

The Economic and Social Research Institute

Ireland's Failure - and Belated Convergence

by

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ESRI Working Paper No. 133

September 2000



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1. INTRODUCTION

Ireland began its career as an independent state with many advantages. In particular, its standard of living in 1922 was higher than that of many other countries in Western Europe (Kennedy *et al.*, 1988). In spite of these advantages, its ranking within Europe in terms of standard of living fell over the following 40 years. In the 15 years after the Second World War its economic performance was dismal, and some of this failure must be attributed to the inappropriate policies of successive post-war governments, continuing the protectionist stance of the pre-war years (O'Grada, 1994). With this background, the story of the Irish economy in the 20th century may be better considered as a case study in failure: the current boom is better seen as a belated catching up, consequent on the reversal of the ill-conceived policies of the immediate post-war years, rather than as an "economic miracle".

The strategy of economic development adopted in Ireland since 1960 has involved the belated opening up of the goods and the capital markets as part of the long-term process of EU integration. However, there was more to Ireland's belated success than merely a liberalisation of markets. There was also active intervention by the state in investing, also belatedly, in human capital and in directly encouraging foreign direct investment. This two pronged approach has been pursued with consistency by all governments over the last 30 years. There were also a series of "enabling" factors that have facilitated the success of the last decade, as well as some policy mistakes that have rendered the convergence path unnecessarily bumpy.

The next Section discusses some of the features that make the Irish experience different from that of its neighbours, factors that help explain its rather different performance in the 1990s. Section 3 discusses the economic record of the last 40 years and Section 4 analyses the process of convergence in the context of a simple model of the labour market.

2 ECONOMIC BACKGROUND

European Integration

The Irish economy maintained high protective barriers against imports until the end of the 1950s. When the rest of Western Europe was embracing free trade and beginning the process of European integration Ireland continued with policies more characteristic of the 1930s. It was not until the end of the 1950s that the dismal failure of this approach was recognised and the dismantling of tariff barriers begun.

Stages on the way to freeing of trade were the Anglo-Irish Free Trade Agreement of 1965 and EU membership in 1973. It was this latter event that was crucial in transforming the Irish economy, having both a direct economic impact, as well as a wider cultural impact. Without EU membership the process of convergence of living standards to the EU level would not have taken place.

The economic adjustment to the changing circumstances had costs as well as benefits. The costs were seen in the closure of many businesses as the economy adjusted. This process of adjustment continued into the 1980s but it is now largely complete. A corollary of this process of adjustment by existing industry was the introduction of new foreign owned businesses across a wide range of sectors, but especially in certain key areas of manufacturing industry. The new multinational industry came to Ireland because it offered access to the EU market. Without such access Ireland would have been of little interest as a location for investment from the early 1970s onwards.

Membership of the EU was particularly important in the access it gave to the wider EU market for agricultural produce under the CAP. Even before membership in 1973, the impact of the impending CAP began changing Irish agriculture. While the CAP and the agricultural sector were crucial to the economy at the time of membership, their significance has steadily fallen. Nonetheless, the EU receipts as part of the CAP remain larger than all the receipts under the Structural Funds and the direction CAP reform will take in the next decade will still be an important political issue for future Irish governments.¹

In the long run, more important than any other economic feature of EU membership, is the access to the single market. The single market reforms were expected to bring significantly greater benefits to Ireland than the related increase in Structural Funds (Bradley *et al.*, 1992, Barry, Bradley *et al.*, 1997). The extent of the integration of the Irish economy into the wider EU economy means that Ireland's economic interests are now inextricably tied up with those of its EU neighbours.

While the structural fund payments from the EU have played a significant role in underpinning essential public investment in the 1990s, their overall role in promoting economic convergence has been limited (Fitz Gerald, 1998), though nonetheless welcome. At least as important as the actual investment has been the way the structural fund process has affected the administrative and political system. Without the stimulus of the CSF Ireland could have found itself suffering from even greater underinvestment than is actually the case in the face of rapid growth in recent years.

Foreign Direct Investment

A key feature of the changing structure of the Irish economy from the end of the 1950s has been the growing importance of foreign direct investment (FDI), in particular in the manufacturing sector. In 1960 the Irish economy was heavily dependent on agriculture. The concentration on this sector was much greater than for other neighbouring countries. There was a need to shift attention to the industrial sector so that industrial growth would counter-balance the inevitable decline in the importance of agriculture. This was reflected in the change in industrial policy in the late 1950s to favour foreign investment in manufacturing. It is now clear that this process has played a very important role in transforming the economy.

¹ Because of the greatly diminished size of the agricultural sector, the outcome of the process of reforming the CAP over the next decade will not have a major economic impact.

The strategy, which relied originally on tax breaks, now relies heavily on the availability of skilled labour to attract foreign firms. The concentration on certain sub-sectors of manufacturing, such as computers and electronics, also appears to have been beneficial.

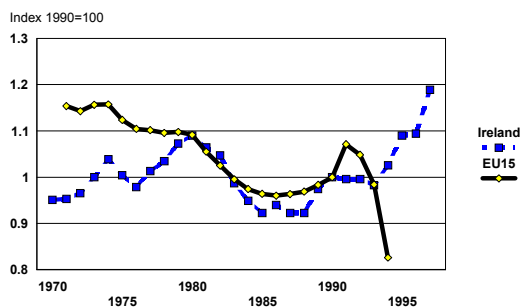
It is important to recognise the consistency with which industrial policy has been pursued by all governments for 40 years (Ruane, 1997). Such a strategic approach to economic policy mirrors that of some Asian countries in more recent times, and it highlights the importance of creating an environment of certainty for foreign investors. While the extent of the concentration on developing the multinational sector at the expense of attention to existing domestic firms has frequently been called into question, some of the promised fruits of that policy are currently to be seen in the rapid growth in the manufacturing sector (Barry, Bradley, and O'Malley, 1999).

While the low rate of corporation tax has long been the key incentive for locating investment in Ireland, since the late 1980s the availability of skilled labour at a reasonable cost has grown in importance as an attraction for foreign multinationals (Barry and Bradley, 1997). The location decision of multinational firms is a function of the relative cost of production in a range of different possible competing locations (Bradley and Fitz Gerald, 1988). The cost of production itself is affected by the tax regime, labour costs, the cost of capital and the cost of other services bought in locally.

As well as bringing a demand for skilled labour, the advent of multinational firms also brought new management skills and access to a range of technologies that were not available locally. In recent years there has been some sign of a transfer of these skills to local firms. In addition, the growth in the critical mass of firms operating in the high technology sectors has seen a rise in the local labour market's supply of necessary skills.

The high proportion of foreign direct investment in the Irish manufacturing sector and its export-oriented development makes the Irish economy quite unique among the EU peripheral members. At this stage foreign owned firms account for over half of all output in manufacturing and almost half of all employment (Barry, Bradley, and O'Malley, 1999). Foreign owned manufacturing firms export almost 90% of their output whereas Irish-owned manufacturing firms export around 36% of output. Thus the influx of foreign-owned firms over four decades has played a vital role in opening up the economy.

Figure 1: Manufacturing Employment 1970-1996



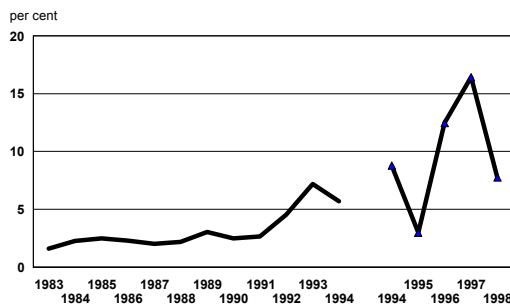
Source: OECD Historical Statistics and Duffy et al. 1997

The result of this outward-oriented strategy was that there was a significant restructuring of the manufacturing sector, especially in the 1970s and 1980s. Production in manufacturing shifted from dominance by a largely indigenous, low-technology, group of “traditional” industries, which had strong links to the domestic and UK market, to the current dominance by a group of “high-technology” industries, concentrated in electronics and pharmaceuticals. This group is largely foreign-owned and export-oriented.

During the 1980s this restructuring resulted in a sharp decline in employment in manufacturing and led many commentators to question the wisdom of deliberately courting foreign firms. It was argued that the relatively low labour-intensity of production in the foreign-owned sector, and its low linkages with the domestic economy, signalled a danger that the indigenous sector was being crowded out and that the economy was becoming increasingly reliant on foot-loose foreign multinationals.

However, the restructuring within the traditional group of industries was an inevitable consequence of the progressive opening of the economy to international trade. External pressures from low-wage competing countries forced many inefficient industries out of production. Similar adjustments occurred in the manufacturing sector of most developed countries, albeit over a longer period.² Viewed in this context, the pro-active industrial strategy pursued by Irish policy makers was central to the long-term development of a strong industrial base. Indeed Irish employment in manufacturing between 1975 and 1991 grew more strongly than the EU average, despite its poor performance in absolute terms. The long-term downward trend in EU manufacturing employment can be seen in Figure 1.

Figure 2: Ireland's Share of US FDI into the EU



Source: US Survey of Current Business. Data 1983-1994 are Capital Expenditure by Foreign Affiliates of US Companies; Data post 1994 are Direct Investment Abroad

The success of this strategy of attracting foreign investment is illustrated in Figure 2. In particular in the 1990s, Ireland's share of all US foreign direct investment into the EU averaged well over 5 per cent, with even higher levels achieved in the most recent years.

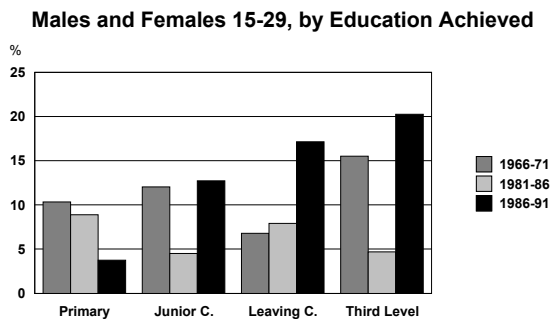
² In the 1990s many countries in Central Europe have had to undergo such a transition in a much more extreme form over a shorter period than was the case for Ireland.

With the increasing concentration of these firms in high technology sectors, the new investment has significantly tightened the market for skilled labour.

Migration

While Ireland in the period 1930 to 1960 had a very closed goods market, as a result of protection, it was unusual in the openness of the labour market. A very high proportion of the young population emigrated in the first six decades of the century and the bulk of them did not return. However, from the 1960s onwards this experience of emigration has gradually changed. By the 1970s a significant number of emigrants were beginning to return and this trend has gradually increased over the last twenty years. Today emigration is still part of the experience of up to a quarter of each generation (and of every family) but the difference is that the emigrants of to-day are seen more as "homing pigeons".

Figure 3: Proportion of Cohort Emigrating



Source: Fahey, Fitz Gerald and Maître, 1998

Set out in Figures 3 and 4 is an analysis of net emigration classified by the educational attainment of the emigrants. The data show a fairly similar pattern in the late 1980s to the late 1960s, in terms of the proportion of the cohort of 15 to 29 year olds emigrating (Figure 3). However, the second half of the 1980s saw a big change in the educational attainment of the emigrants. Up to the early 1980s the bulk of emigrants had limited educational attainment. Over the course of that decade the composition of emigration changed dramatically. (Figure 4). Around a third of the emigrants had a third level education in the late 1980s, compared to under 20% in the 1960s. In the late 1980s there was very little emigration by people with only a primary education, whereas they accounted for the bulk of emigrants in the 1960s. This latter change reflects the fact that the Irish welfare system, which was almost non-existent in 1960, grew to be more generous than that of the UK by the late 1980s.

Figure 4: Education of Emigrants

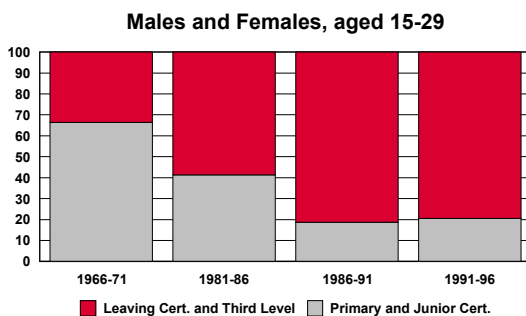
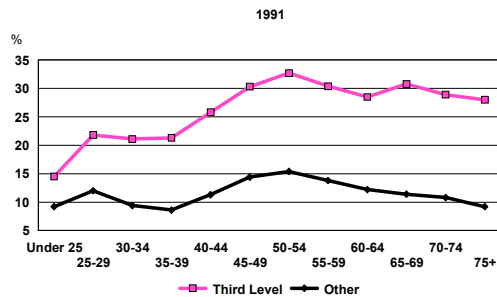


Figure 5: Males Who Have Resided Abroad



Source: CSO Census of Population

While those with a good education are now more likely to emigrate than those with only a primary education, they are also more likely to come back. As shown in Figure 5, in 1991 over a quarter of all those in the country (males and females) with a third level education had lived abroad for at least a year. For all other educational categories the proportion was 10 or 15 per cent. While the latter figure is exceptionally high by the standards of other EU countries, it still suggests a much lower return rate than for those with third level education. It means that, even in the face of continuing substantial gross outflows, the fact that individuals return with additional experience from working abroad may actually enhance the return from investment in education (Barrett, 2000).

Currently there is substantial net immigration. Over half of those coming to work in Ireland are returning emigrants, but in the last 3 or 4 years around 50% of them were not born in Ireland. In the case of new immigrants, whether or not they are Irish, the vast bulk of them have third level education (Barrett and Trace, 1998) and they have played an important role in helping the economy to grow at such a rapid pace. The high level of education of immigrants contrasts with the experience of other EU countries.

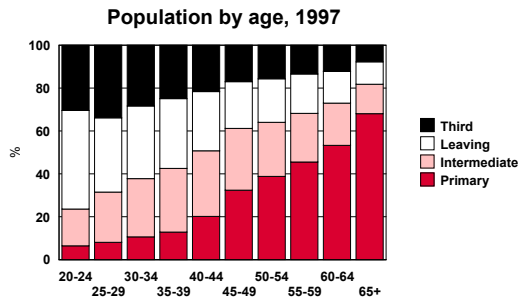
From an economic point of view this high degree of mobility, especially for skilled labour, greatly increases the elasticity of labour supply. As discussed later, this has tended to keep Irish skilled labour costs from rising rapidly. It makes the Irish labour market behave more like that of a US state than that of other EU national labour markets. What is also interesting is the extent to which the mobility now involves skilled individuals who are citizens of other EU countries – the UK, Germany, France, Sweden, Finland and the Netherlands. While a significant number of these immigrants are spouses or partners of returning Irish emigrants (Finneran and Punch, 1999), many of them have no traditional association with the country.

Education

In the immediate post-war years all of Northern Europe, with the exception of Ireland, began a major programme of public investment in human capital, greatly increasing participation in both second and third level. In Ireland, by contrast, the immediate post-war years saw no recognition of the need for change in this area. It was not until after the publication in 1966 of

an OECD report, *Investment in Education*³, that free second level education was introduced in 1967. Since then the strategy of investing in education has been pursued by successive governments.

Figure 6: Educational Attainment



Source: Labour Force Survey micro data

Even in the 1980s, when many other sectors suffered severe financial cutbacks, the education system was largely protected, and participation rates continued to rise. In fact, the rise in participation rates since 1980 has been even greater than that which occurred under the first 15 years of the “free education” policy. The effects of this policy can be seen in Figure 6, which shows the educational attainment of the population by age. Latest data indicate that throughout the 1990s participation in third level education has continued to rise, with around 80% of the 1995 school-leaving cohort having a leaving cert. and over 50% continuing on to some form of third level education.⁴ On average women have been slightly better educated than men throughout the last two generations, but the gap has, until recently, been relatively small.

This long-tailed impact of the change in educational policy is not surprising. Many of the other countries of Northern Europe, which invested heavily in education in the immediate post-war years, saw rapid rates of growth up to and including the 1970s. Ireland began 20 years late and is seeing the benefits of the investment 20 years after its Northern European counterparts (Koman and Marin, 1996).

Enabling Factors

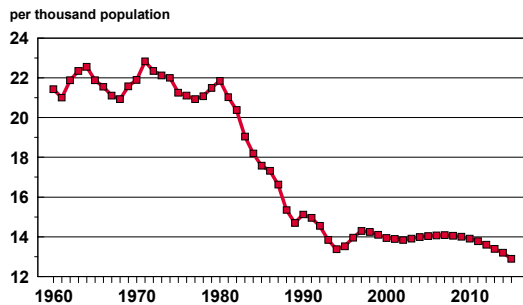
As well as the broadly favourable external environment and the pursuit of suitable development policies, there are a number of other factors that have facilitated the rapid convergence of living standards to the EU average in the 1990s. Among the most important of these is the unusual demographic structure, the restoration to order of the public finances,

³This study was undertaken with the help of the OECD. It was commissioned in 1962 and published in 1966. Among its authors were Professor P. Lynch of UCD and Professor M. O’Donoghue of TCD.

⁴The figures for participation are significantly higher for women than for men.

and the development of a social partnership model suitable to the changed circumstances of the economy and society in the 1990s.

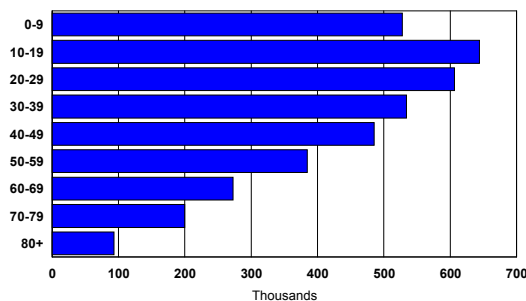
Figure 7: The Birth Rate



While the post-war baby boom petered out in most of the rest of Europe by 1960, Ireland continued to have a very high birth rate until 1980. Since then it has fallen fairly steadily (Figure 7). This delayed fall in fertility has meant that the supply of young people coming onto the labour market has, until now, continued to rise rapidly, long after it had fallen off elsewhere in the EU. It is only in the next five years that the inevitable consequence of the post-1980 decline in the birth rate will come to impact on the labour market.

The combination of this delayed pattern of fertility decline and the lasting effects of the high emigration in the pre-1960 period, makes the Irish population structure very unusual by the standards of the EU. Figure 8 shows the age structure of the population in 1999.

Figure 8: Structure of the Population, 1999



The effects of the “baby boom” of the 1970s can be seen in today's cohort of teenagers that is larger than any cohort that went before, and also larger than the cohort of children aged under 10. The size of this cohort relative to all others will continue to influence the Irish population profile for decades to come. The very rapid fall off in the population aged over 60 reflects the continuing effects of the very high level of emigration in the 1950s. This means that the number of people in the retired age groups will remain relatively low for another 20 years.

Figure 9: Economic Dependency

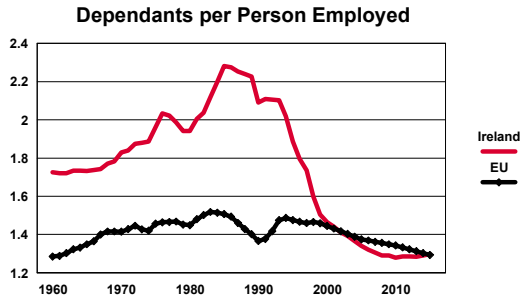
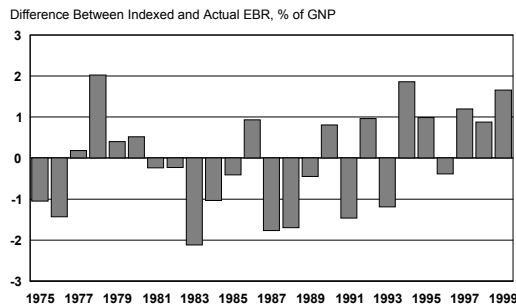


Figure 9 shows the movement in the economic dependency ratio for Ireland relative to that of the EU. This ratio measures the proportion of the population not working relative to those working. A combination of many children and low labour force participation meant that Ireland had a much higher dependency ratio than the rest of the EU in the 1960s and the 1970s. In the 1980s rising unemployment further aggravated this situation. However, the changing demographic structure and the improving economic circumstances have been reinforcing one another since the late 1980s, so that Ireland is facing an exceptionally favourable demographic structure in the current period. It is only in the twenty years after 2015 that the rate of old-age dependency will begin to rise rapidly, as it is currently doing in EU countries, such as Germany.

A second important factor that has affected the pattern of economic convergence, if not the convergence process itself, has been the course of fiscal policy. The serious policy mistakes of the 1970s laid up problems that dogged the economy in the 1980s. The failure to tackle these problems sufficiently rapidly aggravated the situation, increasing the ultimate cost of the necessary correction on output and employment. Of course, without the fiscal correction that took place over the course of the 1980s, the convergence in living standards would not have been possible.

Figure 10: Stance of Fiscal Policy



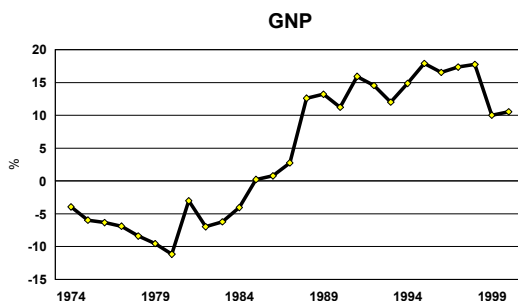
Source: Duffy, Fitz Gerald, Kearney and Smyth, 1999

While some outside observers have suggested that the nature of the adjustment process meant that the costs were small (Giavazzi and Pagano, 1990), the work of Whelan, 1991, indicates that this was not, in fact, the case. The serious costs of the fiscal contraction were offset by the fortuitous effects of an acceleration in the rate economic growth in the outside world.

In Figure 10 we show the stance of fiscal policy on a year by year basis since 1974. Eight out of ten budgets over the course of the period 1980 to 1989 were deflationary. This was necessary to correct the huge imbalance in the public finances and it represented a strongly pro-cyclical fiscal stance at a time of very low growth. Over the 10 years, the cumulative deflationary impetus imparted by fiscal policy amounted to around 8 per cent of GNP. It is not surprising that the Irish economy did not shine over that period!

Using the ESRI HERMES model we simulated what might have happened if a neutral fiscal policy had been pursued from 1974 to 1999, compared to the more pro-cyclical stance adopted by successive governments in the 1970s and the 1980s. Figure 11 shows the deviation of GNP under the neutral policy stance assumption compared to the actual outturn. This suggests that a more orthodox fiscal stance would have resulted in lower growth in the late 1970s and early 1980s, but that the long-term effects would have been significantly positive. It suggests that even today the economy still has the scars from the painful adjustment process of the 1980s.

Figure 11: Effects of Neutral Fiscal Policy - Deviation from Actual Outturn



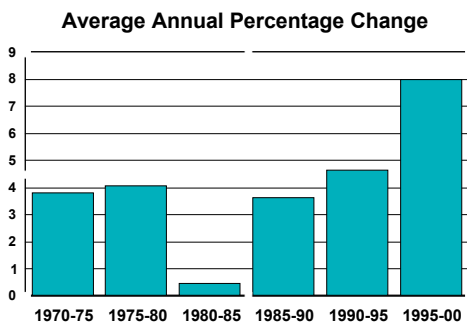
The development of a "partnership" approach to wage formation and policy making from the late 1980s has received a lot of attention (Sweeney, 1997). Undoubtedly it has helped change the industrial relations environment, compared to the experience of the 1960s and the 1970s (O'Connell and Sexton, 1997). While it is difficult to quantify the benefits of a substantial reduction in industrial disputes, this factor has played a significant role in enhancing the performance of the economy. The partnership approach has also contributed to a more coherent approach to economic policy making.

However, its impact on wage formation in the longer term has probably been quite limited. The evidence available suggests that there was a change in the pattern of wage settlements from the early 1980s, before the partnership approach was implemented (Fitz Gerald, 1999). While the agreements have probably served to validate the rate of increase in wage rates that market forces determined, this "validation" was obtained with less industrial strife than in earlier periods - a significant benefit.

3. THE RECORD

In the late 1970s the then Irish government pursued a “dash for growth” policy which involved a huge fiscal injection. Even at the time economists warned that this was unsustainable⁵ and, in the early 1980s, when the storm of world recession hit, it almost wrecked the Irish economy. As shown in Figure 10, the result was a period of almost 10 years of fiscal retrenchment in the 1980s as successive governments tried to put the economy together again. The process was extremely painful, involving both major increases in taxation and a massive cut-back in state expenditure.

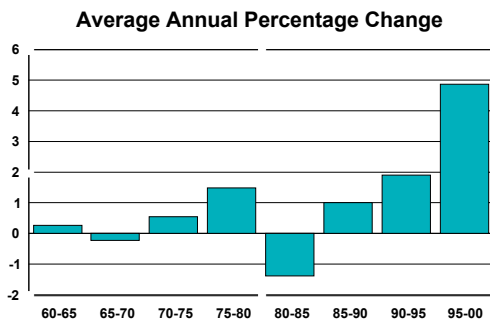
Figure 12: Growth in GNP



Source: Duffy, Fitz Gerald, Kearney and Smyth, 1999.

Figure 12 shows the growth rate for GNP for each of the five-year periods from 1960 to 2000. With the exception of the first half of the 1980s, when the fiscal retrenchment knocked the economy way off course, between 1960 and 1990 there was relatively little deviation from an apparent trend growth of 4% a year. For the 1990s the growth rate picked up, so that the economy is currently growing at a rate well above its past trend.

Figure 13: Growth in Employment



⁵ P. Geary, 1978, "How Fianna Fail's economic policies cannot get this country moving again",

Probably more remarkable than the apparent pick up in the trend growth rate is the experience on employment growth (Figure 13). By contrast with a dismal performance in the 1980s, employment has grown at an unprecedented rate in the 1990s. The bulk of this employment growth is occurring in the private sector. The reduction in unemployment is equally remarkable (Figure 14), falling from a peak of over 15 per cent of the labour force in 1993 to just over 4 per cent today, the lowest level seen since the early 1970s.

Figure 14: Unemployment

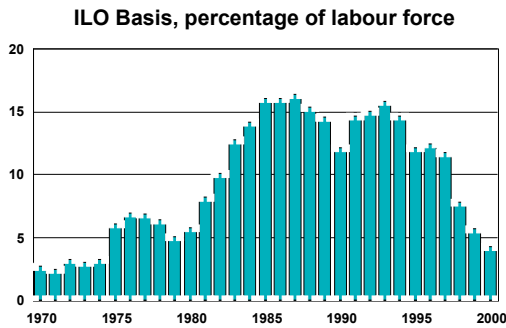
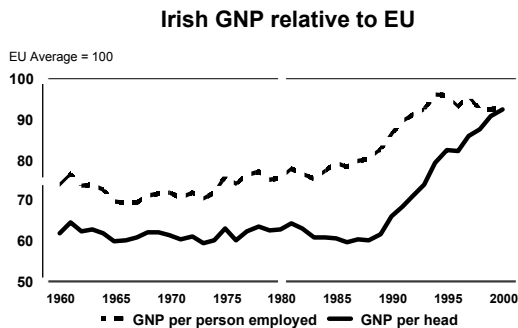


Figure 15: relative Standard of Living



Source: Duffy, Fitz Gerald, Kearney, and Smyth, 1999

The result of the relatively rapid period of growth is that Ireland, which in 1990 had a GDP per head of around 74 per cent of the EU average, already exceeds the EU average. A more appropriate measure is GNP per head (which excludes profit repatriations by foreign multinationals). On this measure Ireland can also be seen to have narrowed the gap in living standards, with output per head compared to the EU as a whole rising from 66 per cent in 1990 to well over 100 per cent this year (Figure 15).

The pattern of development discussed above suggests a marked change in gear around 1990; between 1960 and 1990 there was little change in Ireland's position within the EU, measured in terms of GNP per head. While this may appear to be an exceptional rate of convergence in living standards, measured as GNP per head, the situation looks rather different when considered in terms of output per person employed – national productivity broadly defined. On this measure the Irish economy has been converging towards EU standards of productivity fairly steadily since the 1970s. While we are presently seeing some acceleration in the rate of convergence, this is not out of character with the past 30 years. The explanation for the contrast between the two measures, GNP per head and GNP per person employed, lies in the movement in the economic dependency ratio – the ratio of the population not in paid employment to those who are at work. As discussed earlier, while Ireland still has an economic dependency ratio well above the EU level in the 1980s, it will actually fall below the EU average some time in the next few years. This contrast, and its related effects on living standards represented by the movement in GNP per head, reflects the window of opportunity which Ireland faces over the next 20 years. The declining dependency ratio, at a time when the ratio is rising elsewhere in the EU, will make possible a rapid rise in living standards in Ireland.

4. THE LABOUR MARKET

In this Section we consider the key driving factors⁶ that explain the current success (and also the past failure) of the economy within the framework of a simple model of the labour market: factors that have shifted the supply of labour and factors that have affected the demand for labour.

Supply

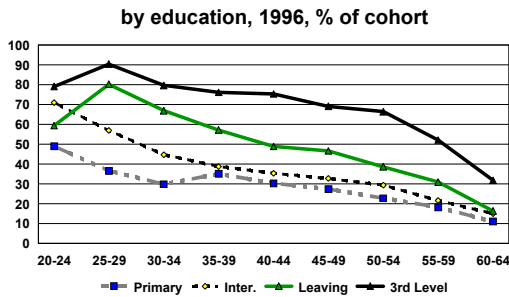
Over the last 30 years the Irish labour market has been profoundly affected by a number of different domestic policies that have altered the supply of labour: changes in the education system and changes in the social welfare system. In addition to these changes in domestic policy, two other special features of the economy affected labour supply: cultural changes, affecting the participation of women in the labour force (Fahey and Fitz Gerald, 1997) and the pattern of migration. These have had the effect of increasing the supply of skilled labour and gradually reducing the supply of unskilled labour - shifting outwards the supply curve for skilled labour and shifting inwards the supply curve for unskilled labour. They have also changed the shape of the supply curve, making the supply curve for skilled labour significantly more elastic to changes in wage rates in Ireland.

The rising educational attainment of the population, due to the substantial investment in human capital, greatly increased the supply of skilled labour. This effect has been particularly important since 1980. Given the rise in educational participation in the 1990s, the effects of this upgrading in skills will continue to be felt for some considerable time. This rise in

⁶ Referred to as long-term factors in Bradley, Fitz Gerald, Honohan and Kearney, 1997.

educational participation has been superimposed on the rapid rise in the supply of young labour market entrants stemming from the high birth rate up to 1980.

Figure 16: Female labour Force Participation by Level of Education



Source: CSO Labour Force Survey, micro data.

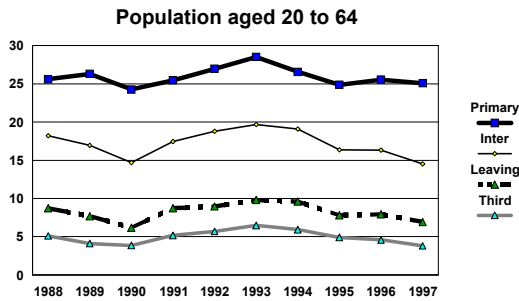
The rising investment in education has had a particular effect on the supply of female labour. Participation rates for women are highly correlated with level of education (Figure 16). As more and more young women have remained on in the educational system, this has increased the probability of them remaining on in the labour force when they have children, or of returning to it as their children grow up. Fahey and Fitz Gerald, 1997 suggest that around a third of the very big rise in female participation rates since 1980 is attributable to the effects of investment in education.

The elasticity of supply of skilled labour in Ireland has been greatly increased by migration. Until now, when the labour market tightens in Ireland firms have been able to attract workers from abroad without any great difficulty. This reflects the big, though diminishing stock of Irish emigrants (Fahey and Fitz Gerald, 1998). When the labour market was weak in Ireland and unemployment tended upwards, Irish people sought better opportunities abroad (Kearney, 1998). The converse has been seen in the 1990s, where improving labour market conditions have attracted increasing numbers of Irish emigrants home, and also significant number of skilled non-Irish workers. As outlined earlier, since the mid-1980s the vast bulk of this pool of mobile labour has been skilled. In increasing the elasticity of supply of skilled labour it has, until recently, allowed the economy to expand without undue pressures on skilled wage rates.

For unskilled labour the possibilities of migration have been greatly reduced compared to the period up to 1980. Hannan, Sexton, and Walsh, 1991, showed that the prospects for those with limited skills improving their labour market prospects through migration were low. The increased role of social welfare systems in providing income support in Ireland, and elsewhere, made migration difficult and unattractive. In addition, the declining labour market prospects for unskilled labour in the traditional alternative labour market, the UK, also rendered migration unattractive (Nickell and Bell, 1995).

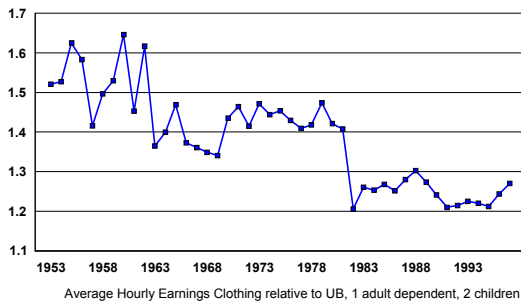
Figure 17: Unemployment by Level of Education

Source: CSO Labour Force Survey, micro data.



The long-term policy of investment in education has clearly had a major impact on the supply of unskilled labour in Ireland over the last 20 years. The labour market prospects for those with limited education have been very poor since at least the early 1980s (Figure 17) and the reduction in supply effected a major improvement in the share of the population at risk of long-term unemployment. Breen and Shortall, 1992, indicated that, in purely financial terms, the exchequer had much to gain from upgrading the educational attainment of those leaving school without qualifications. The effects of the implementation of policy measures to tackle this phenomenon can be seen in the reduction in the supply of unskilled labour over the course of the 1990s - the inward shift in the supply curve for unskilled labour.

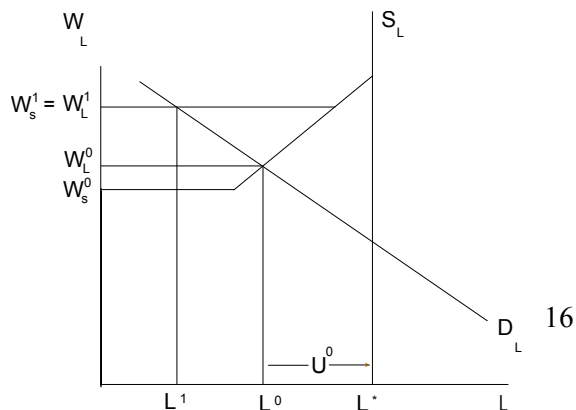
Figure 18: Replacement Rate



Note: Average hourly earnings in clothing relative to Unemployment Benefit for someone with an adult dependent and 2 children

In Ireland a big change in the replacement ratio occurred in the early 1980s, affecting unskilled labour supply. Figure 18 shows the ratio of average earnings in clothing (the least skilled sector of manufacturing) to unemployment benefit payments for a couple with two dependent children. It increased the reservation wage for unskilled labour in the early 1980s, at a time when the economy was facing a series of other shocks.

Figure 19: Unskilled Labour Market



In the 1950s, at a time when the UK had developed a sophisticated social welfare safety net, no such protection was available in Ireland. As a result, unskilled labour in Ireland faced a choice between emigration to the UK, generally to take up employment there, or employment at any price in Ireland. Figure 19 illustrates this position for unskilled labour (L), where the supply curve is vertical at full employment and horizontal at the floor provided by social welfare payments. Initially the going wage rate in Ireland W_L^0 was above the rate of social welfare payments W_s^0 leaving unskilled employment at L^0 . The shape of the supply curve for unskilled labour in the period up to 1980 was greatly influenced by the propensity of unskilled labour to emigrate to the UK. However, as discussed above, by the early 1980s the rate of social welfare payments W_s^1 effectively set a minimum wage, pulling up the market wage rate W_L^1 so that the supply curve for unskilled labour became horizontal at the rate of social welfare payments. The result was a fall in employment to L^1 .

Labour Market – Demand

Over the last 20 years the changing nature of technology and the changing structure of the world economy has seen a rapid rise in the demand for skilled labour in countries such as the US and the UK (Nickell and Bell, 1995). The impact of the foreign direct investment has been to ensure that the Irish economy has also shared in this shift in labour demand.

As discussed above, the consistency with which a policy of attracting foreign direct investment was pursued has ensured that Ireland has shared in the globalisation of the world economy, attracting more than its share of new investment in capacity designed to supply the European or the world market. While the early FDI in the 1960s and the 1970s aimed to exploit lower labour costs and the tax advantages of locating in Ireland, more recently the investment has depended on the availability of a rapidly increasing supply of skilled labour. When taken together with the rapid growth in the private services sector in areas that also require skilled employees, the combined effect on the demand for skilled labour has been very substantial.

The opening up of the economy to competition over the last 40 years meant that those companies operating in the tradable sector that depended on unskilled labour faced increasing competition. Corcoran, Hughes, and Sexton, 1993 document the effect of this on employment of unskilled labour. Since the early 1970s the absolute number of unskilled labourers has been cut by over 50 per cent, with smaller declines in other categories of unskilled labour. The decline in demand accelerated in the early 1980s when a series of shocks affected the economy. These shocks meant that the more traditional firms in the tradable sector, employing relatively unskilled labour, found themselves very uncompetitive. The consequence was an even more rapid scaling down in demand for unskilled labour.

Since the early 1980s firms employing unskilled labour in the tradable sector have continued to experience pressures from manufacturers outside the EU. However, the demand for unskilled labour in certain parts of the services sector (retailing and catering) has risen rapidly in the 1990s in the face of the rapid growth in domestic demand. While the jobs on

offer in the first half of the 1990s were still not attractive to some of those eligible for social welfare⁷, as the economy has expanded exceptionally rapidly in the last five years the demand for unskilled labour has also risen. With a continuing fall in supply of unskilled labour (a supply that is less elastic than that for skilled labour) this has bid up unskilled wage rates (Sexton, Nolan and McCormick, 1999). The consequence has been a rapid fall in unemployment rates over the last two years.

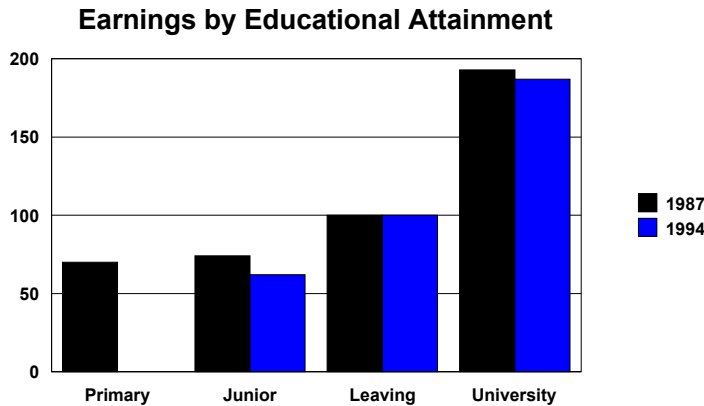
The Labour Market - Equilibrium?

The implications of this analysis are that, when faced with a fixed downward sloping demand for skilled labour, any increase in supply will not be fully matched by an increase in employment - "qualification inflation". However, unless the supply of skilled labour is infinitely elastic there will be some increase in total employment in the economy, as in the second half of the 1980s. While the majority of the skilled workers will find employment in positions that require their skills, there will also be some increase in the number of skilled workers in jobs that do not require their full talents. In this case, an increase in the supply of skilled labour would tend to reduce wage rates (provided that the supply curve is not infinitely elastic). In the late 1980s skilled labour reacted to the fall in returns to education by emigrating.

The situation since 1990 has been rather different. While the supply of skilled labour has continued to shift outwards, the demand has also shifted outwards. This rapid increase in the demand for skilled labour is taking place throughout the developed world. In the UK and the US the effect since the beginning of the 1980s has been to increase the wage differential between skilled and unskilled workers (Nickell and Bell, 1995). This reflects the fact that the supply of skilled labour has not grown very rapidly in these countries. The big investment in education occurred much earlier there than in Ireland and the post-war baby boom generation in the US and the UK entered the labour force in the 1970s.

Figure 20: Returns to education - Female

⁷Much of the supply of labour at these rates has come from women or students working part-time who may not be eligible for social welfare payments.



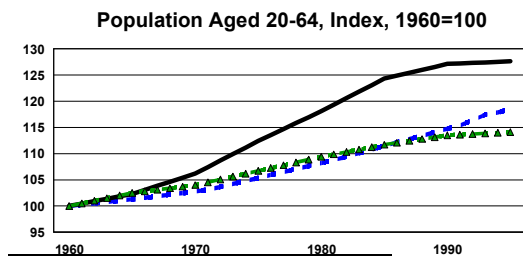
Source: ESRI, Living in Ireland Survey.

Figure 20 shows the average earnings of women employed in 1987 and 1994, classified by their level of education (Callan, 1993 and Callan and Wrenn, 1994).⁸ (The figures for men are fairly similar). It shows that the premium in terms of wages which university education commanded in 1987⁹ changed little over the following seven years. Later work by Barrett, Callan and Nolan, 1999, indicates that, if anything, the returns to education actually increased over that period of rapidly increasing supply. In the face of a major outward shift in the supply curve for skilled labour, this can only be explained by a similar sizeable outward shift in the demand curve. The result has been that the investment in education, and the other policies aimed at increasing the supply of skilled labour, have shown a high rate of return.

For unskilled labour it is only very recently, with the sustained period of high growth, that demand has risen sufficiently to make a major impact on unemployment. With a fairly inelastic supply (compared to the supply of skilled labour) the tightening in the unskilled labour market is resulting in a more rapid increase in unskilled wage rates (Sexton, Nolan and McCormick, 1999). The implications of this for earnings inequality are dealt with later.

In addition to the direct effects on the supply of labour, investment in education has also had a significant impact on productivity in the economy. Durkan, Harmon and Fitzgerald, 1999, estimate that between 1986 and 1996 the increase in educational attainment added around one per cent to the effective labour force.

Figure 21: Index of Human Capital



⁸ The picture for males is rather similar to that for females.

⁹ Roughly a doubling compared to wages of those with leaving certificates

Source: Duffy, Fitz Gerald, Kearney and Shortall, 1997

Figure 21 shows an index of human capital for the adult population. For the purpose of comparison, indices of human capital for Austria and Germany are also shown. These latter indices are constructed on a slightly different basis¹⁰ in Koman and Marin, 1996, but the results are likely to be broadly comparable to our own index. These results indicate that the benefits from investment in human capital are occurring later in Ireland than in other Northern European EU members. The movement in the index of human capital reflects the fact that, as each person retires, generally with only a primary education, they are replaced by a person with a good leaving certificate or a third level education. As a result of this switch, output will rise, as reflected in the increase in average earnings. The growth in the index was quite slow in the 1960s at around 0.3 percentage points a year. From 1970 onwards it averaged around 0.5 percentage points a year, and its growth reached a peak in the first half of the 1990s, suggesting that investment in human capital was contributing around one percentage point a year to the growth in that period. While the rate of growth in the index is expected to slow in the future, as the average educational attainment of the labour force rises, the index will still be rising at around a half of a percentage point a year at the end of the next decade. It would suggest that currently around one percentage point of the growth rate in GNP may be attributable to the rising educational attainment of the labour force (through the effects on raising productivity).

Table 1: Contributions to effective Labour Supply, percentage points

	1990s	1997-98
Natural Increase	1.0	1.0
Female Participation	1.0	1.0
Migration		1.0
Human Capital	1.0	1.0
Total	3.0	4.5

Using the Durkan *et al.* estimate of the impact of education on the effective labour supply, we show in Table 1 a decomposition of the impact of the different forces, discussed above, on the supply of labour in the 1990s. This contrasts with the situation in many other EU members where the labour force is growing quite slowly and where the major benefits of the post-war investment in human capital have already been reaped. Even if the Irish rate of productivity growth were the same as for the rest of the EU, these differences in the factors affecting labour supply go a long way towards explaining Ireland's rather different growth experience in the 1990s.

This difference in factors affecting labour supply, when taken together with the range of social and economic factors described earlier, explains why the Irish economy is growing more rapidly than those of other EU members. However, it is also clear that the benefits of the key supply side factors currently boosting growth will fall gradually over the next 15

¹⁰ Instead of weighting by the average earnings of each category of labour the weights are the total wages of the different categories.

years, bringing the Irish economic experience back into line with that of its neighbours. By then the task of bringing the Irish standard of living up to that of its neighbours will have been completed.

5 CONCLUSIONS

- The falling dependency ratio represents a window of opportunity that will last for fifteen or twenty years; after that the ageing process will change the character of the economy and of society, just as it has changed Germany and Japan. From the middle of the next decade the driving factors behind the rapid growth will begin to slow and the rate of growth in output will gradually decelerate towards the EU average.
- A feature of the Irish experience is the importance of following a consistent development strategy over a long period of time. The broad social and political consensus behind the industrial and educational policies followed over the last 30 years has ensured a high level of continuity. This is one aspect of Ireland's experience which it is important to stress when considering the future for countries aspiring to EU membership. Ireland's current success is built on investment over 30 to 40 years, and also on the pain of a major restructuring of the economy in the 1980s. There is no quick fix for problems of underdevelopment, though there is every reason to believe that the process can be accomplished more efficiently, with less pain, and in a shorter time scale than has been the Irish experience.
- The centrality of investment in education to the process of economic growth does have relevance for other countries. Investment in human capital has probably contributed around one percentage point a year to the growth rate since 1980. The changing nature of the world economy appears to be favouring those with very high levels of education over the least educated and those regions of Europe which ride the crest of this wave may reap the major benefits. Over the last 30 years the strength of the economies of countries such as that of Germany and the Netherlands owes much to this factor.
- The second strand of Irish development strategy that is relevant for other countries in transition is the area of industrial policy. Ireland has pursued a particular policy of attracting foreign direct investment consistently over 40 years. Over that period there have been failures as well as successes. In the past, the concentration on tax incentives has probably unduly favoured foreign firms over domestic firms. The policy, begun in the late 1970s, of targeting particular sectors also carried significant risks. However, we are now seeing the benefits of critical mass in certain key sectors where the investment has succeeded. The presence of a very active labour market in people with information technology skills makes it possible to attract more and more investment in this area. A second aspect of industrial policy has been its focus on sectors which are in the ascendant and the very limited attention given to attracting investment or protecting existing firms in what are essentially declining sectors - don't throw good money after bad.
- The migration mechanism has made the supply of skilled labour in Ireland highly elastic. This has contributed to the growth potential of the economy. Rising demand for skilled

labour has been easily met through migration without a major rise in wage rates. The low substitution elasticity between skilled and unskilled labour has meant that immigration of skilled labour, through increasing the growth rate, has contributed to reducing unskilled unemployment. However, as the supply of Irish emigrants abroad willing to return falls and as the cost of housing in Ireland rises the elasticity of supply of skilled labour may fall in coming years.

- The rise in real welfare benefits in a manner that increased poverty traps in the early 1980s probably contributed significantly to the high unemployment rate.
- As the economy approaches full employment the inelastic supply of unskilled labour means that unskilled wage rates will probably rise more rapidly than skilled wage rates.
- While the rate of growth in output per head in Ireland is somewhat higher than for its EU neighbours, much of the explanation for this difference appears to lie with factors such as investment in human capital. "New economy" forces do not explain the rapid convergence in Irish living standards to the EU average.
- The experience of the 1980s indicates the importance of sound fiscal policies. The slow adjustment of fiscal policy to the serious problems of the early 1980s cost Ireland dear. The experience of Finland in the 1990s suggests that a rapid fiscal response to serious shocks can greatly reduce the ultimate cost.
- Ireland has had two advantages that may not be available to all peripheral regions - the English language and the existence of a core of employment in sophisticated services sectors which are in the ascendant internationally and which require skilled labour. In the case of the English language, all Irish people find that travelling abroad it is a great advantage to speak English but not to be English or American! It is no accident that the information technology (IT) sector, which is dominated by the English language, has been a sector in which Ireland has done well. In the case of tradable services, Ireland has the advantage of having a core of employment in sophisticated legal and financial services. Being a separate country, albeit small, confers certain advantages in this regard over regions of larger countries.¹¹ It has provided a foothold in an area of economic activity that is growing rapidly internationally.

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¹¹ It also has additional costs as there are definitely increasing returns in the case of many of the services needed to run a modern state.

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