

Irish Economic Development over Three Decades of EU Membership

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Ireland – “the Celtic Tiger economy” – has been the European success story of the last decade. It is much less widely appreciated however how poor the country’s economic performance had been over previous decades. It is conventional today to expect poorer economies, as long as the basic requirements for growth have been met, to exhibit *real convergence*, i. e. to grow more rapidly than their richer neighbours. After all, the relative scarcity of capital in poorer economies should mean a high real return to capital, which is expected to stimulate high investment rates and strong capital inflows.

Ireland, however, did not deviate much from around 60 percent of the level of national income per head in the UK (the country’s single most important trading partner) between 1913 and 1985.¹ Trade liberalisation in the late 1950s, and EU accession in 1973, nevertheless changed the economic environment dramatically and sowed the seeds of the rapid real convergence experienced over the last decade or so. The fact that convergence did not take place until almost two decades of EU membership had passed is thought-provoking however, and the lessons of the earlier unsuccessful period – about processes and policies to be avoided – are therefore arguably as important as the lessons to be learned from an analysis of the country’s dramatic growth in the 1990s.

EU accession did not then – for quite some time – lead to a change in the country’s economic fortunes. Accordingly we set the scene, in Section 1, by considering the economic processes set in motion in the period before EU accession. Section 2 analyses the performance of the economy between EU accession and the beginnings of the boom in the late 1980s, and Section 3 discusses the causes and consequences of the Celtic Tiger era.

1. Irish Economic Conditions in the 1950s and 1960s

Ireland emerged from protectionism some time later than the rest of Western Europe. Accordingly it missed out on the post-war boom, recording

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¹ GNP rather than GDP is adopted as the measure of Irish national income. In earlier periods Irish GNP exceeded GDP because of the remittances of emigrants. The situation is sharply reversed today, with GDP almost 25 percent greater than GNP, because of the high level of profits accruing to foreign corporations located in Ireland.

an annual growth rate of less than 2 percent over the 1950s compared to one of almost 6 percent in the rest of Western Europe.

Industrial protectionism, introduced in the 1930s, initially raised the rate of employment growth in manufacturing, from 1.6 percent in the free-trade years after 1926, to an annual rate of 4.3 percent over the protectionist 1930s and 1940s. By the 1950s however, protectionism had run out of steam and manufacturing employment growth slowed to a rate of 0.8 percent per annum over the decade. Exports increased in response to the European post-war boom of course, though these were primarily agricultural in nature.² Imports of capital and consumer goods increased more rapidly, leading to a balance of payments crisis which necessitated contractionary aggregate-demand policies. Over the course of the 1950s, some 400,000 people out of a population of less than 3 million emigrated.

These harsh conditions eventually saw a reversal of the protectionist policy, which began to be dismantled in the late 1950s, at around the same time as Spain and Portugal. A free trade agreement with Ireland's predominant trading partner, the UK, came into force in 1966 and Ireland joined the EU (along with the UK and Denmark) in 1973.

The move towards openness was accompanied by the introduction of a zero tax rate on profits derived from manufactured exports and a liberalisation of the law on foreign ownership of companies.³ German and US companies, in particular, were quick to respond to these changes. The total stock of US FDI in Ireland was USD 6 million in 1958, with over 80 percent of it located in the petroleum sector and none in manufacturing. By the time of EU entry, the stock had risen to USD 269 million (in nominal terms), of which 90 percent was in manufacturing, with the bulk of the sector's output being exported.

In sectoral terms, two further SITC-1 sectors – Chemicals and Manufactured Goods Classified by Material (primarily Textiles, Clothing and Footwear) – had joined Food, Beverages and Tobacco as sectors in which Ireland displayed a revealed comparative advantage at the time of EU entry. Chemicals, in particular, had grown strongly – from less than one half of 1 percent to 6 percent of exports since the end of the protectionist era, while food sector exports had declined to 50 percent of the total.

The growth in foreign industry also contributed to a diversification of Ireland's export markets, with the UK share of manufacturing exports falling from 83 percent in 1959 to 63 percent in 1971, and the then 6-country EEC share rising from 6 percent to 16 percent over this same period.

The value of the tax regime to these newly entering firms may be discerned from this diversification of export activity away from the UK, even though in the years preceding accession Ireland faced an average nominal tariff of over 9 percent on EEC-bound industrial exports (after the implementation of the Kennedy round of GATT).

² As late as 1960, some 30 percent of exports consisted of live animals, another 30 percent were of other agricultural goods and only 19 percent were of manufactures.

³ As the bulk of the country's exports at that time were agricultural in nature, there was little diminution of the tax base when the concessionary tax rate was adopted.

Overall manufacturing employment growth had resumed again during the 1960s, at a rate of 2.3 percent per annum, with much higher productivity growth than during the protectionist period. This overall growth in manufacturing employment masked a number of contradictory underlying trends however. On the positive side, employment was increasing in the foreign-owned sector. The expanding sectors within indigenous industry were of three types: (i) nontraded goods, which enjoyed a degree of natural protection within the local market, (ii) sectors engaged in processing of local primary products, and (iii) the few exceptional industries which had had long-established track records in Ireland and which did not therefore need to overcome barriers to entry as newcomers (O'Malley, 1989). Manufacturing employment in most other sectors of indigenous industry went into decline in the face of growing import penetration. This was erratic in the early years of the 1960s but increased rapidly after the Anglo-Irish Free Trade Agreement of 1966⁴ came into force.

Older people in Ireland look back on the 1960s as a boom period, in contrast to the all-pervasive gloom of the 1950s. Yet, as pointed out earlier, even during this period there was no convergence on UK levels of national income per head. The increased growth simply matched the levels recorded elsewhere in this period, which has been termed "the European Golden Age".

Why should this have been the case? The conventional wisdom in Ireland is that the lack of convergence in this period is due to the legacy of the long delay in dropping protectionism, to heavy-handed state involvement in the economy, and to the fact that Ireland remained about 10 years behind the rest of Western Europe in increasing educational throughput, as state funding of secondary-level education was introduced only in 1966. This perspective however arises as a consequence of the countries chosen against which Irish performance is compared. Traditionally, Irish performance was matched against that of the UK, while more recently it has become conventional to assess performance against the EU average.

In Barry (2003b) however, the present author chooses a different control group against which to assess the Irish experience. This group consists of the other EU cohesion economies – those which along with Ireland have been the traditionally poorest EU member states – i.e. Greece, Spain and Portugal.

This analysis is vastly informative, particularly for the 1960s, since each of the cohesion economies other than Ireland experienced rapid real convergence on average EU levels of income per head, as seen in *Table 1*.

Barry (2003b) shows however that Ireland was no less open than the other cohesion economies during this period. Each moved towards trade liberalisation in the late 1950s and early 1960s, while, in terms of export shares, Ireland was far more open than any of the others. It was no more interventionist in terms of state involvement in the enterprise sector than were the others, with the possible exception of Greece. Nor did Ireland lag

⁴ The trade liberalisation of the period is illustrated by the fact that the average effective tariff level before the Free Trade Agreement was almost four times the level prevailing in the country's trading partners. This had declined to around twice the average level in the run-up to EU entry in 1973 (McAleese, 1971).

TABLE 1 GDP per head, PPS, EU15 = 100 (GNP for Ireland)

	1960	1973	1987	2000
Spain	60	77	74	82
Portugal	40	58	56	72
Greece	44	71	60	68
Ireland	64	61	61	97

Source: European Economy, Statistical Annex, various issues

behind the other cohesion states in terms of educational throughput. In this respect it was on a par with Greece and ahead of Spain and Portugal.

Of the factors that growth theory conventionally focuses on, only in the malfunctioning of its labour market did Ireland appear substantially different from the other countries.⁵ In Ireland, strong wage growth, high unemployment and high emigration coincided. The country at the time had an unemployment rate that exceeded the EU15 average by about 4 percentage points, a labour-productivity growth rate below that of the other cohesion countries (as well as the EU15) and more rapid real wage growth than in these other countries.

This suggests that Irish real wages were pitched at too high a level for labour-intensive industries to prosper. Domestically-owned firms failed to gain foreign market share while seeing their share of the home market eroded. Investment also suffered. Alone of the cohesion countries, Irish investment as a share of GDP was below the EU15 average. Only the significant levels of inward FDI propped up the manufacturing sector.

This experience provides important evidence on the corrosive effects that labour-market disequilibrium can have on growth and convergence prospects. Daveri and Tabellini (2000) present econometric evidence on this, and similar results emerge from the simulations of a macrosectoral model of the Czech economy carried out by Barry, Bradley, Kejak and Vavra (2003).

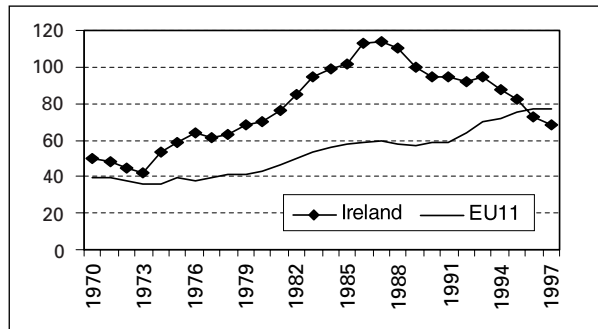
2. The Irish Economy from EU Accession to the Emergence of the Celtic Tiger

Ireland's accession to the EU in 1973 coincided with the first of the major oil shocks of the 1970s and with the slowdown in world productivity growth that brought an end to Europe's Golden Age. Eichengreen and Leblang (2003) chart how generally recessionary periods impede convergence. As seen in Table 1, none of the cohesion countries resumed convergence until the mid- to late 1980s.

Barry (2003b) argues that an important factor behind this general lack of convergence was a decline in the quality of macroeconomic policymaking in the cohesion countries. All had higher inflation than the EU average,

⁵ Ireland of course, in contrast to the others, remained democratic throughout the period. Barro and Sala-i-Martin (1995) however find that democracy impacts on growth only – if at all – through its impact on other relevant independent variables.

FIGURE 1 General Government Consolidated Gross Debt as Percentage of GDP, Ireland and EU11



Source: European Economy, Statistical Annex, various issues

suggesting excessively lax monetary and/or exchange rate policies, and most saw a dramatic decline in their fiscal positions.⁶ This suggests that there may be something in the political economy of poorer countries that makes their general macroeconomic stance particularly vulnerable to general economic slowdowns.

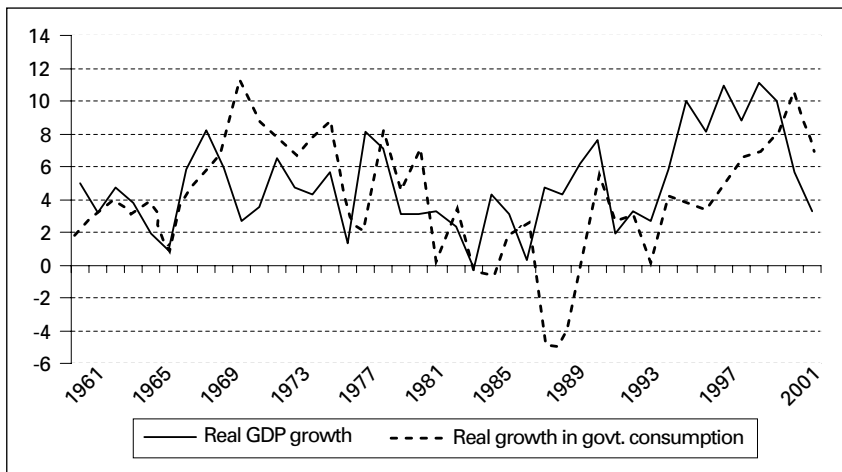
There is no substantial body of opinion, in Ireland at least, that associated the decline in Ireland's economic fortunes during the 1970s with the country's accession to the EU. Most accept that the blame is to be laid on the conduct of domestic macro policy. Hence we will discuss this before returning to developments at the sectoral and industry level.

The growth in Irish public debt as a proportion of GDP is shown in *Figure 1*. The Irish debt crisis, like the broader world debt crisis, came about as a response to the oil shocks of 1973 and 1979. The response in Ireland to the first shock was similar to that of the UK. A counter-cyclical fiscal policy was followed which resulted in a breaking of the traditional rule that there should be no deficit on the government's current account. By 1977 however, higher taxation and economic recovery had almost halved the current budget deficit.

A general election in that year prevented a return to the historical rule, as the political parties vied with each other in offering tax breaks and promises of increased public expenditure. The government which took power rapidly returned the current budget deficit-to-GDP ratio to the levels which had prevailed at the height of the previous recession. This represented a conscious attempt to provide a strong Keynesian stimulus to the economy. The policy, however, was strongly pro-cyclical, as can be seen in *Figure 2*. Employment boomed and there were historically unprecedented net inflows of migrants from the UK (with which Ireland shares an open labour market).

⁶ It may seem surprising to some that a mix of lax monetary and expansionary fiscal policies should lead to low growth. Fisher (1993) however shows that inflation and high budget deficits reduce growth by impacting adversely on both investment and productivity growth. Crafts and Toniolo (1996) and Barro (1991) focus particularly on the negative effects of growth in public-sector consumption and the distortions associated either with the expenditure programmes themselves or with the taxation required to finance them.

FIGURE 2 Growth in GDP and in Government Consumption Expenditures



Note: The figure shows only two episodes of clearly counter-cyclical fiscal actions, in the early 1970s and the late 1980s.

Source: European Economy, Statistical Annex, various issues

Barry and Bradley (1991) in a simulation of a macrosectoral model of the Irish economy found that this fiscal expansion knocked about three percentage points off the Irish unemployment rate – see *Table 2*. With very low multipliers prevailing in the Irish economy however it is no surprise that this came at the expense of a huge increase in the national debt.

With the jump in world interest rates in the early 1980s and a slowdown in the UK economy which reduced the incentive to migrate, Irish unemployment grew rapidly. Interest payments and social welfare payments soared, as seen in *Table 3*, and the debt ratio began to spiral out of control. It came to be recognised that the pro-cyclical fiscal expansion had been a grave mistake. A further pro-cyclical policy, though this time a contractionary one, would have to be undertaken in response to the crisis.

Patrick Honohan, who worked as an economic advisor to the government in the early to mid-1980s described (Honohan, 1988) the conventional wisdom among policymakers at the time the Keynesian policies were overturned. The “one-sector small open economy” perspective had begun to dominate. This holds that all sectors of the economy can be viewed as producing tradables that the country can sell in unlimited quantities at given world prices. In this perspective it follows that the necessary financial adjustment could be achieved without much adverse effect on unemployment and so, the argument went, public sector job losses were to be avoided. Furthermore, the tax wedge was not accorded sufficient attention: the job of balancing the budget, it was thought, could as easily be achieved by raising taxes as by the more politically-difficult method of cutting spending. And finally, since the country’s financial problems could be traced back to when

TABLE 2 Decomposition of Unemployment Changes: 1970–86

	1970/80	1979/86
External factors	1.09	3.00
Domestic policy factors	-2.53	4.41
Demographic factors	2.86	0.60
All factors combined	1.19	8.44
Historical data	1.5	10.2

Note: That the sum of the individual shocks does not add up exactly to the number representing “all factors combined” is due to the non-linear nature of the model.

Source: (Barry – Bradley, 1991)

TABLE 3 Changes in Real Government Spending, 1991 Irish pounds (millions)

	1981–85	1985–89	1989–91
Social welfare	687	-7	195
Interest	832	-234	143
Health	-33	-73	137
Education	68	121	54
Other current	198	-455	453
Total current	1753	-648	982
EBR ^a for capital	-767	-667	312

Note: ^a Exchequer Borrowing Requirement

Source: (Honohan, 1992)

the “no current deficits rule” had been broken, the task of fiscal correction was focussed on eliminating the current budget deficit.

The consequences of following this strategy became clear within a few years after 1982. Ireland had the fastest growing ratio of tax revenue to GNP in the OECD, while the growth in current spending relative to GNP continued. The tax burden raised wage demands, which exacerbated unemployment.⁷ At the same time the jump in world interest rates left less tax revenue for other than debt servicing purposes while the rise in unemployment due both to external and to internal factors automatically destabilised the government budget. The cyclically adjusted deficit declined substantially but this was not reflected in any decline in the actual budget deficit. In fact, despite quite severe fiscal contraction in the 1981–84 period the real current deficit actually rose.

The exchequer borrowing requirement thus remained stubbornly high, the debt to GNP ratio continued to grow, and despondency set in over the seeming inability of government to get the public finances under control. With a crisis by now widely perceived it is not so surprising that, contrary to the Ricardian Equivalence hypothesis, the fiscal contraction of the early to mid-1980s was associated with an increase in the private savings ratio. It has been argued that the setting of an unrealistic target (i. e. a balanced current budget) was partly to blame for this crisis of confidence.

⁷ As seen in Table 2, Barry and Bradley (1991) find that the fiscal contraction added some four and a half percentage points to unemployment up to 1986, more than offsetting the reduction in unemployment achieved over the expansionary period. Adverse external factors (including high interest rates and the generally weak world economy) added a further three percentage points to the unemployment rate.

TABLE 4 Sectoral Employment Levels (thousands)

	1961	1973	1987	2001
Market services	303	325	393	700
Manufacturing	186	233	215	302
Non-market services	109	152	233	340
Building and utilities	69	102	85	191
Agriculture	372	248	157	107
TOTAL	1039	1060	1083	1641

Source: ESRI/Department of Finance databank

The failure to cut government spending Honohan (1989) ascribes to three factors. First was the operation of automatic stabilisers as unemployment grew. Second there was a conscious decision to maintain the real value of welfare payments to shelter the least well-off, and third was the political make-up of the government: the coalition of “trade union and middle-class interests without a parliamentary majority failed to agree on the elimination or curtailment of any significant programmes or to implement real wage rate reductions in the public service”.

By the end of this period Irish unemployment stood at 17 percent, the second highest rate in the EU. In line with Fisher’s (1993) analysis, this poor macroeconomic policymaking must be regarded as the main culprit behind Ireland’s failure to converge over this period.

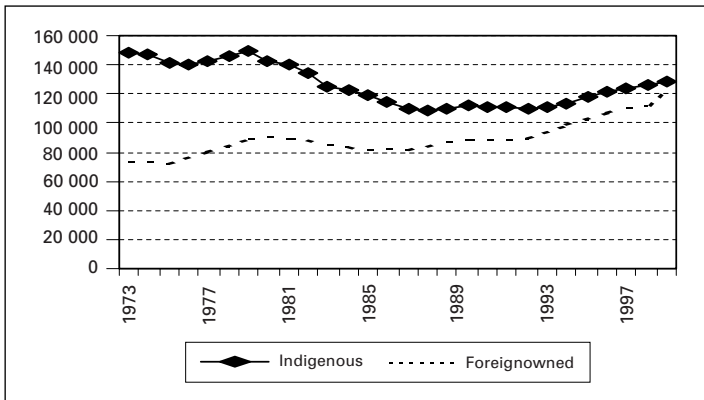
What was happening at the sectoral level at this time? Agriculture employment continued on its long-term downward trend, though the operation of the Common Agricultural Policy contributed significantly to the welfare of those remaining on the land as well as those engaged in agri-business.⁸ Non-market (public) services rose, as a consequence of the fiscal policies discussed earlier, as did market services – though at a much slower rate than that prevailing elsewhere in the EU – see *Table 4*. Building and utilities fell as a consequence of the generally recessionary environment, while manufacturing employment also declined.

Within manufacturing, EU entry brought a further substantial increase in employment in foreign-owned industry, with the number of jobs in this sector expanding by almost 40 percent between 1973 and 1980. This was to be expected as a consequence of the integration of a relatively low wage economy into the large EU market.⁹ This expansion was not sufficient to offset the decline in indigenous industrial employment however – see *Figure 3*.

Walsh and Whelan (1999/2000) argue that there were several offsetting forces acting on indigenous industry. Domestic-market oriented firms in sectors that became internationally tradable after the demise of protectionism were in terminal decline. Free trade did not transform many of these firms into successful exporters, making them particularly vulnerable to domestic

⁸ In 1976, for example, EU expenditures in relation to Irish agriculture amounted to 2 percent of GDP, in 1986 the figure was over 4 percent and in 1996 it was 3.5 percent of GDP (Matthews, various years). The trade effect (which takes into account the difference between EU-supported Irish export prices and world prices) added another 1.2 percent of GDP in the latter year (Matthews, 2000).

FIGURE 3 Employment in Indigenous and Foreign-owned Manufacturing



Source: Annual Reports of the Irish state agency Forfás

recession. It took a considerable period of time however, up until the birth of the Celtic Tiger era according to these authors, for the last of them to be cleared from the market.

Those firms which had already been export-oriented, however, and the new firms that arose (whether export-oriented or supplying to larger export-oriented firms) even in these traditional sectors did relatively well. At the same time, new foreign firms were entering in sectors in which Ireland had displayed no traditional comparative advantage, and new indigenous firms were emerging to supply to them.

The impact of these developments can be seen as follows. While the sectoral distribution of employment in domestically-owned industry in Ireland is quite dissimilar to that in the richer “core” EU economies, the similarity increases substantially when the sectoral distribution of foreign-owned industry is taken into account. Furthermore, the distribution within domestic industry has been growing more similar to that in the core, in contrast to what has been happening in Spain for example (Barrios – Barry – Strobl, 2003). The evidence provided by Görg and Strobl (2002, 2003) suggests that this arose because of the impact that Ireland’s large foreign-owned sector had on Irish indigenous entry and survival rates in these sectors.

The consequences of this will become clearer when we now turn to consider the long economic boom of the 1990s.

3. The Celtic Tiger Era

Ireland was subjected in the late 1980s to a series of more or less concurrent beneficial shocks, creating a “virtuous circle” for the economy. The effects were dramatic. Real national income per head rose from less than

⁹ There were equivalent FDI booms in Spain and Portugal following their accession in the 1980s. These tapered off by the mid-1990s, however, while Ireland’s has not, in large part because of its continuing low-corporation-tax regime.

65 percent of the EU average to achieve rough parity by the end of the 1990s. Unemployment tumbled from a high of 17 percent in 1987 to less than 4 percent in the early years of the new millennium. Numbers at work expanded by more than 50 percent.

The beneficial shocks included a change in fiscal strategy in 1987 which finally resolved the crisis in the public finances. This allowed room for future tax reductions, which, in combination with the country's newly developed "social partnership model" of wage determination, bolstered competitiveness. The doubling of the EU Structural Funds in 1989 allowed a rapid resumption in badly-needed infrastructural projects which had been put on hold as part of the change in fiscal strategy. Airline deregulation, in 1986, facilitated a more than doubling in tourism numbers over the following decade, and finally – crucially – the lead-up to the Single Market saw a huge increase in FDI flows both into and within Europe, of which Ireland captured a sharply increased share. We discuss each of these factors in turn.

3.1 The New Fiscal Strategy

A combination of factors in 1986–87 paved the way for a new and ultimately successful stabilisation attempt, which relied on cuts in government spending rather than further increases in taxation. Supportive supply-side developments included a devaluation of the currency within the Exchange Rate Mechanism (in response to a sharp fall in the sterling) and an improvement in cost competitiveness against the UK.¹⁰ Because of the concurrent fiscal contraction, the devaluation proved to yield a long-lasting gain in international competitiveness. Simultaneous demand-side developments included the lift-off in the world economy and particularly in the UK in 1987. Politically, the retrenchment process was facilitated by the emergence of a courageous political opposition leader who backed the government in its new fiscal strategy.

The actual expenditure reduction was the outcome of exogenous events as well as government policy, as can be seen in Table 3. The pick-up in the UK economy drew labour out of Ireland, reducing social welfare spending. Thus the Social Welfare bill fell even though the real value of social welfare payments was generally maintained. The National Debt Interest bill also fell; again this was partly fortuitous, driven by the lower world interest rates of the second half of the 1980s, though the fiscal contraction also reduced the interest-rate premium on Irish government debt.

The expenditure reductions that did take place consisted of the following: – a postponement of capital spending projects. During 1983–91 capital spending fell below its 1982 peak by a cumulative total of almost GBP 8 billion in 1991 prices;

¹⁰ Around one-third of Irish exports go to the UK, but the significance of the UK market to the Irish economy is greater than this, since much of the industry exporting there is Irish-owned and labour-intensive. Over the period 1980–86 UK imports of manufactures rose by more than 100 percent while manufacturing imports from Ireland grew only 80 percent. In 1986–91 though, imports from Ireland increased by more than total manufacturing imports.

TABLE 5 Main Components of Irish Public Finances over Various Periods

Change in % share of GNP	Phase A 1977–81	Phase B 1981–86	Phase C 1986–89	Phase D 1989–96
Primary deficit	4.5	-5.4	-9.6	-0.9
Borrowing	6.8	-2.7	-11.1	-4.1
Current deficit	4.8	0.9	-7.4	-2.1
Total tax	3.0	4.8	-0.9	0.3
Cycle-related and predetermined spending				
Interest	2.2	2.6	-1.4	-3.3
Transfers	2.2	5.5	-3.0	0.6
Discretionary spending				
Wages	3.4	-0.8	-3.4	0.4
Capital	2.5	-3.7	-3.6	1.3

Source: Irish government accounts

- postponement of public service salary increases;
- a recruitment embargo for public services, combined with an early retirement plan. Public sector employment (including the local authorities) fell by some 24,000 since 1982, yielding a gross savings in pay costs of around 2 percent of GNP;¹¹
- cash limits for autonomous agencies. Cutbacks in the grant-in-aid to non-commercial semi-state bodies achieved considerable expenditure restraint in these years.

Stabilisation of the debt-GNP ratio, which had replaced balancing the current budget as the target of fiscal policy, was finally achieved at the end of 1987 when the primary budget (i.e. net of interest payments) also went into surplus. Control of the current deficit thereafter became very much easier.

The main elements of the public finances are shown in *Table 5*.

Giavazzi and Pagano (1990) argue that the Irish recovery in the years following 1987 represented an example of “expansionary fiscal contraction”. This was a period in which inflation, unemployment and interest rates all fell rapidly, while private sector consumption and investment boomed. They argue that the positive response of the private sector to fiscal consolidation is especially dramatic under crisis conditions.

Barry and Devereux (1995) argue however that even under these circumstances increases in aggregate employment are unlikely, particularly in the tradable sectors of the economy, unless associated with improved cost competitiveness. Yet it was precisely in the tradable manufacturing sector that the strongest employment growth occurred in the years 1987–1990, in the wake of the fiscal contraction. Manufacturing employment grew by 8 percent in this period, well above the average rates for the OECD and EU, while market services, conventionally thought of as nontradable, grew by only 6 percent.

¹¹ This was partly funded by the Central Bank bringing forward dividend payments to the government; the amounts peaked at a cumulative 0.4 percent of GNP by 1989.

There are a number of other reasons to reject the demand-side view. First of all, the Irish recovery appears much less robust when presented against the backdrop of world market conditions. Since the Irish and UK labour markets are closely integrated, the gap between Irish and UK unemployment is arguably more revealing than the Irish unemployment rate per se. This gap rose during the period of fiscal contraction, in contrast to the decline experienced during the Irish fiscal expansion of the late 1970s. Employment growth in Ireland was also less than the UK or EU averages over this period while emigration proceeded at historically high levels.

The dramatic fall in Irish inflation (notwithstanding the 1986 devaluation) and the substantial improvement in the current account are also consistent with Irish aggregate demand being weak relative to that of the country's trading partners. Barry and Devereux (1995) conclude that "the factors which were working in the direction of recovery – buoyant world demand, improvements in cost competitiveness and an inflow of foreign investment in the lead-up to the Single European Market – more than outweighed the short-run *contractionary* effects of fiscal contraction".

3.2 Social Partnership

In contrast to the demand-side orientation of the expansionary fiscal contraction hypothesis, our emphasis is on the supply-side, as appears appropriate for a small open economy, as the main determinant of medium-term growth. The supply-side effects of the fiscal contraction arose through the scope it provided for future tax reductions.

The year of the change in fiscal strategy, 1987, also saw the introduction of the "social partnership" approach to wage determination, whereby government, unions and employers came together to agree on a general path for wages over the following three years. Successive governments have used the process to purchase wage moderation via the promise of future tax cuts, and these tax cuts have accounted for about one-third of the rise in real take-home pay since the partnership process began.¹²

Many commentators argue, furthermore, that the partnership approach promotes a shared understanding of key economic mechanisms and appropriate responses to external shocks between the groups involved.

3.3 The Structural and Cohesion Funds

Following reform and reorganisation in 1988 the level of EU regional aid increased substantially. Between 1989 and 1999 aid flows to Ireland through the Structural and Cohesion Funds amounted to almost 3 percent of GDP per annum, an amount similar to that flowing into the country via the Common Agricultural Policy. The timing of the increased aid was fortuitous in that it allowed a rapid resumption of the badly-needed infrastructural pro-

¹² The standard and top rates of income tax both fell by around 10 percentage points between 1988 and 1998, and the thresholds at which they applied were raised in real terms.

jects which had been put on hold as part of the fiscal contraction of the 1987–89 period.

The aid flows to Ireland are spent in almost equal proportions on human-resource development, on physical infrastructure and on production and investment aids to the private sector. If we take educational attainment data as a measure of human resource development and business enterprise expenditure on R&D as a measure of the health of the industrial sector, Barry (2003a) shows that the EU aid can be determined to have helped Ireland converge in terms of these target areas at least. In terms of physical infrastructure, the European Commission (2001) admits that “while investment in peripheral regions has improved accessibility, it has been accompanied by similar investment in neighbouring regions and more central ones, which can counteract any relative gain”. In this respect then, it may have done no more than prevent further divergence.

Careful analysis has shown however that the *direct effects* on GDP of these EU regional aid programmes would have been modest. In the Irish case Barry, Bradley and Hannan (2001) estimate that they would have contributed a maximum of about half of 1 percentage point per annum to the GDP growth rate of the 1990s, whereas the boom saw Irish average real growth exceeding that of the EU15 by around 6 percent per annum.¹³

By “direct effects” we mean the increased demand associated with EU transfers *plus the* supply-side effects associated with an improved stock of human capital and physical infrastructure, evaluated on the assumption that the response of Irish output is in line with estimates emerging from the international empirical literature. Barry (2003a) explores further possible indirect effects that the aid may have had however, suggesting that their interaction with other concurrent developments in the Irish economy may have made them particularly beneficial in the Irish case.

One of these indirect effects, the serendipity of their timing in the wake of the fiscal contraction, has already been discussed. The aid flows would also have facilitated the social partnership agreements by relaxing the government budget constraint, both directly (to the extent to which the principle of additionality can be side-stepped) and indirectly through the tax revenues associated with the increased FDI inflows that subsequently emerged.¹⁴

A second indirect effect concerns the impact of aid on the efficiency of the public administration system. As FitzGerald (1998) notes with reference to Ireland: “The need to satisfy the donor countries, through the EU Commission, that their money is well spent has resulted in the introduction of a set of evaluation procedures which has helped change the way the admini-

¹³ As the OECD (1999, footnote 32) points out however, even this apparently modest effect nevertheless represents quite a respectable internal rate of return, of 6 to 7 percent per annum, on the funds invested.

¹⁴ It would nevertheless be incorrect to conclude that EU aid generated the Irish boom by facilitating income tax reductions. Corporation tax is the most important tax relevant to the country's ability to attract FDI (Barry, 2003c). This has actually increased over time, from the zero rating on profits stemming from manufacturing exports that was introduced in the late 1950s, to a standard rate of 12.5 percent today.

nistration approaches public expenditure. In the past the only question, once money had been voted by parliament, was whether it had been spent in accordance with regulations. Now there is increasing interest in assessing how effective the expenditure has been.”

A further point of relevance is that the effectiveness of aid expenditures differs in different labour-market environments. The marginal product of public capital will be higher the more flexible the labour market is because it will be combined with higher utilisation rates of the other productive factors, labour and private capital. Ireland, of course, approached full employment over the course of the 1990s, unlike Spain for example.

The final indirect effect considered relates to the interaction between the aid programmes and Ireland’s FDI-oriented development strategy. Infrastructural constraints would have emerged far earlier in the boom had it not been for the EU funding of new infrastructures. Besides expanding the level of FDI inflows that the economy could handle, the aid would also have impacted on the type of FDI Ireland was able to attract. Foreign industry in Ireland has been becoming increasingly high-tech over recent decades, and this type of FDI is reliant on a steady supply of skilled labour, to which the human-resource programmes of the Structural Funds have contributed. Ireland’s increasing levels of R&D funding are likely to have had similar effects.

3.4 FDI Inflows

The final beneficial shock to which the economy was subject in the late 1980s was the development of the Single Market. This led to a doubling (in real terms) in the amount of investment undertaken by US firms in the EU between the early and the late 1980s.

Ireland’s share of these investments actually quadrupled over this period. Why? Barry, Gorg and Strobl (2003) present evidence that both “efficiency agglomerations” and “demonstration effects” were of importance in this regard. The (Marshallian) efficiency agglomerations, which determine that firms will locate close to others in the same industrial sector, arise because of (i) the importance of knowledge spillovers, (ii) the advantages provided by thick markets in specialised factors (particularly labour), and (iii) because of the scope for backward and forward linkages between customer and supplier firms. Demonstration effects arise as firms respond to the fact that others in the sector appear to have found a particular location to be advantageous. The importance of the latter is illustrated by the fact that surveys of executives of newly arriving foreign companies in the computer, instrument engineering, pharmaceutical and chemical sectors indicate that their location decision is now strongly influenced by the fact that other key market players are already located in Ireland.

Perhaps even more important however was the liberalisation of public procurement policies that the Single Market entailed. This prevented larger EU countries from using the threat of blacklisting publicly-funded purchases of a firm’s products as a lever to influence their location decisions,

TABLE 6 Irish Export Destinations (shares as a percent of all exports)

	1975	1985	1990	1995	2000
Asia excluding USSR	2.6	5.5	5.2	7.6	11.1
EU15 minus UK	27.9	39.6	44.2	46.8	39.9
UK	54.2	33.0	33.7	25.4	21.8
US	6.3	10.1	11.7	14.5	17.2

Source: UN International Trade Statistics

a practice which had operated to Ireland's considerable disadvantage (Mac Sharry – White, 2000).

The number of jobs in foreign-owned industry grew by 40 percent between 1987 and 1999, the era of the Single Market and the worldwide high-tech boom – almost the same growth that had been recorded in the period after EU entry.

Input-output linkages between the foreign and indigenous sectors have also expanded considerably over the years. Forfás, the Irish state agency, regularly publishes an Irish-economy expenditures survey which provides data on the wages paid and Irish materials and services purchased by foreign and indigenous firms, as well as indigenous-firm profits and corporation tax revenues received from foreign firms.¹⁵ These data show that real Irish economy expenditures per employee rose by around 50 percent between 1983 and 1995 for both types of firms.

Notwithstanding the fact that Irish economy expenditures per employee are lower for foreign industry, the employment that the latter creates is estimated to be higher because of the greater share of spending directed towards services – in contrast on the indigenous sector, for whom the bulk of spending goes to materials. A ballpark estimate is suggested of around one hundred service sector jobs and ten indigenous manufacturing jobs created via backward-linkages per one hundred foreign manufacturing jobs.

The FDI inflows of the period contributed to a further diversification of Irish export markets, as the foreign-owned sector in particular has increased its orientation towards the US.¹⁶ The changing destination of Irish exports over time is depicted in *Table 6*.

4. Conclusions

There are important lessons to be drawn from the Irish experience over each of the periods considered here. Analysis of the 1950s warns that protectionism, in small economies at least, will ultimately run out of steam. Ireland opened up to free trade in the 1960s. Foreign export-oriented industry began to operate out of Ireland but indigenous industry remained

¹⁵ Forfás is the Irish national policy and advisory board for enterprise, trade, science, technology and innovation.

¹⁶ The share of the output of US firms based in Ireland that was exported to the US grew from 9.5 percent in 1995 to 17.6 percent in 1999.

overly focused on the domestic market. This was to prove extremely detrimental in the 1970s when full trade liberalisation occurred, and in the 1980s when the domestic economy stagnated.

The coincidence of strong wage growth alongside high unemployment and high emigration suggests a great deal of inflexibility in the Irish labour market of the time, and this appears to be the main factor accounting for the lack of convergence over the 1960s at least. It impacted adversely on investment and would have made it particularly difficult for the labour-intensive sectors, in which most indigenous firms were located, to prosper.

The situation worsened over the 1970s and particularly the 1980s as a result of misguided fiscal policies. A strong pro-cyclical expansion was engineered which gave some stimulus to the economy. When it was ultimately reversed, due to the build-up in debt and debt-service payments, the pro-cyclical contraction was far more powerful in the opposite direction.

At the same time, however, some beneficial developments were taking place behind the scenes. The economy's stock of human capital was expanding through education, facilitating the attempt to raise the quality of FDI inflows. As the older home-market oriented indigenous firms died out – with detrimental employment effects – they were gradually replaced by more dynamic firms which were either export-oriented themselves or were engaged in supplying to the export sectors. Thus Ireland had a more promising pool of firms to begin with when conditions improved in the late 1980s.

The lessons from the Celtic Tiger era have already been spelt out elsewhere, e.g. in (Barry, 2000). It is clear that fiscal profligacy is detrimental to the economy. Tax cuts may then be beneficial, particularly if they promote wage moderation, though in Ireland today, after a decade of tax-cutting, the main item on the political agenda is the resulting poor quality and inadequate levels of infrastructure and public services. This suggests that the tax-cutting regime may have been taken too far.

Other types of labour-market institutions appear equally capable of promoting wage moderation and industrial peace. One recalls Eichen-green's (1996) argument that the wage moderation negotiated in exchange for the development of a strong social infrastructure was key to post-war Western European economic development.

With respect to EU aid, it is important to recognise that it alone cannot guarantee convergence. This will be obvious from the experience of the Italian Mezzogiorno for example. It is likely to be of greatest benefit when the other conditions for real convergence are satisfied.

Though Ireland's development strategy has been based substantially on attracting inward FDI in high-tech manufacturing sectors, other countries have successfully followed alternative paths. Portugal for example has experienced substantial real convergence with a manufacturing sector that remains dominated by indigenous low-tech industry. Labour-market flexibility appears to be particularly important along this development path.¹⁷

¹⁷ Some of the features accounting for the flexibility of the Portuguese labour market include low unemployment protection, low levels of unionisation and the existence of supplementary jobs in agriculture (Corkill, 1999).

Finland represents another interesting case – of a geographically peripheral though not historically poor country – which has prospered through indigenous high-tech industry.

A danger inherent in the Irish development strategy is the continuing structural weakness of the indigenous sector. This is frequently masked by the strength of the economy's foreign sector. Indigenous manufacturing firms still have a relatively low export-output ratio (of less than one-third). They are strongly dependent on the UK market, and are even more highly exposed to sterling fluctuations. They are primarily located in low-tech sectors, and engage in very little R&D. Hence the economy is vulnerable in the event of circumstances impinging on its ability to attract foreign industry.

Some Central and Eastern European countries such as Hungary and Estonia have followed Ireland in adopting low corporation-tax rates to attract export-oriented FDI. Others however, including the Czech Republic, have rates that are not much different from those prevailing in most EU countries. The Portuguese and Finnish experiences – amongst others – suggest that this will not necessarily hinder real convergence prospects for the CEE economies. Each development path requires a particular constellation of advantageous factors however. A high degree of labour-market flexibility appears to be required if countries are to successfully follow the low-tech Portuguese route, while a strong R&D environment, a high level of industrial sophistication and an abundance of human capital would appear to be required if the Finnish development path is to be replicated.

REFERENCES

- BARRO, R. (1991): Economic Growth in a Cross-Section of Countries. *Quarterly Journal of Economics*, vol. 106, 1991, pp. 407–43.
- BARRO, R. – SALA-I-MARTIN, X. (1995): *Economic Growth*. New York, McGraw-Hill, 1995.
- BARRIOS, S. – BARRY, F. – STROBL, E. (2003): *FDI and Structural Convergence in the EU Periphery*. University College Dublin, 2003 – mimeo.
- BARRY, F. (2000): Convergence is not Automatic: Lessons from Ireland for Central and Eastern Europe. *World Economy*, vol. 23, 2000, no. 10, pp. 1379–1394.
- BARRY, F. (2003a): European Union Regional Aid and Irish Economic Development. In: Funck, B. – Pizzati, L. (eds.): *European Integration, Regional Policy and Growth*. Washington, World Bank, 2003.
- BARRY, F. (2003b): Economic Integration and Convergence Processes in the EU Cohesion Countries. *Journal of Common Market Studies* – forthcoming.
- BARRY, F. (2003c): Tax Policy, FDI and the Irish Economic Boom of the 1990s. *Economic Analysis and Policy – Journal of the Economic Society of Australia* (Queensland) – special issue on International Taxation and Foreign Investment – forthcoming.
- BARRY, F. – BRADLEY, J. (1991): On the Causes of Ireland's Unemployment. *Economic and Social Review*, vol. 22, 1991, no. 4, pp. 253–286.
- BARRY, F. – BRADLEY, J. – HANNAN, A. (2001): The Single Market, the Structural Funds and Ireland's Recent Economic Growth. *Journal of Common Market Studies*, vol. 39, 2001, no. 3, pp. 537–52.
- BARRY, F. – BRADLEY, J. – KEJAK, M. – VAVRA, D. (2000): The Czech Economic Transition: Exploring Options Using a Macrosectoral Model. *CERGE-EI Working Papers Series*, no. WP 158. – forthcoming in *Economics of Transition*.

- BARRY, F. – DEVEREUX, M. B. (1995): The Expansionary Fiscal Contraction Hypothesis: A Neo-Keynesian Analysis. *Oxford Economic Papers*, vol. 47, 1995, pp. 249–264.
- BARRY, F. – GORG, H. – STROBL, E. (2003): Foreign Direct Investment, Agglomerations and Demonstration Effects: An Empirical Investigation. *Weltwirtschaftliches Archiv* – forthcoming.
- CORKILL, D. (1999): *The Development of the Portuguese Economy: A Case of Europeanisation*. London, Routledge, 1999.
- CRAFTS, N. F. – TONIOLO, G. (1996): Postwar Growth: An Overview. In: Crafts, N. – Toniolo, G. (eds.): *European Economic Growth*. Cambridge, CUP, 1996.
- DAVERI, F. – TABELLINI, G. (2000): Unemployment, Growth and Taxation in Industrial Countries. *Economic Policy*, vol. 30, 2000, pp. 47–104.
- EICHENGREEN, B. (1996): Institutions and Economic Growth: Europe after World War II. In: Crafts, N. – Toniolo, G. (eds.): *European Economic Growth*. Cambridge, CUP, 1996.
- EICHENGREEN, B. – LEBLANG, D. (2003): Exchange Rates and Cohesion: Historical Perspectives and Political-Economy Considerations. *Journal of Common Market Studies* – forthcoming.
- EUROPEAN COMMISSION (2001): *Second Report on Economic and Social Cohesion*.
- FISCHER, S. (1993): The Role of Macroeconomic Factors in Growth. *Journal of Monetary Economics*, vol. 32, 1993, pp. 485–512.
- FITZGERALD, J. (1998): An Irish Perspective on the Structural Funds. *European Planning Studies*, vol. 6, 1998, no. 6, pp. 677–694.
- GIAVAZZI, F. – PAGANO, M. (1990): Can Severe Fiscal Contractions be Expansionary? A Tale of Two Small Economies. *National Bureau of Economic Research Macroeconomics Annual 1990* (eds.: O. Blanchard – S. Fischer), pp. 75–110.
- GÖRG, H. – STROBL, E. (2002): Multinational companies and indigenous development: An empirical analysis. *European Economic Review*, vol. 46, 2002, no. 7, pp. 1305–1322.
- GÖRG, H. – STROBL, E. (2003): Multinational Companies, Technology Spillovers and Plant Survival: Evidence for Irish Manufacturing. *Scandinavian Journal of Economics* – forthcoming.
- HONOHAN, P. (1988): The Role of the Adviser and the Evolution of the Public Service. In: Hederman, M. (ed.): *The Clash of Ideas: Essays in Honour of Patrick Lynch*. Dublin, Gill and Macmillan, 1988.
- HONOHAN, P. (1989): Comment on Dornbusch: Credibility, Debt and Unemployment – Ireland's Failed Stabilisation. *Economic Policy*, vol. 8, 1989, pp. 202–205.
- HONOHAN, P. (1992): Fiscal Adjustment in Ireland in the 1980s. *Economic and Social Review*, vol. 23, 1992, no. 3, pp. 285–314.
- McALEESE, D. (1971): *Effective Tariffs and the Structure of Industrial Production in Ireland*. Dublin, Economic and Social Research Institute, 1971.
- MacSHARRY, R. – WHITE, P. (2000): *The Making of the Celtic Tiger: The Inside Story of Ireland's Booming Economy*. Dublin, Mercier Press, 2000.
- MATTHEWS, A. (1987, 1995, 2000): Agriculture. In: O'Hagan, J. (ed.): *The Economy of Ireland*. Dublin, Gill and Macmillan, 1987, 1995, 2000.
- MATTHEWS, A. (2000): *Farm Incomes: Myths and Reality*. Cork, Cork University Press, 2000.
- OECD (1999): *OECD Economic Surveys: Ireland*. Paris, Organisation for Economic Co-operation and Development, 1999.
- O'MALLEY, E. (1989): *Industry and Economic Development: the Challenge for the Latecomer*. Dublin, Gill and Macmillan, 1989.
- WALSH, P. – WHELAN, C. (1999/2000): The Importance of Structural Change in Industry for Growth. *Journal of the Statistical and Social Inquiry Society of Ireland*, vol. 29, pp. 1–32.

SUMMARY

JEL Classification: E65, F14, F43, O52

Keywords: Ireland – economic development – European Union

Irish Economic Development over Three Decades of EU Membership

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This paper draws out lessons from Ireland's economic experience over the course of EU membership. The author starts with a description of the effects of opening up to free trade, and highlights the problems of the 1970s and 1980s that arose as a consequence of misguided fiscal policy. He then turns to the beneficial developments that paved the way to the emergence of the "Celtic Tiger" economy. EU aid alone, he argues, cannot guarantee convergence. It is likely to be of greatest benefit when the other conditions for real convergence – including a well-functioning labour market, reform-oriented microeconomic policy and macroeconomic stability – are also in place. For countries attempting to follow the Irish strategy of attracting inward FDI in high-tech manufacturing sectors, the author emphasises that low corporation-tax rates are only one part of the story. A supportive public administration system and an abundance of human capital of the appropriate type are also key requirements.