on expenditure.

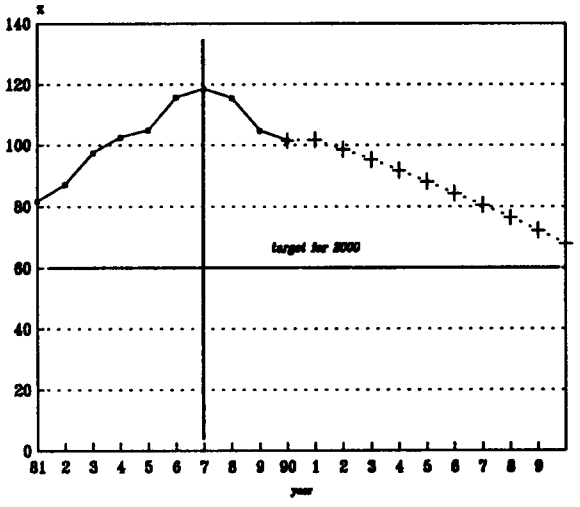
5a. Reasons for accelerated consolidation.

So long as a favourable output and interest rate environment prevails, the strong implosive dynamic in the debt ratio will ensure a steady downward trajectory without further increasing the primary surplus. Assuming a gradual narrowing in domestic interest rate differentials as the debt ratio improves and an annual economic growth rate of 3%[19], f* can be expected to fall over the next decade. On this basis, the official medium and long-term debt ratio targets are achievable as illustrated in Graph 1.6. This would leave the debt ratio at close to 70% of GDP by 2000 compared to a peak of 118,5% in 1989.

There are, however, some convincing arguments for an even more rapid consolidation of the debt ratio:

a) the favourable "stability gap" of more recent years cannot be guaranteed even in the medium term. A deterioration in the stability conditions underlying the debt ratio could make continued consolidation much more difficult arguing for as accelerated a consolidation as possible, while conditions are favourable. In this respect, the failure to make greater progress in financial 1989 and 1990 might be seen as an opportunity lost. In Table 3 below, the sensitivity of the internal dynamic of the Irish debt ratio is tested by examining various scenarios involving different assumptions on trend effective interest rates, output and the primary surplus. The revaluation effect is assumed at zero across the period. Clearly any reduction of the primary surplus would be inconsistent with the official medium-term strategy. A tightening of the primary surplus from an already high 5% to 6% would yield a significant improvement in the debt ratio trajectory but might not be politically feasible.

Graph 1.6: National debt/GDP ratio 1981-2000



b) It is impossible to determine, a priori, the optimal debt/GDP ratio for Ireland but a very high debt ratio is likely to imply a continued risk premium on domestic interest rates. To the extent that a lower debt ratio would further narrow interest rate differentials, an accelerated consolidation would be desirable. In the current situation, approximation to the Community average would imply a debt ratio of about 60%. Table 4 provides the likely timescale for reduction of the Irish debt ratio to this level under various assumptions on the primary balance (f) and the interest rate - output gap (r-g).

c) In the context of EMU, a more rapid convergence towards the Community average might be an appropriate longer-term objective. Monetary union

18 Official targets are expressed as 100% and 75% of GNP respectively.

19 Implying a fall in r-y from 2% to 1% with an assumed zero revaluation effect.

with irrevocably fixed exchange rates will reduce risk premia but the risk of external shocks requires that the maximum scope for short-term stabilisation measures be created and maintained.

TABLE 3: Estimated debt ratio in year 2000 with varying assumptions of primary balance (f), interest rate (r) and growth rate(g).

f \ r-g	2% of GDP declining to 1% of GDP by 2000	constant 2% of GDP to 2000	2% of GDP rising to 3% of GDP by 2000
4,0% of GDP	78% of GDP	81% of GDP	85% of GDP
5,0% of GDP	67% of GDP	70% of GDP*	74% of GDP
6,0% of GDP	57% of GDP	59% of GDP	62% of GDP

* = baseline scenario consistent with official medium term programme.

TABLE 4: Timescale for reduction in debt ratio to about 60% under varying assumptions of the actual primary balance, interest rate (r) and economic growth rate (g).

f \ r-g	2% of GDP declining to 1% of GDP	constant 2% of GDP to 2000	2% of GDP rising to 3% of GDP
4,0% of GDP	2007	2009	2015
5,0% of GDP	2002	2004	2005
6,0% of GDP	2001	2001	2001

5b. Tax reform and the consolidation effort.

The need for tax reform remains the other major issue in Ireland's medium-term budgetary strategy. As part of the first phase of budgetary consolidation, fiscal pressure in the economy increased from about 37,7% of GDP in 1980 to about 42,5% of GDP in 1986. Although the existing overall tax burden in Ireland (about 39,5% in 1990) is not excessive by Community standards (EUR12 average of about 43,5% in 1990), the narrowness of the Irish tax base has resulted in uneven incidence and high marginal rates at low thresholds. In particular, taxation of labour income is high, representing about 84% of direct tax receipts and 30% of total receipts. The heavy tax burden on labour income has resulted in a substantial "wedge" between gross and net wages, which acts as a significant disincentive to labour demand and supply. It is the narrowing of this tax wedge and a rebalancing of relative prices between labour and other production factors, which must underlie any tax reform.

The pace of tax reform to date has been determined by the need for restraint in fiscal policy. The relatively favourable conditions in the more recent phase of budgetary consolidation have allowed for an uncompensated reduction in the tax burden on labour and consumer expenditure since 1987 without endangering medium-term targets for the debt ratio. In less favourable conditions, however, such reductions may not be consistent with continued accelerated reduction of the debt ratio. This apparent incompatibility between accelerated reduction in the debt ratio and further reductions in taxation of labour income can be overcome by a revenue-neutral approach to tax reform. Such a tax reform would be based on the now conventional approach of simultaneously widening the tax base and harmonising effective rates across sources.

A wide-ranging tax reform will need to be presented as a "package" in which losses (through higher taxation in some areas) and gains (through reduced taxation in other areas) are transparent. Otherwise, resistance from minority interest groups to individual changes would risk undermining the entire reform process. The main targets in a reform package would be:

a) the income tax system where the burden on labour income might be eased while the burden on capital and corporation profits might be increased. Effective tax rates on capital remain low reflecting preferential taxation of profits in manufacturing. While the abolition of the special tax relief on export profits has raised the share of corporation taxation in total receipts, this increase also reflects a very substantial recovery in profitability in the Irish economy since 1987.

b) indirect taxation where adjustments to the VAT and excise base will be determined by the requirements of the single market. Since 1986, the standard VAT rate has fallen from 25% to 21% while the reduced rates of 5% and 10% have been replaced with two intermediate rates of 10% and 12,5%; a zero VAT rate still applies to a significant portion of the expenditure tax base. The excise system has been streamlined somewhat by the abolition of minor excise duties. The standard VAT changes made so far, coupled with convergent movements in the corresponding UK rate, suggest that little further adjustment is required in that respect. Some further modification of the excise system is required.

c) residential property taxes which were largely abolished in the late 1970s; a tax on property is attractive as a stable source of revenue.

Some progress in reforming income taxation and indirect taxation has been made since 1987. For reasons of microeconomic efficiency, the tax reform process should continue and the medium-term strategy provides for further reductions in income tax rates and indirect taxes. On a current basis, however, the changes in income tax and indirect tax rates imply a reduction in revenue. In view of the need to maintain the consolidation effort, it is essential therefore that these further reductions in tax rates be accompanied by compensatory widening of the tax base.

6. Conclusions.

Although Ireland has achieved a remarkable budgetary stabilisation since 1987, the adjustment process began much earlier in 1981. The first phase of the stabilisation effort 1981-86 failed because the extent and nature of the discretionary fiscal consolidation was not adequate to compensate for the explosive debt dynamic set in motion by low growth, high real interest rates and exchange rate instability. The success of the second stage of stabilisation 1987-90 coincided with further discretionary tightening of fiscal policy but was substantially determined by a more favourable trend in output, real interest rates and a more stable exchange rate.

The lessons for general application to be drawn from the Irish experience are that the timing of the adjustment (in terms of growth and interest rate cycles) and the nature of the adjustment process itself (in terms of the pace and credibility of the consolidation effort, expenditure cuts versus tax increases) are crucial to the success of any stabilisation effort. If appropriate, a "once and for all" devaluation of the currency to boost external demand in compensation for the fall in internal demand may also prove useful but only if accompanied by a binding incomes policy.

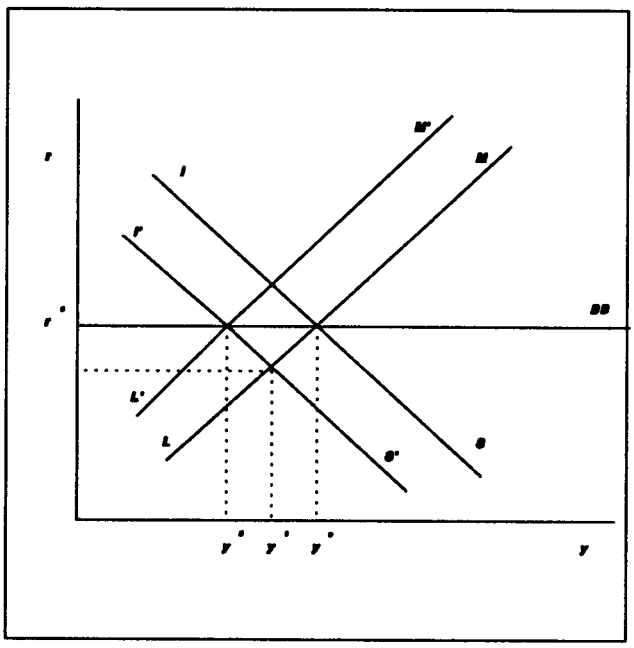
As Irish budgetary policy enters a post-stabilisation phase, competing demands are emerging. Accelerated consolidation of the debt is clearly desirable to reduce vulnerability in the economy particularly in anticipation of EMU. However, microeconomic efficiency requires that distortions created by the tax system should be removed via a process of reform. Given the need to maintain the consolidation effort, tax reform should be broadly revenue-neutral with any reduction in rates compensated by widening of the base.

* This chapter was mainly prepared by S. Berrigan of the National Economies Directorate.

APPENDIX A

A fiscal contraction in IS-LM framework for a small open economy with fixed exchange rates and capital mobility.

The diagram above sets up the standard IS-LM framework adopted for a small open economy with perfect capital mobility. The IS curve describes the combinations of real interest rates (r) and income (y) which will maintain equilibrium in the product market. The product market equilibrium position may be written as:



$$IS: y = c(y - t(y)) + g + i(r) \qquad (1)$$

where

c = private consumption

t = taxation

g = government expenditure

i = investment

The slope of the IS curve is obtained by totally differentiating equation (1) holding g constant so that

$$dy = c'.(dy - t'dy) + i'dr \qquad (2)$$

Rearranging we obtain

$$dr/dy = (1 - c'(1-t'))/i' \qquad (2a)$$

As $1-c'(1-t') \geq 0$ and $i' < 0$ it follows that dr/dy is negative

The LM curve descibes the combinations of r and y which will maintain equilibrium in the money market. The money market equilibrium condition may be written as

$$LM: M/P = l(r) + k(y) \qquad (3)$$

where

M/P = the real money supply

l = the speculative demand for money

k = the transactions demand for money

The slope of the LM curve is derived by totally differentiating equation (3) so that

$$0 = l'dr + k'dy \qquad (4)$$

Rearranging we obtain

$$dr/dy = -\frac{k'}{l'} \qquad (4a)$$

As $k' > 0$ and $l' < 0$, the slope of the LM curve is positive.

The BB curve describes the combinations of r and y in which the balance of payments is in equilibrium. The equilibrium condition in the balance of payments may be written as

$$BB: t(m, y) + f(r) = 0 \qquad (5)$$

where

t = the trade balance

m = the marginal propensity to import

f = capital flows to/from the economy

Rewriting equation (5) in terms of the autonomous trade balance (i.e. that part of trade independent of income) we obtain

$$t - m.y + f(r) \qquad (5a)$$

As t-my = 0 in equilibrium, the slope of the BB curve is given by f'dr. The sign of f'dr will depend upon conditions in the domestic capital market. If there is perfect mobility of capital f'dr = infinity and the BB curve will be horizontal. If there is no capital mobility, f'dr = zero and the BB curve is vertical. The standard case lies

between these extremes with the BB curve positively sloped.

In Diagram A, the economy is in equilibrium at r^e and y^e with the goods market and money market clearing and balance of payments at zero. A fiscal contraction implies a shift leftwards in the IS curve to IS'as demand in the product market declines. Activity is reduced and real domestic income falls from y^e to y^1. With domestic income falling, the balance of payments moves into an initial surplus reflecting a fall in imports (via the m.y term). However, the fall in money demand associated with reduced economic activity eases the domestic interest rate below the international level. The emergence of a negative interest rate differential in the domestic economy induces a capital outflow and imposes downward pressure on the exchange rate. As the economy is operating in a fixed exchange rate regime, the monetary authorities are obliged to intervene to support the domestic currency. On the assumption of unchanged levels of domestic credit, the loss of reserves implies a contraction in the domestic money supply followed by the return of the domestic interest rate to parity with the international rate. In the diagram, this is represented by a leftward shift in the LM curve to LM'and a further decline in real income to a new equilibrium level at y^2.

The assumptions of fixed exchange rates and capital mobility are crucial to the ultimate impacts of a fiscal contraction on income. If exchange rates are flexible, the effects of the fiscal contraction will be transient as nominal depreciation of the domestic currency boosts exports and restores income to its original equilibrium level. If capital movements are fully restricted, the fiscal contraction will be compensated by "crowding in" effects on private sector investment.

(5)

APPENDIX B

Derivation of condition for stabilisation of trajectory in public debt ratio in a discrete time period t in a small open economy with capital mobility.

The general government budget constraint may be expressed in terms of the dynamic evolution of the public debt ratio as

$$B_t - B_{t-1} = -F_t + i^d \cdot B_{t-1} \qquad (1)$$

where

B = the nominal value of the public debt

F = the primary balance (i.e. total receipts minus total expenditure excluding debt servicing costs)

i^d = the implicit interest rate on the debt

This representation of the budget constraint abstracts from the possibility of monetary financing of the debt (i.e. the holding of government debt by the monetary authorities). If monetary financing is to be included, the term - l.M/Y should be added to the right-hand side of equation (1). This term represents seigniorage, where l is the rate of growth in base money and M/Y is the seigniorage tax base. However, as this nature of monetary financing is not a significant feature of budgetary policy in Ireland, this term is omitted for purposes of simplification.

Expressing (1) in terms of GDP we obtain

$$\frac{B_t}{Y_t} - \frac{1}{1+G} \cdot \frac{B_{t-1}}{Y_{t-1}} = -\frac{F_t}{Y_t} + \frac{i^d}{1+G} \cdot \frac{B_{t-1}}{Y_{t-1}} \qquad (2)$$

where

Y = nominal GDP

G = the growth rate of nominal GDP

Rearranging (2) and expressing ratios to GDP in small letters we obtain

$$b_t = -f_t + \frac{i^d}{1+G} \cdot b_{t-1} + \frac{1}{1+G} \cdot b_{t-1} \qquad (3)$$

so that

$$b_t = -f_t + \left[\frac{1+i^d}{1+G}\right] \cdot b_{t-1} \qquad (3a)$$

Equation (3a) may be rewritten as

$$b_t = -f_t + \left[\frac{(1+r^d) \cdot (1+p^d)}{(1+g) \cdot (1+p^d)}\right] \cdot b_{t-1} \qquad (4)$$

where

r^d = the real implicit interest rate on the debt

g = the growth rate of real GDP

p^d = the domestic inflation rate

so that

$$b_t = -f_t + \left[\frac{(1+i^d)}{(1+g)}\right] \cdot b_{t-1} \qquad (4a)$$

For stabilisation of the trajectory in the debt ratio in period t, it is necessary that

$$b_t - b_{t-1} = 0 \qquad (5)$$

Adjusting equation (4a) we obtain

$$b_t - b_{t-1} = 0 = -f_t^* + \left[\frac{(1+r^d)}{(1+g)}\right] \quad b_{t-1} - b_{t-1} \qquad (6)$$

where

f* is the "stabilising primary balance" i.e. the primary balance consistent with an unchanged debt ratio between period t and t-1.

From equation (6) we obtain

$$f^* = \left[\frac{(1+r^d)}{(1+g)}\right] \cdot b_{t-1} - b_{t-1} \qquad (6a)$$

so that

$$f^* = \left[\frac{r^d - g)}{(1+g)}\right] \cdot b_{t-1} \qquad (6b)$$

In a small open economy, the interest rate parity theorem implies that

$$(1+i^d) = (1+i^w) \cdot (1+e) \cdot (1+q) \qquad (7)$$

where

i^w = the international interest rate.

e = the expected appreciation/depreciation in the exchange rate

q = the risk premium on domestic interest rate

We can now derive

$$(1+r^d) \cdot (1+p^d) = (1+r^w) \cdot (1+p^w) \cdot (1+e) \cdot (1+q) \qquad (7a)$$

so that

$$(1+r^d) = (1+r^w) \cdot \left[\frac{(1+p^w)}{(1+p^d)} \cdot (1+e)\right] \cdot (1+q) \qquad (7b)$$

If long-term purchasing power parity holds then

$$\left[\frac{(1+p^w)}{(1+p^d)}\ (1+e)\right] = 1 \qquad (7c)$$

Substituting in equation (7c) we obtain

$$(1+r^d) = (1+r^f)\ (1+q) \qquad (7d)$$

so that

$$r^d = (1+r^w) \cdot (1+q) - 1$$

If we now substitute equation (7e) into equation (6b) we obtain

$$f^* = \left[\frac{(1+r^f) \cdot (1+q) - (1+g)}{(1+g)}\right] b_{t-1} \qquad (8$$

Rearranging equation (8) we obtain

$$f^* = \left[\frac{(r^w - g) + q \cdot (1+r^w)}{(1+g)}\right] \cdot b_{t-1} \qquad (8b)$$

As $1+r^w$ is close to 1 we can assume that $q.(1+r^w)$ approximates q.

Finally, equation (8b) can be written to provide the primary balance f required to stabilise the debt ratio as

$$f^* = \left[\frac{(r^w - g + q)}{(1+g)}\right] \cdot b_{t-1} \qquad (8c)$$

Thus, dynamic stability in the debt ratio in this small open economy model with capital mobility is determined by the international interest rate, economic growth and the risk premium on the domestic interest rate.

Chapter 2
Unemployment and the Irish Labour Market

0. Introduction.

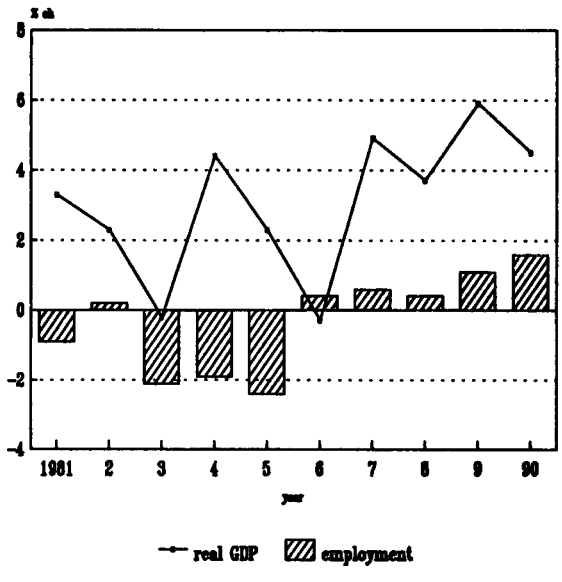
For Ireland, a persistently high unemployment rate is one of the principal macroeconomic legacies of the last decade. The unemployment rate[1] of 17% remains almost twice the Community average, despite four successive years of accelerated economic growth since 1987. This annex examines how the deterioration in Ireland's unemployment trend in the first half of the 1980s was particularly severe and how the unemployment response to the subsequent recovery in the economy has been weak when adjusted for emigration. The nature of the unemployment problem now facing Ireland is then briefly discussed with reference to some theoretical considerations. In particular, the possibility that persistently high unemployment may have shifted the natural rate close to the actual rate is examined. By applying some standard and more recent theoretical concepts to the Irish case, some possible factors explaining the emergence and persistence of such a high unemployment rate are presented. Finally, a number of conclusions are drawn as the basis for an improved policy response to the problem.

1. A costly disinflation 1981-86.

In line with international trends, the Irish economy disinflated in the first half of the 1980s. The Irish experience was notable for its above average duration[2] and cost in terms of reduced output and employment growth. Between 1981 and 1986, real GDP increased by an average of less than 2% per annum and employment growth largely stagnated - actually declining in some years (See Graph 2.1).

The sectoral distribution of employment performance was not uniform over the period (see Table 1). A secular decline in agricultural employment and a sharp reduction in manufacturing and construction employment was partly offset by steady, if not spectacular, growth in services. Although rationalisation was greater in the male labour force than in the female labour force (see Graph 2.2a), unemployment amongst women has increased more rapidly than amongst men (see Graph 2.2b) reflecting a progressive rise in female participation rates (see Graph 2.2c).

Graph 2.1: Real GDP and employment growth 1981 - 90



A consequence of the weak employment performance in this period was a near doubling of the unemployment rate which rose from 10% in 1981 to 18,1% in 1987. A comparison of the evolution of Ireland's unemployment rate relative to that in other Community member states is provided in Graph 2.3. While the growth in unemployment in Ireland reflected structural adjustments in the economy, the rationalisation of the labour force was undoubtedly accelerated by the disinflation process. The unemployment rate in Ireland post-disinflation in 1986 was exceeded only in Spain (20,4%).

2. Slow labour market response to economic recovery 1987-90

After 1986, Ireland enjoyed a sharp acceleration in economic growth, averaging 4,8% per annum over the next four years. While the recovery was initially export-led, internal demand has since emerged as the main source of growth in the economy. This phasing of the recovery between the external (relatively capital intensive) and the internal sectors of the economy may partly explain an extended lag in the response of employment to output

1 Unless otherwise stated, a labour force survey definition of unemployment is used in this analysis.

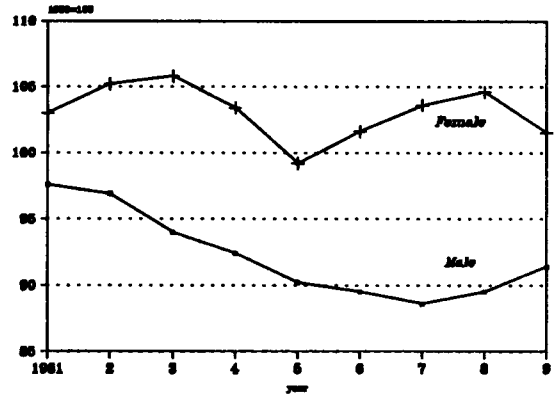
2 Recovery in the international economy began in 1985, while Ireland continued to experience low economic growth until 1987.

Table 1: Sectoral Composition of Employment, 1981-89

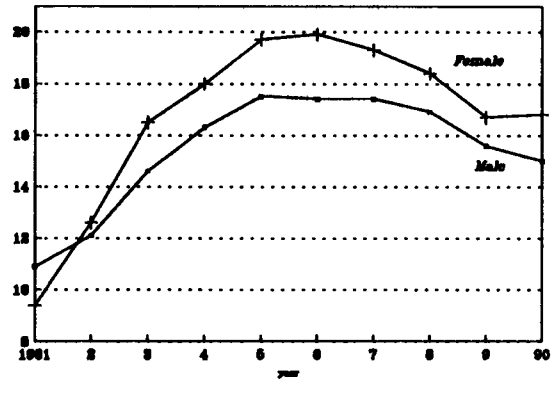
	1981	1985	1986	1987	1988	1989
Agricuture, forestry and fisheries	17	16	16	15	15	15
Industry	32	28	28	28	27	28
of which:						
– Manufacturing	21	19	20	19	19	19
– Construction	9	7	7	7	7	6
– Others	2	2	2	2	2	2
Services	51	56	57	57	57	57
of which:						
– Commerce, insurance, finance	18	19	20	20	20	20
– Transport, communication, storage	6	6	6	6	6	6
– Public administration and defence	6	7	7	6	6	6
– Other non-agricultural services	21	23	25	25	24	25
– professional	–	16	17	17	17	17
– personal	–	6	6	6	6	6
– other	–	2	2	2	2	2
Total employment	100	100	100	100	100	100

Source: Labour Force Surveys 1980–90

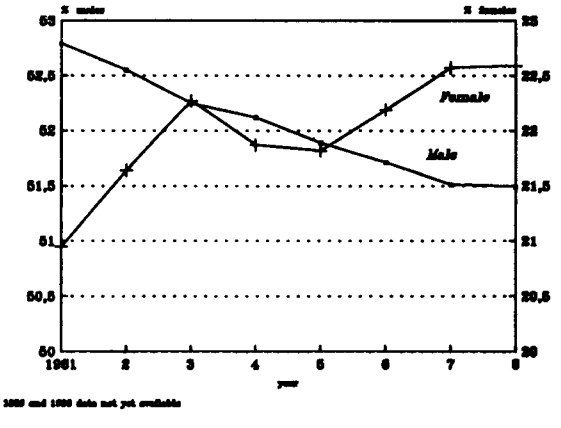
Graph 2.2a: Male and female employment growth 1981 - 1989



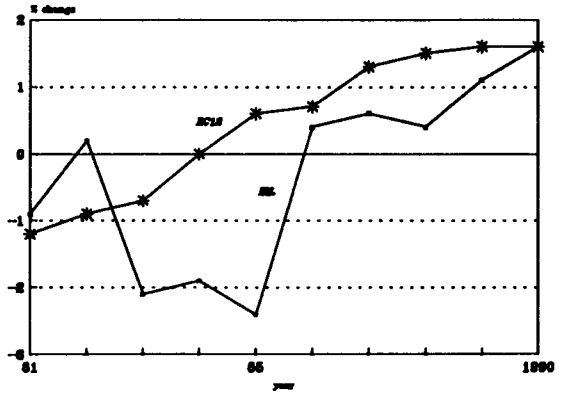
Graph 2.2b: Male and female unemployment rates 1981 - 90



Graph 2.2c: Male and female participation rates 1981 - 88



Graph 2.3: Employment growth in Ireland and EC12 1981 - 90



France. Among German apprentices more than 90% obtain a professional qualification and 80% are recruited by their "host" firms at the end of their three-year training period. Less than 50% of the French apprentices obtain a final qualification (CAP, "certificat d'aptitude professsionnelle") and an insignificant number are recruited by the firm where they made their apprenticeship.

A significant influence of education on labour productivity is also evident. The average productivity of a worker who left school before the age of 15 is half that of a worker who stayed in the education system until the age of 22 to 24 years. Apparent labour productivity is systematically increased as enterprises employ more engineers and qualified technicians and less non-qualified personnel.

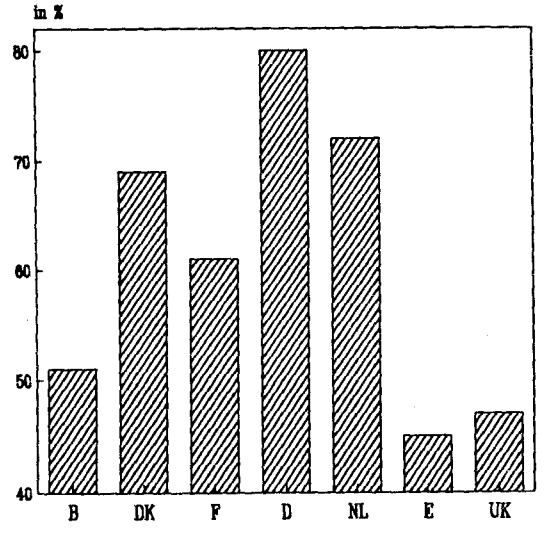
All in all, the general level of education in France is far from being satisfactory. Full-time education is compulsory until the age of 16. If the rate of participation in education at the age of 17 is equivalent to those of other EC countries, it decreases rapidly among higher age groups. At the age of 19, only 43% of French youths are still in the education system as compared to 57% in Germany, 54% in the Netherlands, 53% in Denmark and 49% in the UK.

A serious problem lies in the interface between schools and enterprises. The transition from the education system to the labour market is made more difficult because a vast majority of youth leaving school have no real direct experience of a working environment. Ages of reciprocal misunderstanding or ignorance between the educative and economic worlds need to be overcome culturally in order to approach the "dual" system successfully developed in Germany. Nevertheless, improvements have been observed in the past few years. For example, new types of vocational training implying compulsory periods in firms ("baccalauréats professionnels") have been created.

The orientation of the French education system is quite "elitist". There are significant barriers to entry into different channels of education. In the second level (aged between 10 and 18 years), the general education system is distinct from vocational training and mobility of pupils from one to another tends to be from general education to vocational training. In the third level, the "Grandes Ecoles" which recruit most of their students between the age of 18 and 22 and benefit from the highest expenditure-per-student ratios form a channel completely separated from the remaining universities. This polarisation at the different levels of the system is reinforced by the long-standing Paris-provinces polarisation.

The general picture is supported by comparative statistics. The proportion of any given generation entering university is comparable to that of other EC countries: 33% as compared to 26% in Germany, 33% in the UK, 35% in the Netherlands or 37% in Denmark. The proportion obtaining a 4-year degree and higher qualification is even higher than in all other countries, probably because third level education in the public sector is free. The education system is clearly providing the French economy with a sufficient number of highly qualified workers, for whom the probability of unemployment is very low.

Graph 31: Share of vocational training in secondary school



Source : OECD 1990

4.6 Labour market policies

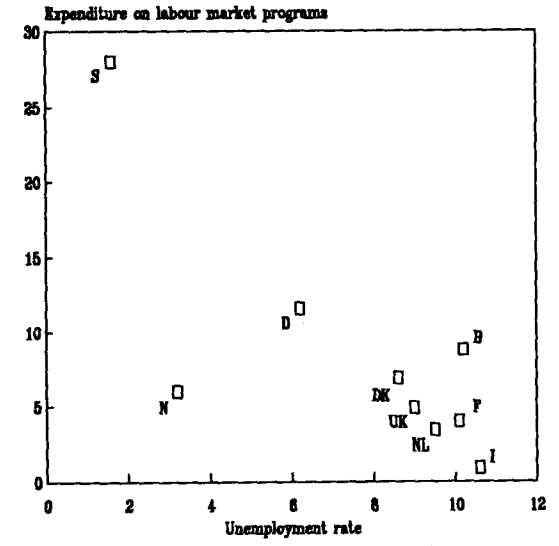
Most Community Member States have been reluctant to adopt active employment policies. Except for public sector wages, intervention in the wage settlement process is minor and is confined to moral suasion. In France, however, the minimum wage regulation is controlled by the Government.

Labour market policy can be divided into active policy and passive policy. Passive policy might consist of early retirement schemes: thus artificially reducing the number of unemployed. Active labour market policies aim at reducing vocational weaknesses, increasing the mobility of workers, and reducing the insider-outsider problem.

Graph 32 compares the level of unemployment with the expenditures of active labour market programmes per unemployed person. Although the success of individual labour market programmes cannot be proved and the unemployment rates depend on a variety of important factors, the graph suggests that countries with active labour market programmes and a corresponding design of their social security system experience lower unemployment rates.

Among the Community countries, France shows a fairly inactive attitude. A closer link between social security

Graph 32: Labour market programmes and unemployment in 1988



Source: Commission services

benefits, which are provided fairly easily, and labour market programmes appears advisable.

Labour market programmes should mainly be devoted to the following three areas. Firstly, they should aim at improving the vocational training of young people. Given the abrupt transition from school to work life, young people fail to adjust to the new challenges. Therefore, labour market programmes should aim at improving the professional quality of school leavers and also to provide greater flexibility between professions. Secondly, labour market programmes should increase the professional flexibility of unemployed people in order to prepare them for new jobs. This would reduce unemployment in sectors where employment is on a structurally-declining trend. Thirdly, the importance of labour market programmes for reducing insider-outsider problems should not be underestimated. Participants in such programmes get much more information about their own professional prospects, realistic income levels and the necessity to become more flexible. In order to strengthen the links between labour market programmes and the labour market such programmes should be designed in close contact with the trade unions and the enterprise sector.

4. Possible determinants of Irish unemployment.

4a. Structural aspects

Demography : Natural increase, labour force participation and migration.

Labour supply is a function of the natural rate of increase in the potential labour force (i.e. the 15-64 age cohort in the population), the activity rate and net migration. As indicated in Table 3, the potential rate of natural increase in the Irish labour force is high, reflecting traditionally high (but now falling) fertility rates and a period of significant immigration in the mid-1970s. This resulted in a population "bubble" with more than 50% of the total population below 25 years of age in 1985. As this "bubble" enters the labour market, the rate of natural increase will remain elevated and supply pressure will remain high. Population estimates (based on a zero emigration assumption) indicate that the "bubble" will not have passed fully until 2006. (See Table 3)[10]. The activity rate in Ireland is not significantly below the Community average, but female participation rates are relatively low. Labour Force Survey evidence suggests that female participation rates are indeed rising in line with improved education opportunities for women and the rising trend in atypical employment e.g. part-time work (See Graph 2.2b). Migration is a particular characteristic of the Irish labour market reflecting economic and cultural links with the UK and US. The direction of migratory flows varies with the relative performance of these economies and the domestic economy. Outflows during the domestic economic depression in the 1950s, gave way to substantial reverse flows in the 1970s but re-emerged in the course of Ireland's disinflation in the 1980s. Emigration has thus acted as an equilibrating mechanism regulating supply pressure on the Irish labour market[11].

With a high natural rate of increase in the labour force, a rising activity rate and variable migration flows, demographic influences on the Irish unemployment rate might be expected to be significant. Model-based analysis[12] of developments in the Irish labour market casts new light on this issue. The analysis indicates that over the extended period 1970-87 demographic factors accounted for about one third of the increase in the unemployment rate but over the more confined period of accelerating unemployment 1979-86, the net effect of demographic factors on the increase in the unemployment rate was quite small (less than one tenth). This reflects substantial net outflows of population after 1984 offsetting earlier inflows. Thus, while variable demographic pressures have clearly been significant in the context of Ireland's long-term unemployment performance, it would seem that they did not significantly contribute to Ireland's rising and persistently high unemployment rate in the 1980s.

Table 3: Estimated Labour Force Flows by Age Groups 1986 to 2005, assuming nil net migration in all categories

Age	1986/87	1989/90	1992/93	1995/96	1998/99	2001/02	2004/05
15-24	55.8	59.0	58.3	58.3	58.9	54.6	49.5
25-34	-10.7	-11.3	-12.0	-12.9	-13.8	-14.1	-14.2
35-44	-2.1	-2.2	-2.3	-2.4	-2.5	-2.7	-2.9
45-64	-10.3	-10.3	-10.5	-11.0	-11.7	-12.5	-13.5
65+	-10.0	-9.7	-9.4	-9.3	-9.2	-9.4	-9.5
Total	22.6	25.5	24.1	22.6	21.8	16.0	9.4

Source: NESC Report No. 90 "The Economic and Social Implications of Emigration" (March 1991)

10 See NESC Report No. 90: "The Economic and Social Implications of Emigration" (March 1990).

11 Other economic aspects of emigration such as the "brain drain" effect and interference with real wage adjustment (i.e. by easing downward pressure) are also relevant to the determination of the domestic unemployment rate.

12 See Barry F. and Bradley J.: "Irish Employment and Unemployment - A Macroeconomic Analysis" Report to the NESC (1990).

Changes in the productive system.

In the mid-70s, the long-term vulnerability of traditional manufacturing activity in Ireland encouraged the adoption of a new industrial strategy based on attracting mobile foreign investment. The underlying rationale has been to increase output and employment in the economy by importing capital with a high degree of embodied technology; by progressive linkage of foreign based industry to the domestic economy, it is hoped to ultimately create a strong indigenous industrial base. Inward investment is attracted using capital grants and fiscal incentives.

There has been considerable success in attracting inward investment to Ireland and productivity in manufacturing has risen sharply[13]. While foreign-based enterprises now employ about 40% of the manufacturing labour force, the returns in terms of linkage to the domestic economy and hence total employment creation in the economy have been below original expectations. Much of the problem lies in the type of inward investment attracted as:

i) inward investment has been concentrated in capital- intensive activities providing insufficient employment creation to replace losses in the declining traditional and labour-intensive industries; thus, the modern industries have provided an increasing share of a declining stock of manufacturing employment.

ii) capital grants and favourable tax treatment of corporation profits (i.e. a 10% tax rate on profits from manufacturing activity and a facility for full repatriation without additional taxation) have attracted transnational operations characterised by vertical integration and frequently engaged in transfer pricing. For these operations, linkage to the domestic economy is not considered a priority; moreover, the high level of profit repatriation inevitably associated with this type of investment reduces the level of "retained" value-added from these industries and so dilutes any demand impact on employment elsewhere in the economy.

4b. Cyclical aspects.

As the acceleration in Irish unemployment in the first half of the 1980s coincided with a protracted period of weak growth in the economy, it might be reasonably expected that demand deficiency may have been an important determinant. As a small open economy (in the process of a simultaneous disinflation and fiscal consolidation), Ireland's growth performance in the 1980s has been highly dependent on conditions in the international environment. A recent econometric analysis of Irish unemployment performance has attempted to isolate the impact of cyclical movements in the world economy on Irish unemployment[14]. The external influence is assumed to be channelled through trends in world output, the rate of unemployment in the UK (as the main destination of outward migration from Ireland), international interest rates, world profitability and world prices. The period under analysis extends from 1970 to 1987 and movements in the relevant external variables relating to cyclical influences are abstracted by assuming a hypothetical trend equal to actual trend over the earlier period 1960-70.

The isolated impact of external influences[15] on the evolution of the Irish economy was to reduce the end-period unemployment rate by 6,5 points relative to the historical outturn. Negative external impacts were found to be greatest in the first half of the 1980s when the Irish unemployment rate accelerated. A significant aspect of this "cyclically adjusted" outcome is that the unemployment reduction (mainly in the second half of ther 1980s) coincides with higher emigration as the hypothetical employment conditions assumed for the UK are considerably more favourable than the historical outturn. This "pull" effect of conditions in the UK economy on Irish migration flows presents the Irish labour market as having the characteristics of a regional segment of the larger UK labour market. This view is further reinforced by the fact that Irish unemployment is rising rapidly during 1991, as the UK economy experiences recession. In these circumstances, the level of involuntary unemployment in Ireland is clearly influenced by demand conditions in the UK labour market; this would support the thesis that

13 Sustained growth rates above 10% in productivity in the Irish manufacturing sector have raised doubts about the reliability of productivity measurement. The existence of transfer pricing is suspected as a source of upward distortion in the productivity figures.

14 Barry and Bradley op cit.

15 The Barry and Bradley study also finds public policy and demography as having had a significant effect on Irish unemployment rates.

the emigration adjusted unemployment rate in Ireland in 1989 (when labour demand in the UK was very high) was indeed close to the natural rate.

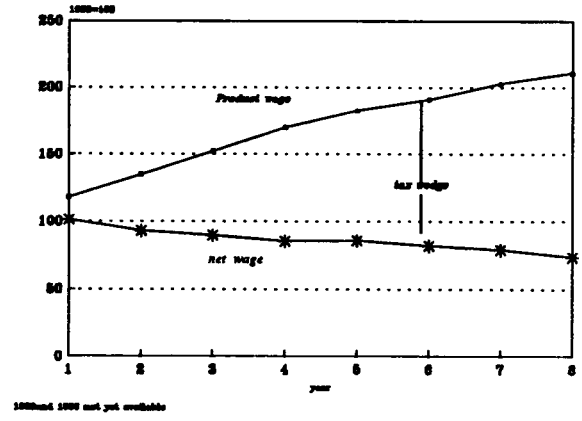
4c. Supply-side aspects.

The tax wedge, social transfers and the replacement ratio

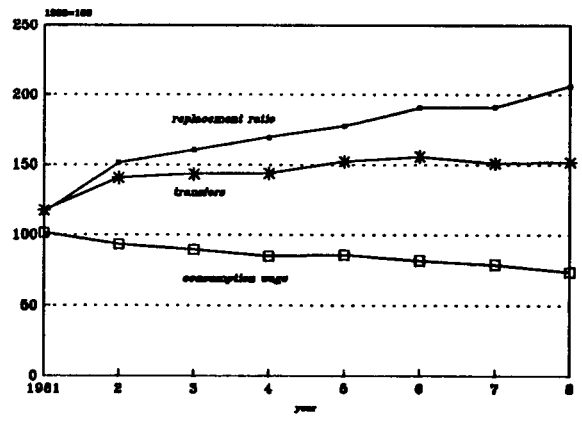
While the overall tax burden on the Irish economy is not excessive by Community standards, the incidence of taxation is uneven with substantial portions of the potential tax base exempt. A narrow tax base[16] has given rise to very high marginal rates and low thresholds within the taxation system, as fiscal pressure rose in the first half of the 1980s. The main burden of taxation is now borne by labour income (including social security about 44% of total tax receipts in 1990) and consumer expenditure (about 45% of total receipts in 1990)[17], reflected in the emergence of a very substantial "tax wedge" between the gross wage (gross cost of labour) and the net wage (net of tax remuneration of labour). The scale of the tax wedge implies a significant additional cost of labour to employers. The most striking feature of the emerging tax wedge in the 1980s (See Graph 2.4) has been that it has not only affected the respective level but also the trends in the gross and net wage. In real terms, the average net wage fell steadily over the period 1981-86, while the average gross wage increased. The clear implication is that upward pressure on wages in this period of rising unemployment has derived more from the fiscal system than from the labour market. Thus, while the disinflation process after 1981 required wage moderation to avert unemployment, the fiscal system was exerting upward pressure on labour costs. In this way, public policy is likely to have had a major impact on trends in unemployment by impeding adjustment in the real wage[18]. The widening tax wedge will have been a twofold source of unemployment, acting as a powerful disincentive to both labour demand and supply, and would explain the rather moderate employment creation performance of labour-intensive service sectors of the economy during the 1980s.

While taxation of labour income rose over the 1980s, the political philosophy of successive administrations has been to protect the real value of per capita current trans-

Graph 2.4: Gross and net wage, 1981 - 88



Graph 2.5: Per capita transfers vs consumption wage and implicit trend in replacement ratio 1981 - 88



16 The narrowness of the tax base is not solely attributable to the favourable treatment of the enterprise sector. The tax base is also narrowed by the absence of taxation on many fixed assets (e.g. only limited residential property tax) and a substantial number of zero-rated items in the VAT system.

17 e.g. in 1987, the marginal income tax rate of 56% was applicable to an unmarried employee earning just below 98% of the average industrial wage while expenditure tax rates were second only to those of Denmark and substantially above the Community average.

18 This implication is verified by the Barry and Bradley study which concludes that the procyclical fiscal policies of the late 1970s resulting in the extended correction in the first half of the 1980s contributed about 4,7 points to the unemployment rate in the period 1980/87.

fers. In Graph 2.5, the estimated growth in per capita real current transfer payments to the unemployed as a proxy for trends in overall social transfers is indicated. As current transfers are not subject to direct taxation and net wages were falling more rapidly over the period, a rise in replacement ratios is implied (see also Graph 2.5). Empirical research supports this finding and suggests that the rise in overall replacement ratios (inclusive of benefits not specifically related to unemployment) throughout the 1970s and early 1980s was quite substantial- from 46% to 58% between 1978 and 1985[19]. While there is little theoretical consensus on the unemployment effects of rising replacement ratios through disincentive to work, there are specific instances where the interaction of the social welfare and taxation systems have given rise to identifiable "poverty traps".

Labour law, trade union powers and the wage formation process.

A major focus of more recent unemployment theories has been the effect of institutional rigidities in the labour market. This approach concentrates on factors which may shift the balance of power in the wage bargaining process and/or reduce the influence exerted by the unemployed on the wage formation process. Three main sources of rigidity may be identified in this respect:

i) Worker protection legislation may act as a disincentive to employment, particularly inasmuch as it limits flexibility in labour supply (e.g. via restrictions on "hiring and firing") and hinders adjustments in real wages (e.g. via a statutory minimum wage). The Irish labour market is not excessively regulated relative to other Community member states and survey evidence[20] indicates that this factor is not ranked highly as an impediment to employment by employers[21]. Ireland does not have a statutory minimum wage. Minimum wage levels are established in some specific sectors but these are not uniform, being related to the demand and productivity conditions applying in each sector. Thus, the scope for reducing unemployment through labour market deregulation would appear somewhat limited in Ireland.

ii) The relative strength of the trade unions and employers in determining wage rates and other conditions in the labour market may be another determinant of unemployment levels. Contemporary analysis comparing unemployment and wage formation under different collective bargaining regimes suggests that the prospects for unemployment are worst when the regime falls between the two extremes of highly centralised wage negotiations and fully decentralised (i.e. at firm level) negotiations[22]. This was the situation in Ireland between 1981 and 1986. Trade union influence in Ireland reached its apex in the late 1970s and early 1980s when management of the economy was based on a highly centralised arrangement and the social consensus encompassed a wide range of economic and social policies. However, the dismantling of the centralised wage bargaining system in 1981 (and subsequent rationalisation of the labour force in the disinflation period to 1986) greatly reduced the role of the trade union movement in the management of the economy but individual unions continued to exert influence within specific sectors of the labour market.

The change in economic regime in 1987 has meant a return to "corporatist" strategies. The two medium-term economic and social programmes[23] have been based on a consensus incorporating government, employers, farmers and trade unions. A key element of both of these programmes has been a wage agreement, limiting per capita wage growth close to the rate of inflation and including restrictions on industrial action. The wage limitations have been adhered to since 1987 (facilitated by increases in real disposable income through low inflation and reductions in payroll taxes) and the number of strikes fell sharply. Once again, wage bargaining is highly centralised; however, the success of this more recent experiment in social consensus is largely attributable to a mutual recognition of the severe difficulties facing the economy in the mid-1980s. It is interesting, however, that wage consensus is required in an economy with an unemployment rate above 16%.

iii) The "insider-outsider" model has attracted attention as a further supply-side source of unemployment and is closely linked to the notion of trade union power. In this case, members of the labour force (insiders) are assumed to set the conditions for employment in the wider labour market on the basis of self-interest. Their ability to do so will be a function of their relative power vis-a-vis employers. The employers, however, may reinforce

19 See Hughes J.G. and Walsh B.M.: "Unemployment Duration, Aggregate Demand and Unemployment Insurance" (1984) and Nolan B. "More on Actual versus Hypothetical Replacement Ratios in Ireland" Economic and Social Review (1988).

20 Undertaken by the Department of Labour 1986.

21 Indeed, there may be some validity in the counter-argument that the existence of formal structures to resolve employer employee disputes promotes rather than discourages employment creation.

22 See Calmfors L. and Driffill J.: "Bargaining Structure, Corporatism and Macroeconomic Performance". Economic Policy No.6 1988.

23 The Programme for National Recovery 1987-90 and the Programme for Economic and Social Progress 1991-93.

the dominant position of the insiders through a reluctance to replace existing employees with new but unproven candidates. In this way, the unemployed (outsiders) are impeded from entering the labour market even when willing to do so at a wage rate below the market rate. This model is particularly relevant to labour markets where segmentation between highly skilled (insider) and low skilled (outsider) workers is pronounced. In this case, the insiders can use their comparative advantage to maximise their share of profits so long as the integration of the low-skilled into the labour market can be prevented. In Ireland, analysis of the unemployed suggests that the proportion of the long-term unemployed falling into the category of unskilled workers has been rising steadily in the 1980s; this would be consistent with the predictions of the insider-outsider model.

Labour market mismatch, vocational training and education.

As structural shifts in an economy will alter the pattern of employment demand there may be a resultant mismatch of labour supply and demand. In Ireland's case, the effects of a belated integration into the world economy (after fifteen years of protectionism post World War II) reinforced by a strategy of accelerated industrial development via high rates of inward investment have resulted in a pronounced structural shift in the economy. As many of the traditional sectors of the economy have been replaced by more modern sectors, the level and pattern of labour demand has clearly changed. Structural adjustment in Ireland was concentrated in the 1981-1986 period and coincided with the sharp acceleration in unemployment so that the possibility of mismatch as a source of persistent unemployment exists.

The conventional response to mismatch in the labour market is vocational training. This can either be preventative (e.g. "in house" training provided primarily within the private sector and designed to prevent redundancy) or corrective (e.g. State sponsored training for the unemployed). There is little published information available on "in house" training in Ireland, but the level of State training has clearly increased in line with the trend in unemployment. Much of this increase has been funded by a progressively larger contribution from the Community's Social Fund. Expenditure increases mirror a steady rise in throughput and the latest statistics indicate a throughput of about 100 000 participants in training courses (of variable duration) per year in Ireland.

The bulk of State trainees receive general training although a small number are trained by skill-specific agencies (e.g. Irish Management Institute, CERT). A wide range of training options is provided (increasingly technology-based) but a formal relationship between training provision and the profile of anticipated labour demand in the economy is not clear. Little analysis has been undertaken in this area while a similar paucity of follow-up research on the labour market experience of trainees prevents an ex post assessment of the effectiveness of training measures. A more analytical appraisal of training provision is necessary to ensure the effectiveness of this type of labour market intervention. If training is ineffective, then intervention reduces to an extension of the social welfare system; in consequence, the massive investment in human capital implied by the level of training expenditure in Ireland would not be reflected in a proportionate reduction in unemployment.

The general education system is also an important determinant of employment and hence unemployment conditions in the economy. Relative to other Community member states (many more developed) per capita public expenditure on education in Ireland compares favourably. The existence of a well-educated and flexible young labour force is frequently cited as one of Ireland's principal attractions as a location for foreign investment. However, the large proportion of the population in education imposes a heavy burden on the public finances. As emigration has risen in recent years the financing of education has come under increasingly critical scrutiny.

Hysteresis.

The concept of hysteresis implies that unemployment in any given period is at least partly determined by unemployment in previous periods. If the unemployment rate moves from equilibrium in response to a shock, factors may come into play which hinder a return to the previous equilibrium. Such factors would include the supply-side impediments discussed above, which might eventually lead to a depreciation in human capital (through skills loss) and discouragement in job search. The longer the actual unemployment rate remains away from the earlier equilibrium, the more likely it is that the new rate will become a new equilibrium. In this way, the NAIRU (or natural rate) gravitates towards a new equilibrium around the actual rate. Thus, if actual unemployment is high and rising over time then the natural rate is also likely to rise over time. The existence of hysteresis casts doubt on the extreme neo-classical postulation that the actual unemployment rate will ultimately gravitate towards a clearly defined natural rate and suggests the existence of persistent involuntary unemployment. Hysteresis would be consistent with the observed concentration of Irish unemployment in the marginal (i.e. older and low-skilled cohorts of the labour force) and the

progressive lengthening in the average duration of unemployment throughout the 1980s (proportion of long-term unemployed in total up from 32% of total in 1979 to 46% in 1987)[24].

5. Conclusions.

The acceleration in the unemployment rate in the first half of the last decade was the result of the interaction of structural shifts in the economy, weak external and internal demand and increasing supply pressures in the domestic labour market. The emergence of emigration after 1983/4 seems to have largely neutralised demographic pressures on the unemployment rate in this period; however, the population structure and the sensitivity of emigration flows to recovery in the domestic economy present a latent threat of surging supply pressure in the labour market. There is also much evidence to suggest that the accelerated rise in unemployment and its persistence at high rates in the 1980s has led to a hysteresis, with the natural rate moving close to the actual rate.

Demographic pressures on the labour market cannot be addressed in the context of short-term policies. Population estimates suggest that the natural rate of increase in the labour force will fall dramatically in the early years of the next century. However, in the short term, employment will be required to grow by between 2% and 2,5% per annum in the absence of net emigration simply to restrain the unemployment rate to its current position; Neither the level of economic growth required to provide such employment growth nor the reduction in the real wage rate necessary to clear the labour market at more normal growth rates seem likely. Undoubtedly, continued outward migration would ease supply pressure on the labour market but historical variability in the level and direction of migration flows suggest that such beneficial impacts cannot be assumed a priori. On this basis, Ireland's unemployment problem is clearly not capable of a "quick fix" solution; any expectation that the Irish economy can simply grow its way out of its unemployment problem seems implausible.

It is imperative that whatever impediments which currently exist to the maximisation of employment creation from growth in the economy should be removed. In this respect a number of targets for adjustment can be identified:

i) the reduction of the substantial tax wedge which has raised the costs of employment creation despite downward pressure on net-of-tax wages from supply conditions in the labour market. One of the central features of recent fiscal strategy has been a reduction in taxation of labour incomes, while expenditure taxes have also been reduced in line with the requirements of the internal market. In consequence, the tax wedge has narrowed somewhat since 1988 (see Graph 2.4). The narrowing trend in the tax wedge is set to continue but will be largely constrained by the need for continued fiscal restraint. The scale of differential between gross and net wages will undoubtedly remain a source of unemployment in the medium term.

ii) while the existing corporatist approach to wage negotiating has proven successful thus far, flexibility in the wage formation process is still desirable to ensure that productivity differentials are adequately reflected in wage rates. Otherwise, rigidity in wage formation may result in spill-over from more productive to less productive sectors. A remarkable feature of the recent centralised wage agreements is that the upper limit on wages has been observed in sectors enjoying significant productivity gains[25]. Much of this success may have been attributable to the severe economic circumstances and to increases in real disposable incomes facilitated by low inflation and income tax cuts. In less difficult economic circumstances, relating wage claims to productivity performance claims may become more the norm. The limitations of the present arrangements in this regard have already been recognised in the Programme for Economic and Social Progress 1991-93 where a facility for a limited supplemental wage increase related to productivity is included.

iii) The attraction of foreign capital is an important means by which a less-developed economy may enhance productivity and hence provide for sustainable growth; given Ireland's relative labour costs, competition for highly labour-intensive investment is unrealistic. As much of the inward investment will, therefore, be in capital intensive production a large payback in terms of employment creation cannot be expected. However, the use of capital incentives to attract mobile investment tends to distort factor prices in the domestic economy, thereby reducing whatever employment might be forthcoming from this type of industrial strategy if it were operated on a more neutral basis. In addition, measures to encourage maximum linkage between foreign-based production and the domestic economy will help to retain the maximum level of value-added from these activities and so boost employment creation elsewhere in the economy.

24 Localised concentration of unemployment (e.g. in particular urban areas or rural villages where two and in some instances three generations of unemployed workers may be living) is a particular feature of the Irish economy; such concentration can give rise to a pervasive "unemployment culture" in these areas.

25 Some of this discipline may be explained by increased access to personal contracts between employees and employers.

iv) while a global freezing of transfer payments in conditions of substantial structural unemployment may be difficult to justify, continued targeting of transfers would seem an appropriate measure to minimise disincentive effects of the social welfare system. Meanwhile, examination of the interface between the welfare system and the taxation system to avoid the occurrence of poverty traps is clearly desirable. Some adjustments to the duration of higher rates of benefit payment might also be considered.

v) a more quality-oriented approach to the provision of vocational training seems essential better to address the existence of skills mismatch in the labour market. This is even more important as the level of Community assistance to Irish investment in human capital increases. A more analytical approach to the provision of training in the context of anticipated labour market requirements is required. A greater private sector involvement in the formulation (and financing) of training initiatives might also help to improve the relevance of the training provided and link it more closely to the likely profile of demand in the economy.

vi) promotion of new work patterns (i.e. contract employment, part-time employment, profit-sharing arrangements) will help to improve flexibility in the labour force and hence the employment response to economic growth. In this respect, there is a short-term risk that increased provision of atypical employment will be more reflected in increased participation rates than in lower unemployment. However, in the longer term the increase in potential output associated with these measures should provide the basis for a sustained improvement in overall employment and unemployment performance.

vii) finally, a more positive aspect of the hysteresis phenomenon is that it occurs in both directions. Just as rising unemployment can pull the natural rate upwards, a sustained fall in unemployment can correspondingly create a downward momentum in the natural rate. This thesis underlies recent proposals for State intervention to specifically promote the reintegration of the long-term unemployed into the labour market.

* This chapter was mainly prepared by S. Berrigan of the National Economies Directorate

Chapter 3
The Catching-up Process in Ireland

0. Introduction.

As Economic and Monetary Union approaches, attention has increasingly focused on the risks to economic and social cohesion posed by continuing disparities in nominal and real economic performance among member states. The main sources of nominal divergence can be found in differing inflation rates, external balances and public finance ratios. Consideration of real divergence has so far concentrated on differences in economic development, with the Community broadly divided into the more developed EUR8 (Belgium, Denmark, Germany, France, Italy, Luxembourg, Netherlands and United Kingdom) and the less developed EUR4 (Greece, Spain, Ireland and Portugal). This division is based on measurement of relative per capita GDP (adjusted for differences in purchasing power), with all members of EUR4 below 75% of the Community average. Real convergence implies a narrowing of the gap in per capita GDP between EUR4 and EUR8 in what is termed the "catching-up" process.

As Ireland currently enjoys an inflation rate below the Community average, a surplus on external account and a convergent trend in its public finances, nominal stability has been largely realised. This annex will, therefore, concentrate on real convergence issues in examining the Irish catching-up process; however, the interaction of nominal and real convergence in Ireland's past performance and future prospects for catching up will be highlighted. The first section examines the Community's interpretation of catching up and how this definition reflects an underlying philosophy on the nature of the economic and monetary union (EMU) to be created. The Irish catching-up performance over the period 1960-90 is then reviewed. Looking forward, the prospects for a sustained catching up in Ireland are examined in the context of potential constraints imposed by EMU. In the final sections, some specific implications for Ireland's catching-up process arising from the existing economic development strategy are considered.

1. The catching-up process.

Articles 130(a) and 130(b) of the Treaty commit the Community to the strengthening of economic and social cohesion. Cohesion is to be secured particularly by (i) narrowing disparities between the various regions and (ii) reducing the backwardness of the least-favoured regions. In the formulation of economic policy at both Community and national level, cohesion aspects are to be considered. More direct Community support is to be provided via the Structural Funds (see Appendix A). Relevant to the concept of cohesion are the two related concepts of nominal and real convergence. The former concerns the need for greater coherence among the various national monetary and fiscal policies in advance of an operational EMU; the latter concerns the desirability of a more balanced regional distribution of benefits (and losses) accruing from increased economic and monetary integration.

In broad terms, nominal convergence requires the approximation of inflation rates, public finance balances and (to a lesser extent) external balances to sustainable levels throughout the Community. In this way, potential sources of tension between member state economies operating within a fixed exchange rate regime will be diminished. The requirements for real convergence are less clear-cut. To date, the Commission has concentrated on trends in per capita GDP[1] at member state level as an operational measurement of real convergence in the Community. With per capita GDP as a basis[2], a successful real convergence in the Community implies a process in which average output in the lagging member states is brought considerably closer to the that of the more-developed member states. This process is described as catching up.

The choice of per capita GDP as the basis for measuring the catching-up process reflects a philosophy on the nature of the EMU to be created. By regarding output per capita as a proxy for average welfare, the Community has interpreted a successful catching-up within EMU as a balanced regional distribution of production capacity, in conditions of nominal stability. The underlying rationale is that convergent levels of per capita output will ensure that all regions of the Community have ultimately the economic base from which to independently generate sufficient income to maintain high living standards. Community assistance to physical and human capital investment in the least favoured regions (via the various Community Support Frameworks) is clearly consistent with this philosophy.

1 adjusted for purchasing power parities

2 The limitations of aggregate constructs such as per capita GDP in measuring average economic performance are well documented (e.g. exclusion of non-market transactions, assumptions that market prices reflect social value and failure to capture distributional aspects). Nevertheless, such indicators remain a useful tool of analysis at the macroeconomic level.

In the Community's concept of catching up, trend growth in average labour productivity (i.e. equivalent to output per member of the employed labour force in national accounting terms) must remain higher in the less-developed member states than in the more-developed member states over an extended period. In standard neo-classical theory, inequalities in factor productivity are not sustainable as equilibrating flows of capital to and labour from the less-developed regions brings labour productivity into line with that of the more developed regions[3]. The implication is that the catching-up process will occur automatically. However, the fact that the level of labour productivity itself has remained persistently lower in certain regions of the Community implies the existence of impediments to the equilibrating flow of production factors. These factors may relate to scale economies, technological endowment, locational disadvantages etc. The catching-up process might thus be seen in terms of success in removing impediments to the free flow of production factors.

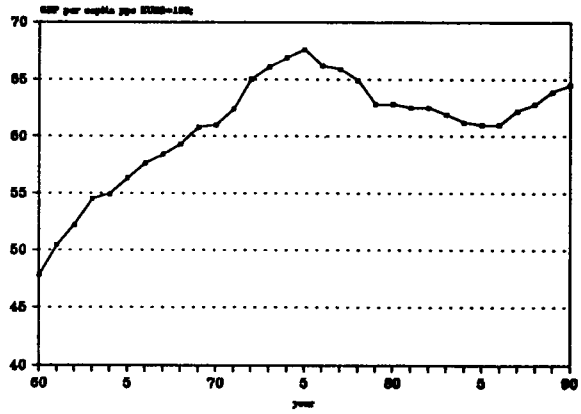
As the single market comes into operation restrictions on labour flows within the Community will be eased. If capital does not flow from the more-developed to the less-developed regions, the burden of adjustment in the catching-up process will be borne by labour migration which may ultimately result in an inefficient population distribution throughout the Community. To foster capital accumulation in the less-developed member states, the conditions for investment must be optimised. The Community has an important role to play in directly supporting investment in infrastructure and human capital; deficiencies in these areas frequently act as impediments to investment and reduce efficiency in the economy. However, the dominant factor in promoting catching up is the domestic policy framework i.e. an appropriate macroeconomic policy mix to provide greater certainty for investment decisions and microeconomic/structural reform to boost overall economic efficiency. Impediments to the free flow of labour should also be removed.

2. Ireland's catching-up performance 1960-90.

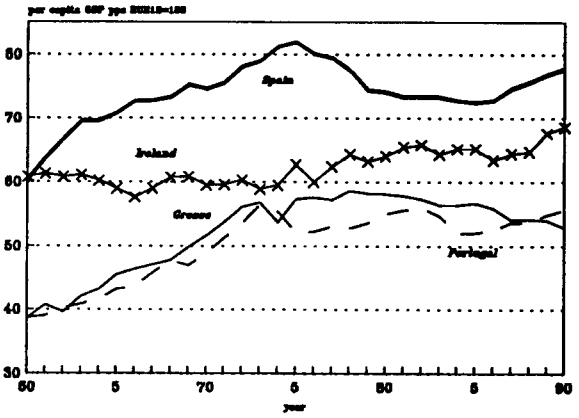
Real convergence among the present members of the Community was strongest in the 1960s, when the catching-up process in EUR4 relative to EUR8 accelerated (see Graph 3.1). However, the greater severity in the effects of the two oil shocks in the weaker economies and a generalised sub-potential performance in the world economy throughout most of the 1970s and early 1980s stalled the catching-up process. As the world economy recovered after 1985, the catching-up process resumed. The apparently positive correlation between catching-up performance and overall growth in the Community suggests a strong "cyclical" aspect to progress in real convergence measured in terms of per capita GDP.

Within EUR4, catching-up performance has not been uniform (see Graph 3.2). Unlike the other members, Ireland has experienced a rather static trend in per capita GDP relative to the Community average since 1960. Four phases of Irish catching up are identifiable:

Graph 3.1: Catching up EUR4 vs EUR8 1960-90



Graph 3.2: Catching up within EUR4 1960-90



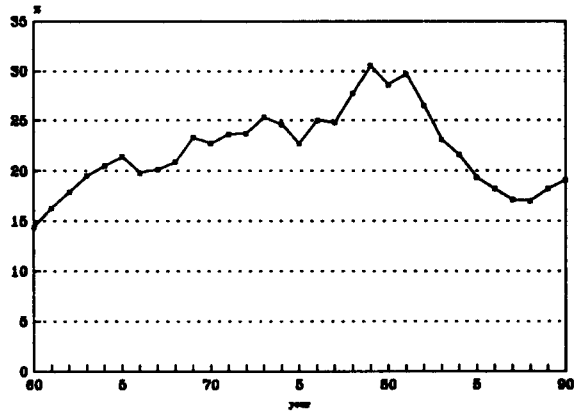
3 A catching up in levels of labour productivity will not be mirrored in an exact equalisation of per capita GDP between member states due to likely differences in dependency ratios.

Phase 1: 1960-77.

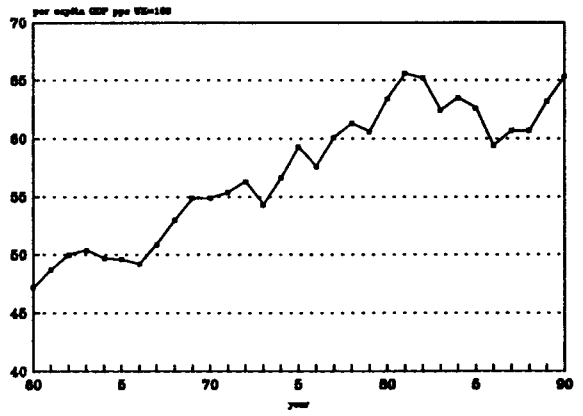
In the period 1960-77, developments in the Irish economy were influenced by a new policy framework of rapid industrialisation and abolition of trade barriers. As the integration of the economy into world trade progressed, the investment/GDP ratio increased from 14,4% to 24,8% (see Graph 3.3) while the weight of foreign trade (imports plus exports of goods and services) in GDP rose from 69,1% to 107,9%. Despite the favourable trend in world trade and policies aimed at improving potential output and efficiency in the economy, Ireland made virtually no progress in catching up. This relatively poor performance contrasts sharply with the remainder of EUR4 where very substantial improvements in relative per capita GDP were observed[4].

Ireland's static performance in this earlier period can be largely attributed to the influence of the UK economy. While the Irish economy was opening, economic performance was very much influenced by a formal currency link with sterling and the heavy weight of the UK in Ireland's burgeoning foreign trade. In these circumstances, it is not surprising that Irish economic performance should have been adversely affected by the long-run weakness of the UK economy[5]. It should be noted, however, that this episode of stagnation in Ireland's real convergence relative to the Community as a whole coincided with a substantial convergence relative to the UK (see Graph 3.4). In the wake of the 1973 oil shock, stabilisation policies operated to support the level of per capita GDP in Ireland relative to the rest of the Community. However, as in the other members of EUR4, no progress was made in catching up.

Graph 3.3: Investment/GDP ratio in Ireland 1960-90



Graph 3.4: Catching up in Ireland and the United Kingdom, 1960-90



Phase 2: 1978-81

After 1978, Ireland entered a short and unsustainable period of accelerated catching up; per capita GDP rose by about 3 points relative to the Community average over the succeeding four years, despite a rapid rate of growth in population[6]. The accelerated catching up coincided with a rise of 5 points in the investment/GDP ratio peaking at 30,5% in 1979 (see Graph 3.3). However, this catching up was not spontaneous but was "engineered" through the pursuit of a markedly procyclical fiscal policy[7]. The increase in investment did not simply reflect a private sector response to fundamentals in the economy but also reflected a sharp increase in public sector borrowing. As investment was heavily concentrated in social areas (hospitals, schools etc.), the improvement in supply potential in the economy was not proportionate to the increase in investment. The simultaneous fiscal stimulus to consumer demand (via transfers to house-

4 Greece +14 points, Spain +18 points and Portugal +14 points.

5 In the period 1960-73, per capita GDP in the UK declined by almost 20 points relative to the Community average.

6 In the 1970s, immigration from the UK to Ireland raised the average rate of increase in population to about 1,5% per annum.

7 This experiment in demand management was an attempt to "pump-prime" the economy so as to force GDP onto a higher medium-term growth path. In theory, the use of fiscal policy to boost medium-term economic performance was not unjustified. In the context of monetary union with the UK, the expansion in demand would initially result in a widening external deficit but financing of the deficit was assured by a fixed exchange rate with sterling and the free movement of capital from the UK. Over time, a supply-side response from the domestic economy would restore external balance.

holds and public sector employment) resulted in a supply shortfall. The 1979 oil shock further constrained the supply-side response and resulted in a widening aggregate demand-supply gap and very quickly in severe nominal instability.

Phase 3: 1982-86

By end-1981, nominal conditions in the economy were clearly unsustainable. Widening public deficits underpinned the already high levels of consumer price inflation (19,6% in 1981) and were reflected in increasing external disequilibria (current external deficit of 14,7% of GDP in 1981). As the unsustainability of the expansionary fiscal (and monetary) stance became apparent, the authorities were forced to disinflate the economy between 1982 and 1986. The result was a protracted period of sub-potential growth in which the earlier improvement in investment performance was more than reversed; the investment/GDP ratio ended the period at 18,2% (see Graph 3.3), despite an acceleration of inward investment into exporting sectors. The deterioration in investment reflected a reduction in public and private construction activity and difficulties experienced in traditional (and labour-intensive) manufacturing sectors as the real exchange rate appreciated and payroll taxes rose steadily. Thus, nominal instability effectively applied a brake to Ireland's catching-up effort in this period and progress in real convergence was again stalled, although the rest of the Community was also growing relatively slowly.

Phase 4: 1987-1990

Between 1987 and 1990, Ireland has experienced a second phase of accelerated catching up; per capita GDP has risen by about 4 points relative to the Community average. In contrast to the earlier phase of rapid catching up, this more recent phase has coincided with a sharp consolidation in the public finances (net borrowing down by about 8% of GDP) implying a more spontaneous convergence in economic growth performance. This more sustainable catching up can be explained by three main factors:

Firstly, the international environment since 1987 has been particularly favourable. The reverse oil shock in 1986 and the subsequent resurgence in world trade resulted in a massive expansion in Irish export markets. With disinflation largely achieved, the real appreciation in the punt has stopped so that the trend in competitiveness has improved considerably. In consequence, the external performance of the economy has improved, particularly in the highly export-oriented modern sectors, most of which did not exist before 1981, where output volume has surged. (However, the scale of recovery in external performance has most likely been exaggerated by transfer pricing activities within the foreign-based sectors).

Secondly, the lessons of the failed experiment in fiscal activism in the 1970s, combined with the discipline of the ERM, have resulted in a macroeconomic policy mix more consistent with the requirements of a small open economy in international trade. Fiscal policy is geared towards a greater equilibrium in the public finances and anti-inflation credibility has been boosted by a monetary policy geared toward exchange rate stability. The moderate wage performance reflects an increased awareness of international competitiveness constraints and has reinforced the downward trend in inflation. As the credibility of the new policy mix has been established the favourable trends in the fundamentals of the economy have been reinforced, fostering a recovery in private sector investment.

Finally, a not insignificant contribution to the catching-up performance as measured in terms of per capita GDP has come from demographic sources. Having fallen sharply from the mid-1970s, net emigration returned to historically high levels after 1985; this has resulted in a stagnation in population growth and a mechanical improvement in measured per capita GDP.

The role of the domestic policy framework in the more recent period of sustainable catching up contrasts sharply with that of the previous catching up in 1978-81. The current macroeconomic policy mix has fostered a high rate of return on investment through price stability and high profitability despite a reduction in public sector activity. In response to more favourable external and internal conditions, the investment/GDP ratio has risen slowly from below 17% in 1987 to 18,25% in 1990 (see Graph 3.3). This growth has been almost exclusively sponsored by the private sector, although the operation of the Community Support Framework will ensure a greater public sector contribution in coming years. Coupled with the favourable external environment (essential to an accelerated catching up in a small open economy), the nominal stability provided by macroeconomic policies has allowed a sustainable catching up in per capita GDP[8]. As already noted, however, this catching-up performance must be adjusted somewhat for the historically high labour outflows primarily to the UK.

8 In 1991, the short-term outlook for the catching up process has deteriorated. World trade has entered a phase of more moderate growth and the recession in the US and UK has stifled outward migration resulting in a rise in the population for the first time since 1986.

3. Prospects for catching up within EMU.

The recent success in Ireland's catching-up performance suggests that the direction of Ireland's macroeconomic policy framework, supplemented by further structural/microeconomic reforms is appropriate for an accelerated catching up (if external conditions permit). On the Community level, however, the question arises whether EMU will foster or hinder progress in Ireland's catching up.

As stated in the report on EMU by the Commission services "One market, one money" the key to a successful catching up "lies in obtaining synergies between national and Community policies". Within EMU, monetary policy will be centralised and will be geared towards overall price stability. Fiscal policy will remain the responsibility of national authorities; however, the restoration of public finance equilibrium in Ireland will remain a priority to reduce the vulnerability of the economy to external shocks. Completion of the internal market will impose increased competitiveness constraints on the evolution of domestic costs (predominantly labour costs in a small open economy) while exposing any inefficiencies in the domestic productive system. In these respects, EMU implies a reinforcement of the existing macroeconomic policy regime in Ireland rather than any major alteration. As EMU acts to reinforce the favourable domestic conditions for investment, capital should flow from the more developed regions to Ireland promoting real convergence. Meanwhile, the use of the Community's structural funds as an element of the integration process will help to underpin the catching up in Ireland by further easing infrastructural and human capital constraints on the level and efficiency of investment.

3a. Possible constraints implied by economic union.

The benign view of the synergy between EMU requirements and Ireland's independent catching-up efforts is not uncontested. The principal reservations expressed have related to economic union (completion of the internal market). Emphasis has been laid on arguments from the "divergence school" which point to the centripetal effects of scale economies, industrial structures, transport costs, locational disadvantages (peripherality) and imperfectly competitive market structures as potential economic impediments to Ireland's catching up within EMU. Such impediments to investment flows from the more to less-developed regions could lock the Irish economy into a permanent state of underdevelopment.

In the NESC Report on Ireland in the European Community[9], the prospects for Irish economic performance as integration continues were examined in considerable detail. The report points to the significant threats posed to Irish industry by the completion of the single market. For manufacturing industry, it is concluded that the positive direct effects of the single market (related to cost and price reductions) are likely to be outweighed by negative indirect effects (related to absence of scale economies, technological innovation); however, the net effect on each industry will depend upon specific factors which characterise its operations. Community integration poses a greater threat to the service industries, which in contrast to the manufacturing sector, remain largely sheltered from international competition; many of these service industries may now face the same "weeding out" phenomenon as occurred in manufacturing in the years following accession. A rationalisation of the services sector would have serious implications for employment performance in the economy. Again, the net effect will depend upon the specific characteristics of the industry concerned but the risks in this sector are seen as high.

Counter-arguments suggest that the net effect on the Irish economy will be positive. Given the high level of intra–industry trade (as opposed to inter-industry trade)[10] and the absence of scale advantages in the main growth sectors of its manufacturing base, the Irish economy would seem well placed to benefit from the abolition of frontiers. Meanwhile, the proximity of the very substantial UK market would suggest that scale constraints on the traditional manufacturing sectors are not so great as implied by the small size of the domestic market. Locational and transport disadvantages related to Ireland's peripherality will be eased by appropriate investment in physical infrastructure with Community assistance. While some service sectors will undoubtedly suffer from increased international competition, others (notably financial services, where competition already exists and scale is less important) should benefit from a single market. In this respect, it is possible that the Irish economy will experience a "U-curve" experience with

9 NESC Report No.88: Ireland in the European Community: Performance, Prospects and Strategy. (August 1989).

10 Studies by the Commission have shown that lagging member states with a high degree of intra-industry rather that inter-industry trade may be better positioned to compete within economic union. Economies relying on inter-industry trade will be competing on progressively narrowing wage differentials as catching up proceeds. Ireland, has a relatively high concentration of intra-industry trade reflecting the substantial foreign based component of the manufacturing sector. However, the size of this foreign-based sector poses risks of its own leaving the economy vulnerable to strategic decisions taken outside of the national jurisdiction. See O'Malley E.: "Sectoral implications of the Single European Market for Irish Manufacturing", European Economy - Special edition 1990.

integration implying an initial deterioration in relative economic performance followed by a sharp recovery.

3b. Possible constraints implied by monetary union.

With nominal stability achieved, movement to a system of fixed exchange rates implies little cost for the Irish economy; as already indicated, rapid rates of catching up have coincided with historically low rates of inflation and an external current surplus[11]. Thus, the risks of monetary union per se to Ireland's catching up would seem limited, if nominal stability is maintained. Nevertheless, Ireland's earlier experience (1978-81) of rapid catching up interrupted by nominal difficulties suggests the possibility of a dynamic interaction between nominal and real convergence. If a rapid catching up in real output is accompanied by a corresponding catching up in prices, to what extent will a fixed exchange rate regime lock the Irish economy into a stop-go cycle of rapid real growth, inflationary pressures, real appreciation and slowdown?

Two potential sources of inflation within the context of a rapid catching up in Ireland within EMU can be identified. Firstly, inflationary pressure could emerge in response to a wage spillover from the tradable to the non-tradable sector. As average labour productivity rises in Ireland (as demanded by the catching-up process), a corresponding catching up in domestic wage levels will inevitably occur. However, as wages tend to equalise between the relatively more productive (mainly tradables) and less productive (mainly non-tradables) sectors of the domestic economy[12], a positive average inflation differential may emerge between Ireland and the rest of the Community. Under a fixed exchange rate regime, such inflationary pressures could not be countered by a nominal appreciation to divert demand from non-tradables to tradables by means of a relative price adjustment. However, fixed exchange rates would not necessarily imply a nominal constraint on the economy arising from the average inflation differential. So long as wage growth in the tradables sector remains in line with productivity, a positive average inflation differential related to a catching up in non-tradables prices can be supported without a loss of external competitiveness[13].

Secondly, inflationary pressures might arise from a demand-pull inflation associated with the phasing of catching up between aggregate demand and supply. In this case, the risk is of an inflationary wage spillover from the non-tradable to tradable sector, which would reduce competitiveness in the (price-taking) tradable sector at any given level of productivity and so reduce export potential. Without access to nominal depreciation, a real appreciation will constrain growth and so stall the catching-up process. Within EMU as is already the case with the ERM, an independent monetary response to potential demand pressures will be limited.

The important determinant of inflationary risks in an accelerated catching up will be the size of the non-tradable sector. In an open economy where the non-tradables sector is small, any catching up in demand ahead of supply will be reflected in a temporary deterioration in the external balance; within a fixed exchange rate regime, this will not impose a major short-term constraint on the economy and will be corrected as supply and demand move back into line over time. In the context of EMU, with free trade in all goods and services and free capital mobility, the weight of non-tradables in all Community economies is likely to be reduced in the longer term. The Irish economy is now among the most open in the OECD so that the relative weight of non tradables in GDP is already small; thus, the risk of severe inflationary pressures arising from the non–tradables sector in Ireland is low. However, as inflation implies allocative inefficiency, a reduction in the size of the non-tradable sector by opening the economy to the maximum degree possible would still be appropriate.

4. Catching up and the Irish development strategy.

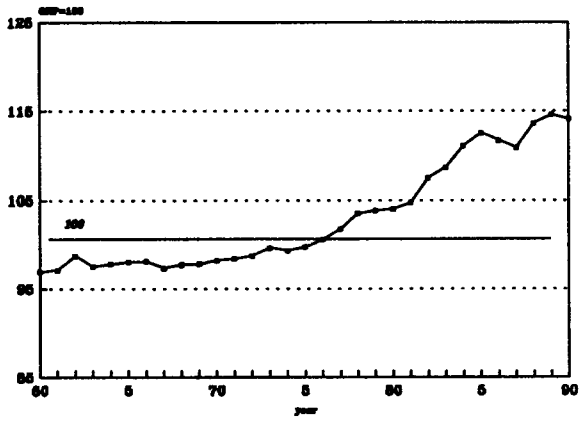
A particular characteristic of Ireland's economic performance in the 1980s has been the emergence of a progressively larger divergence between GDP and GNP (see Graph 3.5). This GDP/GNP gap reflects an increase in net factor outflows, mainly comprising profit repatriations and debt-servicing payments. The high level of profit repatriations (net 6% of GDP in 1989) is a function of an economic development strategy based on attracting inward investment into highly profitable and export-oriented sectors. These sectors are dominated by subsidiaries of transnational corporations in which operations tend to be vertically integrated and transfer pricing is a particular attraction. In such circumstances, a high rate of profit repatriation is to be expected. The debt-servicing payments relate to the substantial stock of external debt in the public sector, where a belated correction of

11 This is in marked contrast to the experience of other member states enjoying rapid growth in this period (UK, Portugal, Spain) where nominal divergence has accompanied economic expansion.

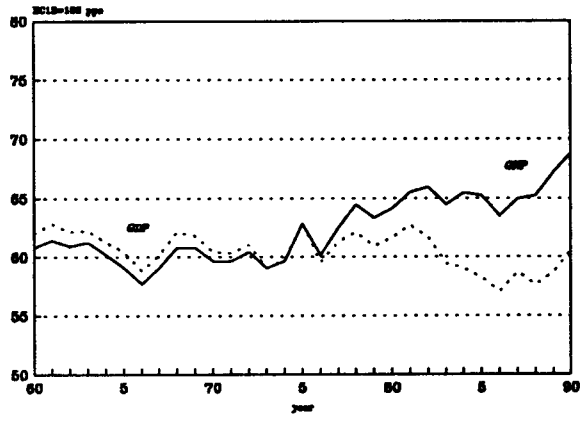
12 This type of wage spillover is entirely consistent with the efficient operation of the economy as demand for production factors shifts between sectors.

13 This analysis is empirically supported by the experience of Japan and the United States in the 1980s when higher Japanese productivity in tradables facilitated a positive average inflation differential with the US accompanied by an appreciation of the yen (see also Bank of England Quarterly Bulletin May 1991).

Graph 3.5: Ratio of GDP to GNP in Ireland 1960-1990



Graph 3.6: Comparison of per capita GDP and GNP in Ireland relative to EUR12 1960-1990



the procyclical fiscal policies in the 1970s has left a heavy debt overhang. While the trajectory in the public debt/GDP ratio is now downward and external debt (about 37% of total debt) is being retired whenever possible, debt-servicing outflows still constitute about 3% of GDP and will remain significant in the medium term.

The scale of the differential between GDP and GNP raises the question of the appropriateness of per capita GDP as the measure of catching up in Ireland. The strength of Ireland's productive capacity is clearly captured by the GDP measure but the capacity of the economy to independently support living standards is more accurately reflected in the GNP measure. Thus, GNP per capita is a more accurate measure of the independent catching-up process in Ireland. As indicated in Graph 3.6, the level of per capita GNP (and hence the implied standard of living) is much lower than per capita GDP. This is particularly the case for the 1980s, when the weight of the foreign-based sectors in GDP became increasingly important. Thus, Ireland's catching up as measured by per capita GDP may be overstated.

Apart from inaccuracies in measuring catching-up performance, the divergence between GNP and GDP (relating to profit repatriations rather than external debt servicing) points to a potentially more serious difficulty in Ireland's development strategy. Direct inward investment has been the favoured means of modernising the Irish industrial base since the mid-1970s; inward investment is attractive because it facilitates a catching up, not only by capital accumulation but also by improving the efficiency of the capital stock via a high level of embodied technology. However, as most of these industries are subsidiaries of larger parents, a high level of profit repatriation is an inevitable feature of their operations in Ireland. In this way, much of the value-added (and hence potential spillover employment effects elsewhere in the economy) leaks from the domestic economy.

The scale of net profit repatriation from Ireland is an important manifestation of the severe duality which reliance on inward investment has created in the economy. The manufacturing base is split between capital-intensive, highly productive, foreign-based sectors and relatively labour-intensive, indigenous, traditional sectors. The foreign sectors are highly export-oriented, mainly towards the broader Community market, while the indigenous sectors remain predominantly oriented towards the domestic and UK markets (although the weight of the Community markets in their exports is rising). While the foreign sectors provide a significant share of total employment (40% in manufacturing), in most other respects their linkage to the domestic economy is weak.

The emergence of a dual structure between the domestic sectors and the foreign-based enclave reflects an implicit "targeting" within industrial policy of more capital-intensive production; investment is attracted using a generous package of capital grant-aid and fiscal incentives. While there is no evidence of formal discrimination between foreign and domestic investment, it is likely that the relatively limited scale of capital invest-

ment affordable by domestic investors explains the lower response to industrial incentives from indigenous sources. In this way, inward investment is effectively favoured over domestic sources within industrial policy. A further consequence of the fiscal bias towards capital is a distortion of relative factor prices; this distortion is made worse by a very heavy tax burden on labour income[14]. The distortion of relative prices will not only have reduced the employment response to economic growth (by encouraging capital deepening) but will also have penalised local entrepreneurship and so further discriminated against indigenous investment activity.

Continuation of the existing industrial strategy is likely to result in an increasing weight of foreign relative to domestic investment in the economy. If linkage between the two sectors cannot be improved, the divergence between GDP and GNP will widen. Moreover, as capital intensity of production increases but profits continue to leak from the economy there is a risk that the employment response to economic growth will be progressively eroded. In such circumstances, higher rates of labour migration to other parts of the Community over the next decade[15] cannot be avoided. Catching up in terms of per capita GDP will be achieved at the expense of a static or even declining resident population.

A more neutral treatment of capital and labour within industrial/fiscal policy would help to provide a more balanced development in the economy. By removing factor price distortions and fostering an improved balance between domestic and foreign investment activity, the gap between GDP and retained value-added might be controlled and the employment response to growth enhanced. In more recent years, Irish industrial policy has moved in this direction with adjustments to the relative fiscal treatment of production factors, reduced emphasis on aid to fixed assets in favour of R&D and by attempts to link inward investment incentives to use of domestic supply.

The need for a reorientation of industrial strategy is increased by the emergence of strong competition for inward investment in other parts of the Community and particularly Eastern Europe. The Irish authorities face an important policy dilemma: an intensification of existing strategy to maintain direct investment flows will further distort the economy but a failure to respond to competition risks the loss of a major source of output and employment growth. Despite the obvious risks, it would seem appropriate for the Irish authorities to avoid aggravating existing distortions in the productive system. Instead, the focus of industrial policy should move to alternative areas in which Ireland possesses a comparative advantage in terms of inward investment. In this respect, Ireland's ability to compete on the basis of a high return on investment via a favourable wage/productivity relationship supported by high quality and flexible labour force and physical infrastructure up to Community standards is vital.

5. Catching up and fiscal transfers.

A possible means to achieve an accelerated catching up in a less developed economy without population loss is through substantial income support from more-developed regions. In "One market, one money", no convincing arguments were found to support the need for an income equalisation mechanism financed by fiscal transfers within EMU. This type of mechanism is normally employed to avoid major population shifts which might impose negative externalities by the desertification of some regions and the congestion of others. Thus, the use of income support to interfere with labour mobility from lagging regions is considered economically justified when real convergence threatens spatial balance in the distribution of population. Unlike other federally-based economies, the scale of potential labour mobility in the Community is small (due to cultural and linguistic diversity); thus, no major dislocation of population from the less-developed regions is expected. The absence of such "inefficient" emigration reduces the need for direct income transfers from the richer to the poorer regions of the Community.

Ireland is exceptional within the Community in that it continues to experience high rates of international emigration mainly to the UK. Although there are negative economic and social aspects to Ireland's emigration, the outflow of labour has acted as an important equilibrating mechanism by easing domestic labour supply pressures while satisfying demand mainly in the UK. Migration flows are highly sensitive to income levels in the Irish economy; this was illustrated in the mid-1970s when an improvement in Irish economic performance relative to that of the UK induced a wave of return migration. More recently, analysis of the impact of the Community Support Framework 1989-93 on the Irish economy has found that while Community assistance is expected to boost GNP by 2,7% from the baseline level by the year 2000, an associated slowdown in emigration is likely to reduce the benefit to 0,8% in terms of per capita GNP[16].

14 The low taxation of capital simply exacerbates the problems posed by an already narrow Irish tax base where exemptions are widespread so that labour income bears 84% of the direct tax burden and more than 30% of the total tax burden.

15 Supply pressure in the domestic labour market is expected to ease dramatically in the early years of the next century, due to a recent decline in the birth rate.

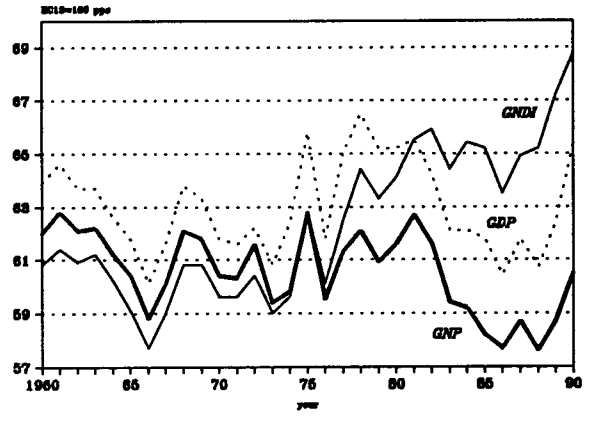
16 See Bradley J. and Fitzgerald J.: "The macroeconomic impact of the Structural Funds on the Irish economy." - A study undertaken on behalf of DGXXII (unpublished).

The NESC report[17] argues for a model of EMU involving a highly centralised policy function and sizable fiscal transfers from a Community budget. This model is based on existing income equalisation mechanisms in the United States and Germany where income in poorer regions is supplemented by permanent transfers through the federal taxation system. In such a model, the catching-up process would be measured in terms of disposable income and could take place independently of an economy's capacity to produce. Per capita output (GDP or GNP) relative to the Community average would no longer be the appropriate index of catching up and a more income-based index would be necessary.

In the previous section, a case was made for the use of per capita GNP rather than GDP in measuring Ireland's catching up in terms of output. However, just as GDP fails to take account of net factor movements to and from the economy, GNP does not include income transfers to and from the economy. In a catching up process based on convergence in the disposable income of economic agents, per capita GNP would understate the level of catching up in the Irish economy. For Ireland, the appropriate basis for measuring a catching up in income would be Gross National Disposable Income (GNDI). GNDI adjusts GNP for net income support from abroad. Net international transfers to the Irish economy are strongly positive (2-3% of GDP) and largely comprise Community assistance to the economy. GNDI is therefore an ex post measure of income in Ireland i.e. after support from the Community[18] (see Graph 3.7).

If the justification for fiscal transfers is to be the stemming of migration flows by supporting disposable income in the economy, the use of per capita GNDI as an appropriate index of catching-up performance is called into question. The sensitivity of Irish migration flows to improvements in domestic economic conditions points to a trade-off between improvements in the level of total gross disposable income and catching up measured in per capita terms. As the resident population grows in response to increased income[19], the improvement in the level of GNDI provided by fiscal transfers would not be reflected in a proportionate increase in per capita GNDI[20]. The pace of convergence in per capita income would thus be conditioned by the (desired) rate of growth in resident population. In these circumstances, the catching-up process would be more accurately represented in terms of the ability of the Irish economy to support a higher resident population at a given level of per capita income.

Graph 3.7: Per capita GDP, GNP and GNDI in Ireland 1960-1990



The use of fiscal transfers to stem population shifts is not without risks. While a high resident population is likely to induce positive growth effects through greater scale economies in the domestic market, the disincentive aspects of public transfers from the centre to Ireland must also be considered. The provision of income support without a sound macroeconomic and microeconomic basis could actually retard the catching-up process. If income support serves to encourage the least productive workers not to emigrate, while having less impact on emigration among higher skilled cohorts of the labour market, backwardness in the economy may become cumulative, trapping Ireland in a less-developed, dependency status.

17 op cit

18 An interesting feature of the Irish economy is the switchover which took place in the 1980s when per capita GDP (average product) began to exceed per capita GNDI (average disposable income). This phenomenon is particular to Ireland and is not reflected in other members of EUR4 where in all cases per capita GNDI remains above (to varying degrees) per capita GNP and GDP (see Fig 8)

19 Given the scale of emigration from the economy since the mid-1980s, there is potential for significant reverse migration into the Irish economy if income levels were to rise.

20 The effect on catching up in the lagging regions would tend to be negatively affected by disincentive effects associated with dependence on large-scale transfers.

6. Conclusions.

The Community is committed to the promotion of economic and social cohesion by reducing disparities in performance among regions and helping the less-developed regions to catch up. To date, the Community has employed the trend in per capita GDP at member state level as an operational measure of the catching-up performance of member states. The use of GDP as a proxy for economic welfare reflects an underlying philosophy that each member state should have an adequate economic base to independently support (Community) average living standards.

Economic theory suggests that catching up should occur automatically through equilibrating flows of labour and capital. The fact that some countries have persistently lagged behind suggests the existence of impediments to factor flows. The catching-up process can be seen as the removal of such impediments. While capital accumulation in less-developed member states will be helped by Community support to infrastructural and human capital investment, the crucial determinant remains the domestic policy framework in reducing investment uncertainty and promoting productive efficiency.

The role of domestic policy in the catching-up process is evident from Ireland's catching-up performance. In the late 1970s, a short period of accelerated catching up based on expansionary fiscal and monetary policies proved unsustainable as nominal conditions in the economy deteriorated. The real effects of the subsequent disinflation reversed all earlier gains. In more recent years, however, an appropriate macroeconomic policy mix has facilitated a sustainable catching up in Ireland while maintaining nominal stability.

As EMU approaches, the external context for Ireland's catching- up effort will change. In economic terms, the net effect on Irish performance will be determined by the relative weight of convergent and divergent forces within the single market. In monetary terms, Ireland's past achievements in nominal convergence have greatly reduced any adjustment costs related to a fixed exchange rate regime. The degree of openness in the Irish economy is likely to limit the risk of future nominal divergence associated with an accelerated catching up.

Of more significance to Ireland's catching-up process are the implications of a development strategy based on attracting inward investment. The catching-up process has been substantially overstated as profit repatriations (and also external debt servicing) associated with inward investment have led to a widening divergence between GDP and GNP in the economy. More importantly, however, the targeting of mobile foreign investment has effectively discriminated against domestic capital and labour, creating a dual economy. Continuation of the existing policy will increase the weight of foreign investment in total and further reduce the employment response to economic growth. In this way, catching up in terms of per capita GDP will increasingly overstate the true position of the Irish economy relative to the Community average and catching up will in part be achieved at the expense of a lower employment-creating potential.

Fiscal transfers from the more-developed to the less developed regions of the Community provide a means by which labour migration from Ireland might be stemmed while maintaining per capita income levels. In this context, the appropriate measure of catching up would be the level of Gross National Disposable Income; as the objective of the fiscal transfers would be to support the resident population, it would no longer be appropriate to measure catching up in per capita terms. In effect, the pace of convergence in per capita income would be balanced against a desired growth in resident population.

*This chapter was mainly prepared by S. Berrigan of the National Economies Directorate.

Appendix A

THE COMMUNITY SUPPORT FRAMEWORK FOR IRELAND

With per capita GDP below 75% of the EUR12 average, Ireland was classified as an Objective 1 region in the reform of the Community's structural funds. The Community Support Framework (CSF) for Ireland is, therefore, primarily aimed at promoting a sustainable catching up in terms of per capita GDP. The CSF is based on the medium-term National Development Plan 1989-93 which provides a macroeconomic and structural policy framework for improvements in potential output and employment performance in the economy. Community assistance under the CSF will total ECU 3 672 million (2-3% of annual GDP over the five year period) implying a substantial annual increase over the 1988 base-year level (about 1,5% of GDP). The increase in the programmed national public contribution will be more moderate, reflecting the need for continued fiscal restraint in the medium term. An annual breakdown of programmed Community assistance together with national public and private contributions to the CSF is provided in Table A.

The CSF covers a total of ECU 6 125 million of public expenditure, to be supplemented in certain areas by private sector investment. Four specific priorities have been identified:

i) Agriculture, fisheries, forestry, tourism and rural development: investment is to be concentrated in areas where Ireland is perceived to enjoy a comparative advantage, notably with respect to natural resources and a clean environment;

ii) Industry and services: investment is to be concentrated in the exporting sectors with special emphasis on promoting R&D and marketing activities;

iii) Measures to offset the effects of peripherality: investment is to be mainly concentrated in upgrading the national road network;

iv) Human resources measures: investment to be concentrated on measures to ensure an appropriate match between labour supply and demand in a developing economy.

Model-based analysis of the impact of the CSF on the Irish economy indicates a net increase of 2,7% from baseline GNP by the year 2000. The corresponding impact in terms of baseline per capita GNP is a net increase of only 0,8%. This reflects a slowdown in net emigration in response to the creation of 30 000 jobs (about 2% of the existing level of employment). The supply side impact is favourable implying an improvement in public finance balances, the public debt ratio, unemployment rates and emigration, while demand-led inflation rates are transient.

TABLE A: ANNUAL BREAKDOWN OF EXPENDITURE UNDER THE COMMUNITY SUPPORT FRAMEWORK FOR IRELAND 1989/93.

year	Total expenditure	Community assistance	National public contribution	National private contribution
1989	ECU 1571m	39%	33%	28%
1990	ECU 1422m	47%	31%	22%
1991	ECU 1578m	46%	30%	24%
1992	ECU 1785m	44%	28%	28%
1993	ECU 2044m	43%	26%	31%
1989/93	ECU 6126m	44%	29%	27%

Chapter 4
Monetary and Exchange Rate Policy in Ireland

1. Instruments of monetary policy and liquidity ratios

In the mid 1980s, management of monetary policy in Ireland underwent a substantial change, the most important element of which was a shift from credit rationing to the use of market-oriented instruments.

Credit controls came into operation in 1978. Until 1981, these controls related to Irish pound lending by banks, with a view to limiting the external deficit and to increasing official reserves. From 1981 onwards, the controls applied to total lending (inclusive of foreign currency lending) to the private sector; the controls were enforced up to 1984 by direct methods, primarily calls by the Central Bank for supplementary deposits.

Controls were progressively phased out and ultimately abandoned by the end of 1985; the Central Bank had been relying on indirect methods of money management since early 1984. The main instrument currently employed by the Central Bank is the rate of interest on the STF (Short-Term Facility) which provides licensed banks[1] with very short-term loans secured by government paper and admissible bank bills. Commercial banks use the STF rather than excess reserves to smooth out fluctuations in their liquidity positions.

Foreign currency swaps and repos (sale and repurchase agreements) provide liquidity for periods of one to two weeks. The latter were introduced in 1983 as an additional tool of liquidity management but developed rapidly and accounted for 13% of Central Bank liabilities in 1990 compared to 5% in 1986. The Central Bank also accepts term deposits from banks at specified interest rates. Open-market operations are not available to the Central Bank as its portfolio of government securities is small.

Complementary to the above instruments is the banks' reserve requirement, in the form of a liquidity ratio referred to as the primary ratio (as opposed to the secondary ratio which is mentioned below). The primary liquidity ratio applies to domestic branches of licensed banks; besides deposits with the Central Bank, it includes the balance of the deposit protection account and the banks' holdings of notes and coin, thus limiting the need for discretionary balances. The ratio is calculated on the relevant resources of banks i.e., essentially, non-bank residents' deposits, domestic interbank funding and the net external liability.

The primary liquidity ratio was 10% but recently has been reduced to 8%. As a rule, the ratio is reduced by one to two points in the period December to January each year to support liquidity by offsetting the effect on the money multiplier of the seasonal rise in the currency ratio. Although this action is not strictly necessary, it is useful as it attenuates the seasonal increase in interest rates and the resulting capital movements.

Required reserves in Ireland are remunerated, so that the burden on banks is lessened. However, the rate paid is lower than in the market (by 10 to 20%) so that seignorage revenue (measured on the basis of interest-rate discrepancy) in Ireland was, until recently, comparable to Germany and slightly higher than France and Belgium. Thus, in a situation of complete freedom of capital movements, Ireland may face a problem of dislocation similar to that in other Community countries. Further adjustment in the primary liquidity ratio may be necessary, raising the question of whether a certain degree of harmonization of reserve requirements at Community level may be necessary.

In addition to the primary ratio, banks are subject to a secondary liquidity ratio in the form of compulsory holdings of government paper. The ratio is 25% of relevant resources for Associated banks and 13% to 15% for Non-Associated banks. This facility was useful in the past as it provided a secure source of government financing at times when deficits were high. Now, its usefulness is less obvious. Although it is remunerated at market rates and, in consequence, does not have a fundamental impact on banks' competitiveness, the existence of this secondary ratio tends to complicate monetary aggregates[2]; in addition, it limits the productive role of the banking system, implying a misallocation of resources. As countries compete more and more through their supply-side performance, the elimination of such a distortion may need to be seriously considered. In any event, such a facility is not likely to be acceptable in the next stage of EMU. However, the elimination of this facility could require some caution so as to avoid unfavourable effects stemming from an abrupt liquidation of the large portfolio of government paper held by the banks.

1 Licensed banks, comprising the Associated (the clearing banks) and the Non-Associated (mainly merchant and industrial banks), together with the Central Bank form the banking system in Ireland. Other monetary intermediaries mainly include the Post Office Savings Banks, other savings banks, the state-sponsored financial institutions and the building societies which are accounting for an increasing proportion of total deposits in recent years.

2 It is recorded as bank credit to Government and is classified by the Central Bank as monetary financing of the public deficit.

2. Conduct and stance of monetary policy

2.1 The hard currency option

Exchange-rate stability has been an important component of monetary and general economic policy in Ireland. As in all Community member states, it has been used to achieve disinflation of the Irish economy and to provide the necessary stability for sustainable growth and employment.

At the end of 1978, when the UK Government chose not to participate in the ERM, the Irish Government decided to join and imposed exchange controls on capital movements to and from the UK. Ireland had only limited monetary policy options within the currency union with the UK, so monetary independence was not an issue. However, terminating (in March 1979) the 153 year-old link with sterling meant not only that Ireland had to establish an independent monetary and financial system but also that it was abandoning a monetary union with a country with which it had very close commercial, demographic, financial and cultural ties. Nevertheless, with disinflation a primary target of economic policy, a continued link with sterling outside of the ERM was considered inappropriate.

Commitment to exchange rate discipline within the ERM was expected to bring benefits in terms of a disinflation bonus. The underlying rationale was a version of the purchasing power parity theory. The traditional (relative) version of PPP suggests that the nominal exchange rate will adjust to offset inflation differentials; by fixing the exchange rate it was expected that increases in prices and costs in Ireland would have to adjust to those of the dominant trading partners. Ireland's experience of inflation under the sterling link in the 1970s seemed to support these views; so it was hoped that low (essentially German) inflation would feed into Irish prices. It was acknowledged, however, that disinflation could not rapidly pass through to costs and that competitiveness would accordingly decline in the short term.

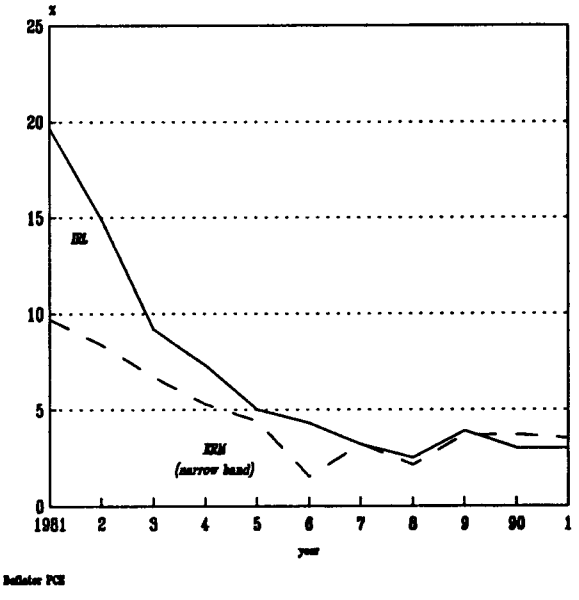
2.2 The achievement of stabilization

The basic objective of the chosen monetary and exchange-rate policy was undoubtedly achieved: disinflation was largely completed by mid-1986 when the annual rate of increase in consumer prices was down to 3.1% from 19.6% ten years earlier. This achievement has been maintained; in 1990, the deflator of private consumption was 2.6%, comparable with that of Germany and lower than the ERM average (see Graph 4.1).

Exchange-rate discipline fed into the economy through a competitiveness constraint, necessitating a process of real adjustment. Domestic demand was weak throughout the early 1980s and, although unemployment rose sharply, real wages did not decline. However, the apparent strong upturn in recorded labour productivity caused a significant slowdown in unit labour costs and a large redistribution of income towards profits. Over the decade as a whole, the adjustment of labour costs was faster in Ireland than in other member states (see Table 1).

Inflation in Ireland and in the ERM narrow-band countries

Graph 4.1: Inflation convergence 1981-91



2.3 Credibility and exchange-rate competitiveness

Ireland's experience of the ERM proved to be even more difficult than originally expected. One of the basic reasons was that the exchange-rate commitment in itself was not sufficient to ensure the credibility required to secure a painless disinflation. The absence of supporting macroeconomic policies, especially in the area of the public finances, resulted in a considerable erosion of credibility.

Equally important in terms of credibility, was the financial market assessment of Ireland's monetary separation from the UK. There is some evidence suggesting that, after 1979, German price changes influenced the pricing

Table 1 - Real* unit labour costs, total economy (1980=100)

	1982	1984	1986	1988	1990	1991(E)
Ireland	93.7	91.7	88.7	87.1	83.1	84.1
EC 12	99.3	96.6	94.4	93.1	92.9	93.2

Source: European Economy

* On the basis of GDP deflators

behaviour of Irish firms more than in the past and more than the trade weight would suggest[3]; indeed, Irish prices now seem to be equally influenced by German and UK prices. After 1979, the UK was no longer the exclusive influence on the determination of interest rates and monetary policy in Ireland. However, the influence of UK rates remains predominant. Although the share of the UK in Irish trade was reduced in the period after 1978, it still represents more than one third of Ireland's exports and more than half of its imports. Thus, movements in sterling and cycles in the UK economy have sometimes created exchange-rate tensions as the financial markets have speculated on possible realignments of the punt within the ERM in response to competitiveness pressures.

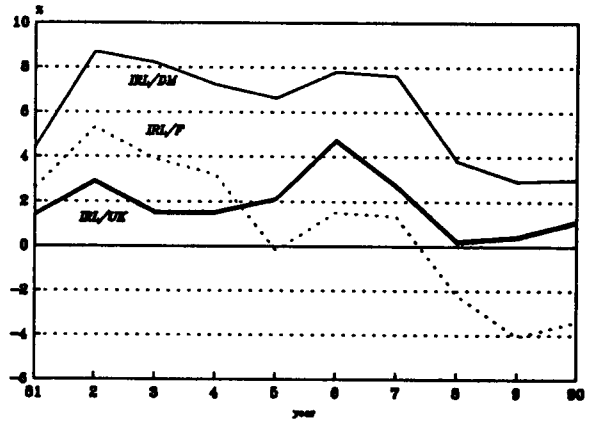
Initially, Ireland's ERM commitment was not a burden; sterling appreciated sharply, improving Ireland's competitiveness in its major market, while Germany was experiencing a period of current account deficits, relatively large budget deficits and relatively high inflation. However, by the same token, these developments initially did little to restrain Irish inflation. Interest-rate differentials began to widen in 1981 (see Graph 4.2).

Subsequently, Ireland's failure to cope with internal problems, compounded by sterling's retreat from its 1981 peak and the progress in fiscal consolidation and disinflation in Germany, made exchange rate discipline considerably more burdensome. In the March 1983 realignment, the Irish pound was devalued. Differentials increased substantially, reaching a maximum of ten points against the DM in 1981-82 and again in 1985-86.

This latter period was critical for the Irish economy as external and internal circumstance compounded to create large scale speculation against the Irish pound. In 1985-86, both the US dollar and sterling depreciated strongly while the Irish public debt/deficit problem came sharply into market focus. As a result, strong expectations of a realignment caused large capital outflows and official reserves declined.

Yield curves reflected this situation. As the Government underlined its determination to avoid a devaluation by increasing official interest rates, the short end of the yield curve rose from September 1985 to December 1985. By February 1986, short rates moved even higher

Graph 4.2: Short-term interest rate differentials



but rates at the long end actually fell under the additional expectation of slack growth in economic activity in anticipation of fiscal correction. In March, the entire yield curve shifted downwards while maintaining its inverted shape; subsequently its normal shape was restored as money market rates fell sharply when the Government avoided Irish pound devaluation in the April 1986 EMS realignment.

However, the decision to abstain from realignment resulted in a further severe loss of competitiveness. Sterling continued to depreciate in the second quarter of 1986 and this drove the real exchange rate to a peak even higher than in the beginning of 1982. The Government sought and obtained a unilateral realignment in the beginning of August 1986. The negative credibility effects of devaluation reinforced by the overrun in the budgeted level of Exchequer borrowing produced upward pressure on domestic interest rates; thus, although short rates had reached a low level of 9% at the end of the second quarter of 1986, the deterioration of market sentiment resulted in a new increase in interest rates and in differentials against the DM which climbed, by the end of 1987, to 13.9% and to 8.25% respectively (see Graph 4.2).

The yield curve again shifted upward in September and further in December 1986. However, when a string of credible budgetary measures were taken in 1987 and sterling became significantly stronger, it was possible for the Irish authorities to underline their commitment to the ERM by maintaining the Irish pound's rate in the January 1987 realignment. Thus, by March 1987, long rates had fallen; by June, the short end of the yield curve

3 T. Callan and J. Fitzgerald, "Price Determination in Ireland: Effects of Changes in Exchange Rates and ER Regimes", The Economic and Social Review, January 1989.

also shifted down and thereafter the curve resumed its normal shape.

A significant event in the period since 1987 has been the decoupling of Irish interest rates from UK rates. Since mid-1987, there has been a negative interest-rate differential between the Irish and UK rates, largely the result of a favourable inflation differential.

Since the end of 1986, the Irish authorities have been able to support the exchange rate more effectively, so that the Irish pound has been displaying a remarkable stability vis-à-vis the DM. The successful public finance adjustment, radically increasing the credibility of Ireland's EMS commitment, meant that interest-rate differentials vis à vis the DM have fallen to low levels and are now at about 100 basis points.

However, the external environment has not been favourable throughout the period. In 1989, the strengthening of the DM pulled up the narrow-band against third currencies, sterling and the US dollar among others, giving rise to expectations of a realignment. The substantial weight of sterling in Irish trade again created problems for the Irish pound; short rates were raised, and differentials against the DM and the FF increased in order to counter losses in reserves.

It is noteworthy that, in this period, it was mainly short rates which increased; this points to the credibility that Irish monetary policy has gained. By September 1989, the yield curve was inverted as the short end moved upward and thereafter the whole curve moved up in line with international developments. It was not before the second quarter of 1990 that the yield curve flattened as a result of the decline in short rates.

* This chapter was mainly prepared by Y. Xenakis of the Directorate for Monetary matters.

Chapter 5
Developments and Issues in Irish Financial Markets

0. Introduction

In Ireland, the financial system has seen a number of major changes since the currency link with the UK was broken early in 1979 and Ireland participated in the exchange rate mechanism of the EMS. The changes in the financial environment accompanying the break with sterling led to a rapid development in domestic financial markets, a trend that had already begun in the 1970s as the Irish economy opened up to Europe.

Participation in the ERM led to an increased role for the Central Bank of Ireland in the implementation of monetary policy geared to exchange rate stability. As a counterpart to ERM participation, sterling area exchange controls were replaced by comprehensive Irish exchange controls covering all transactions outside the State. At the time, it was difficult to assess the potential scale of capital movements which could take place and hamper the Central Bank's task in managing the exchange rate since data on sterling asset holdings of Irish residents were incomplete. Thus, to some extent, these controls were precautionary at the time. Once in place they proved difficult to remove. Progressive liberalization in the scope of the controls took place in the late 1980s but they still remain on a limited number of short-term transactions. They are scheduled to be abolished completely by the end of 1992, stemming from Ireland's obligations under Directive 88/361/EEC.

Allied to these internal developments in Ireland have been the broader changes taking place worldwide such as the rapid growth in international trade and multinationals, technological change in banking, creation of new financial instruments and shifts in sectoral financial balances. The liberalization of regulatory controls in major countries has also had significant knock-on effects. These developments have led to a number of innovations in Irish financial markets over the past few years.

1. Structure of Irish financial market

The share of services of credit and insurance institutions in gross value added in Ireland in 1987 was 6% compared to an EC7[1] average of 7,8%. However the figure for Ireland is comparable to that of other smaller European economies furnishing data at market prices (i.e. Belgium 5,8%, Netherlands 5,7%, and Portugal 5,8%). The share of money and other liquid assets held in various institutions and its development over time is shown in Table 1. Profitability in banking is at the upper end of the Community scale when measured by the rate of return on assets but less satisfactory in terms of the gross rate of return on equity (see Table 2).

Up to the late 1960s, the so called "associated" banks dominated Irish commercial banking. The name was conferred on these banks by the Central Bank Act 1942 which gave them a special relationship with the Central Bank. These banks now comprise two major Irish owned banking groups, 40th and 62nd respectively in The Banker ranking of top European banks by market capitalization, both formed in the mid 1960s by the amalgamation of previously independent banks, and two subsidiaries of foreign banks, one operating on a branch basis. These banks have an extended branch network throughout the country and the vast bulk of current accounts are held with them. Market concentration in Ireland is high. On the basis of Community figures for end 1987, 74% of total assets were absorbed by the largest four banks (in practice in Ireland the major part by the big two), a figure only approached by the Netherlands (69%), Greece (64%) and Portugal (57%). This compared with figures of between 20-27% for Italy, Luxembourg, Spain and the UK, while in Germany the corresponding figure was 15% with the remaining Member States being between 42 and 47% (see Table 3).

The number of inhabitants per bank branch is relatively high, exceeded only at the Community level by Greece and Portugal (Figure 1). Technological change in the industry has been rapid with the number of automatic teller machines per capita being well above that in a number of Community countries. In 1987 it was more than double that of Germany and Italy. These developments have to an extent reflected the militancy of staff unions in the main banks which have generally not been a party to national wage agreements.

The integration of financial markets across Community borders will have important effects on the efficiency of the sector itself and also on the efficiency of resource allocation of sectors using financial markets. The analysis of the financial sector in "The Economics of 1992" did not include statistics for Ireland. However, a report[2] prepared last year suggested that the overall potential price reduction in Ireland was half the average potential reduction in the Community as a whole (see Table 4 for an estimate of the comparable average cost of a basket of banking services). It is doubtful if foreign banks will be interested in breaking into the local banking market to take on low value consumer clients, but competition is likely to focus on profitable niche segments. The market share absorbed by foreign institutions in 1987 was just 11%.

1 EC7 is an aggregation compiled by Eurostat of data for B, DK, D, F, I, NL and UK.

2 Report prepared by Indecon International for the Department of the Taoiseach.

Table 1: Money and other liquid assets: components

End December:	1969	1982	1984	1986	1988	1990
Total (IRL billion)		1.01				
	(1.33)	(1.16)				
Licensed Banks			% of total			
Non-gov. current accounts		8.8	8.9	8.1	8.5	9.4
	(19.30)	(8.10)				
Non-gov. deposit accounts		53.0	50.6	46.7	46.6	46.5
	(46.60)	(57.20)				
Accrued interest		2.3	1.5	1.4	1.0	1.2
	(-)	(-)				
Holdings of notes + coin		-0.7	-0.9	-0.8	-0.8	-1.2
	(-)	(-)				
Central Bank						
Currency outstanding		8.7	8.4	8.1	8.2	7.8
	10.3	7.0				
POSB and Savings Banks						
Deposits		6.7	7.1	7.4	6.9	5.9
	11.5	5.9				
State sponsored F. Institutions						
Deposits		3.5	3.4	2.9	3.2	3.8
	0.6	3.9				
Building Societies						
Shares & deposits		16.6	18.9	20.9	20	19.8
	4.5	14.8				
Government Savings Schemes						
Amount outstanding		3.5	4.5	7.8	9.5	10.1
Inter-Institution adjustment		-2.4	-2.4	-2.7	-3	-3.2

Table 2: Indices of bank profitability [1]

	Rate of return on equity (before tax)	Rate of return on assets (before tax)	Average rate of Inflation
Belgium	14.25	0.39	4.87
Denmark	10.83	1.07	5.2
FR of Germany	19.06	0.72	2.27
Spain	9.95	0.83	10.6
France	12.93	0.33	5.83
Greece	14.61	0.4	19.6
Ireland	12.84	1.08	6.27
Italy	19.27	1.09	9.53
Luxembourg	9.06	0.32	6.1
Netherlands	17.12	0.67	1.6
Portugal	5.06	0.33	21.57
United Kingdom	22.78	1.15	4.7

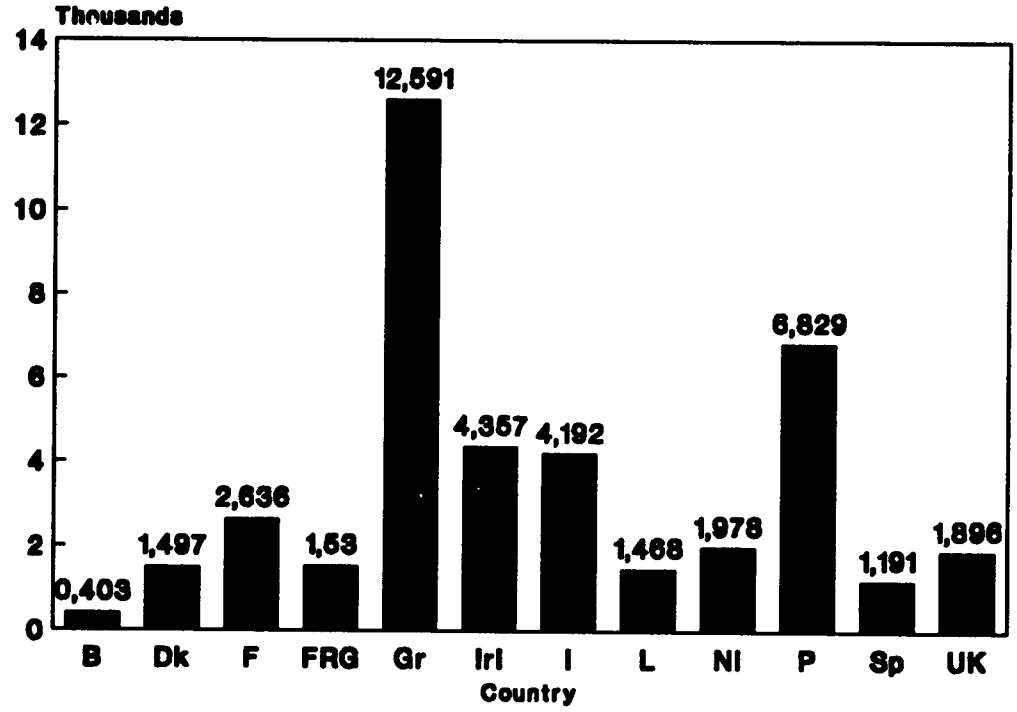
(1) Figures in percentages. Averages for the period 1984-86. The inflation rate has been approximated with the GDP deflator at market prices.
Source: OECD: Financial Statements of Banks and EC Commission.

Table 3: Market concentration and share of foreign institutions, [1] end of 1987

(% of the total assets)	Market share absorbed by the largest four banks [2]	Market share absorbed by foreign Institutions [3]
Belgium	42	46
Denmark	47	1
FR of Germany	15	4
Spain	21	11
France	42	16
Greece	64	N/A
Ireland	74	11
Italy	25	3
Luxembourg	24	91
Netherlands	69	10
Portugal	57	3
United Kingdom	27	60

(1) 'Foreign institutions' include branches of foreign banks, and establishments totally or majority owned by foreign banks.
(2) End of 1986 for Belgium, Denmark, France, FR of Germany and Spain. Figures based on unconsolidated balance sheets.
(3) End of 1986 for Ireland. Including the largest banks.
Source: OECD: European central banks and national banking associations

Graph 5.1: No. of inhabitants per branch



Source: OECD, Financial Statements of Banks 1982-88 and national sources.

Table 4: Average costs of a basket of banking services (in ECU) 1988

Banking Services	B	D	E	F	IRL	I	L	NL	UK
Commercial loans	4500	5000	5625	4375	5625	5125	5000	6750	6875
Consumer credit	12	46	27	40	27	43	14	26	43
Credit cards	94	84	66	37	83	99	46	75	61
Mortgages	480	575	800	653	430	350	499	343	290
Foreign Exchange									
Drafts	43	53	120	63	3	3	54	22	47
Current accounts*	0	117	2	10	76	76	8	0	112
letters of credit	575	425	750	438	400	400	600	550	510

*200 Cheques, 20 standing orders, 50 ATM withdrawals, 20 credits
Source: Price Waterhouse and Irish Bankers' Federation

The "non-associated" banks represent an assortment of different types of banks many of them concerned with servicing larger customers. They are generally located in Dublin and do not operate large branch networks. They are classified into two categories, merchant and commercial banks (numbering 22) and industrial banks (9).

The other main credit and financial institutions are building societies (9), trustee savings banks (2), the Post Office Savings Bank, state-sponsored credit institutions (the Agricultural Credit Corporation plc and Industrial Credit Corporation plc) and hire purchase finance companies (35). The building societies are principally engaged in the provision of housing mortgage from deposits taken from the public. However, under the Building Societies Act, 1989, they are now empowered to engage in a wide range of banking activities subject to the approval of the Central Bank, which has been given supervisory responsibility for the societies under the 1989 Act. The move by building societies to extend the range of their activities is being carried out on a gradual basis, while the banks have correspondingly moved into the area of mortgage financing.

Insurance companies (67) are regulated by the Minister for Industry and Commerce. Their total business, at 786 ECU per capita, is somewhat above the Community average (686 ECU) although a breakdown into life and non-life business shows a greater concentration on the life sector (462 ECU per head as compared with a Community average of 286 ECU). Premia on life insurance policies in Ireland, representing 6,4% of GDP in 1987, were the highest recorded in the OECD area.

The Irish Stock Exchange, which was established in 1799, is one of the oldest in the world. It is an integral part of the International Stock Exchange in London, is small, and the main market is dominated by the six largest companies that represent about two thirds of market capitalization. More dynamic in recent years has been the unlisted securities market with the numbers of companies swelling by 16 in the past three years compared to one company joining the full list. The Irish gilt market dwarfs the equity market (turnover in the account periods ending in December 1990 being IRL 4 billion in gilts and IRL 270 million in equities). Irish brokers, who have over the years been amalgamating to create larger units, still operate on an agency basis and participants consider that the market is too small for marketmaking. Only one large broking firm does not have a major institutional shareholder and the banks generally wholly own or have a large holding in a brokerage.

2. Recent innovations

An Irish Futures and Options Exchange (IFOX) opened on 29 May 1989. The Exchange has twenty-four members and trades four futures contracts - a long-term gilt contract, a Dublin interbank interest rate contract, a dollar/Irish pound contract and a contract on the Irish Stock Exchange equity index. The Exchange is automated and is supervised by the Central Bank on the basis of a regulatory system designed to safeguard the financial integrity of transactions, discourage manipulation and provide potential users with sufficient information.

A new Gilts Settlements Office (GSO) to provide a secure and efficient system for settling wholesale transactions in gilts commenced operation on 1 February 1989. The system eliminates counterparty settlement risk by providing for the simultaneous transfer of stock and the corresponding guaranteed payment. The introduction of the GSO, operated by the Central Bank of Ireland, creates the potential for automating gilt settlements as a further stage of market development. In the year ended 31 January 1990, a total of 19 700 transfers with a nominal value of IRL 29 billion were processed. There are thirty-five GSO members encompassing the Authorities, stockbrokers, nominee companies, banks, insurance companies, building societies and the IFOX.

In December 1990 the National Treasury Management Agency was established to act on behalf of the Minister for Finance in managing Ireland's National Debt. Annual savings of IRL 40 million have been set as a target for the agency through reducing margins and seeking out alternative borrowing possibilities. Plans for the first year include refinancing about IRL 3.5 billion of domestic and IRL 500 million external debt plus up to IRL 1 billion in prepayments.

Following legislation in May 1987, the Government decided to establish an International Financial Services Centre (IFSC) in Dublin. Occupiers of commercial space in the new centre at the Custom House Docks covering 27 acres will enjoy tax incentives and rates remission under an urban renewal scheme. The EC Commission agreed in December 1990 to the extension of the end of the concessionary 10% corporation tax rate for international business in the IFSC by five years to 2005. All projects approved before the end of 1994 will qualify. To date, over 180 projects have been approved with a jobs potential of some 2 800, and two thirds of these are already operating. The majority are in asset financing and leasing, funds and investment management, corporate treasury management and insurance and reinsurance. Other important areas represented are captive insurance and securities and currency trading. The geographical spread of participants is varied but with particularly strong representation of Japanese, German, British and US financial firms.

3. Exchange controls

Exchange controls were first introduced in Ireland in 1939. During the war period and up to 1978 they were a reflection of those controls which operated throughout the Sterling Area. Restrictions applied only to transactions with countries outside this area and there was complete freedom of capital movements between Ireland and the United Kingdom.

When Ireland decided to participate in the exchange rate mechanism of the EMS and the United Kingdom opted not to do so, Ireland was faced with the risk of exchange rate volatility vis à vis sterling. It was considered necessary at the time, partly because of the scarcity of data on external holdings of Irish residents, but principally due to the expansionary budgetary policy being pursued at that period, to take steps to counter any possible speculative and destabilizing flow of funds. In 1978 therefore, the coverage of Ireland's exchange control system was extended to the Sterling Area. These controls, administered by the Central Bank of Ireland, restricted a wide range of payments and other financial transactions with non-residents. Payments related to trade, commercial and other current transactions could however be made freely and were merely supervised to ensure that unauthorised capital transfers did not take place. General permissions were also given for many capital operations (for example, inflows of capital from abroad were encouraged and direct and real estate investments by Irish residents in the Community were permitted). Certain restrictions on outward portfolio investment, liberalised under Community directives of the early 1960s, were however maintained. These were allowed on the basis of a derogation under Article 108 of the Treaty of Rome.

The improvement in the public finance and external payments position in the 1980s and the increased focus in the Community on the creation of the internal market led to the announcement in October 1987 of the Government's intention to dismantle exchange controls on a phased basis. The process began in January 1988 when resident investors were given certain limited freedoms to acquire foreign securities, rules governing forward cover were relaxed and documentary requirements eased. In January 1989 all restrictions on residents' purchases of medium and long-term foreign securities were removed and Ireland's Article 108 derogation lapsed. In April 1990 greater access was provided to innovative financial instruments, Irish financial institutions were allowed to accept fixed-term Irish pound deposits from non-residents, and administrative requirements were further eased. Further relaxations were announced on 7 December 1990 for 1991 concentrating on beginning the process of relaxing controls on personal foreign currency accounts, investment in short-term securities, permitting long-term loans in Irish pounds to non-residents and easing restrictions which apply only to non-EC countries.

With the implementation of the 1991 measures comparatively few restrictions remain. These concern essentially unlimited access by Irish residents to foreign short-term securities and external bank accounts and short-term Irish pound lending to non-residents. The Government are committed to completing the liberalization process by the end of 1992 at the latest.

Although there were substantial outflows when controls on foreign security investment were relaxed, as institutional investors restructured their portfolios, external reserves, representing just over 3 months import cover, are regarded as satisfactory and Ireland's interest rate differential with Germany has been reduced significantly.

4. Some issues outstanding

Remaining exchange controls

In general, there appears to be a perception in Ireland that exchange controls have already been abolished. It would also seem from a comparison of data from banking returns and statistics collected for exchange control purposes that a substantial number of restricted transfers are not being declared. It is questionable whether the remaining controls serve any useful purpose and the costs involved to operators and the authorities in maintaining such controls may exceed any benefits accruing.

In retrospect it could be felt that comprehensive exchange controls may have enabled the pursuit of inappropriate domestic policies. The absence of such an instrument would seem, therefore, to endogenize fiscal responsibility.

Taxation of savings

The Deposit Interest Retention Tax (29%) is an important source of revenue for the Exchequer, accounting for 3% of total tax revenue. Full liberalization of residents' access to foreign accounts and short-term securities could create avenues for tax evasion. It has been pointed out that the UK has a similar tax, but with more exceptions, and that the absence of exchange controls does not hinder collection. A number of other Member States have already faced this problem in the liberalization process. Although one Member State (Denmark) has adopted a tight reporting system on residents external accounts for tax purposes, the general policy stance has been towards some lowering of rates of taxes on the income from savings.

The establishment of the IFSC in Dublin does, to a certain extent, depend on differences in tax treatment on interest and dividend income in the Community and elsewhere. It has been suggested that the 10% rate of corporation tax in the IFSC, the lack of transaction taxes, and Ireland's double taxation treaties with many OECD states has led to certain companies, particularly those with Belgian, Danish and German parents, establishing there for mainly tax reasons. However, one must also bear in mind the rationale for establishing the Centre (i.e. job-creation, economic development) and the fact that it is in early stages of development. Furthermore, it has been agreed that the cornerstone of the incentive package i.e. 10% corporation tax should end by 31 December 2005. The absence of withholding taxes on dividends and interest payments also enhances the appeal of the centre as a base for corporate treasury and intra-group activity by multinationals. There may seem to be a conflict between the interests of the IFSC and domestic taxation of income from savings. Thus, for example, a

common taxation regime for interest and dividend income in the Community would help the authorities objectives on domestic taxation but may affect the attractiveness of the IFSC. However, any benefits to the Centre of differing tax regimes throughout the Community are of a temporary nature and it is intended that the Centre should essentially be in a position to survive and develop when such differences disappear.

The bank levy

A special levy on banks, introduced in the 1980s, was renewed in the 1991 budget at its existing level of IRL 36 million. The levy represents a tax equivalent of about 70 pence per annum on every IRL 100 of domestic bank savings. Foreign banks with no IRL deposits are not subject to the levy nor is it charged on non-bank savings deposits. In the context of the opening up of the banking market in the Community this levy will constitute a competitive disadvantage for domestic banks. The Minister for Finance has announced his intention to set up a special working group of officials and representatives of the banks to examine corporation tax applying to banks and the role of the levy and will look at the matter again when formulating his 1992 budget.

The Business Expansion Scheme

The Business Expansion scheme, introduced in 1984, was aimed at helping smaller companies in need of seed capital. Under the scheme tax payers purchasing the non-quoted shares of qualifying Irish manufacturing companies, or of companies engaged in certain international services, may deduct the amount of the purchase to a maximum of IRL 25 000 a year from taxable income. The scheme was extended to tourism, shipping and trading houses in 1987, plant cultivation in 1988 and construction and leasing of advance factories in 1990.

The Commission noted in November 1987 that there had been an increasing tendency in Member States to introduce tax incentives for the purchase of domestic securities which in its view were discriminatory and should be eliminated, and the Business Expansion Scheme has been classed as such an incentive.

The scheme is estimated to have cost the Exchequer IRL 40 million in tax foregone in the 1989/90 tax year and the Minister of Finance admitted that it is frequently being used to provide relief for investment in secure asset-backed ventures involving little risk and "creating an unacceptable tax shelter". The scheme was severely restricted in 1991, with the funds so released being used to help pay for income tax reductions. Although such schemes are, as already stated, a feature of many Member States' tax systems, its distortionary nature may still create compatibility problems with Community rules. In Ireland's case, the scheme must be seen in the context of the limited availability of venture capital domestically and the need to help Irish industry to overcome disadvantages relative to other Member States.

* This chapter was mainly prepared by K. Lennan of the Directorate for Financial engineering and capital movements.

Country Studies

See also Economic Papers No.79 (The United Kingdom), No.81 (The Netherlands) and No.82 (Belgium).

No. 1 The Federal Republic of Germany (September 1990)

No. 2 Portugal (February 1991)

No. 3 United Kingdom (March 1991)

No. 4 Denmark (April 1991)

No. 5 France (août 1991)

No. 6 Ireland (September 1991)

Economic Papers*

The following papers have been issued. Copies may be obtained by applying to the address mentioned on the inside front cover.

No. 1 EEC-DG II inflationary expectations. Survey based inflationary expectations for the EEC countries, by F. Papadia and V. Basano (May 1981).

No. 3 A review of the informal economy in the European Community, by Adrian Smith (July 1981).

No. 4 Problems of interdependence in a multipolar world, by Tommaso Padoa-Schioppa (August 1981).

No. 5 European Dimensions in the Adjustment Problems, by Michael Emerson (August 1981).

No. 6 The bilateral trade linkages of the Eurolink Model : An analysis of foreign trade and competitiveness, by P. Ranuzzi (January 1982).

No. 7 United Kingdom, Medium term economic trends and problems, by D. Adams, S. Gillespie, M. Green and H. Wortmann (February 1982).

No. 8 Où en est la théorie macroéconomique, par E. Malinvaud (juin 1982).

No. 9 Marginal Employment Subsidies : An Effective Policy to Generate Employment, by Carl Chiarella and Alfred Steinherr (November 1982).

No. 10 The Great Depression : A Repeat in the 1980s ?, by Alfred Steinherr (November 1982).

No. 11 Evolution et problèmes structurels de l'économie néerlandaise, par D.C. Breedveld, C. Depoortere, A. Finetti, Dr. J.M.G. Pieters et C. Vanbelle (mars 1983).

No. 12 Macroeconomic prospects and policies for the European Community, by Giorgio Basevi, Olivier Blanchard, Willem Buiter, Rudiger Dornbusch, and Richard Layard (April 1983).

No. 13 The supply of output equations in the EC-countries and the use of the survey-based inflationary expectations, by Paul De Grauwe and Mustapha Nabli (May 1983).

No. 14 Structural trends of financial systems and capital accumulation : France, Germany, Italy, by G. Nardozzi (May 1983).

No. 15 Monetary assets and inflation induced distorsions of the national accounts - conceptual issues and correction of sectoral income flows in 5 EEC countries, by Alex Cukierman and Jorgen Mortensen (May 1983).

No. 16 Federal Republic of Germany. Medium-term economic trends and problems, by F. Allgayer, S. Gillespie, M. Green and H. Wortmann (June 1983).

No. 17 The employment miracle in the US and stagnation employment in the EC, by M. Wegner (July 1983).

No. 18 Productive Performance in West German Manufacturing Industry 1970-1980; A Farrell Frontier Characterisation, by D. Todd (August 1983).

No. 19 Central-Bank Policy and the Financing of Government Budget Deficits : A Cross-Country Comparison, by G. Demopoulos, G. Katsimbris and S. Miller (September 1983).

No. 20 Monetary assets and inflation induced distortions of the national accounts. The case of Belgium, by Ken Lennan (October 1983).

---

* "Economic Papers" are written by the Staff of the Directorate-General for Economic and Financial Affairs, or by experts working in association with them. The "Papers" are intended to increase awareness of the technical work being done by the staff and to seek comments and suggestions for the further analyses. They may not be quoted without authorisation. Views expressed represent exclusively the positions of the author and do not necessarily correspond with those of the Commission of the European Communities. Comments and enquiries should be adressed to:
The Directorate-General for Economic and Financial Affairs,
Commission of the European Communities,
200, rue de la Loi
1049 Brussels, Belgium

No. 21 Actifs financiers et distorsions des flux sectoriels dues à l'inflation : le cas de la France, par J.-P. Baché (octobre 1983).

No. 22 Approche pragmatique pour une politique de plein emploi : les subventions à la création d'emplois, par A. Steinherr et B. Van Haeperen (octobre 1983).

No. 23 Income Distribution and Employment in the European Communities 1960-1982, by A. Steinherr (December 1983).

No. 24 U.S. Deficits, the dollar and Europe, by O. Blanchard and R. Dornbusch (December 1983).

No. 25 Monetary Assets and inflation induced distortions of the national accounts. The case of the Federal Republic of Germany, by H. Wittelsberger (January 1984).

No. 26 Actifs financiers et distorsions des flux sectoriels dues à l'inflation : le cas de l'Italie, par A. Reati (janvier 1984).

No. 27 Evolution et problèmes structurels de l'économie italienne, par Q. Ciardelli, F. Colasanti et X. Lannes (janvier 1984).

No. 28 International Co-operation in Macro-economic Policies, by J.E. Meade (February 1984).

No. 29 The Growth of Public Expenditure in the EEC Countries 1960-1981 : Some Reflections, by Douglas Todd (December 1983).

No. 30 The integration of EEC qualitative consumer survey results in econometric modelling : an application to the consumption function, by Peter Praet (February 1984).

No. 31 Report of the CEPS Macroeconomic Policy Group. EUROPE : The case for unsustainable growth, by R. Layard, G. Basevi, O. Blanchard, W. Buiter and R. Dornbusch (April 1984).

No. 32 Total Factor Productivity Growth and the Productivity Slowdown in the West German Industrial Sector, 1970-1981, by Douglas Todd (April 1984).

No. 33 An analytical Formulation and Evaluation of the Existing Structure of Legal Reserve Requirements of the Greek Economy : An Uncommon Case, by G. Demopoulos (June 1984).

No. 34 Factor Productivity Growth in Four EEC Countries, 1960-1981, by Douglas Todd (October 1984).

No. 35 Rate of profit, business cycles and capital accumulation in U.K. industry, 1959-1981, by Angelo Reati (November 1984).

No. 36 Report of the CEPS Macroeconomic Policy Group. Employment and Growth in Europe : A Two-Handed Approach by P. Blanchard, R. Dornbusch, J. Drèze, H. Giersch, R. Layard and M. Monti (June 1985).

No. 37 Schemas for the construction of an "auxiliary econometric model" for the social security system, by A. Coppini and G. Laina (June 1985).

No. 38 Seasonal and Cyclical Variations in Relationship among Expectations, Plans and Realizations in Business Test Surveys , by H. König and M. Nerlove (July 1985).

No. 39 Analysis of the stabilisation mechanisms of macroeconomic models : a comparison of the Eurolink models by A. Bucher and V. Rossi (July 1985).

No. 40 Rate of profit, business cycles and capital accumulation in West German industry, 1960-1981, by A. Reati (July 1985).

No. 41 Inflation induced redistributions via monetary assets in five European countries : 1974-1982, by A. Cukierman, K. Lennan and F. Papadia (September 1985).

No. 42 Work Sharing : Why ? How ? How not ..., by Jacques H. Drèze (December 1985).

No. 43 Toward Understanding Major Fluctuations of the Dollar by P. Armington (January 1986).

No. 44 Predictive value of firms' manpower expectations and policy implications, by G. Nerb (March 1986).

No. 45 Le taux de profit et ses composantes dans l'industrie française de 1959 à 1981, par Angelo Reati (Mars 1986).

No. 46 Forecasting aggregate demand components with opinions surveys in the four main EC-Countries - Experience with the BUSY model , by M. Biart and P. Praet (May 1986).

No. 47 Report of CEPS Macroeconomic Policy Group : Reducing Unemployment in Europe : The Role of Capital Formation, by F. Modigliani, M. Monti, J. Drèze, H. Giersch and R. Layard (July 1986).

No. 48 Evolution et problèmes structurels de l'économie française, par X. Lannes, B. Philippe et P. Lenain (août 1986).

No. 49 Long run implications of the increase in taxation and public debt for employment and economic growth in Europe by G. Tullio (August 1986).

No. 50 Consumers Expectations and Aggregate Personal Savings by Daniel Weiserbs and Peter Simmons (November 1986).

No. 51 Do after tax interest affect private consumption and savings ? Empirical evidence for 8 industrial countries : 1970-1983 by G. Tullio and Fr. Contesso (December 1986).

No. 52 Validity and limits of applied exchange rate models : a brief survey of some recent contributions by G. Tullio (December 1986).

No. 53 Monetary and Exchange Rate Policies for International Financial Stability : a Proposal by Ronald I. McKinnon (November 1986).

No. 54 Internal and External Liberalisation for Faster Growth by Herbert Giersch (February 1987).

No. 55 Regulation or Deregulation of the Labour Market : Policy Regimes for the Recruitment and Dismissal of Employees in the Industrialised Countries by Michael Emerson (June 1987).

No. 56 Causes of the development of the private ECU and the behaviour of its interest rates : October 1982 - September 1985 by G. Tullio and Fr. Contesso (July 1987).

No. 57 Capital/Labour substitution and its impact on employment by Fabienne Ilzkovitz (September 1987).

No. 58 The Determinants of the German Official Discount Rate and of Liquidity Ratios during the classical gold standard : 1876-1913 by Andrea Sommariva and Giuseppe Tullio (September 1987).

No. 59 Profitability, real interest rates and fiscal crowding out in the OECD area 1960-1985 (An examination of the crowding out hypothesis within a portfolio model) by Jorgen Mortensen (October 1987).

No. 60 The two-handed growth strategy for Europe : Autonomy through flexible cooperation by J. Drèze, Ch. Wyplosz, Ch. Bean, Fr. Giavazzi and H. Giersch (October 1987).

No. 61 Collusive Behaviour, R & D, and European Policy by Alexis Jacquemin (November 1987).

No. 62 Inflation adjusted government budget deficits and their impact on the business cycle : empirical evidence for 8 industrial countries by G. Tullio (November 1987).

No. 63 Monetary Policy Coordination Within the EMS : Is There a Rule ? by M. Russo and G. Tullio (April 1988).

No. 64 Le Découplage de la Finance et de l'Economie - Contribution à l'Evaluation des Enjeux Européens dans la Révolution du Système Financier International par J.-Y. Haberer (Mai 1988).

No. 65 The completion of the internal market : results of macroeconomic model simulations by M. Catinat, E. Donni and A. Italianer (September 1988).

No. 66 Europe after the crash : economic policy in an era of adjustment by Charles Bean (September 1988).

No. 67 A Survey of the Economies of Scale by Cliff Pratten (October 1988).

No. 68 Economies of Scale and Intra-Community trade by Joachim Schwalbach (October 1988).

No. 69 Economies of Scale and the Integration of the European Economy : the Case of Italy by Rodolfo Helg and Pippo Ranci (October 1988).

No. 70 The Costs of Non-Europe - An assessment based on a formal Model of Imperfect Competition and Economies of Scale by A. Smith and A. Venables (October 1988).

No. 71 Competition and Innovation by P.A. Geroski (October 1988).

No. 72 Commerce Intra-Branche - Performances des firmes et analyse des échanges commerciaux dans la Communauté européenne par le Centre d'Etudes Prospectives et d'Informations Internationales de Paris (octobre 1988).

No. 73 Partial Equilibrium Calculations of the Impact of Internal Market Barriers in the European Community by Richard Cawley and Michael Davenport (October 1988).

No. 74 The exchange-rate question in Europe by Francesco Giavazzi (January 1989).

No. 75 The QUEST model (Version 1988) by Peter Bekx, Anne Bucher, Alexander Italianer, Matthias Mors (March 1989).

No. 76 Europe's Prospects for the 1990s by Herbert Giersch (May 1989)

No. 77 1992, Hype or Hope : A review by Alexander Italianer (February 1990)

No. 78 European labour markets : a long run view (CEPS Macroeconomic Policy Group 1989 Annual Report) by J.-P. Danthine, Ch. Bean, P. Bernholz and E. Malinvaud (February 1990)

No. 79 **Country Studies** - The United Kingdom by Tassos Belessiotis and Ralph Wilkinson (July 1990)

No. 80 See **"Länderstudien"** No. 1

No. 81 **Country Studies** - The Netherlands by Filip Keereman, Françoise Moreau and Cyriel Vanbelle (July 1990)

No. 82 **Country Studies** - Belgium by Johan Baras, Filip Keereman and Françoise Moreau (July 1990)

No. 83 Completion of the internal market : An application of Public Choice Theory by Manfred Teutemann (August 1990)

No. 84 Monetary and Fiscal Rules for Public Debt Sustainability by Marco Buti (September 1990)

No. 85 Are we at the beginning of a new long term expansion induced by technological change?, by AngeloReati (August 1991)

No. 86 Labour Mobility, Fiscal Solidarity and the Exchange Rate Regime: a Parable of European Union and Cohesion, by Jorge Braga de Macedo (October 1991)

No. 87 The Economics of Policies to Stabilize or Reduce Greenhouse Gas Emissions: the Case of CO_2, by Mathias Mors (October 1991)

No. 88 The Adequacy and Allocation of World Savings, by Javier Santillán (December 1991)

No. 89 Microeconomics of Saving, by Barbara Kauffmann (December 1991)