WILL EU ENLARGEMENT THREATEN IRELAND'S FOREIGN DIRECT INVESTMENT INFLOWS?

FRANK BARRY AND AOIFE HANNAN*

1. Introduction

One frequently encounters the view that eastwards enlargement of the EU will be in Ireland's economic interest because it represents a substantial expansion of the market into which Ireland will be able to export freely. This perspective indeed provides the basis for most analyses of how the costs and benefits of enlargement will be shared across EU states. By failing to consider how enlargement may affect Ireland's foreign direct investment (FDI) inflows, however, this view ignores what is probably the most important dynamic in Ireland's economic development.[1]

The conventional perspective is encapsulated in the work of Baldwin, Francois and Portes (1997) for example. Their analysis draws a distinction between two groups of industries. The first comprises sectors in which trade between the EU and CEEC (Central and Eastern European countries) is largely balanced at present. They argue that reciprocal liberalisation in these sectors will cause expansion in both regions because of the greater potential to exploit economies of scale. More dramatic changes are predicted for the second group of sectors, in which the EU has a strong surplus in its trade with the CEEC. Baldwin, Francois and Portes argue that CEE countries will be specialised *out of* these sectors, with consequent strong gains for the EU countries which currently export to the CEEC within these sectors. These sectors are (i) chemicals, rubber

* Frank Barry and Aoife Hannan are based at the Economics Department in UCD. Corresponding author: Frank.Barry@ucd.ie. This paper is part of an EU-funded research project on Labour Market Effects of European FDI (HPSE-CT99-00017).

[1] Nor has any more profound analysis been offered as yet by the Irish Institute of European Affairs, though its website (iiea.com) refers to an ongoing project that aims to "produce an analysis of the implications of enlargement for Ireland, taking into account the expectations and perspectives of the applicant states." The 150-page document available on this section of the website ("Enlargement/Agenda 2000 Watch") contains no mention of the issues with which the present paper is concerned.

and plastic products, (ii) transport equipment, and (iii) capital goods. The EU country that stands to gain by far the most, given its size, sectoral composition and export orientation, is Germany, with France and the UK following at a distance. On the consumption side, the benefits of the projected price reductions resulting from further trade liberalisation are allocated across incumbent states according to their share of EU income.

These calculations leave Ireland with 0.3 per cent of the estimated gain to EU incumbents. The fact that this gain is smaller than Ireland's weight in EU GDP is due to the fact that Ireland does not at present export much to the CEEC. The only EU incumbent estimated to lose, along these narrow grounds, is Portugal, due to its heavy reliance on textiles, the EU sector predicted to take the largest blow from enlargement according to Baldwin *et al.*'s projections.

On the basis of Ireland's experience this analysis can be faulted on several grounds, all more or less related to the fact that it ignores the role of FDI. First is the presumption, based on "revealed comparative advantage", that the CEE countries will specialise into textiles. Barry and Hannan (2001) show however that Ireland pre-EU accession displayed a revealed comparative *disadvantage* in Chemicals and Metals and Engineering, the two sectors which boomed post-accession due to strong FDI inflows.

Irish experience also warns that the geographic and sectoral destination of FDI-inflows post-accession cannot be predicted from data on pre-accession inflows. Another deficiency of the analysis that should be obvious to Irish observers is the presumption that these are the main channels through which enlargement will affect Irish welfare. This ignores the possibility that the FDI inflows which have supported the rapid pace of development in Ireland over the last 15 years may be diverted to CEE states.

For example, *if* the CEE countries were to prove successful in attracting FDI in the pharmaceutical sector, and *if* this displaced pharmaceutical FDI away from Ireland, the revealed comparative advantage of CEE countries would not be in textiles even though it might appear as such today. Nor would the non-FDI-based analysis give a correct accounting of the relative costs and benefits of enlargement for Ireland.

The evidence amassed to date suggests that current FDI flows to the CEEC are diverted away from Spain and Portugal rather than from Ireland. We review this evidence in the next section. Ireland has not been adversely affected in this regard because there is as yet very little high-tech US FDI going to CEE countries. We believe that this is likely to change after enlargement, however, so that some of the CEE countries post-accession may well represent a threat to Ireland in this regard.

2. Current FDI Inflows to CEEC Countries and the Threat to Spain and Portugal

Over the course of the 1990s, as shown in Table 1, the inward stock of FDI in the ten applicant CEE countries increased 23-fold.

Until recently however, most CEE-bound FDI has been "market seeking" rather than attempting to integrate CEE production into EU production networks. Both Holland *et al.* (2000) and Lankes and Venables (1996), for example, report home-market size and growth potential as the driving forces behind the FDI that has gone to CEE countries over the course of transition, while the fact that the CEE automobile market is

heavily protected explains the strong inflows into that sector.[2] This market-seeking FDI is of a different nature to the type of FDI that Ireland seeks to attract, and so does not represent a threat to Ireland's position.

Table 1: FDI Inward Stock (millions of current dollars)

	1990	1995	1998	1999
EU	723,455	1,050,270	1,451,159	1,652,322
Memo: Ireland	5,502	11,706	25,647	43,969
EU less Southern Europe	**633,754**	**906,485**	**1,287,744**	**1,496,279**
Greece	14,016	19,306	22,048	22,948
Portugal	9,769	17,579	22,446	20,513
Spain	65,916	106,900	118,921	112,582
Total Southern Europe	**89,701**	**143,785**	**163,415**	**156,043**
Slovenia	666	1,759	2,907	2,997
Bulgaria	4	337	1,488	2,258
Czech R.	1,360	7,352	14,375	16,246
Estonia		731	1,822	2,441
Hungary	569	10,007	15,862	19,095
Latvia		616	1,558	1,885
Lithuania	97	352	1,625	2,063
Poland	109	7,843	22,479	29,979
Romania	766	1,150	4,335	5,441
Slovakia	87	1,248	2,502	2,044
Total CEE	**3,658**	**31,395**	**68,953**	**84,449**

Source: World Investment Report (2000).

Nor have FDI inflows thus far been very substantial, as a comparison of the totals for Southern Europe and CEEC in Table 1 will verify. Sinn and Weichenrieder (1997) argue that the stock of inward FDI remains far lower than would be expected on the basis of CEE income levels. Another factor which could lull the Irish authorities into a false sense of security is the fact that most CEE-bound FDI has come from the EU rather than from the US, suggesting the apparent importance of geographical and cultural proximity.

To the extent to which any EU region has been threatened by the diversion of FDI flows so far, it appears to have been Southern Europe rather than Ireland. While inflows to the CEEC were increasing rapidly, the stock of inward FDI into the EU – excluding Southern Europe – rose by a factor of 2.4, while the stock located in the Southern European countries of Greece, Portugal and Spain increased only 1.7-fold. There could be many reasons for these differences in growth rates. One recent analysis, however, provides strong evidence that FDI flows were indeed

[2] Other conventional factors also show up as significant determinants of how FDI flows are allocated across individual CEE countries. Lansbury *et al.* (1996) for example find that investors locate in Hungary to take advantage of its relatively advanced research base, while Zinnes *et al.* (2001) find a strong positive correlation between FDI per capita and a country's ranking on a competitiveness indicator that takes into account factors such as infrastructure, the functioning of labour markets and public administration.

being diverted away from the low-wage economies of Southern Europe towards the even lower wage economies of Central and Eastern Europe.[3]

The raw data presented in Table 2 comes from this analysis, carried out by Braconier and Ekholm (2001) on a firm-level dataset on the operations of Swedish multinational companies. The table shows a reduction of 14,000 in employment in Swedish MNCs in Southern Europe combined with a rise of 15,000 in Central and Eastern Europe over the period 1990 to 1998.[4]

Table 2: Employment by Swedish MNCs in Different European Regions 1990-1998

	Sweden		CEE		Western Europe		Southern Europe	
	1000s	Per Cent	1000s	Per Cent	1000s	Per Cent	1000s	Per Cent
1990	339	54	1	0	292	42	20	3
1994	245	60	10	3	140	35	11	3
1998	226	64	16	5	105	30	6	2

Source: IUI database, Braconier and Ekholm (2001).

This in itself does not prove that a causal link exists. It is possible, for example, that the firms exiting the Swedish database sample may have been less active in CEEC than new firms entering the sample, so that the change in the geographical pattern of production could be due simply to firm- or industry-specific characteristics.

Table 3, however, reinforces the notion of a causal relationship by demonstrating the similarity between Swedish MNC operations in CEE countries and in Southern Europe. Average wage costs per employee are obviously much lower in CEEC but these are balanced by lower productivity levels in the region. We note the high relative wage of white-collar workers in CEEC and Southern Europe (reflecting the relative scarcity of skilled labour in these regions), to which firms respond by locating the less skill intensive segments of the production process in these regions. This is reflected also in the low R&D-intensity levels recorded in both regions.[5]

[3] Annual Competitiveness Report (2000) reports total labour costs per hour for production workers in manufacturing, in Swedish Krone, as 27 for the Czech Republic, compared to 72 for Greece and 98 for Spain.

[4] Note that while the share of both Western and Southern European affiliate employment decreased the share of parent employment in Sweden increased.

[5] Note also the reasonably high export-orientation of the affiliates in both regions, indicating that this is more like the kind of FDI that is important to Ireland than pure home-market oriented FDI would be.

Table 3: Characteristics of Swedish MNC Activities Across Regions in 1998

	Sweden	CEE	Western Europe	Southern Europe
Total wage costs per employee (thousands of Swedish kroner)	311	40	334	214
Value added per employee (as above)	476	78	538	400
Wage ratio white collar/blue collar workers	1.69	2.12	1.62	1.99
Employment ratio white collar/blue collar workers	0.65	0.29	0.48	0.21
R&D expenditures (share of total sales)	0.072	0.006	0.010	0.007
Affiliate exports (share of total sales)	-	0.48	0.38	0.40

Source: IUI database, Braconier and Ekholm (2001).

In a detailed econometric examination of the data, Braconier and Ekholm (2001) confirm that the expansion in affiliate-firm employment in CEE countries did indeed come at the expense of affiliate activity in Southern Europe, and that affiliate activities in the overall EU have become more sensitive to changes in labour costs as CEE locations came on stream. They conclude that "the evidence of specialisation in relatively unskilled-labor intensive production suggests that the least skill-abundant of the other European regions (i.e. Southern Europe) is the region most likely to be hurt by the expansion of MNE activity in CEE". It is to this issue that we now turn our attention.

3. The Threat to Ireland

We noted above that most current CEE-bound FDI flows, being market-seeking, are of a different nature to Irish inflows. To the extent to which some of the FDI is export-oriented, the sectoral destination appears to represent a threat more to Southern Europe's FDI inflows than it does to Ireland. Furthermore, most (some 68 per cent) of FDI flows to CEEC comes from the EU, while investments from the US are relatively insignificant. In all these respects enlargement might not appear to represent a threat to Ireland's ability to continue to attract continued substantial FDI inflows.

Is this likely to continue to be the case after EU enlargement however? We think not. Recall that before Ireland's accession to the EU much of the FDI inflow into that country also tended to be market-seeking.[6] Furthermore, the bulk of it came from the UK and Continental Europe rather than from the US, and went into sectors other than the "three C's" (chemicals, computers and concentrates) into which most post-accession FDI flowed.

Accession is likely to change substantially the nature, origin and sectoral destination of FDI flows to Central and Eastern Europe. We

[6] Most attention tends to be focused on the grant-aided foreign industry that started up in Ireland after protectionism was dismantled. Numbers provided by O'Malley (1989, page 101) suggest however that almost one half of foreign manufacturing employment in 1973 was in firms that set up under protectionism. This is likely to understate total foreign employment substantially as Kelleher (1987) found that one-third of the top 115 Irish-based companies in the protectionist era were foreign-owned (including 5 of the 9 associated banks and 8 of the 11 insurance companies). Long (1976) also notes the considerable extent of foreign investment in the (home-market oriented) tertiary sector even in the early free-trade era.

argue that uncertainty over future policy stance (and even about accession itself) militates against the capital-intensive and training-intensive investments that Ireland currently attracts. As reported in *The Irish Times* of May 25, 2001, however, executives in the US technology and pharmaceutical sectors foresee a shift in the focus of corporate America away from Ireland, Scotland and the Netherlands to countries like Poland, Hungary, the Czech Republic and Estonia in the event of accession, particularly since controls over corruption and the establishment of a transparent business environment are likely to be an integral element of that scenario.[7]

Rather than basing our predictions of future changes in CEE sectoral structure on current FDI inflows, therefore, we believe it is more appropriate to compare their country characteristics directly with those of Ireland and the other EU cohesion countries. We will see along a number of these dimensions that Ireland appears to be more similar to the more advanced CEE countries than it or the CEE countries are to Portugal or Spain, suggesting that Ireland may face tougher competition for US FDI flows once these are unblocked by CEE accession to the EU.

COUNTRY CHARACTERISTICS: IRELAND, SPAIN, PORTUGAL AND THE CEE ECONOMIES

There is a range of characteristics on which Ireland competes with other EU countries for FDI projects. The low rate of corporation tax for manufacturing is obviously of huge significance. Arguably also important are the skills and experience of the IDA, the country's English-language environment, infrastructure, macro-economic stability, cost competitiveness, the skill levels of the workforce, and the efficiency of public administration and the regulatory environment. We consider each of these characteristics in turn.

The first column in Table 4 shows average effective corporation tax rates on US investments for 1992, while the second column shows maximum nominal tax rates. There is a strong correlation in EU countries' rankings in both columns, which allows us assess where CEE countries are likely to stand in a comparable ranking. Ireland of course has the lowest corporation tax on manufacturing in the EU, and is surpassed only slightly by Singapore and China in the world economy. Now consider the CEE countries. Estonia has set its corporate tax rate to zero. Hungary is also very competitive tax-wise, while Slovenia and Latvia (and Poland in the near future) do not lag very far behind. Upon enlargement, Ireland's lead will be reduced substantially in this regard, if not eroded completely.[8]

[7] http://www.ireland.com/newspaper/finance/2001/0525/fin17.htm

[8] In fact, in the source from which most of the data in the table comes, Ireland is allocated a maximum rate of 32 per cent (the rate payable on most service-sector activity in 1997) for which we have substituted in the rate on manufacturing instead. The extent to which the table may suggest a misleadingly high tax rate on other countries' manufacturing sectors is unfortunately not known.

(i) Corporation Tax

Table 4: Corporation Tax Rates, Effective and Nominal

	Average effective tax rate on US MNCs (1992) [a]	Top rate of corporation tax (1997) [b]
Singapore	5.65	
China	5.7	
EU		
Ireland	5.8	10 per cent for manufacturing, due to rise to 12.5
Finland	15.8	28
Sweden	16.7	28
Netherlands	17.9	35
UK	19.3	31
Luxembourg	21.6	32
France	22.8	42
Portugal	25.3	36
Spain	25.33	35
Belgium	25.9	39
Germany	28.9	45
Denmark	31.0	34
Italy	32.56	37
Austria	32.58	34
Greece	33.4	35
CEE		
Hungary		18
Czech Republic		39
Poland		38 [b] (30, falling to 22% by 2004)[c]
Lithuania		29 [c]
Slovenia		25 [c]
Latvia		25 [d]
Estonia		0 [e]
Bulgaria		max of 50% [c]

Sources: [a] Altshuler *et al.* (1998); [b] National Competitiveness Council (2000);
[c] UNCTAD (2000)
[d] http://www.ernstyoung.lv/oecd.htm#_Toc442245117;
[e] Central Europe Review (http://www.ce-review.org/00/27/sally27.html)

(ii) The Skills and Experience of the IDA

Because Ireland was one of the first countries in the world to adopt an FDI-based development model, the IDA arguably has been able to remain ahead of the competition in terms of the skills and experience necessary to capture FDI projects.

With so many others entering the field since then, however, this competitive advantage would have been gradually diluted over time. The IDA for example helped design Costa Rica's strategy to attract FDI, as described by Clark (1997), while Sachs (1997) describes how Costa Rica went on to beat Ireland, Malaysia and Mexico in the competition to attract a major new Intel semiconductor facility![9] Even if the IDA did not engage in this training of potential competitors, of course, there are many other international consulting agencies who would.

(iii) The Skill Levels of the Workforce

Skill levels are usually measured by the educational attainment of the workforce. Table 5 shows that higher proportions of the populations of

[9] This story is told by Kirby (2001).

the Czech Republic and Poland have completed secondary education than is the case in Ireland and Spain, though smaller proportions have completed tertiary. The value of the latter point may be questioned however, as it is shown (OECD, 1997, page 34) that about equal proportions of the population aged 25-34 in the Czech Republic and Ireland have university-level education (with a slightly lower proportion in Poland). Thus, Ireland's dominance in overall tertiary seems to reflect the dominance in Ireland of a more academic route to skilled labour over the more vocational route favoured by many researchers; see e.g. Prais (1995).

Focusing on scientific attainment, which appears to be especially important for modern industry, OECD (1997, page 337) reveals that higher proportions of scientific degrees are awarded in the Czech Republic and Hungary than in Ireland (no data appear for Poland), while the Czech Republic and Hungary both lead Ireland in terms of the only standardised scores available, which measure average achievement in maths and science at ages 11-12. Spain and Portugal lag far behind along these dimensions.

Table 5: Percentage of Population Classified by Educational Attainment, 1995

	At least upper secondary (tertiary)				
Age group	**Ireland**	**Czech Rep**	**Poland**	**Spain**	**OECD**
25-34	64 (27)	91 (12)	88 (15)	47 (27)	71 (23)
35-44	51 (21)	86 (11)	82 (13)	32 (18)	63 (22)
45-54	36 (16)	83 (11)	68 (14)	18 (11)	53 (18)
55-64	27 (11)	70 (8)	47 (9)	10 (6)	41 (12)

Source: Education at a Glance, 1997.

Another factor often cited in Ireland's favour is its English-language environment, which may be particularly important for US firms. As *The Irish Times* article referred to earlier reported however "English is the lingua franca of most aspirant countries" as well.

Finally, with reference to labour supply, it has been pointed out to us that Ireland's demographic situation is uniquely favourable at present, with stronger growth rate projections for the working age population than in the case of any other EU or CEE country; World Bank (2001). This may well prove to be important in terms of the country's ability to continue to attract FDI. Recall, however, that these same demographic conditions were regarded as unfavourable not so long ago, when the country was grappling with very high rates of unemployment; Barry and Bradley (1991).

(iv) The R&D Environment

Midelfart-Knarvik *et al.* (2000) find that a strong R&D environment in a country is associated with a strong presence of high-tech industry, with the presumption that the former causes the latter. The Irish experience suggests however that causation may run in the opposite direction. Ireland has caught up on other small EU countries in recent years in terms of business expenditures on R&D as a proportion of GDP, for example, with foreign firms accounting for the bulk of this spending; Barry, Bradley and O'Malley (1999). This suggests that Ireland's success in attracting FDI has led to the improvement in the R&D climate rather than vice versa.[10]

[10] The causation is not unidirectional however as indicated by the story told by MacSharry and White (2000, page 217) of the IDA campaign to bring Intel to Ireland. The company was worried that Ireland had no history as a producer of microchips. The development agency contacted over 300 Irish engineers working abroad in this field and convinced the

In terms of R&D personnel per thousand members of the labour force, Ireland at 7.8 exceeds Hungary at 5.2, Poland at 4.9 and the Czech Republic at 4.5 (with Spain coming in at 5.3). Note though that as recently as 1993, the Czech figure stood at 8, compared to a figure of 5.6 for Ireland at that time; OECD (1999). This again suggests that R&D indicators can change rapidly with changes in industrial structure, without the former necessarily determining the latter.

(v) Centrality

The degree of centrality (or "closeness to purchasing power") is another factor that appears to be of importance in empirical explorations of a location's attractiveness for FDI. Brulhart (1998) provides a ranking of EU countries in this regard. The four lowest, in descending order, are Ireland, Spain, Portugal and Greece. While we do not have equivalent data for CEE countries, their closeness to Germany would probably put them ahead of Ireland on this measure.

(vi) Cost Competitiveness

Labour costs in the CEE economies are well below levels prevailing in Western Europe. The National Competitiveness Council (2000) uses the Swedish data discussed earlier to show total per hour labour costs for manufacturing sector production workers. Of the countries shown (Hungary, Portugal and Poland are excluded), the Czech Republic comes in as the lowest cost economy (paying an average of 27 Swedish crowns per hour), followed by Greece (at 72), Spain (at 98) and Ireland (at 106).

The paper by Braconier and Ekholm (2001) discussed earlier argued that productivity in the Czech Republic is also substantially lower, which largely cancels out these cost differences. Again, however, on the basis of Irish experience, one might suggest that if the country is successful in attracting substantial FDI inflows, these inflows will serve to raise productivity substantially. Viewed in this light current low productivity is not necessarily a barrier to FDI; it may merely serve to indicate that the country has not yet had substantial FDI inflows.

(vii) Infrastructure, Public Administration and General Business Environment

One area where the CEE economies seem to lag substantially behind Ireland, Spain and Portugal is in these broader areas that also impact on competitiveness. Zinnes *et al.* (2001) propose a set of indicators similar to those developed by the World Economic Forum (1999). The overall competitiveness indicator is based on seven sub-indicators that measure openness to trade, level of technology, macro stability, delivery of infrastructure, financial sector indicators, efficiency of management and labour markets, and quality of institutions.

In terms of the overall indicator Ireland appears in the top ten of the group of about 80 countries, Spain and Portugal appear in the high 20s, Italy in the mid 30s, Hungary and the Czech Republic in the high 30s, followed closely by Greece, Poland and the Baltic states.

company that over 80 per cent of them would be prepared to return to Ireland if given a good career opportunity with a quality company.

Zinnes *et al.* (2001) go on to show that there is a strong positive correlation between the ranking of transition economies and their levels of FDI per capita. This may not be overly revealing however as the relative ranking of the former state-planned economies contains few surprises: Slovenia is just behind Estonia; Slovakia follows Latvia; Bulgaria, Russia and Romania lag substantially behind, while the former Soviet republics of Central Asia take up the rear.

The question then is whether the fact that even the most developed CEE economies lag so substantially behind Ireland, Spain and Portugal means they will not threaten FDI flows to current EU member states. One cannot conclude this however as we have already seen that they appear to threaten FDI flows to Spain and Portugal. Furthermore, EU accession will itself help to guarantee and enforce improvements in macroeconomic stability, the operation of the financial sector and arguably also the efficiency of public administration.[11]

Will FDI-inflows into CEE Countries Necessarily Reduce Inflows into Ireland?

The notion that increased inflows to CEE countries *must* reduce the pool available for Ireland assumes that the volume of the pool of available FDI is fixed. Fortunately this is unlikely to be the case.

There are several earlier historical episodes from which some information on this can be gleaned. First is the formation of the Common Market itself. Did this increase the sum total of FDI flowing into the region? Second, there are the earlier enlargement phases, the accession of the UK, Ireland and Denmark in the 1970s, that of Greece, Spain and Portugal in the 1980s, and Austria, Finland and Sweden in the 1990s. And third, we have the development of the Single Market, which also represented an increase in the effective size of the market to be served by individual production locations. Dunning (1997a, 1997b) summarises much of the literature on the effects of two of these episodes on EU FDI flows – the original formation of the Common Market, and the Single Market Programme. His overall conclusion is that both episodes raised the amount of FDI coming into EU countries, both from other EU countries and from outside the Union.

Furthermore these FDI flows complemented rather than displaced trade flows.

He finds that the original formation of the Common Market was accompanied by a substantial net increase in both intra- and extra-EU FDI flows, with the largest increases coming from countries outside the EU. Substantial increases in both flows were also found to occur in the lead-up to the Single Market, though in this case intra-EU FDI flows increased more. The EU attracted 21 per cent of Japanese outflows in the late 1980s compared to 17 per cent in the mid-1980s; the proportion of US flows attracted rose from 39 to 45 per cent over the same period, while intra-EU flows as a proportion of total EU outflows rose from 31 to 51 per cent. Pain and Lansbury (1996), in an econometric model, calculate that the Single Market Programme raised the constant-price stock of UK outflows

[11] Fitz Gerald (1998) for example in discussing the impact on Ireland of the Structural Funds programmes argues that "the need to satisfy the donor countries, through the EU Commission, that their money is well spend has resulted in the introduction of a set of evaluation procedures which has helped change the way the administration approaches public expenditure".

to the rest of the EU by around 30 per cent, and the German stock by around 6 per cent. Hence it would be incorrect to assume that the stock of FDI would remain constant in the event of eastern enlargement of the EU. Whether the increased size of the pie would be sufficient to compensate for each country's presumably smaller share is a question that requires further analysis.

4. Concluding Comments

This paper raises an issue the importance of which should be obvious to anyone with an interest in Irish economic development. Previous analyses of the distribution of the costs and benefits of eastern enlargement to EU incumbents have ignored the possibility that FDI flows may be diverted away from Ireland.

We argue that little can be read from the fact that *at present* most CEE-bound FDI comes from Europe rather than the US, that most of it is directed towards supplying the CEE market, and that it appears to be diverted away from Portugal and Spain rather than from Ireland. We suggest that uncertainty about CEE public policy, CEE public administration and even CEE accession can explain why high-tech US multinationals have not yet begun to invest heavily in Central and Eastern Europe. Accession will release many of these blockages and Ireland will then find itself in direct competition with the most advanced of these countries for investments in the sectors in which Ireland has been relatively successful so far.

Ireland does not differ substantially from a number of these countries in terms of corporation tax and the skill levels of the population, and labour costs in CEE countries are very much lower. We argue that productivity and R&D rankings are *endogenous,* reflecting success or failure at attracting FDI rather than *exogenous* variables that determine the likelihood of success or failure in this regard. Upon accession, several at least of the CEE countries will have equally easy access to the high-income markets of Western Europe, are likely to enjoy an equally stable macro policy environment and equivalent regulatory and public administration systems.

The brighter side of the coin for Ireland is that FDI flows in the expanded EU are likely to increase substantially upon enlargement, so that the more competitive environment will not necessarily represent a zero sum game.

REFERENCES

ALTSHULER, R., H. GRUBERT and T. SCOTT NEWLON, 1998. "Has US Investment Abroad become More Sensitive to Tax Rates?", *NBER Working Paper 6383*.

BALDWIN, R., J. FRANCOIS and R. PORTES, 1997. "The Costs and Benefits of Eastern Enlargement: the Impact on the EU and Central Europe", *Economic Policy*, April.

BARRY, F., and J. BRADLEY, 1991. "On the Causes of Ireland's Unemployment", *The Economic and Social Review*, Vol. 22, No. 4, pp. 253-286.

BARRY, F., J. BRADLEY and E. O'MALLEY, 1999. "Indigenous and Foreign Industry", in F. Barry (ed.), *Understanding Ireland's Economic Growth*, London: Macmillan.

BARRY, F., and A. HANNAN, 2001. "FDI and the Predictive Powers of Revealed Comparative Advantage Indicators", unpublished ms, available at: http://www.ucd.ie/~economic/staff/barry/fdi.html

BRACONIER, H., and K. EKHOLM, 2001. "Foreign Direct Investment in Central and Eastern Europe: Employment Effects in the EU", *CEPR Working Paper* (forthcoming).

BRULHART, M., 1998. "Trading Places: Industrial Specialisation in the European Union", *Journal of Common Market Studies*, Vol. 36, No. 3, pp. 319-346.

CENTRE FOR ECONOMIC RESEARCH AND INNOVATION, 1997. *Education at a Glance*, Paris: OECD.

CLARK, M., 1997. "Transnational Alliances and Development Policy in Latin America: Non-traditional Export Promotion in Costa Rica", *Latin America Research Review,* Vol. 32, No. 2, pp. 71-97.

DUNNING, J., 1997a. "The European Internal Market Programme and Inbound Foreign Direct Investment", Part 1, *Journal of Common Market Studies*, Vol. 35, No. 1, pp. 1-30.

DUNNING, J., 1997b. "The European Internal Market Programme and Inbound Foreign Direct Investment", Part 2, *Journal of Common Market Studies*, Vol. 35, No. 2, pp. 189-223.

FITZ GERALD, J., 1998. "An Irish Perspective on the Structural Funds", *European Planning Studies*, Vol. 6, No. 6, pp. 677-694.

D. HOLLAND, M. SASS, V. BENACEK and M. GRONICKI, 2000. "The Determinants and Impact of FDI in Central and Eastern Europe: A Comparison of Survey and Econometric Evidence", *Transnational Corporations*, Vol. 9, No. 3, pp. 163-212.

KELLEHER, P., 1987. "Familism in Irish Capitalism in the 1950s", *The Economic and Social Review*, Vol. 18, No. 2, pp. 75-94.

KIRBY, P., 2001. Book Review, *The Economic and Social Review*, Vol. 32, No. 1, pp. 92-101.

LANKES, H.P., and A. VENABLES, 1996. "FDI in economic transition: the changing pattern of investments", *Economics of Transition*, Vol. 4, No. 2, pp. 331-347.

M. LANSBURY, N. PAIN and K. SMIDKOVA, 1996. "FDI in Central Europe since 1990: An econometric study", *National Institute Economic Review*, Vol. 156, pp. 104-113.

LONG, F., 1976. "FDI in an Underdeveloped European Economy – the Republic of Ireland", *World Development*, Vol. 4, No. 1, pp. 59-84.

MacSHARRY, R., and P. WHITE, 2000. *The Making of the Celtic Tiger: The Inside Story of Ireland's Booming Economy*, Dublin: Mercier Press.

MIDELFART-KNARVIK, K-H., *et al*., 2000. "The Location of European Industry", *Economic Papers* No. 142, European Commission.

NATIONAL COMPETITIVENESS COUNCIL, 2000. *Annual Competitiveness Report*, Dublin: Forfás.

OECD, 1999. *Main Science and Technology Indicators*, Paris: OECD.

O'MALLEY, E., 1989. *Industry and Economic Development: the Challenge for the Latecomer"*, Dublin: Gill and Macmillan,

PAIN, N., and M. LANSBURY, 1996. The Impact of the Internal Market on the Evolution of European Direct Investment (NIESR; mimeo).

PRAIS, S. J., 1995. *Productivity, Education and Training*, Cambridge: CUP.

SACHS, J., 1997. in A. Gray, *International Perspectives on the Irish Economy*, Dublin: Indecon.

SINN, H. W., and A.J. WEICHENRIEDER, 1997. "FDI, Political Resentment and the Privatization Process in Eastern Europe", *Economic Policy*, Vol. 24, pp. 179-210.

UNCTAD, 2000. *Tax Incentives and FDI: A Global Survey*, New York and Geneva: UNCTAD.

WORLD BANK, 2001. *World Development Indicators*, Washington, D.C: World Bank.

ZINNES, C., Y. EILAT and J. SACHS, 2001. "Benchmarking Competitiveness in Transition Economies", *Economics of Transition*, Vol. 9, No. 2, pp. 315-353.