Outward FDI and the Investment Development Path of a Late-Industrialising Economy: Evidence from Ireland

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Abstract
The Investment Development Path (IDP) hypothesis holds that a country’s net outward direct investment position is systematically related to its level of economic development. Ireland is an interesting test case because of the importance of inward FDI over the last three decades and the recent increase in outward FDI by Irish-owned multinationals. We find empirical support for the IDP concept for the Irish case. Our sectoral analysis suggests that Ireland’s outward FDI flows are disproportionately horizontal and oriented towards non-internationally-tradable sectors. Also, the firm-specific assets of Irish multinationals lie neither in R&D nor in the type of product differentiation associated with high advertising expenditures.

Keywords: Outward FDI, Investment Development Path, Ireland.

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Introduction

Dunning (1981, 1986) and Dunning and Narula (1996) argue that a country or region’s net outward direct investment position is systematically related to its level of economic development. This notion, formalised in the concept of the investment development path (IDP), proposes that there is a U-shaped relationship between economic development and a country’s net outward investment position.

As economic development proceeds net inward direct investment will first grow and then decline. In the earliest phase the country’s infrastructure will be inadequate to support even vertical (“low labour cost seeking”) inward investment. Such investment will grow however as the economy develops. It will take longer for firms from backward regions to accumulate the firm-specific assets that would allow them to engage in outward direct investment; Caves (1996); Dunning (1988). Over time, learning-by-doing will allow this process to evolve and outward FDI will emerge. At the same time, the country’s absolute cost competitiveness will be eroded, reducing the incentive for vertical inward investment. The incentive for horizontal (“market seeking”) and technology-sourcing investments may expand however as the economy becomes wealthier, and domestic firms will seek to maintain their competitiveness by engaging in outward vertical investments.

Recently the hypothesis has been extended further by Dunning, Kim and Lin (2001). They argue that in the earlier stages of economic development outward investment (and exports) will be in other than “created asset”-intensive sectors but that this sectoral orientation will change as technological progress and human resource development proceeds.

In this paper we examine whether the development of inward and outward investment in Ireland fits in with these concepts. Ireland represents an interesting test
case for the IDP hypothesis for two reasons. First is the very rapid pace of economic
development enjoyed over the last decade: income per head, measured as GNP per
capita at purchasing-power-parity prices, rose from less than 65 percent of the UK
level in 1990 to rough equality with the UK (and the EU average) today, while net job
creation over the same period exceeded the rate achieved even by the US, traditionally
the world's "job creation dynamo".\textsuperscript{1} It is of interest to ask whether traces of the
postulated dynamic patterns in the net foreign investment position can be seen over
such a relatively short period of rapid growth. Secondly, of course, there is the fact
that Ireland has relied far more heavily than other EU countries on inward FDI as the
driving force behind manufacturing-sector development. This is reflected in the data
in Table 1 on the share of manufacturing sector employment in foreign-owned firms
for a number of OECD countries.

\textit{Table 1 here}

Given the magnitude of inward FDI it is not clear whether the patterns
postulated by the IDP, with outward FDI rising over time to match the levels of
inward investment, will be as much in evidence as in economies with less dramatic
inward flows. We investigate this issue by examining the overall patterns of inward
and outward FDI in Ireland in Section 1. Section 2 looks at bilateral FDI between
Ireland and the US, and estimates an econometric model of the IDP following
Buckley and Castro (1998). In Section 3 we examine the differences in sectoral
destination between Ireland's inward and outward FDI flows. Section 4 summarises
and discusses some policy implications.

\textsuperscript{1} GNP is used here as it excludes the profits earned by foreign firms producing in Ireland. Irish GDP
per head is substantially higher.
1. Ireland’s Inward and Outward FDI Flows

Total FDI outflow data is available for Ireland only for the last few years. A view of the historical record may be gleaned however from UNCTAD (2000) data on inward and outward investment stocks. These show Ireland in the late 1990s as having the third highest stock of inward investment relative to GDP in the EU, after Belgium/Luxembourg and the Netherlands. Ireland’s outward investment stock on the other hand was third lowest, after Greece, Portugal and Austria. This suggests that until recently outward FDI flows from Ireland were not very large, as the IDP concept would suggest.

In looking at flow data, it is important to distinguish between inflows into the International Financial Services Centre (IFSC) in Dublin and inflows into other sectors of the Irish economy. The IFSC, founded in 1987, is one of Europe’s largest off-shore financial centres. Inward investment here entails the transfer of capital by foreign companies to their financial subsidiaries at the IFSC. These inflows are then mostly reinvested in overseas assets. Thus, direct-investment inflows into the IFSC are roughly matched by outward flows of portfolio investment, with little impact on the productive potential of the economy; Forfás (2000). We therefore attempt to exclude such flows of funds from our discussion.

The Irish Central Statistics Office has recently started to publish data on inward and outward FDI flows. Inward direct investment into non-IFSC sectors in Ireland came to 3.5 billion euro in 1998, rising to 6 billion in 1999 and 8.8 billion in 2000. Surprisingly, given the historical levels of such inflows and their importance, illustrated above, outward flows for the first two years almost matched these inward flows, totalling 3.5 billion euro in 1998 and 5 billion in 1999. Though outflows fell to 2.9 billion euro in 2000, Forfás (2001) reports a 40 percent increase for the first six
months of 2001 compared to the equivalent period one year earlier. These are substantially higher than the average annual outflows of around $400 million for the 1988 to 1993 period recorded by UNCTAD (2000), lending further support to the investment development path concept.

To take the analysis further requires information on both the geographic and sectoral destination of outflows. Let us consider the geographic destination first. The pre-eminence of the US and the UK as host locations is clear from Table 2, which is derived from a database on overseas acquisitions by Irish companies.\(^2\) Over 70 percent of overseas acquisitions annually were made in the UK and US. Acquisitions in turn are thought to be the main vehicle by which Irish companies invest overseas; Forfás (2001).\(^3\)

*Table 2 here*

Growth over time in the stock of Irish FDI in the UK is confirmed by UK Office of National Statistics data, which report numbers employed in foreign-owned firms in the UK manufacturing sector. In the first year these data were reported, 1981, Irish-owned firms employed 8,900 workers in the UK. By 1996 this had climbed to over 23,000, though it declined to 19,000 in 1997.\(^4\)

The US appears to be even more important than the UK as a destination for Irish outward FDI. For the few years for which Irish Central Statistics Office data are available, around 70 percent of FDI outflows from Ireland went to non-EU countries, and primarily, it is thought, to the US. Given the scarcity of Irish source data on

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\(^2\) Note that this data is different from outward FDI since the acquisitions may be funded through a variety of non-FDI as well as FDI sources.

\(^3\) This is true more generally also. According to UNCTAD data, the value of cross-border mergers and acquisitions in the world economy reached $720 billion in 1999, compared with $145 billion in greenfield investments.

\(^4\) ONS Summary Volume – Manufacturing, Table 9.
outward flows, we are fortunate in having US Department of Commerce data on foreign-owned assets in that country. As the US is also the most important source of FDI flows into Ireland, we concentrate in the next section of the paper on what the US data tell us about the bilateral Ireland-US FDI relationship.

2. The Bilateral Ireland-US FDI Position

Table 3 shows that over the course of the 1980s and 1990s Irish FDI in the US grew even more rapidly than US FDI in Ireland. This result is quite surprising, given the focus of academics and policy makers on Ireland as a host country for inward investment rather than as a base for outward investment.

The employment associated with Irish non-bank affiliates in the US (which is unfortunately the only employment data available to us) also increased considerably over the period. As shown in Figure 1, these numbers increased steadily from around 10,000 in the early 1980s to approximately 39,000 in 1997 and then surged to 65,000 in 1998 due to a spate of acquisitions of US firms. This should be seen in the context of development in the US-owned affiliate sector in Ireland over the period, where employment grew from around 38,000 in 1982 to 65,500 in 1997 and 70,400 in 1998.

Although the IDP concept outlined earlier relates to a country’s total net outward investment position, we propose to explore it in terms of the bilateral investment relationship between Ireland and the US. We argue that this is of interest not only because the US is the most important source country for FDI in Ireland, but

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5 These data are available in the publication *Survey of Current Business* and on the Bureau of Economic Analysis website (http://www.bea.doc.gov/bea/di1.htm).
is also, as seen earlier, one of the most important, if not the pre-eminent, destination for Irish outward FDI flows.

Figure 2 plots Ireland’s net outward position with the US (defined as outward FDI stocks in the US minus inward FDI stocks from the US) over the period 1980 to 1999. Note firstly that it has remained negative: the inward FDI stock from the US has been consistently higher than the Irish FDI stock in the US. Secondly however, the pattern over this period during which Ireland developed very rapidly does indeed look like the U-curve predicted by the IDP.

*Figure 2 here*

To analyse the relationship between the net outward investment (NOI) position and economic development more formally, Dunning (1981) suggests regressing NOI on GDP, utilising a quadratic specification to allow for the non-linearity in the relationship. Dunning (1981) and, more recently, Dunning and Narula (1996) estimate this relationship for a cross-section of different developed and developing countries, and find statistical support for the use of such quadratic specifications. Evidence of such a non-linear relationship has also been presented recently for Portugal by Buckley and Castro (1998), employing time series data for the period 1943 to 1996.

Following these studies, we analyse the IDP relationship for Ireland’s net outward position with the US (NOI = outward – inward FDI stocks) by estimating the following model:

\[
NOI = \beta_0 + \beta_1 GDP + \beta_2 GDP^2 + \varepsilon \tag{1}
\]

\footnote{See Görg (2000) for a more detailed analysis of this relationship.}
where $GDP$ is real gross domestic product in Ireland and $\varepsilon$ is a regression error term. Estimating this equation using data for the period 1980 to 1999 yields the following result:

$$NOI = -325.609 - 0.172 GDP + 1.78e-06 GDP^2$$

(2)

\begin{align*}
(575.424) & & (0.027) & & (0.27e-06)
\end{align*}

where the numbers in parentheses are heteroskedasticity consistent standard errors.\(^7\) The R-squared obtained is 0.66. The negative sign of the coefficient on $GDP$, and the positive sign on the $GDP$-squared coefficient (which are both statistically significant at the one per cent level), provide evidence of a U-shaped relationship between Irish GDP and the country’s net outward FDI position with the US, a pattern consistent with the IDP concept.

3. Sectoral Destination of Ireland’s Inward and Outward FDI Flows

Early formulations of the Investment Development Path concept had little to say about differences in the sectoral destinations of FDI inflows and outflows. Indeed no clear distinction was drawn between vertical and horizontal flows.\(^8\) The process of economic development would seem to have two implications of relevance. The first is that as production costs (and particularly labour costs) rise, this strengthens the incentive for domestic firms to engage in vertical FDI, shifting the labour-intensive segments of the production process abroad to lower-cost locations. The second is that as domestic firms reap the benefits of learning-by-doing, they become able to compete

\(^7\) Note that the reported estimation corrects for heteroskedasticity, which was detected in the initial regression, using the White (1980) estimator of variance. The Durbin-Watson statistic, $dw(3,18)=1.97$, indicates that first-order autocorrelation is not a problem.

\(^8\) Vertical flows are associated with the international fragmentation of production, driven by factor costs, while horizontal flows are associated with goods-market access considerations.
successfully in the home markets of earlier-developed countries, and so engage in horizontal FDI.

Our interpretation of the data on the sectoral destination of Irish acquisitions overseas indicates that the bulk of Irish outward FDI is of the horizontal type. Indeed it is in exploring this issue that we feel we make a contribution to the further development of the IDP concept.

**Sectoral Destination of FDI Outflows from Ireland**

Table 4 compares the sectoral distribution of overseas acquisitions by Irish companies with that for all EU companies. Given the importance of the US as a location for Irish acquisitions we also show the sectoral distribution of acquisitions by overseas companies within the US. The latter is seen to conform fairly closely to the distribution for all overseas acquisitions by EU companies. The sectoral distribution of Irish acquisitions differs substantially from both other series however.

*Table 4 here*

The largest acquisition sectors for Irish firms are Financial Services, Construction, Food and Agribusiness, and Print, Paper and Publishing, with the vast bulk of acquisitions being by the largest Irish firms.\(^9\)

\(^9\) Thus Allied Irish Banks, having entered the US market in 1988, is now one of the 50 largest bank holding companies in the US, with assets of close to $20 billion and a workforce of 6,500. Following recent acquisitions, Cement Roadstone’s US materials businesses now has sales of some £1 billion per annum. The recent merger of Smurfit’s US operations with Stone Container makes it one of the five biggest producers in the packaging industry, and these five now control nearly 60 per cent of North
While the behaviour of Irish Financial Services firms reflects international norms, the same cannot be said for the other three sectors. Given the importance of agribusiness within Irish indigenous industry, where the Food Drink and Tobacco sector accounts for 27 percent of indigenous manufacturing employment compared to 12 percent of total manufacturing employment within the EU15, it is not so surprising that this sector should play a greater role in Ireland’s outward FDI than is the case for the rest of the EU.  

Of most interest then is the predominant role played by the Construction and Print, Paper and Publishing sectors in Ireland’s outward FDI.

Expansion abroad in such largely non-tradable sectors entails horizontal rather than vertical FDI. If companies in these sectors expand abroad they do so for market-access reasons, i.e., in order to penetrate and grow in new markets.

The year 2000 saw a huge increase in US acquisitions by Irish firms in high-tech sectors such as Information Technology and Communications, and the Medical and Pharmaceutical industry. Dunning appears to suggest that this emergence into high-tech outward FDI is an automatic consequence of economic convergence. In the Irish case however the importance of inward FDI in hastening these developments should not be overlooked.

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American capacity. By contrast, Forfás (2000) notes that overseas investment by small and medium Irish enterprises is low by European standards.

10 These data are for 1997, the latest year available to us. The data sources are Census of Industrial Production for Ireland and Daisie for the EU15.

11 The acquisitions associated with many high-tech firms in ICT are small however, on the order of several million Irish pounds, paling in comparison to the £840 million spent by AIB on US purchases in 1997, the £418 million spent on US acquisitions by CRH in 1996 and the £82 million spent by Waterford Wedgewood in 1999.

12 Görg and Strobl (2002) for example show that inward FDI has a positive effect on the coming into being of domestic firms in the same sector. For a case study of the development of the Irish indigenous software sector see Ó Riain (1997).
Why should high-tech firms from a relatively peripheral region be drawn to set up US operations so early in their lives? Access to new technologies and capabilities is clearly an important contributory factor. There is also, according to Cryan (1999), a need to network. Without a local presence there is little possibility of being featured in the US press, of developing relationships with computer vendors or of attracting the attention of venture capitalists. The importance of a US base is summed up by one US venture capitalist who is quoted as saying:

"I will not invest in a company that is any more than a 35-minute drive from my office. I need to keep an eye on my investment and it's very difficult to do that if the company headquarters is 6,000 miles away."¹³

Ireland’s outward FDI in high-tech sectors is also driven by market-access considerations therefore, though by different ones from those conventionally focussed upon in discussing either horizontal or vertical FDI.

Why do we see so little vertical FDI outflows from Ireland to lower production-cost locations? Here we need to remind ourselves of the reasons why firms choose to set up production facilities abroad. These are based on the importance of intangible firm-specific (or proprietary) assets, the full benefits of which are more easily reaped through intra-firm rather than conventional market relationships. R&D and superior product differentiation through advertising are generally found to be the most important firm-specific assets associated with multinationality;¹⁴ Caves (1996), Markusen (1995).

¹³ Irish Times, Friday, March 26, 1999.
¹⁴ Multinationality is defined in this case in terms of the FDI-intensity of manufacturing sectors rather than the importance of FDI flows. Ekholm and Midelfart-Knarvik (2002) consider two such measures based on US data: the shares of total sales of US MNEs that consist of foreign-affiliate sales, and the share of US industry GDP comprised of the gross product of US affiliates of foreign firms. The industries that score above average on both measures are Petroleum and Coal Products, Chemicals, Electronic Products and Transportation Equipment. The latter three are all R&D- and advertising-intensive sectors.
Of the sectors with which the leading Irish firms are associated, only pharmaceuticals and some segments of food are advertising-intensive, according to the classification proposed by Davies and Lyons (1996, Table A2.1). Only one of the firms driving the acquisitions data in Tables 4, the pharmaceuticals company élan, is located in what the OECD (1994) classify as a high-technology sector. This is also the only one of these companies to feature in a list of the top thirteen patent holders among Irish indigenous enterprises; O'Sullivan (2000).

Irish multinational companies do not appear therefore to follow the standard pattern associated with multinationality. As R&D, technology and advertising-related characteristics do not appear to be important for the majority of Irish multinationals, we may conjecture that their predominant proprietary assets are in the fields of management and experience in largely non-traded sectors.

On the basis of our knowledge of the Irish Financial Services firms operating overseas, outward FDI in this sector does not appear to conform to the Caves (1996, page 11) hypothesis that such firms, having developed a transactions-cost advantage for supplying services to particular firms, follow those firms when they expand overseas. His hypothesis on construction firms however, that they “rely on inventories of routines and reputation assets resembling those that commonly support MNEs in manufacturing” does appear to be close to the mark in the Irish case.

Proprietary assets other than R&D and advertising then appear to be associated with the horizontal multinationalisation of Irish firms. It is also worth bearing in mind that, as Caves (1995, p.83) points out, factors such as R&D and advertising that generally give rise to MNEs also represent barriers to entry into these industries. The fact that the proprietary assets of Irish MNEs do not lie in these areas serves as an
illustration of the difficulties facing firms in late-developing regions in surmounting the entry barriers that characterise more conventionally multinational sectors.

*Sectoral Destination of FDI Inflows into Ireland*

As much has been written about FDI flows into Ireland (see, for example, Barry and Bradley, 1997) we can deal with this material briefly, focussing only on the contrast between the level of technology associated with inward and outward FDI.

The difference in the level of technology is suggested firstly by balance of payments data. In 1999 for example, the country paid out over £5 billion in overseas royalties and licence payments as the high-tech processes of the foreign-owned sector originate from their parent companies. By contrast, the country received only £300 million in royalties and licence payments from abroad.

Table 5 presents evidence on the sectoral destination of inflows by showing the share of each sector in total foreign-industry employment in Ireland.

*Table 5 here*

Recall that almost no high-technology sectors were represented in the group that served as destinations for FDI outflows. By contrast, most of the sectors which attract FDI inflows are so classified. Of the nine sectors listed in Table 5 for example, the top five are classed as high-tech by OECD (1994). Of the remaining four, two are classed as medium technology (transport equipment and chemical products) and two as low technology (food and textiles). Within the food sector, furthermore, 90 percent of foreign employment is in segments classified by Davies and Lyons (1996, table A2.1) as ones in which advertising expenditures are important.
In comparison to inward FDI, the sectoral destination of Ireland’s outward FDI does not as yet reflect the kind of strong “created asset” intensity that Dunning et al. (2001) find for Korea and Taiwan.

4. Concluding Comments

In this paper we report evidence on inward and outward FDI flows for Ireland. Inflows have grown substantially over time, and have been an important driving force behind the economy’s dramatic recent growth; Barry (1999). According to UNCTAD (1998), no other EU country had as high a ratio of inward to outward FDI stocks in the late 1990s. We have pointed out however that outflows from Ireland have grown even more sharply than inflows in recent times. This evidence is consistent with the “investment development path” (IDP) hypothesised by Dunning (1981, 1986).

Due to the dearth of consistent time-series data on outflows from Ireland we cannot evaluate the IDP hypothesis empirically on total FDI stocks or flows. The US is the most important source of FDI flows into Ireland, however, and the evidence adduced here suggests that it has also been the most important destination for Irish outflows in recent years. In our econometric work therefore we utilise US data on the bilateral Irish-US FDI relationship, and our results provide further support for the IDP hypothesis.

We go on to analyse the sectoral destinations of inflows and outflows, on which the IDP hypothesis is largely silent. We show that Irish FDI outflows go disproportionately into non-traded sectors such as construction materials and paper and packaging. This is assuredly not the case for FDI inflows into Ireland, where over 90% of the output of the foreign-owned segment of Irish manufacturing is exported.
The sectoral destination of outward FDI flows from Ireland is reminiscent of the discussion in Caves (1995, p.238-240) of developing-country multinationals. Irish firms have clearly not (yet?) surmounted the formidable entry barriers associated with the development of firm-specific assets based on R&D and strong product differentiation; O’Malley (1987). This appears to contrast with the experiences of Korea and Taiwan, as analysed recently by Dunning et al. (2001).

The proprietary assets associated with Irish MNEs appear instead to be based on management and experience. Their disproportionate presence in (non-traded) downstream sectors does not offer an incentive to engage in vertical multinationality (as opposed to conventional trade) in accessing upstream intermediate inputs.

Much of the literature analysing the implications of outward investment focuses on vertical FDI, in which labour-intensive segments of the production process are shifted abroad. Blomström et al. (1997) for example find, for US firms, that increased foreign production is associated with reduced employment in the parent company, though there may be an expansion of headquarters services and high-skill employment in the home base. Locating abroad to source new technologies on the other hand may lead to a downsizing of domestic R&D facilities and a reduction in high-skill employment; Blomström and Kokko (2000). Technology sourcing may also generate positive externalities however, as Globerman et al. (2000) argue.

With most Irish FDI outflows concentrated in lower technology sectors, spillover benefits from headquarters services in Ireland may be less likely to arise than in the case of firms whose proprietary assets lie in R&D. In the case of Ireland's "new economy" firms locating in the US however, the various offsetting effects discussed above may arise, and should be worth exploring.
In terms of policy implications, one occasionally encounters arguments both that outward FDI is too low, because of entry barriers inhibiting the development of indigenous firms in sectors conducive to FDI, and that it is too high, because of the disruption to employment that it may cause at home. In answer to the first of these, we note that market failures associated with R&D are widely recognised. The measures put in place in Ireland and elsewhere to encourage R&D and the upgrading of skills and technology should help indigenous firms to surmount these entry barriers. In answer to the second point, we recognise that, as in all cases of economic restructuring, there will be losers as well as winners. Public intervention to minimise dislocation resulting from the growth of outward FDI should be focussed on providing those who are displaced by the process with new skills and training.
Tables and Figures

Table 1: Proportion of Manufacturing Employment in Foreign-Owned Firms, 1998

<table>
<thead>
<tr>
<th>Country</th>
<th>Proportion of manufacturing employment in foreign firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Republic</td>
<td>16.2</td>
</tr>
<tr>
<td>France</td>
<td>27.8</td>
</tr>
<tr>
<td>Finland</td>
<td>15.9</td>
</tr>
<tr>
<td>Germany</td>
<td>6</td>
</tr>
<tr>
<td>Hungary</td>
<td>44.9</td>
</tr>
<tr>
<td>Ireland</td>
<td>47.5</td>
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<tr>
<td>Italy</td>
<td>11.5</td>
</tr>
<tr>
<td>Japan</td>
<td>1.1</td>
</tr>
<tr>
<td>Netherlands</td>
<td>19.7</td>
</tr>
<tr>
<td>Norway</td>
<td>17.4</td>
</tr>
<tr>
<td>Sweden</td>
<td>21.1</td>
</tr>
<tr>
<td>Turkey</td>
<td>5.3</td>
</tr>
<tr>
<td>UK</td>
<td>17.8</td>
</tr>
<tr>
<td>US</td>
<td>13.4</td>
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</tbody>
</table>


Table 2: Overseas Acquisitions by Irish Companies

<table>
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<tbody>
<tr>
<td></td>
<td>£000</td>
<td>%</td>
<td>£000</td>
<td>%</td>
</tr>
<tr>
<td>UK</td>
<td>453,350</td>
<td>67</td>
<td>979,140</td>
<td>42</td>
</tr>
<tr>
<td>US</td>
<td>64,550</td>
<td>10</td>
<td>999,300</td>
<td>43</td>
</tr>
<tr>
<td>ROW</td>
<td>157,650</td>
<td>23</td>
<td>371,100</td>
<td>15</td>
</tr>
</tbody>
</table>

Source: CFM Capital *Acquisitions Survey* (various years)
Table 3: Outward and Inward FDI Stocks
(in million $ at 1996 prices)

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Irish FDI in US</td>
<td>174</td>
<td>318</td>
<td>476</td>
<td>1702</td>
<td>2413</td>
<td>4840</td>
<td>12842</td>
<td>17222</td>
</tr>
<tr>
<td>US FDI in Ireland</td>
<td>3957</td>
<td>5332</td>
<td>5700</td>
<td>5608</td>
<td>8305</td>
<td>8150</td>
<td>15472</td>
<td>18998</td>
</tr>
</tbody>
</table>

Note: both data series were deflated using the US GDP deflator available at http://w3.access.gpo.gov/usbudget/fy2001/hist.html#h10.

Source: own calculations based on US Department of Commerce data

Table 4: Cross-Border M&A Activity by sector, average annual share 1993-1999:
(i) by EU firms, (ii) within the US and (iii) by Irish firms

<table>
<thead>
<tr>
<th>Sector</th>
<th>Cross-border M&amp;A purchases by EU firms</th>
<th>Cross-border M&amp;A sales within the US</th>
<th>Cross-border M&amp;A purchases by Irish firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food, Drink and Agribusiness</td>
<td>5.9</td>
<td>5.7</td>
<td>17.5</td>
</tr>
<tr>
<td>Print, paper and publishing</td>
<td>2.8</td>
<td>4.5</td>
<td>16.2</td>
</tr>
<tr>
<td>IT, Telecommunications and Electronics</td>
<td>5.1</td>
<td>7.8</td>
<td>4</td>
</tr>
<tr>
<td>Chemical and pharmac.</td>
<td>14.4</td>
<td>17</td>
<td>9.5</td>
</tr>
<tr>
<td>Other Manufacturing</td>
<td>24.2</td>
<td>20.5</td>
<td>5.8</td>
</tr>
<tr>
<td>Construction, property</td>
<td>1</td>
<td>1.8</td>
<td>22.2</td>
</tr>
<tr>
<td>Financial services</td>
<td>32.4</td>
<td>22.5</td>
<td>22.5</td>
</tr>
<tr>
<td>Services (consulting, retail, wholesale etc.)</td>
<td>14.3</td>
<td>20.2</td>
<td>2.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Source: own calculations, from UNCTAD (2000) for (i) and (ii) and CFM Capital Acquisitions Survey (various years) for (iii).

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15 This sector comprises Electrical and Electronic Equipment and Precision Instruments.
Table 5: Sectoral Distribution of Employment in Foreign Industry in Ireland

<table>
<thead>
<tr>
<th>Sector</th>
<th>Share of total employment in foreign-owned industry by sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office and Computing Machinery</td>
<td>14</td>
</tr>
<tr>
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Source: Census of Industrial Production (1999)
Figure 1

Employment associated with Irish Outward Investment to and Inward Investment from the US

Source: own calculations based on US Department of Commerce data
Figure 2
Development of Irish Net Outward Investment Position with respect to US
References


UNCTAD (various years) *World Investment Report*.