

Foreign Direct Investment and the Economy of Ireland: Some Current Issues

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Introduction

Ireland is the most FDI-intensive economy in the European Union and the expansion in FDI inflows – in both manufacturing and services – over the course of the 1990s was an important driving force behind the remarkable boom of the “Celtic Tiger” era. Ireland’s low rate of corporation tax is one of the major factors accounting for Ireland’s success in the FDI stakes. Its impact is strengthened however by the co-evolution of other elements of the Irish environment, such as the third-level education system and the role of the industrial development bodies within the public-sector bureaucracy. Section 2 of the paper provides details of these various features of the Irish economy and assesses why Ireland was so successful in attracting FDI over the course of the 1990s. Section 3 presents an Irish perspective on some current issues concerning the European environment for inward FDI; specifically, the growth in offshoring of R&D functions, the implications of some recent European Court of Justice rulings, and the EU corporation tax harmonisation debate. While Ireland’s success in attracting inward FDI is widely known, it might come as a surprise to many to learn that in 2005, for the first time, Irish outward FDI flows exceeded inward investment. Section 4 provides some details on Irish outward direct investment and the policy issues that have arisen in tandem with its emergence.

2. Inward FDI: the Irish Experience

Ireland is the most FDI-intensive economy in Europe. As seen in Table 1, foreign-owned firms account for almost 50 percent of Irish manufacturing employment. This compares to an average figure of 23 percent for the Western European EU member states and 33 percent for the three largest Central and Eastern European economies. Of the 17 EU countries plus the US and Norway for which OECD (2005, E7) provides data, Ireland also records the highest share of services-sector employment in foreign-owned firms. These figures are reflected in the value of the stock of foreign direct investment (FDI). Per head of population, the Irish inward FDI stock is a multiple of the EU average.¹

¹ Luxembourg records a higher FDI stock per head of population than Ireland but this is largely concentrated in financial services and is much less employment-intensive.

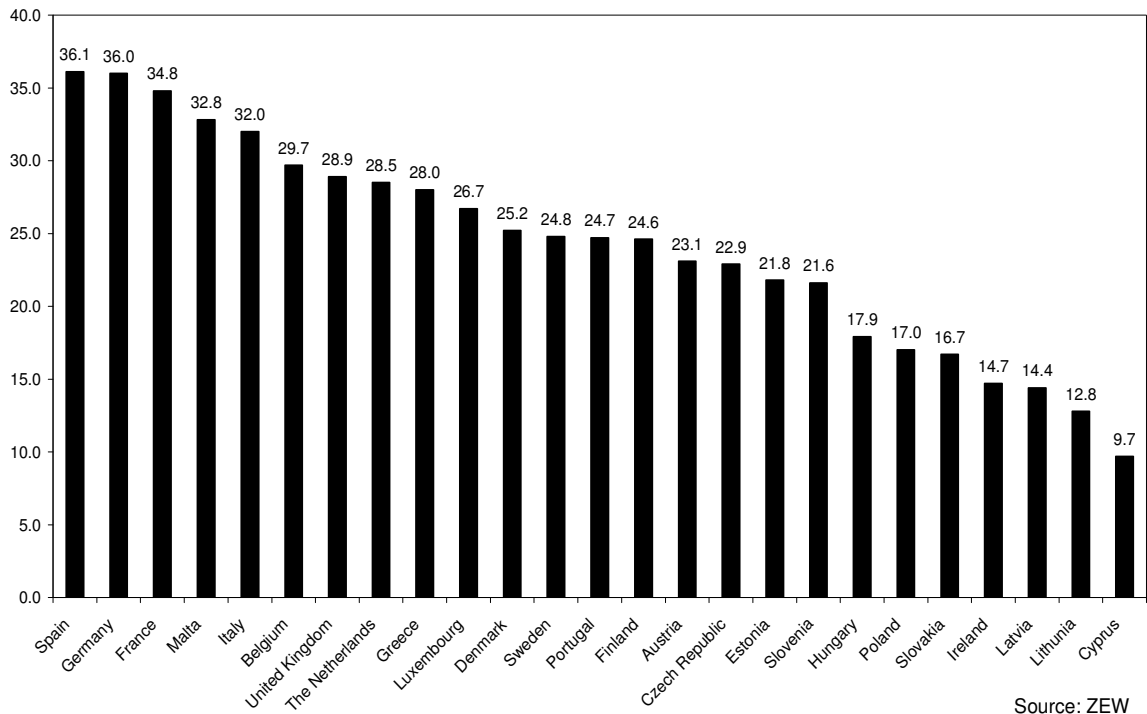
Table 1: FDI-Intensity of the Irish Economy

	Share of foreign affiliates in manufacturing employment	Share of foreign affiliates in services employment	FDI inward stock (USD) per head of population (2004)
Ireland	49	22	57372
EU15	23	10	9796
CEE	33	16	2403

Notes: affiliate employment shares (2002 or closest date) come from OECD (2005, tables E6 and E7) Science, Technology and Industry Scoreboard. CEE refers to the country average for Hungary, Poland and the Czech Republic. FDI Inward Stock data come from the UNCTAD (2005) World Investment Report.

One crucial factor in determining Ireland’s success in attracting FDI has been the country’s low rate of corporation tax. There are various measures of the effective tax rate, which combine the tax rate and the tax base. Figure 1 graphs the effective average tax rate (EATR), which Devereux, Griffith and Klemm (2002) show to be the tax rate relevant to discrete investment choices. Ireland is seen to have the fourth lowest rate among the 25 current EU member states and by far the lowest among the Western European EU15.

Figure 1: Effective average tax rates among EU member states in 2005



Ireland has other advantages as well however, including an English-language and common law environment that proves attractive to US MNCs. The long-established orientation of policy towards attracting FDI and the resulting FDI-intensity of the economy have also helped configure Ireland’s institutional structure to be able to respond rapidly to changes in the nature and the requirements of the type of global

FDI that an economy with Ireland's characteristics can hope to attract. One key element of this concerns the third-level educational system. Ireland now surpasses the OECD in terms of the proportion of the cohort aged 25 to 34 with tertiary education, as seen in Figure 2, and, according to the data presented in Figure 3, has one of the highest proportions in the world of science and engineering graduates among this age group.

Figure 2:

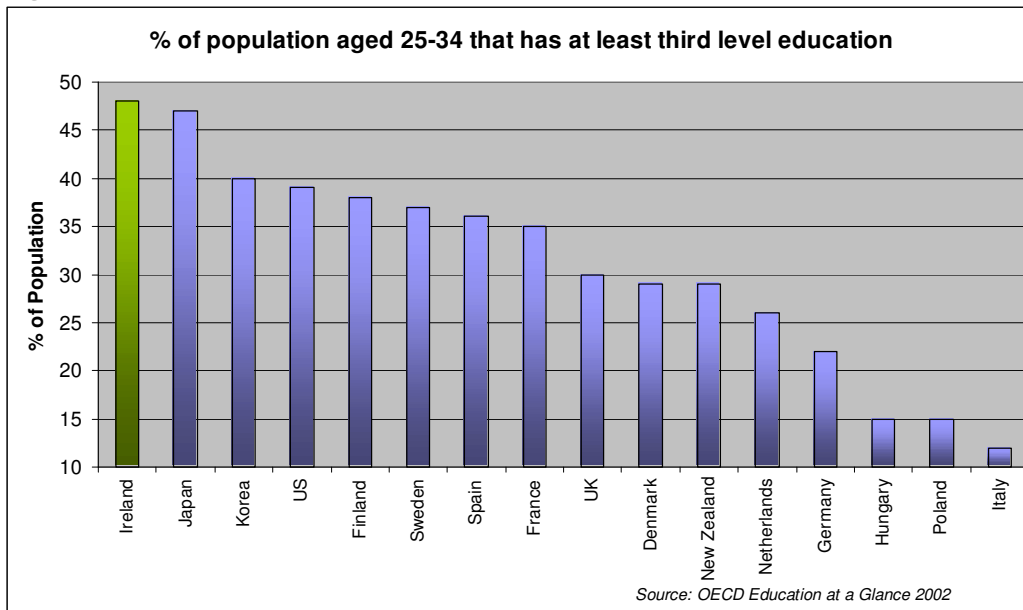
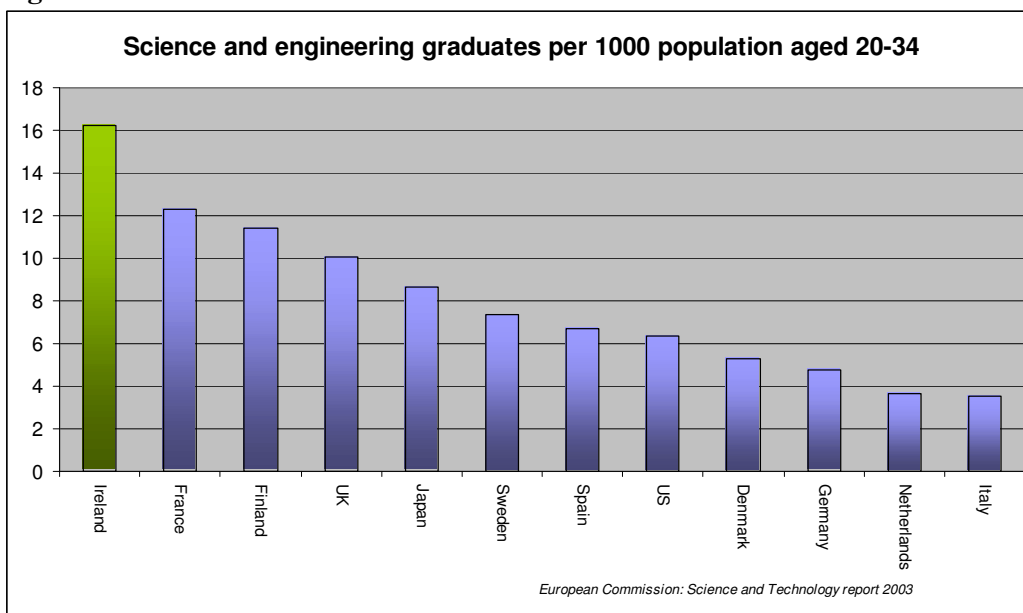


Figure 3:



These outcomes, in turn, are largely responsible for the high ranking accorded to the Irish education system in the annual surveys of global executives carried out by the International Institute for Management Development. In the 2005 edition of the *World Competitiveness Yearbook*, for example, global executives ranked Ireland number 2 out of a total of 60 OECD and medium-income developing countries in terms of how well the educational system is deemed to meet the needs of a competitive economy (with the UK ranked number 36) and number 5 out of 60 in terms of how university education is thought to meet the needs of a competitive economy (with the UK ranked 38th). Gunnigle and McGuire (2001), in a survey of executives of 10 major US MNCs, confirm that education and skill levels rank second in importance to the corporation tax regime in drawing these firms to Ireland.

A factor that is more difficult to quantify is the role of the country's Industrial Development Agency (IDA), which is widely regarded internationally as exemplary of best practice in the industrial promotion field. An important element of governance in the agency's operations is that it is subject to frequent external reviews, which have led to substantial changes in structures and procedures in the 1960s, the 1980s and the 1990s. The agency is facilitated in continuously adapting to changing circumstances and global business trends by its "transnational strategic network", consisting of its overseas offices and its relations with investors already in Ireland. These provide it with information about trends in targeted and newly emerging sectors that warrant attention. The resulting feedback to headquarters not only influences the industries or sub-sectors targeted but also guides efforts to inform and persuade the government about required legislative changes, necessary additions to infrastructure and specific training programs to serve the needs of targeted sectors.²

Ireland's development agencies (Forfás, IDA-Ireland and Enterprise Ireland), through the strong position they have attained in the policymaking hierarchy, have had an impact in areas not traditionally recognised as lying within the remit of industrial promotion agencies. They played a major role, for example, in forcing through the modernisation of the country's telecommunications infrastructure in the late 1970s and early 1980s and in the development and upgrading of human capital for the electronics sector. They were also instrumental in convincing government to reduce dramatically the rate of corporation tax on services (when the European Commission insisted that the rate be harmonised across sectors) and in driving the push for the massive increase in government spending on R&D in the National Development Plan for the period 2000-06.

Ireland's long-standing FDI orientation has also allowed agglomeration and demonstration effects to accumulate.³ As Barry and Bradley (1997) have noted, "surveys of executives of newly arriving foreign companies ... indicate that the presence of key market players in Ireland strongly influences the location choice of the newcomers". Ireland hosts many such firms in its key FDI sectors: ICT, pharmaceutical, medical instruments and international financial services. In computer

² An example of the speedy implementation of legislative change is provided by the case of the UCITS Directive which established a 'single EU passport' in financial services. Ireland was the second country after Luxembourg to implement the Directive in 1989.

³ Barry, Görg and Strobl (2003) demonstrate that these serve to attract further FDI.

hardware, such firms include IBM, Intel, Hewlett Packard, Apple and Dell; in software, Microsoft, Lotus and Oracle; in pharmaceuticals, the country hosts nine of the top ten companies in the world – including Glaxo, Johnson and Johnson, Pfizer, and Merck; 13 of the world’s top 25 medical devices and diagnostics companies have bases in Ireland, while half of the world’s top 50 banks and of the top 20 insurance companies operate out of the country. Barry and van Egeraat (2005) show that the critical mass of companies established in related sectors facilitated the rapid adjustment of the economy e.g. as the computer hardware sector migrated eastwards out of Ireland over recent years.

Having established a reputation as a reliable location for FDI in high-tech sectors, Ireland was well placed to profit from the global high-tech boom of the 1990s. A less obvious factor behind the growth of the period is emphasised by MacSharry and White (2000). They describe how restrictive public procurement policies on the part of some of the larger EU member states used to offer a strong incentive to transnational corporations to locate there. With the outlawing of these practices under the Single Market initiative, the attractiveness of Ireland as a destination for FDI inflows increased.

3. Inward FDI: Some Current Issues

Offshoring of R&D

An important new trend in global FDI concerns the offshoring of R&D functions, for which Kuemmerle (1999) provided early evidence. US Bureau of Economic Analysis data reveal a rise in European R&D employment in US affiliates from 66,500 workers in 1989 to 73,100 in 1994 up to 83,100 in 1999, while a recent National Science Foundation report (Moris, 2004), points out that between 1994 and 1999 overseas R&D employment in US MNC affiliates grew at an average annual rate of 3.9 percent compared with just 0.7 percent in the parent companies – “an indication of the increasing globalization of innovation and knowledge-based competition”.

The 2005 UNCTAD World Investment Report provides broader and more detailed evidence on the recent growth in global offshoring of R&D functions. It points out that for the largest Swedish MNCs the share of R&D carried out overseas rose from 22 percent in 1995 to 43 percent in 2003, and, for Japanese MNCs, from 2 to 4 percent over the same period. These trends are further confirmed by survey evidence cited in the report.

Kuemmerle (1999) distinguishes between “home-base-exploiting” R&D sites – which are associated with traditional FDI and tend to locate close to existing factories and important markets – and “technology-sourcing” sites, which are more likely to be located close to universities. The proportion of technology-sourcing R&D labs in his study rose from 7 percent in the mid-1960s to 40 percent by the late 1990s.

In line with these developments, Ireland’s share of gross R&D expenditures in the OECD and the EU15 increased over the 1990s and beyond, as seen in Table 2, while the government commitment to the issue is seen in the *five-fold* increase in

expenditures on science, technology and innovation policy over the 2000-06 planning period.⁴

Table 2: Gross Expenditures on R&D (GERD): Ireland, EU15 and OECD

	1991	1997	2000	2002
Ireland as share of EU15	0.35	0.69	0.70	0.73
Ireland as share of OECD	0.11	0.20	0.20	0.22

Source: OECD (2005) Science, Technology and Industry Scoreboard; Table A.2.2

Nor is the increase in Ireland share driven solely by the increased funding available from government and delivered primarily through third-level educational institutions. Business expenditures on R&D have also increased more rapidly than in the case of the EU or OECD, with the vast bulk of this (some 70 percent) accounted for by foreign-owned multinational corporations.⁵

Ireland has scored some notable successes in attracting offshore R&D projects in recent years. Academic centres for science, engineering and technology have been established in partnership with firms such as Intel, Bell Labs and Hewlett-Packard; Intel has established an innovation centre at its main site outside Dublin and increased its investment in its research centre near Limerick; Bell Labs has announced its intention to set up a major R&D centre at Lucent Technologies' Dublin facility and Hewlett-Packard has announced the establishment of a world-class Technology Development Centre at its manufacturing facility outside Dublin. Microsoft also recently announced the establishment of a new R&D facility at its European Product Development Centre in Dublin while IBM has announced significant investments in its R&D software facility in Dublin. In July 2005 alone, 5 major new R&D investments were announced by companies in ICT (Xilinx), biopharmaceuticals (Bristol-Myers Squibb, Pfizer, Genzyme) and services (Citigroup). The latter is the first dedicated R&D Centre ever established by Citigroup and represents the first R&D investment by a financial services company in Ireland. A number of these projects also involve significant collaborations with Irish academic institutions.⁶

How does the country's corporation-tax regime affect its ability to attract R&D functions? There is a strand in the Irish literature that argues that "the tax incentives for manufacturing in Ireland...inhibit the performance of R&D, since R&D costs can be written off at higher tax rates in the home country" (from a report to the state agency Forfás). Hines (2003) rejects the argument that low corporation tax rates discourage R&D, but suggests that R&D *intensity ratios* may be reduced because employment and output might be stimulated to a greater extent than R&D. Indeed, it is likely, he suggests, that low tax rates indirectly encourage local R&D activities on the part of multinational corporations eager to defend themselves against the charge that rents should not be attributed to their operations in low-tax locations.

This argument is supported by a Wall Street Journal analysis of Microsoft's 1997 allocation of intellectual property to an Irish subsidiary, which "helped the computer giant shave at least \$500 million from its annual tax bill.... The subsidiary has...a thin roster of employees...and the software was mostly developed outside Ireland, but

⁴ The Irish data, unfortunately, are as yet available only up to 2002.

⁵ OECD (2005): Sections A2, A5 and C.5.1.

⁶ <http://www.idaireland.com/home/index.aspx?id=65>

the subsidiary ...controls more than \$16 billion in Microsoft assets” (*Wall Street Journal*, November 7, 2005). Though the thrust of the analysis is strongly disputed both by Microsoft and the IDA, the article goes on to point out that expanding R&D operations in Ireland, by pharma-chem as well as ICT companies, is “necessary to satisfy IRS rules on moving intellectual property abroad. To do so – and thus have profits from it be taxed abroad – a company must be able to argue plausibly that its offshore unit is at least partly responsible for the innovations”.

The European Court of Justice and the Tax Harmonisation Debate

Much of the running on corporation tax issues within the EU today is being made by the European Court of Justice. A detailed study of the implications of these decisions for Ireland is close to completion and will be published shortly by the Institute of European Affairs in Dublin. The study concludes that ECJ decisions, by expanding capital mobility within the EU, will generally operate to the benefit of lower-corporation-tax environments. This may cause some EU countries to push harder for corporation tax harmonisation. Since Ireland would stand to lose a substantial segment of its inward FDI were this to come about, the issue attracts a good deal of attention in the country.

One point to note is that Ireland is competing for specific multinational investments not just with other EU countries but with non-EU countries such as Switzerland and Singapore. If Ireland were forced to raise its rate of corporation tax, at least some of these investments would be likely to be lost to the EU completely. Furthermore, recent analysis suggests – perhaps surprisingly – that the Irish tax regime may in fact facilitate larger and richer EU countries in attracting FDI in spite of higher corporation tax rates: the opposite of the view enshrined in the “race to the bottom” argument.

The formal exposition of the “race to the bottom” argument assumes that producers will move to whichever country has the lowest tax rates, so that – in the absence of tax coordination – the attempt to attract or preserve employment will lead to tax rates being driven ever lower.⁷ This argument depends crucially on countries being “symmetric” however, in which case, as Haaland and Wooton (1999) show, the battle between jurisdictions to attract FDI shifts all the surplus from domestic taxpayers to the relevant MNCs. When countries are asymmetric, on the other hand, the surplus will be shared between the successful jurisdiction and the MNCs. Subsidy or tax wars that affect the international allocation of production can enhance welfare by attracting the FDI project to the location where it yields the greatest benefits.

The assumption of asymmetry between countries is an important step in the direction of greater realism. Baldwin and Krugman (2004) show that larger, richer and less peripheral countries in Europe levy higher corporation tax rates than other countries, which suggests they can use these advantages to extract surplus from MNCs through

⁷ Technically, the tax competition results only go through under source-based (as opposed to residence-based) taxation. Bilateral tax treaties normally give the host country the right to tax income originating within its territory, implying that the source principle is in operation. However, exemptions or tax credits for tax paid elsewhere imply that the residence principle also enters (Barba Navaretti and Venables, 2004, p.244).

higher tax rates. Under these circumstances, harmonisation could be detrimental to both groups of countries.

Because of the specific details of US tax law, furthermore – where the US accounts for around half of manufacturing-sector FDI in Ireland – the Irish tax regime may in fact benefit higher-tax EU economies. As Hines and Rice (1994) explain, the United States taxes income on a residence basis, meaning that American corporations and individuals owe taxes to the US government on all of their worldwide income. In order to avoid subjecting American multinationals to double taxation, the US provides taxpayers with a tax credit for income taxes paid to foreign governments.

Assume that the US corporate tax rate is 34 percent. With the foreign tax credit, a US corporation that earns \$100 in foreign country A with a 15 percent tax rate pays \$15 to country A and only \$19 to the US government, since its US corporate tax liability of \$34 is reduced to \$19 by the foreign tax credit of \$15. The foreign tax credit is, however, limited to US tax liability on foreign income; if, for example, the tax rate in foreign country B were 50 percent, the firm would pay \$50 to country B and no taxes to the US government, but the firm would not be eligible for any tax rebate. If the firm has operations yielding \$100 in both A and B, it pays only \$8 to the US government, because its US liability of \$68 (34×2) is reduced by the \$65 ($15 + 50$) that it has paid in foreign taxes. Thus the existence of the low-tax jurisdiction reduces the disincentives that US firms face in investing in high-tax economies.⁸

Desai, Foley and Hines (2006) show, furthermore, that the firms most likely to initiate operations in low-tax countries are those with growing activity in nearby high-tax countries, implying that the existence of low rates regimes facilitates investment in nearby high-tax regimes. A somewhat similar argument had recently been advanced for low-tax offshore financial centres (OFCs). Rose and Spiegel (2005) argue that while OFCs facilitate tax avoidance, they also exert competitive pressures on home-country banking systems such that proximity to an OFC is associated with a more competitive domestic banking system and greater overall financial depth. Thus OFCs, they suggest, may increase overall welfare.

4. Outward FDI from Ireland

While Ireland's outward FDI stock was very low relative to GDP in the late 1990s, by 2004 it had risen to 41 percent, slightly above the EU15 average. In that year, for the first time, the flow of outward direct investment (ODI) from Ireland exceeded the gross FDI inflow.

Most of the FDI outflow is thought to consist of acquisitions rather than greenfield investments. Table 3 shows that the major sectors accounting for overseas

⁸ Nor is it necessarily true that the US tax authorities lose out from foreign tax-haven activities. As pointed out by Hines and Rice (1994), "taking the total profitability of American multinational firms to be fixed, the US government collects the most tax revenue when American firms earn their foreign profits in tax havens, since fewer foreign tax credits are available on haven profits than on profits earned in high-tax foreign countries. Consequently, the ability of American multinational firms to adjust reported profits in response to local tax rates might enhance US tax revenues, since American firms have incentives to report profits in jurisdictions where they generate the fewest foreign tax credits." A further possibility is that profitable business operations in tax havens stimulate complementary business investment in the United States.

acquisitions by indigenous Irish firms are (i) Financial Services, (ii) Construction and Property, (iii) Food and Agribusiness and (iv) Print, Paper and Publishing. While the importance of Irish financial services firms in overseas acquisitions reflects international norms, evidenced by the sector's share in worldwide acquisitions by EU firms, the same cannot be said for the other three sectors. The disproportionate prominence of mergers and acquisitions in the Food, Drink and Agribusiness sector in Irish M&A activity relative to the activities of European firms more generally reflects the weight of the sector in the Irish economy relative to that in the overall EU. The importance of Construction and Print, Paper and Publishing in Irish overseas M&A activity reflects the proprietary assets in management skills, experience and reputation that Irish firms have developed over time in these sectors.

Table 3: Cross-Border M&A Activity by sector, average annual share 1993-1999: (i) by EU firms, and (ii) by Irish indigenous firms

Sector	Cross-border M&A purchases by EU firms Worldwide	Cross-border M&A purchases by Irish firms
Food, Drink and Agribusiness	5.9	17.5
Print, paper and publishing	2.8	16.2
IT, Telecommunications and Electronics	5.1	4
Chemical and pharmac.	14.4	9.5
Other Manufacturing	24.2	5.8
Construction, property	1	22.2
Financial services	32.3	22.5
Services (consulting, retail, wholesale etc.)	14.3	2.3
Total	100	100

Source: Barry, Gorg and McDowell (2002).

The emergence of ODI as a new and rapidly growing phenomenon in Ireland has drawn attention to the international literature on home-country effects of FDI.⁹ Most of that literature identifies the effects as positive on balance. Blomström et al. (1997), for example, in a study on US firms, find that increased foreign production raises labour-productivity and expands headquarters services and high-skill employment in the home base, while Desai et al. (2005) find that higher capital expenditures on the part of foreign affiliates of US MNCs are associated with higher parent-company investments in the US. The implication drawn from this is that firms combine home production with foreign production to generate final output at lower cost than would be possible without ODI. This makes each stage of the production process more profitable and ultimately raises production in both locations, suggesting that home-country production and ODI are complements rather than substitutes.

⁹ This is the topic of the 2007 UNCTAD World Investment Report, research on which is currently underway.

Brainard and Riker (1997a, b) provide some contrary evidence however. While they find that the relationship between parent-firm employment in the US and US-affiliate employment in lower-wage economies is one of complementarity, affiliate employment in other high-wage economies appears to be to some extent substitutable for US employment. Braconier and Ekholm (2000) report a similar finding for Swedish MNCs. Such substitutability can arise if the FDI displaces exports from the firm's home base, in contrast to the type of FDI entailed in the offshoring of the labour-intensive segments of the production process.

In the Irish case however, even though most of ODI is directed towards developed countries, it does not typically entail the displacement of Irish exports. As Barry, Görg and McDowell (2003) point out, many of the largest Irish MNCs, which are thought to be responsible for the bulk of ODI, are in largely non-traded sectors. Of the top 10 companies, as listed by Forfás (2000), Allied Irish Banks, Bank of Ireland and Irish Life are in financial retail services;¹⁰ Independent Newspapers is a media company; Cement Roadstone Holdings and the Smurfit Group are in construction and packaging materials respectively. The only way these companies can expand on world markets is through FDI.¹¹ This leaves only food companies Kerry and Greencore, glassware company Waterford Wedgwood and pharma company élan operating in internationally-traded sectors in which FDI might possibly substitute for exports.

Even if home and host-country employment were substitutes rather than complements however, so long as the Irish economy remains at full employment the gains from ODI are likely to dominate the losses from any job displacement even in the short term.

Concluding Comments

Already by 1973 Ireland – with 0.6 percent of the population of Europe and a little over 1 percent of the EU15 – had 1.5 percent of the US manufacturing-sector FDI stock in Europe. Today that figure is closer to 10 percent. Ireland has also been very successful in attracting services FDI, with the McKinsey Global Institute (2003) identifying Ireland and India as the most popular destinations for offshored business services (comprising BPO and IT services). The present paper went on to detail how R&D offshoring has been gathering pace in recent years, and documented the steps that Ireland has taken to ensure success in this sphere also.

Ireland's ability to attract such high volumes of FDI would be greatly hindered by any movement within the EU towards corporation-tax harmonisation. It was argued that the decisions of the European Court of Justice on corporation-tax matters cannot be interpreted as "harmonisation by the back door", but that they may elicit further calls

¹⁰ Dicken (2003) mentions both Allied Irish Bank and the Bank of Ireland as among the top 10 most globalised banks in the world.

¹¹ High-tech Irish companies also establish foreign operations in order to source new technology. While Blomström and Kokko (2000) find that technology-sourcing ODI can lead to a downsizing of domestic R&D facilities and a reduction in high-skill employment, it can also generate positive externalities (Globerman et al., 2000). Cantwell and Piscitello (2002) argue that the international networks that MNCs establish can provide other home-based companies, interacting with these firms, with links to innovation in other areas of the globe.

for harmonisation. The paper then dealt with some of the arguments for and against harmonisation, pointing out that US tax law is particularly relevant for Ireland, which is the country that would stand to lose most from harmonisation. It was pointed out that a consequence of some of the intricacies of US tax law is that low-tax regimes such as Ireland may actually enhance the attractiveness to FDI of other higher tax regimes.

Finally, it was pointed out that though Ireland tends to be associated globally with the strength of its FDI inflows, outward FDI has grown rapidly over the course of the “Celtic Tiger” boom and in 2004, for the first time, outflows exceeded FDI inflows. This raises a new set of issues for Irish policymakers. The most difficult issues arise however (a) when outward FDI acts as a substitute for exports, and (b) when unemployment prevails so that there are high adjustment costs associated with job displacement. Ireland faces neither of these difficult issues at present.

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