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The ‘Celtic Tiger’ - An Analysis of Ireland’s Economic Growth Performance

Antoin E. Murphy

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Poor Ireland

In January 1988 *The Economist* published a survey of the Republic of Ireland. The title was ‘Poorest of the Rich’ and it was accompanied by a young girl with her child begging on the street. The opening lines of this survey conveyed an almost Beckettian bleakness:

> “Take a tiny, open ex-peasant economy. Place it next door to a much larger one, from which it broke away with great bitterness barely a lifetime ago. Infuse it with a passionate desire to enjoy the same lifestyle as its former masters, but without the same industrial heritage of natural resources. Inevitable result: extravagance, frustration debt...Ireland is easily the poorest country in rich north-west Europe. Its gross domestic product is a mere 64% of the European Community average”.

Less than ten years later the Economist highlighted Ireland on its front cover with the title ‘Europe’s shining light’. In the lead editorial it remarked:

> “Just yesterday, it seems, Ireland was one of Europe’s poorest countries. Today it is about as prosperous as the European average, and getting richer all the time”. (*The Economist*, May 17, 1997, 15)

The Irish economy’s current performance is most impressive. High and sustained economic growth, low inflation, a current account balance of payments surplus, falling unemployment, net immigration and a growing budget surplus are the stuff of macroeconomists’ dreams. All the key macroeconomic indicators are positive. Ireland, traditionally a laggard behind the U.K. economy, has now a per capita GDP which exceeds that of the U.K. The metaphor, the Celtic Tiger, first coined by Morgan Stanley in August 1994, has become the fashionable neologism for the Irish economy. Many articles have been written about the Celtic Tiger as commentators highlight the transformation of the Irish economy. These articles have been followed by books - Barry (1999), Gray (1997) and Sweeney (1998).

Theorists have examined the phenomenon wondering if the Irish performance can be modeled and explained by the new growth theory. How can a country with a very sluggish growth performance move to a high growth path so quickly? How can a country with chronic budget deficits and a high level of indebtedness suddenly become one with a rising budget surplus and a low level of indebtedness? How can a country with a very high level of unemployment and net emigration be transformed into one with close to full employment and net immigration? The Irish economy, as it moves towards the millennium, is fascinating not only because of the extent of the transformation of its growth performance, but, also, by the speed of the transformation. Indeed the speed of the transformation provides part of the answer to in explaining the Irish success.

The theme of this paper is that it is wrong to over ascribe to Ireland some unique magical qualities, some *potion magique* that transformed it from a low performance economy to the Celtic Tiger. Ireland's transformation, one primarily caused by multi-nationals, was facilitated by the phenomenon of globalisation and in particular the shifting closer together of two economic tectonic plates that of the United States and the European Union. Ireland, at the geographic periphery of the latter, but, as the closest European ethnic partner of the former - remembering that 40 million U.S. citizens are of Irish extraction - has flourished, rather than been crushed, by the inner shifts of these economic plates. The geographic factor, albeit between Ireland and the U.K., which was identified by *The Economist* as the cause of the problem in 1987, suddenly becomes part of the explanation behind the surge in growth in the 1990s.

Globalisation enabled Ireland to move from the periphery towards the centre of the new global economy. Now Ireland is the second largest exporter of packaged computer software in the world after the United States, twelve of *Fortune's* top twenty electronic companies and all of its top ten pharmaceutical companies have plants in Ireland. From having virtually no major export industries (Guinness and Irish whiskey representing two exceptions) Ireland has become a significant platform for U.S. high-tech companies competing in the European market.

In this new global economy, or more specifically, this Euro-US economy, is it sensible to talk of core and periphery, to discuss convergence and catch up? These were terms that were appropriate in the industrialised world where transport and communication costs conferred benefits to countries at the core and where investment from core economies could gradually help peripheral countries to converge towards them. In the post-industrial high-tech world core and periphery have become anachronistic. There is, in the words of Paul Krugman, a new economic geography.

This new economic geography flips traditional theory on its head. Convergence, at least in Irish terms, needs to be replaced by leap-frog because Ireland has successfully moved from the equivalent of a donkey-and-cart economy to a high-tech economy by leap-frogging over the intermediate hump of industrialisation. Indeed, it will be argued that the absence of a large industrial base actually helped Ireland in that it enabled the government to provide significant tax advantages which would have been difficult, if not impossible, to make if a large industrial base already existed. Furthermore the lack of industrialisation meant the absence of obsolete capital and rigid labour practices. Ireland was not to follow the path of industrialisation. Instead an alternative path emerged, a high-tech path configurated by a different economic terrain.

The Irish case raises issues as to whether other pre-industrial countries can be transformed to post- industrial economies and whether it can be done as speedily as the Irish case.

The *Economist*'s article of 1987, though harsh, was realistic. Ireland was a poor struggling economy. Table 1 shows that economic growth had averaged 0.2% over the previous five years during which time there were three years of negative economic growth. Unemployment amounted to 18% of the labour force, and the national debt amounted to 125% of GNP. Some commentators were comparing Ireland to a heavily indebted banana republic.

When did all this change? Paradoxically many identify 1987 as the take-off year for the economy, when a policy of fiscal retrenchment was introduced, to correct the economy from the excesses of the late 1970s and early 1980s. Even here, as will be explained later, the forces for change were global rather than specifically domestic. But while 1987 ushered in some hope with good growth in GNP registered for 1987, 1989 and 1990, the familiar pessimistic refrains were heard between 1991/93. This may be seen by examining the growth in GNP and the growth in employment since 1987:

	GNP	Employment
1987	4.4	0.8
1988	2.5	1.9
1989	5.4	0
1990	7.3	4.4
1991	2.5	-0.3
1992	1.9	0.8
1993	2.6	1.5
1994	**6.3**	**3.2**
1995	**8.0**	**5.0**
1996	**7.2**	**3.7**
1997	**9.0**	**3.8**
1998	**8.1**	**8.3**
1999	**6.5**	**5.4**

The period 1991-93 produced little that was spectacular in terms of economic growth with the total number of people at work actually falling in 1991.High interest rates associated with the exchange rate crises that hit the European Union countries in 1992/3 severely dampened demand. The old questions started to be asked once again. Where was the country heading? Even though employment had grown by some 72,000 between 1988 and 1993 unemployment was 3,000 greater at 220,000.

Suddenly everything changed and the change was dramatic. From 1994 there has been a period of sustained growth in GNP and in employment. GNP growth has averaged 7.5% in the six years between 1994-1999 (GDP growth has averaged 8.4%), employment has grown by over 390,000 and unemployment is expected to average just 6% in 1999. The public sector deficit has moved into substantial surplus and the national debt/GNP ratio now below 60% is half what it had been in 1987. Domestic demand is strong and there is an effervescence effect running through all forms of expenditure ranging from new car sales to house purchases. Table 1 shows the extent of the contrast between the growth of the second half of the 1990s with the experience of growth in the 1980s. So why has there been this transformation? Why has the economy moved to a very high and sustained growth performance?

A Short Primer on Ireland's Recent Economic History

In order to explain the new economic configuration and how a predominantly pre-industrial economy leap-froged to a post-industrial high-tech economy so abruptly it is first necessary to outline some of Ireland's recent economic history. Using a broad brush the following periods may be identified:

- **1922-32** - The first decade of independence marked by a continuation of existing policies. In 1927 an independent Irish currency was established but kept at a one-to-one parity with sterling.
- **1932-38** - The era of protectionism. There was an economic war with the U.K. and an attempt to build infant industries behind high tariff walls. The Control of Manufactures Acts were introduced prohibiting the ownership of Irish industry by foreigners.
- **1939-45** - World War II during which Ireland remained neutral.
- **1946-57** - The period of economic stagnation marked by heavy emigration - net emigration averaging over 40,000 during the 1950s.
- **1957** - The removal of the Control of Manufactures Act.
- **1973** - Ireland joined the European Economic Community.
- **1977-81** - Expansionary macroeconomic policy used in an attempt to provide full employment. This policy, which resulted in the Public Sector Borrowing Requirement (PSBR) constituting over 20% of GNP, failed creating balance of payments problems and pushed the public sector debt up to 120% of GNP. Paradoxically, during this period of fiscal excess, Ireland joined the European Monetary System in 1978.
- **1979** - As a result of joining the ERM of the EMS the Irish pound's one-to-one parity with sterling was broken in March 1979.

- **1981-86 -** Attempts at fiscal retrenchment largely aborted by conflicts amongst the partners of the Coalition governments of the period.
- **1987 -** Fiscal retrenchment introduced. The International Financial Services Centre launched.
- **1988 -** The first tax amnesty. This helped to reduce significantly the budget deficit and the PSBR.
- **1992 -** Single European Market. Ireland signed up for the first phase of EMU at Maastricht. Abolition of exchange control regulations.
- **1992/3 -** Exchange rate crises. Devaluation of the Irish pound (January 1993) and move to wider exchange rate bands (15%+/-)
- **1999 -** Ireland in the EMU.

The above is not a comprehensive listing of the events which helped to shape the Irish economy in the twentieth century but it does show a number of important issues: (1) the fluctuating openness of the economy; (2) the recourse to independent policies to solve economic problems; (3) the growing Europeanisation of the Irish economy.

The Openness of the Irish Economy

An economic mantra, familiar to students, consists of the statement Ireland is a small open economy. The smallness element does not need discussion. Ireland's GDP constitutes about 1% of the European Union's GDP. It is the third smallest of the OECD economies, ahead of only Iceland and Luxembourg. The openness issue is different for Ireland has had varying degrees of openness since 1922 as may be seen from table 2. In the first ten years of independence the Irish economy continued its free trading relationship with the U.K. Its banking system was closely linked to that of the U.K. and even when the Irish pound was established in 1927 it was decided to maintain a one-to-one parity with sterling. Irish labour moved freely to the U.K. and U.S. and capital moved freely between Ireland and the U.K.

When Mr. De Valera assumed office in 1932 the openness of the Irish economy was sharply reduced, both with respect to commodities and capital. Commodity openness was considerably lowered by the economic war with the U.K. and the attempt to build up infant industries behind high tariff walls. While the economic war finished in 1938, many tariffs were kept in place in the continuing effort to build up infant industries.

An even more significant legacy of that period was the continuation of the Control of Manufactures Act which was first introduced in 1932. The Control of Manufactures Acts 1932 and 1934 prohibited foreign ownership of

Irish industry by stipulating that Irish people had to control 51% of the voting shares in manufacturing companies. Effectively this ensured that foreign capital would not move into the Irish economy. These acts continued until their removal in 1957. Though it could be argued that there was no great reason for foreign companies to invest in Ireland between 1932 and 1957, the Acts suggested that, even if they contemplated such action, they were not welcome. As O Gráda noted ‘Fianna Fáil [the governing party] sought to reserve the domestic market for Irish capital’ (O Gráda, 1994 : 407).

Paradoxically, Irish capital was free to move out of Ireland - at least to the Sterling Area. Capital outflows from Ireland were endemic in the 1940s and 1950s as the banking sector invested a considerable portion of its deposits in external assets such as British government securities. With foreign capital prohibited from investing in the manufacturing sector and the Irish banking system investing largely outside the economy it was not surprising to see little economic development in Ireland during the 1940s and 1950s. The cost of this lack of development was a stagnant economy which missed out on the European post-war boom and net annual emigration of over 40,000 during the 1950s.

The abolition of the Control of Manufactures Acts in 1957 signaled the beginning of a new approach aimed at welcoming foreign capital into Ireland. In 1958 Dr. T.K. Whittaker, the secretary of the Department of Finance, produced a report *Economic Development* which was highly critical of the infant industry argument and proposed encouraging foreign capital with tax concessions and other incentives. Moves towards free trade were initiated through the signing of the Anglo-Irish Free Trade Agreement in 1965 and Ireland’s joining of the EEC in 1973.

Joining the EEC marked the first step in the reduction of Ireland’s close links with the U.K. economy. This process was accelerated by Ireland’s decision to join the European Monetary System in 1978, a decision that led to the breaking of the one-to-one parity with sterling in 1979. The process was further accelerated with the decision to move towards European Monetary Union by signing up to the Maastricht Agreement in 1992 and full commitment to join EMU, which Ireland did in January 1999, even though it was known that its largest trading partner was not committed to monetary union.

This process of Europeanisation had significant implications for capital movements. The break in the exchange rate link in 1979 heralded the start of an enforced floating exchange rate with sterling. The Irish pound newly linked with the currencies of the ERM floated against sterling according as the European currencies fluctuated against sterling. In an effort to protect the Irish currency the Central Bank, in 1979, introduced exchange control regulations limiting capital transactions outside the Sterling Area! However, the growing commitment to European Monetary Union, led to the dismantling of these exchange control regulations in the early 1990s. With the abolition of the last vestiges of these exchange control regulations in 1992 and the introduction of the Single European Market the Irish economy had become a fully open economy, not only for commodities and labour but, also, for capital.

The immediate consequences of this full openness produced a strong deflationary period for the economy in 1992/3. The sterling devaluation of the late summer of 1992, Ireland's continued identification with the U.K. link and the weakness of the other ERM currencies led to a period of continued speculative attacks against the currency. In an attempt to defend the currency the Irish authorities pushed up domestic interest rates to very high levels, an action which considerably dampened domestic demand. Full openness initially produced high interest rates and depressed domestic demand. The move to wider ERM exchange rate bands in August 1993 and the commitment to EMU were successful in removing these exchange rate pressures and their implications for interest rates. The more stable exchange rate environment post 1993 along with the growing confidence that interest rates would fall to German levels as European Monetary Union approached were key elements in assisting the very sizeable growth in domestic demand which has been manifestly evident in the economy since then. Using as the criterion for openness the ratio of the sum of export and import values to GDP Ireland is the second most open economy in the OECD with imports and exports constituting more than 1.7 times GDP in 1997.

Openness and Independent Policies

The failure to understand the significance of the openness of the economy to the international economy led to important domestic policy failures. The first of these failures, as shown above, was the closure of the economy in the 1930s, one legacy of which was the continued prohibition on foreign capital investment until 1957. This resulted in a neglect of the role of international capital in fostering economic growth.

The second openness related policy failure was that of the period 1977-81 when there was an attempt to force growth on the domestic economy without consideration of the balance of payments consequences triggered by these growth led policies. The view of the government at the time was that fiscal pump priming, arising through a combination of tax cuts and increased government expenditure, would push the economy to a high growth path and eventual full employment. This was an uncritical approach to Keynesian macroeconomic policy - the policymakers having failed to read Keynes's cautionary views on expansionary policy in an open economy which he elaborated in the 'Notes on Mercantilism' *in The General Theory of Employment Interest and Money* (1936). To finance the high and growing public sector borrowing requirement (PSBR) the government resorted to substantial domestic and foreign borrowing. This policy helped to promote a certain amount of short term growth as may be seen from table 1. However, the policy did not take into account Ireland's high marginal propensity to import which resulted in most of the budgetary stimuli exiting on imports. The increase in importss in turn caused the balance of payments to move into substantial deficit. By 1981 the balance of payments deficit was running at 14.6% of GNP (as against 5.3% in 1977) and inflation was 20.4% at a time when the U.K.'s inflation rate was 11.9% and the EU average 12%.

Ireland's growing macroeconomic crisis was not addressed immediately. Though politicians were prepared to use retrenchment rhetoric they were not prepared to support this rhetoric with appropriate economic policies. This in part was due to the coalition mix of the Fine Gael/Labour governments which governed for the period June 1981 to February 1987 except for the short period of Fianna Fáil rule between February and November 1982. The failure of the macroeconomic policy to redress the situation may be seen by the absence of economic growth between 1982-86 and from the growing burden of government indebtedness which reached 125% of GNP in 1987, over 50% of which was held externally.

1987 was to prove a crucial year in Ireland's recent economic history. The new Fianna Fáil government, which had committed itself in the general election to increasing public expenditure, turned *volte face* and committed itself to fiscal retrenchment. Notwithstanding the electioneering excesses this change was recognised as necessary by most people. Honohan (1999) suggests that 'the real fear was of a financial meltdown with foreign and domestic financial market refusal to rollover debt'. The new commitment to fiscal retrenchment was epitomised by Fine Gael, the chief opposition party, promising not to precipitate an election providing the appropriate fiscal measures were undertaken by the government. For once at a critical juncture in the country's history there was a consensus on the appropriate economic policy to follow.

A third policy failure relating to the openness issue was the initial unwillingness to recognise that the abolition of the exchange control regulations in the early 1990s left the economy open to speculative foreign exchange attacks. Ireland's commitment to Europeanisation meant that the authorities felt obliged to maintain the exchange rate in the narrow ERM bands even after sterling had been devalued in August 1993. This commitment provided speculators, both Irish and foreign, with a certain one way bet against the Irish currency. In order to defend the currency the authorities resorted to an expensive policy of protecting it through high interest rates. These high interest rates stifled domestic demand in the second half of 1992 and the first half of 1993. The short term costs of Ireland's increased openness were evident in 1992/3 but the benefits of this increased openness, particularly the process of Europeanisation, were also about to manifest themselves.

The Growing Europeanisation of the Irish Economy

In discussing the growing Europeanisation of the Irish economy it is helpful to highlight some of the most important dates in this process:

- **1973 -** Ireland joined the EEC
- **1978 -** Ireland joined the EMS
- **1979 -** The break in the one-to-one parity with sterling consequent on commitments to the Exchange Rate Mechanism of the European Monetary System.
- **1987 -** Fiscal retrenchment forced on the authorities by fear of of financial markets refusing to rollover debt.
- **1990 -** Dismantling of exchange control regulations.
- **1992 -** Ireland became part of the Single European Market.
- **1992/3 -** Breakdown of narrow-band ERM of the EMS.
- **1997/8 -** Harmonisation of Irish interest rates to German interest rates.
- **1999 -** European Monetary Union.

Europeanisation has been a key element in the transformation of the Irish economy. The trend towards Europeanisation began in 1973 when Ireland joined the European Economic Community. The benefits to Ireland's ailing agricultural sector were obvious and the Common Agricultural Policy (CAP) provided farmers with guaranteed prices for many of their products. Ireland also soon became adept at encouraging inflows of European structural and cohesion funds. Barry (1999) recently suggested that European Union structural funds may have raised Ireland's GNP to a level of 4 per cent above what it would otherwise have been. Furthermore, during the 1990s it contributed 'only half of one percentage point of the per annu, growth of GNP'. But while Ireland became skilled at taking money from Europe there was still some way to go to learn the other side to the European story, namely the need to adopt a lower inflationary profile and to accept stronger fiscal discipline in order to progress the EEC towards greater integration. Germany had spearheaded the low inflation/fiscal discipline approach and its chancellor Helmut Schmidt was instrumental, along with France's president, Valéry Giscard d'Estaing, in launching, in 1978, the European Monetary System, as an intermediate stage, towards reaching the target of European Monetary Union.

Paradoxically, Ireland committed itself to joining the exchange rate mechanism of the EMS in 1978 at the very time when it had embarked on a policy of fiscal abandon. The main reason given for joining the EMS, even though its main trading partner the U.K. opted out of the new exchange rate mechanism, was the aspiration that the anchoring of the currency to a D.Mark bloc would lower the inflation rate. The underlying economic contradiction of committing Ireland to the EMS whilst simultaneously pursuing a policy of excessive fiscal and monetary expansion did not seem to register on the political leaders of the time. Instead the breaking of the one-to-one parity with sterling, the inevitable consequence of joining the ERM, in March 1979 occupied their attention with the new exchange rate policy perceived to represent some type of national virility symbol. Ireland had come of age, it was felt in some circles, because it had apparently shown that its currency was no longer inextricably linked to sterling. The *púnt* was born. Though the initial anti-inflation assumptions behind this move became quickly dated as sterling, due to its enhanced petro-currency status, strengthened and the D.Mark weakened, the 1978 decision represented an important step in the orientation of the Irish economy. Ireland was committing itself to the Continental European countries and attempting to reduce its dependency on the U.K. This policy was not to have an immediate pay-off. However, it did mean that when the move to European Monetary Union gathered momentum at Maastricht there was a type of seamless policy for the government of the day to follow. Ireland had committed itself to this policy in 1978. Maastricht was just a continuation of this policy which would lead to Ireland becoming part of the new monetary bloc when it fully evolved.

This commitment to Europeanisation was very much in contrast to the United Kingdom which continued to draw its sterling tail in and out of the monetary union negotiations.

How Europeanisation and Globalisation Coalesced to Benefit the Irish Economy

During the shift in Ireland's economic tectonic plate towards Europe there was an even more significant movement towards each other of the US and European Union's economic plates due to globalisation. Silicon Valley was starting to invade Europe producing in the process a dramatic technological revolution. Think back ten years ago when most people did not have a portable computer, a mobile phone, user friendly computer programmes and access to the Internet. These are now part of the everyday working tools of people in developed economies, tools which have dramatically changed our concepts of economic geography. These tools of the new high-tech age have broken down distance. Now an entrepreneur based in the Aran Islands on the periphery of Ireland, which is on the periphery of Europe, may run a business in Prague selling services to New York, Frankfurt and Tokyo without moving outside his white-washed thatched cottage. The periphery disappears in this high-tech world once the region concerned has good telecommunication facilities.

In this new high-tech world US multi-nationals needed to have a European base from which they could sell their commodities. The creation of the Single European Market and the plan for the move to monetary union via the Maastricht Treaty in 1992 increased the urgency for MNCs to seek locations in Europe.

By the late 1980s and early 1990s Ireland was well positioned to attract a considerable part of the US MNCs' business. Why? The first reason was that the Industrial Development Authority had targeted in the 1970s and 1980s emerging MNCs, particularly in high-tech sectors such as computers, computer software, pharmaceuticals and chemicals. The U.S. multi-nationals' platform had already been partially moved into Ireland. By the early 1990s the high-tech revolution in these areas had gathered considerable momentum with the advent of sophisticated and user friendly computer programmes, portable computers, CDs, mobile telephones, Internet facilities and a wide range of new pharmaceutical products.

The new MNCs were attracted to Ireland by very low corporate tax rates - initially a zero per cent corporate tax rate on the profits of manufactured exports, and, later, a 10% corporate tax rate on manufacturing profits and internationally traded services profits. Ireland was able to offer these attractive tax facilities because of the absence of a well established industrial sector already paying substantial corporate taxes. Ireland's lack of industrialisation, the problem which had restrained the economy in previous decades, suddenly became a plus factor in that it enabled the government to provide tax facilities to MNCs which were not possible in mature industrialised economies. Imagine the budget deficit that would be created if France or Germany attempted to introduce a 10% corporate tax rate. U.S. MNCs were primarily attracted to Ireland by the low tax regime and the transfer pricing possibilities raised by such low tax rates.

Secondly, Ireland was able to advertise to US MNCs that it was both English speaking but, also, unlike the other English speaking member (the U.K.), fully committed to the Europeanisation process. The U.K.'s hesitancy on this issue came to the fore in 1992 when sterling broke away from the ERM and decided to float independently relative to the EMS currencies. This hesitancy was then transformed into a reluctance to progress on the EMU issue with the U.K. voting to opt out of the arrangement. The current strong anti-European stance in the Conservative Party along with the Labour Party's reluctance to allow EMU membership to become an electoral issue has left the U.K. as the country on Europe's periphery rather than Ireland. US MNCs looking for a platform to sell into Europe have in many cases decided to locate in the English speaking country that is part of the Euro rather than in the English speaking country that appears to want to distance itself from the Euro.

Ireland with its low corporate tax rates, its young English speaking and increasingly computer literate labour force, along with its full participation in Europe through the Single European Market and the European Monetary Union, was ideally positioned to act as the pontoon linking the US high-tech companies to the European Union. The OECD's recent report on the Irish economy noted that 'US investment in Ireland tripled from 1991 to 1993, just at the time the SEM programme was being implemented' (1999 : Note 45). There were 'demonstration effects' in that the favorable experience of the initial group of MNCs encouraged their competitors to follow them into Ireland. For some Americans Ireland has become the fifty first state. McCarthy (1999) shows that U.S. direct investment in Ireland averaged around 2.75% of GNP between 1994 and 1998. Krugman (1998 : 43) points out that US foreign direct investment in Ireland is 50 percent higher per capita than in the U.K. and six times as high as in France or Germany. In 1997 Ireland 'ranked fifth in the world as a destination for US direct investment outflows'. (OECD, 1999 : 12)

From this perspective it is the contention of this paper that the Celtic Tiger is a misnomer. It is more accurate to look at it as a predominantly U.S. high-tech multi-national tiger nurtured in a special Irish tax reserve which is part of the united states of Europe. A considerable part of the economic growth witnessed in Ireland is U.S. growth that was waiting to happen somewhere in Europe. Ireland has been able to appropriate and harness this U.S. led growth to fuel its domestic economy. Put another way if the major U.S. MNCs and the International Financial Services Centre (IFSC) were to close down in Ireland would the boom continue? It is highly doubtful.

The MNCs and the Irish Economy

It is the theme of this paper that the high tech multi-national companies (MNCs) have been the *sine qua non* behind Ireland's high growth performance. Furthermore the MNCs growth element has been moved up many extra gears by the closer linking of the European-U.S. economic tectonic plates in the 1990s

In this part of the paper it is intended to:

1. Examine the size and influence of the high-tech MNCs on the manufacturing sector.
2. Calculate the size of high-tech MNC exports.
3. Present a model which highlights the ways in which the MNCs influence the Irish economy.

The Size and Influence of the High-Tech MNC Tiger on the Manufacturing Sector

A great deal of the activity of the high-tech MNCs in Ireland may be captured by examining the following five sectors:

a) Computers
b) Computer software
c) Chemicals
d) Pharmaceuticals
e) Cola concentrates

Using the *Census of Industrial Production* for the years 1993 to 1996 table 3 shows net output, employment and net output per person of the five selected foreign owned high tech sectors in manufacturing. It also shows the total foreign and total Irish and foreign output, employment and net output per person statistics for each of these years.

In 1993 the selected high tech five high tech MNCs produced net manufacturing output of £5 billion which constituted 43% of total net manufacturing output with only 11% of manufacturing employment. By 1994 they were producing 46% of total net output with only 12% of manufacturing employment. In 1995 this had jumped to 52% of total net output with only 13% of manufacturing employment. In 1996 the selected five high tech MNC sectors were producing £9.6 billion of net output. This amounted to 53% of net output with a labour force of only 32,044 workers which constituted only 14% of the total labour force engaged in manufacturing activity.

Table 3 shows the extent to which Irish manufacturing activity and its rate of growth is influenced by a small group of MNCs in the high-tech sectors, companies such as Boston Scientific, Coca Cola, 3 Com, Dell, Gateway, IBM, Intel, Hewlett Packard, Macintosh, Microsoft, Motorola, Northern Telecom, Pepsi, Pfizer, Schering Plough, etc. When the other foreign owned companies are added to these selected high-tech companies it may be seen that foreign owned companies controlled 77% of net manufacturing output in 1996 (up from 70% in 1993).

In three years, and these were the three years (1994,1995 and 1996) in which the 'tiger' really appeared to manifest itself, the high tech MNCs increased their net output by £4.5 billion, an increase of 88%. The other foreign companies increased their net output by £1.2 billion, an increase of 37%. However, over the same period, Irish owned manufacturing companies increased their net output by only £741 million, an increase of 22%.

The story that emerges from analysing the manufacturing data is as follows. There has been very strong growth in manufacturing output in the 1990s but the bulk of this growth may be attributed to a small group of MNCs who are employing only 18% of the manufacturing labour force. Take these high-tech companies out of the manufacturing equation and the manufacuturing performance is a great deal less impressive.

Output Per Employee

The relatively sluggish performance of the Irish owned companies compared to the high tech MNCs is further exemplified by the comparisons between the net output per person for the U.S. owned MNCs and the Irish owned companies in each of the five high tech sectors:

	U.S. Owned Companies (*Net Output per Person)*	**Irish Owned Companies** (*Net Output per Person)*
Chemicals	£926,000	£75,000
Cola Concentrates	£845,000	£37,000
Computer Software	£628,000	£52,000
Pharmaceuticals	£182,000	£40,000
Computers	£116,000	£29,000

The very wide discrepancies in output per employee in the U.S. owned high tech MNC sectors against those recorded by Irish companies in these same sectors shows the danger of using aggregated statistics to assess Irish labour productivity. The MNCs output performance is bloating the output statistics and giving a very false reading of the real underlying output of Irish workers. Observe the recent comments of authors such as Paul Krugman on Irish productivity "Between 1979 and 1995 labour productivity in Ireland's business sector rose 3.3% percent per year - more than twice as fast as the G7 average...Given the combination of good productivity growth and wage restraint, the success of the economy is in a macro sense not hard to explain."[1] If Professor Krugman had filtered out the huge artificially generated 'productivity gains' of the high tech MNCs he would have found a very

[1] *International Perspectives on the Irish Economy*, op. cit. p. 42.

different story emerging. He is attributing U.S. workers' productivity gains to Irish workers and, explaining part of the Irish economic success by reference to a set of Irish output data which is unreliable because of the transfer pricing policies of the high tech MNCs.

The OECD's 1995 report on the Irish economy highlighted the dual nature of the Irish manufacturing sector noting '...measures of international competitiveness for Ireland have to take into account the dual nature of the manufacturing sector. High productivity growth in the modern sector does not improve competitiveness in the traditional sector. Consequently, for manufacturing industry as a whole, competitiveness measures have to be based on relative movements of wages.'[2]

Transfer Pricing

How do such wide discrepancies emerge between the output per employee in high tech MNCs and that produced in Irish owned companies? Are the Irish workers in the high tech MNCs a new breed of super-performing workers? How can they be producing nine times more output than their counterparts in domestically owned companies? The answer lies in the power of the accountant's pen and the scope that globalisation gives him/her to transfer productivity gains from high tax to low tax environments.

Sotto voce the term transfer pricing enters the discussion. It is contended that the differences in output per head between the high tech MNCs and Irish owned companies is indicative of the extent to which the MNCs are involved in transfer pricing activities. Because of Ireland's low rate of corporation tax on manufactured goods and financial services (10%) it is in the interests of the MNCs to attribute very high levels of output to their Irish based plants. In this way growth that is for the most part produced by workers in the United States is attributed by corporate accountants to Irish workers for tax reasons. The National Economic and Social Council explained the problem in 1992:

There can be little doubt but that the productivity data for Irish manufacturing industry are artificially inflated by transfer pricing practices carried out by some multi-national corporations. The objective of transfer pricing is to optimise the global distribution of profits within a multinational organisation, so as to minimise the overall corporate tax bill. In practice, this means locating as much as possible of the company's global profits in a low tax location, such as Ireland. This can be done by pricing inputs at less than arms length price and/or valuing outputs at more than the market price. The effect of this would be to raise the net output figures for the manufacturing sector

[2] *OECD Economic Surveys, Ireland 1995*, p. 6

(because the profit element is contained in this component of manufacturing output), and to raise recorded productivity levels (because this is measured in terms of output per employee).[3]

Transfer pricing, produced by the tax skills of corporate accountants, metamorphoses the U.S. high tech 'tiger' into an Irish worker who is then misrepresented by the local and world media as the 'Celtic Tiger'. This misrepresentation may be more clearly seen by examining the high-tech MNCs exports.

High-Tech MNCs Exports

As is the case with the production statistics a great deal of the export story may be explained by isolating the five main areas of high tech MNC exports. These are (1) soft drinks concentrates (cola concentrates, etc) classified under 'miscellaneous edible products'; (2) chemicals - classified under 'organic chemicals'; (3) medical and pharmaceutical products; (4) computers - classified as 'office/data processing machinery' and (5) computer software - classified under 'recorded media'.

Calculating the overall level of these high tech MNCs exports is a difficult exercise. It means delving into the Byzantine labyrinth of the official trade statistics where exports are classified by international customs classifications rather than by more rational economic criteria. Export classifications for small, insignificant, and in some cases historically outdated products are deemed sufficiently important for separate headings whereas computer software and cola concentrates, which are very sizeable export categories, are not specifically referred to in the trade statistics!

Table 4 presents exports under the five selected MNC high tech sectors, along with remaining exports, from 1988 to 1996.These five sectors, listed in table 4, produced 36% of Irish merchandise exports in 1988. Their share of total merchandise exports rose to 39% in 1989, staying at 39% in 1990 and actually declining to 38% in 1991. It rose to 40% in 1992 and then jumped to 46% in 1993. It recorded a further increase in 1995 rising from 47% to 50%. Using the official trade statistics it appears that the high tech exports share of total merchandise exports fell back to 49% of total exports in 1996. This was solely due to the re-classification of certain cola concentrates and computer software. By adding £400 million to 'miscellaneous edible products' (cola concentrates) and £300 million to 'recorded media' (computer software) the revised total for

[3] National Economic and Social Council: *The Association between Economic Growth and Employment Growth in Ireland* (Dublin, December 1992).

high tech exports amounted to £15,507 million in 1996 - just over 50% of total exports.

Table 5 shows the rate of growth of exports of these five sectors and the rate of growth of other exports since 1988. The pattern of growth shows some very sizeable jumps in computer software - 36.5% (1989), 56.5% (1994), 54.8% (1995); organic chemicals - 34.4% (1989), 31.1% (1993), 30.4% (1994); medical and pharmaceutical equipment 33.8% (1989), 28.5% (1994), 32.4% (1996); office/data processing machinery 28.2% (1989), 39.7% (1993) and 40.7% (1995).

Between 1988 and 1996 the high tech MNC export sectors increased exports from £4.4 billion to £15.5 billion (my revised estimate), a growth of almost 250 per cent. The remaining export sectors increased exports from £7.9 billion to £14.9 billion, an increase of 89%. These statistics reveal the very significant expansion in exports by the high tech MNCs and the extent of their domination of the rate of growth of total exports.

Just as was the case with the manufacturing output statistics prudence needs to be exercised in their interpretation. Take the case of computer software. A new computer programme discovered in Silicon Valley may be re-packaged and exported to infinity out of Ireland via the Internet. To what extent do the resulting export statistics - indeed they are now reclassified into ‘invisibles’ in the balance of payments accounts - reflect Irish inputs rather than the creative pen of the multi-national accountant?

The extent of this profit repatriation may be seen by analysing the outflow of dividend payments, distribution of profits, and reinvested earnings from Ireland. Table 6 shows that the total of these payments amounted to £2.6 billion in 1990. By 1998 they had risen to £9.3 billion, an increase of nearly 260%. This outflow constituted 16% of GDP. Examination of table 6 shows the extent to which the rate of growth of these outflows has increased in recent years, particularly 1995, 1997 and 1998.

A Model of the MNC’s Impact

Critics maintain that my position in highlighting the role of the multi-nationals is excessive. They show that there have been noticeable gains in employment most of which have not originated in the multi-national sector. They highlight the growth in the services sector as evidence of the vitality of the overall economy. They point out some of the new indigenous domestic companies that have spun-off the MNCs. All of these points are correct, but, ultimately, in my opinion, the Irish success story always reverts back to the role of the MNCs. If the high-tech MNCs and the financial institutions based at the IFSC were to decamp out of Ireland the economy would encounter considerable difficulties. Employment would fall dramatically as accountants, builders, hoteliers, restauranteurs, solicitors, etc found there was a reduced demand for their services. Property prices would move sharply downwards resulting in sharp cutbacks in employment in the construction industry. Tax revenues would plummet. These potential effects may be more clearly seen by presenting a small model of the way in which the MNCs affect the macroeconomy.

Chart 1 presents a model showing the way in which the MNCs influence economic activity in Ireland. It outlines the following four primary areas through which the MNCs influence economic activity:

1. Exports
2. Gross Domestic Product
3. Employment
4. Taxes.

The effects of MNCs' activities in these four primary areas, in turn, create spill-over and feedback effects to other sectors of the economy as may be seen from chart 1. The growth in exports exercises a strong influence on the growth rate of GDP. It also has had a positive effect on the balance of payments generating a balance of trade surplus. Part of this surplus is offset on the balance of payments on current account through the increase in net factor income outflows caused by profit repatriation of the MNCs. In the pre-EMU period the balance of payments surpluses improved foreign financial institutions' perceptions of the Irish exchange rate. A strong exchange rate in turn influenced positively the inflation rate and also fed into interest rate expectations.

Chart 1 suggests that the MNCs have direct and indirect effects on employment. They directly increase employment in the manufacturing sector. Indirectly, they boost employment in the services sector by generating an increased demand for a wide variety of services. This increased employment generates increased tax revenue through more buoyant direct and indirect taxes. They also increase significantly the level of corporation tax. These tax effects have greatly improved the budgetary situation which in turn has caused a dramatic improvement in the national debt/GNP ratio.

Isolating these effects in greater detail is a more difficult task. The effects of the high-tech MNCs on exports has been shown on table. There it was demonstrated that by selecting just five of the high tech sectors it may be shown that they were producing over 50% of the merchandise exports. In an earlier paper 'The Celtic Tiger - The Great Misnomer' (1998) I attempted to deduct from the national expenditure accounts the contribution of the high-tech MNCs exporting sector. I found that by excluding the high tech MNCs' exports that the nominal growth in GDP for the period 1990-1996 fell from 55% to 23%. I stressed at the time that this was a somewhat crude technique, but it at least highlighted the extent to which the high tech MNCs were the driving force behind Ireland's economic growth. More recently McCarthy (1999) using an output approach concluded that '...inflows of FDI into the Irish manufacturing sector have boosted the growth rate of the economy over the period 1993-1997 by a minimum of 2.25 % per annum. Furthermore, taking multiplier effects into account, would at a minimum, raise this to 3 % per annum.' Even taking multiplier effects into account I feel McCarthy's estimate is too low because the success of the MNCs and more recently the IFSC have generated substantial effects in other parts of the economy most notably the services sector. A case in point is the housing market. Residential property prices have soared because of the improved economic situation. Since 1993 residential and commercial property prices have more than doubled. O'Connell and Quinn (1999) reported 'In the Dublin area, where prices have risen fastest, the cumulative increase in real (in excess of the Consumer Price Index) prices, during the period 1994 to 1998 was 88.4 % for new houses and 106.2 % for second-hand houses'. Investment in property has consequently greatly increased. However, if the MNCs and the IFSC had not been in Ireland would the property market have boomed. Though increased investment in the construction sector may be deemed to be a domestic activity it has, in my opinion, been induced for the most part by the success of the MNCs and the IFSC. Remove them and the so called 'property market bubble' will quickly deflate. Commentators who stress the extent to which domestic demand components in the form of consumer and investment expenditure have kicked in during the late 1990s to push the growth rate upwards are missing the point. Domestic demand is buoyant because the MNCs and IFSC have generated considerable increases in both direct and indirect employment and boosted confidence to an unprecedented level. Here I should express my own *mea culpa* in that in an earlier work (1993) I underestimated the extent of the knock-on effects that the MNCs were about to have on the rest of the economy.

The story so far has emphasised the way in which the low 10% corporate tax rate attracted MNCs into the Irish economy. But now even this low tax rate is increasingly producing sizeable revenue gains for the Exchequer. Ten per cent may appear to be a low rate but when it is ten per cent of sizeable and growing profits the revenue gains to the Exchequer start accelerating. In 1990 corporation tax amounted to £475 million. By 1998 it had shot up to £2.1 billion, an increase of 335% - as against an 89% increase in income tax. Already in the first half of 1999 corporation tax has produced £1.9 billion for the Exchequer, so the end on year figure should show a further considerable increase. Companies such as Intel (Pentium chips), Microsoft (Windows software) and Pfizer (Viagra) in increasing their output, and their profitability, through Ireland are providing the Irish Exchequer with an increasing tax bonanza. It is little wonder that both the budget and exchequer borrowing are in surplus and that the government debt/GNP ratio fell to 59% in 1998. In 1997 the Department of Finance estimated that 62% of the total yield of corporation tax emanated from companies subject to the 10% rate on part or all of their profits. Further attempts to disaggregate the amount paid by high tech MNCs, the IFSC and by Irish companies are apparently not possible according to the Revenue Commissioners. Using the 62% figure - and it has surely grown since 1997 - the 10% taxed MNCs were contributing £1.3 billion in corporation profits tax to the Exchequer in 1998.

Domestic Inputs into the Growth Performance

Whilst this paper has stressed the role and importance of the high-tech MNCs in the Irish growth performance it must also be emphasised that this success story has many Irish components. First of all successive governments since the 1960s have encouraged foreign direct investment in Ireland. This combined with the Europeanisation approach has meant that Ireland is perceived by the MNCs as a good European base from which to expand their operations. The mistakes of prohibiting foreign investment resulting from the Control of Manufactures Acts were belatedly learnt in the late 1950s. Since then there has been no antipathy by the public or successive governments to foreign investment. Secondly, the Industrial Development Authority targeted emerging high-tech companies across a range of different sectors such as computers, computer software, telecommunications, chemicals, pharmaceuticals and cola concentrates. The IDA correctly identified some of the main growth areas of the future and by targeting these sectors at an early stage of their development created important first-mover advantages for Ireland. There is now a balanced portfolio of foreign investment in Ireland so that if one particular company or group of companies fails or leaves the country the effect will be more dampened than if the export led growth was dependent on just one specific MNC sector. Thirdly, labour has shown considerable responsibility in negotiating national pay agreements, which has created a stable industrial relations environment. Fourthly, investment in education has produced a solidly educated young labour force. Fifthly, fiscal retrenchment was implemented when it was vitally necessary in 1987. This fiscal retrenchment aided by two tax amnesties, which greatly expanded the tax base, restored equilibrium to the public finances. Indeed the current problem is one of learning how to cope with growing budget surpluses. Sixthly, Ireland is not a country fettered by excessive bureaucracy or regulation. Because it is small foreign investors can have quick access to government officials and politicians in order to sort out problems that they encounter in establishing their companies in Ireland. On the regulatory side there has been substantial de-regulation in two key sectors which improve the openness of the economy - transport and telecommunications. Now thanks to the pioneering work of Ryanair the costs of airline, and also boat, travel between Ireland and

Europe have been greatly reduced. This has helped improve the attractiveness of Ireland as a business location and also as a tourist centre. Deregulation of the telecommunications sector has produced cost cutting rivals to the former monopoly provider Telecom Eireann, which has been privatised and re-launched as Eircom. Seventhly, there has been a belated diaspora dividend. Since the middle of the nineteenth century up to recent years Ireland's main export was its people. Unlike the Jewish diaspora with its assistance for Israel over the last fifty years, the Irish diaspora has only taken a real interest in Ireland in recent years. John F. Kennedy identified the importance of the Irish-American political grouping. He was followed by Richard Nixon and Ronald Reagan, both of whom showed great keenness in identifying their Irish roots for the purpose of garnering votes from this group. The Irish American lobby identified Bill Clinton's presidential ambitions at an early stage and helped him to the Presidency. He has repaid this cooperation by his intense interest in the peace negotiations and in his encouragement of US investment in Ireland. Now Ireland strikes a strong resonant ethnic note for many Irish American business people who take pride in investing in the country of their ancestors.

Conclusions

For someone who spent nearly three decades of his professional life analysing a poorly performing economy it is gratifying to show the very considerable improvements and new dynamism in the Irish economy. Decade after decade I watched nearly all of my graduating classes in Trinity emigrate. Now it is a source of pleasure to see most graduates finding employment at home and so many of those who emigrated returning to well paid employment in Ireland. Success has led to more success. MNCs impressed by the performance of their competitors in Ireland have been attracted to invest in the country. Young Irish entrepreneurs impressed by the success of the young high-tech U.S. entrepreneurs have started to establish their own companies geared towards the international market. There is now a considerable buzz and effervescence in the Irish economy.

Ireland's recent economic story would be one's which emphasises the role of low taxation in promoting economic activity. Low corporate taxes are vital if a region is to encourage foreign direct investment. Aside from the 10% corporation tax rate there have been substantial reductions in tax rates between 1985 and 1998. The top rate of income tax has come down from 65% to 46%, capital gains tax has been reduced from 60% to 20% and capital acquisitions tax from 55% to 40%. Well targeted tax breaks can generate worthwhile employment generating activity.

Another message would be to focus attention on the de-regulation of government monopolies particularly in the areas of telecommunications, energy and transport. Ryanair, the airline born in the era of de-regulation, has been an absolute boon to Irish business and tourism. A further message would be to encourage greater mobility of students. Most Irish students have worked abroad in the U.S. or Europe for at least two summers prior to graduating from university. This work experience promotes flexibility and openness which MNCs appreciate in their labour force.

The most important message is one which encourages participation in the dual processes of globalisation and Europeanisation. It is a message which states that rather than demonising and fearing these processes that they may actually be viewed as being highly beneficial to a country such as Ireland. Globalisation has abolished peripherality enabling people to work from the region in which they were born. In the past during industrialisation they had to emigrate to the large cities. In this new high-tech post-industrial world many companies are attracted to regions such as Ireland not only because of the tax incentives and a well educated labour force, but, also, by the quality of life offered during leisure time. Aquatic sports, golfing, hunting, shooting, fishing, walking, etc. can all be quickly enjoyed in our two regions rather than spending hours in futile traffic jams. Equipped with mobiles and modems the new high-tech post-industrial worker may produce *un retour à la campagne*.

Antoin E. Murphy
Department of Economics
Trinity College, Dublin.

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Table 1. Economic Growth in Ireland 1975-99

	GNP	GDP
1975	0.8	1.3
1976	1.4	2.3
1977	5.8	6.9
1978	5.7	7.3
1979	3.0	3.3
1980	1.7	2.1
1981	2.0	2.8
1982	-1.7	1.3
1983	-1.2	0.1
1984	1.6	3.7
1985	1.0	2.4
1986	-0.7	0.4
1987	4.4	4.4
1988	2.5	4.5
1989	5.4	6.2
1990	7.3	7.1
1991	2.5	1.9
1992	1.9	3.3
1993	2.6	2.6
1994	6.3	5.8
1995	8.0	9.5
1996	7.2	7.7
1997	9.0	10.7
1998	8.1	8.9
1999	6.5*	7.8*

*Central Bank forecast Autumn 1999.
Sources: Budgetary and Economic Statistics, Department of Finance, May 199; National Income and Expenditure 1998.

Note: Due to the very substantial net factor income outflows - amounting to 13% of GDP in 1999 - which for the most part is caused by profit repatriation by the MNCs the GNP growth rate is more useful the GDP growth rate as an indicator of the annual growth of the economy.

Table 2. Openness of the Irish Economy 1922-1999

Year	Commodities	Labour	Capital
1922-32	Yes	Yes	Yes
1932-38	No	Yes	No
1939-45		WAR	
1945-57	Yes	Yes	No
1958-78	Yes	Yes	Yes
1978-92	Yes	Yes	No
1992 -	Yes	Yes	Yes

Table 3. **Manufacturing Activity in Ireland 1993-96**

Net Output (£ millions)

Years	1993	1994	1995	1996
Selected High Tech	5,086	6,191	8,491	9,570
All Foreign	8,302	9,817	12,490	13,975
Irish	3,419	3,508	3,747	4,160
Total	11,721	13,325	16,237	18,135

Employment

Years	1993	1994	1995	1996
Selected High Tech	21,469	24,430	29,406	32,044
All Foreign	88,836	95,715	103,864	106,410
Irish	111,167	109,706	116,714	120,224
Total	200,003	205,421	220,578	226,634

Net Output Per Person (£000)

Years	1993	1994	1995	1996
Selected High Tech	236	253	289	299
All Foreign	93	103	120	131
Irish	31	32	32	35
Total	47	65	74	80

Source: CIP

Table 4. Total Exports Breakdown 1988-1996

Export divisions	88	89	90	91	92	93	94	95	96
1. Miscellaneous edible products – cola concentrates (09)	714	786	736	796	894	1251	1445	1744	1757 [a]
2. Organic chemicals (51)	672	903	972	1158	1421	1864	2432	2502	3151
3. Medical & pharm. Equipment (54)	367	491	579	713	899	963	1238	1313	1739
4. Office/data processing machinery (75)	2264	2903	2760	2485	2609	3645	4139	5826	6384
5. Recorded media (898.79)	421	575	534	604	762	890	1393	2157	2476 [b]
Total (1-5)	4438	5658	5581	5756	6585	9063	10647	13515	15507
Remainder	7867	8939	8762	9263	10044	10767	12106	13782	14878
Total/exports	12305	14597	14343	15019	16629	19830	22753	27297	30385

Source: Trade Statistics of Ireland 1988-1996.

Table 5. Total Exports: Annual Growth rates in exports

Export Divisions	89	90	91	92	93	94	95	96
1. Misce. edible products - cola concentrates (09)	10	-6.4	8.1	12.3	39	15.5	20.7	0.7[a]
2. Organic chemicals (51)	34.4	7.6	19.1	22.7	31.1	30.4	2.8	25.9
3. Medical & pharm. Equipment (54)	33.8	17.9	23.1	26	7.1	28.5	6	32.4
4. Office/data processing machinery (75)	28.2	-5	-10	4.9	39.7	13.5	40.7	9.5
5. Recorded media (898.79)	36.5	-7.2	13.1	26.1	16.8	56.5	54.8	14.8[a]
Total (1-5)	27.5	-1.4	3.1	14.4	37.6	17.5	26.9	9.5[a]
Remainder	13.6	-2	5.7	8.4	7.1	12.4	13.8	10.8[a]
Total/exports	18.6	-1.8	4.7	10.7	19.2	14.7	19.9	10.2[a]

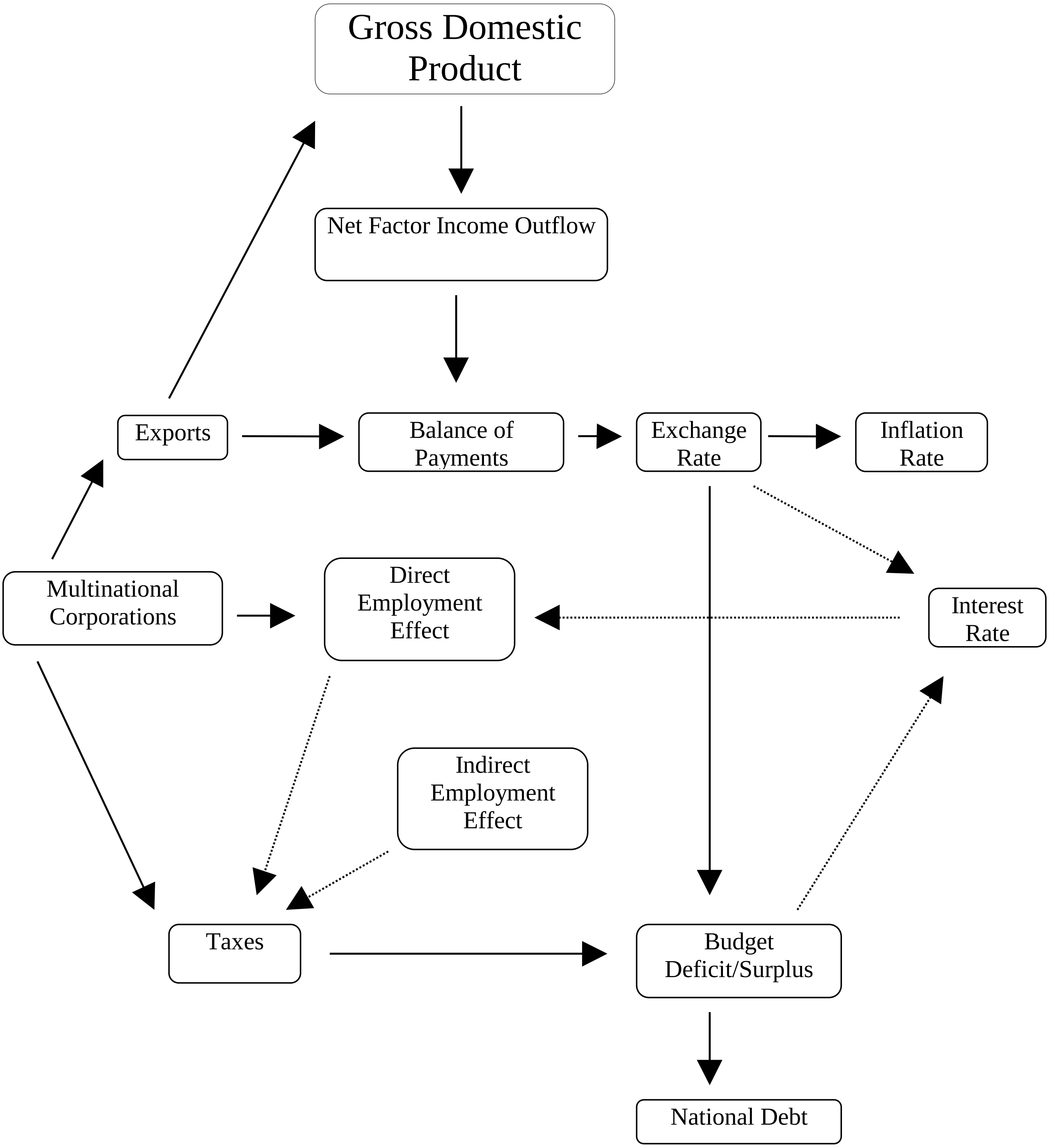
Source: Trade Statistics of Ireland 1988-1996.

Table 6. Profit Repatriation by the MNCs

Year	Dividends	Reinvested Earnings	Total	Growth
1990	2214	396	2610	
1991	1936	602	2538	-2.8%
1992	2247	795	3042	19.9%
1993	2691	664	3355	10.3%
1994	3209	577	3786	12.9%
1995	3945	1248	5193	37.2%
1996	4454	1372	5826	12.2%
1997	6005	1389	7394	26.9%
1998	7506	1790	9296	25.7%

This table is derived from table 30a Balance of International Payments in *National Income and Expenditure 1998*. It includes profits repatriated not only by the high-tech MNCs but also by other foreign owned companies. However, it is contended by most of the outflows and, in particular, the rate of growth of the outflows emanates from the high-tech MNC sector.

Chart 1


Gross Domestic Product
Net Factor Income Outflow
Exports
Balance of Payments
Exchange Rate
Inflation Rate
Multinational Corporations
Direct Employment Effect
Interest Rate
Indirect Employment Effect
Taxes
Budget Deficit/Surplus
National Debt

Remarks

Since 1994 Ireland has produced a strong and sustained growth performance. A great part of this has been due to the activities of the high tech MNCs and the International Financial Services Centre. It would be wrong to say that the country does not need these high tech MNCs and the IFSC. They play a key role in the Irish economy and the Industrial Development Authority (IDA) appears to have done a very good job in identifying those high tech sectors which may flourish in Ireland. The high tech MNCs have created employment, encouraged the growth of employment in the services sector and made substantial contributions to the Exchequer in taxation, most notably through corporation tax.

Nevertheless the debate raises some very significant issues:

(1) Ireland’s economic performance, while impressive, is imbalanced in that it is crucially dependent on the activities of a small group of MNCs. It must be emphasised once again that a small group of MNCs employing less than 30,000 employees dominate a large part of Ireland’s manufacturing performance. If some or all of these MNCs were to leave Ireland then there is the potential for an economic implosion. The closure in Clonmel of the Seagate Technology plant, which manufactured computer disk drives, in December 1997, resulting in the loss of 1,400 jobs showed the potential fragility of such high tech MNC investment.

(2) The *raison d’être* for these high-tech MNCs locating in Ireland is the low rate of corporation tax. This policy is now regarded as tax dumping by some members of the European Union. Any rapid European Union move towards fiscal harmonisation of the corporate tax regimes could raise serious question marks as to the long term commitment of the high-tech MNCs to the Irish economy.

The Irish Economy in the 1990s

Since Morgan Stanley coined the term the Celtic Tiger there has been a widespread perception that Ireland had a high rate of economic growth in each of the years of the 1990s. This has not been the case. The growth performance in the 1990s has been quite uneven. The average for expenditure and output data shows the following annual real growth rates for GNP:

Economic Growth

1990	7.3
1991	2.2
1992	2.3
1993	2.7
1994	7.4
1995	8.8
1996	6.0
1997	7.7
1998	8.5[a]
1999	6.5[b]

[a]) Department of Finance estimate.
[b]) Central Bank forecast.

These growth rates indicate that 1990 produced a very high level of growth but it was followed by three years of modest growth. This was an issue that was highlighted in *The Irish Economy: Celtic Tiger or Tortoise?* (1994). In that paper it was maintained that the evidence over the previous three years did not suggest that a booming economy. Proxies for domestic demand such as retail sales and the sales of new cars were sluggish.

	Volume of Retail Sales	New Private Car Registrations
1990	2.7%	6.4%
1991	-0.1	-17.8%
1992	2.3%	-1.0%
1993	1.4%	-10.4%

The first estimates for economic growth in 1991 and 1992, made in *National Income and Expenditure 1992*, had indicated growth rates of 3.6% for 1991 and 3.5% for 1992. These were substantial overestimates. These growth rates have been revised downwards in the subsequent National Income and Expenditure accounts. The latest estimates of an economic growth rate of 2.2% in 1991 and 2.3% in 1992, along with a growth rate of 2.7% in 1993, suggest that there were no great indications of the 'tiger' phenomenon between 1991 and 1993. Since 1994, however, there has been a sustained and impressive rate of economic growth.

When writing *The Irish Economy: Celtic Tiger or Tortoise* three knock on effects created by the MNCs had not fully manifested themselves. These were (1) the critical mass effect; (2) the spillover effects into the services sector (3) the effervescence effect on domestic expenditure. These effects have, in recent years, come to the fore.

The success of some of the established high tech MNCs has attracted their competitors to establish in Ireland.Success has built on success. Surveys of executives working in the MNCs indicate that their decision to base in Ireland was significantly influenced by the presence of their competitors in Ireland. The critical mass effect has been reinforced by developments in the European Union in the form of the completion of the Single Market in 1992 and the move towards European Monetary Union. These developments brought home to US MNCs the need to have platforms in the expanding European Union market. Furthermore the sustained improvement in the public sector finances, started in 1987, produced a more stable macroeconomic environment which added to Ireland's attractiveness as a location for US MNCs.

The spillover effects have resulted in increased demand for services ranging from legal and accounting skills to increased demand for offices and housing to increased demand for hotel and restaurant facilities. The demand curve for property has shifted sharply to the right due to the growth in employment and the high incomes earned by executives employed by the MNCs and the IFSC. With a limited supply of quality residential property coming on the market it is not surprising to see the continued spiral in property prices.

The effervescence effect that was missing in the early 1990s has been clearly evident in recent years. Increased consumption expenditure has become a strong factor pushing up economic growth. Buoyant retail sales and exceptionally high levels of new car sales suggest that the hesitant and uncertain consumer of the early 1990s have been transformed into the confident spender of the late 1990s. The volume of retail sales rose by 6.2% in 1996, by 7.9% in 1997 and by 8.8% in 1998.

On the employment front the total number of people at work increased by only 23,000 between 1990 and 1993. Between 1993 and 1996 the total number of people at work increased by 146,000. Employment growth continued to surge between 1996 and 1999 with total employment expected to average 1,576,000 in 1999, an increase of 247,000 on 1996. Unemployment is expected to average less than 6% for 199.

Against this background it may appear inappropriate to raise question marks about the future of the Irish economy. However, just as the Irish 'boom' of the 1970s was artificially based on excessive government expenditure and borrowing, there is an imbalanced element in the boom of the 1990s in that it is predominantly a multi-national phenomenon rather than an indigenous Irish one.