



An Chomhairle Náisiúnta Eacnamaíoch agus Shóisialta  
National Economic & Social Council

**BACKGROUND PAPER**

## **2. The Role of the Internal Market in Ireland's Economic Growth**

by Noel Cahill and Rory O'Donnell





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Background Paper 2

## The Role of the Internal Market in Ireland's Economic Growth

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## Abbreviations

<b>ACER</b> Agency for the Co-operation of Energy Regulators	<b>ComReg</b> Commission for Communications Regulation	<b>FDI</b> Foreign Direct Investment	Economic Co- operation and Development
<b>BEPGs</b> Broad Economic Policy Guidelines	<b>CPI</b> Consumer Price Index	<b>GBER</b> General Block Exemption Regulation	<b>QMV</b> Qualified Majority Voting
<b>BERD</b> Business Expenditure on Research and Development	<b>CSO</b> Central Statistics Office	<b>GDP</b> Gross Domestic Product	<b>RPI</b> Retail Price Index
<b>BEREC</b> Body of European Regulators of Electronic Communications	<b>ECJ</b> European Court of Justice	<b>GGB</b> General Government Balance	<b>SEA</b> Single European Act
<b>BIDS</b> Beef Industry Development Society	<b>ECN</b> European Competition Network	<b>GGD</b> General Government Deficit	<b>SEM</b> Single European Market
<b>CAPEX</b> Capital Expenditure	<b>EEC</b> European Economic Community	<b>GNP</b> Gross National Product	<b>SMEs</b> Small and Medium Sized Enterprises
<b>CE</b> Conformité Européenne [European Conformity]	<b>EEER</b> European Energy Programme for Recovery	<b>HICP</b> Harmonised Index of Consumer Prices	<b>TEU</b> Treaty on European Union
<b>CEER</b> Council of European Energy Regulators	<b>EMEA</b> European Medicines Agency	<b>M&amp;A</b> Merges and Acquisitions	<b>TFEU</b> Treaty of the Functioning of the European Union
<b>CEN</b> Comité Européen de Normalisation [European Committee for Standardisation]	<b>ERG</b> European Regulators Group	<b>NAMA</b> National Assets Management Agency	
<b>CENELEC</b> Comité Européen de Normalisation Electrotechnique [European Committee for Electrotechnical Standardisation]	<b>ERGEG</b> European Regulators' Group for Electricity and Gas	<b>NCA</b> National Competition Authority	
	<b>ESB</b> Electricity Supply Board	<b>NRA</b> National Regulatory Authority	
	<b>ESOT</b> Employee Share Ownership Trust	<b>ODTR</b> Office of the Director of Telecommunications Regulation	
	<b>ESRI</b> Economic and Social Research Institute	<b>OECD</b> Organisation for	

# 2

BACKGROUND PAPER

## The Role of the Internal Market in Ireland's Economic Growth

## 2.1 Introduction<sup>1</sup>

This paper discusses the development of the internal market and its implications for the Irish economy. Section 2.2 outlines the internal market programme and summarises some of the ways in which it has been analysed. Section 2.3 describes and analyses Ireland's experience in the internal market. It begins by noting institutional responses and then considers trade and foreign direct investment (FDI), mergers and acquisitions, prices, productivity, innovation, state aid and competition policy. Section 2.4 discusses networked sectors, particularly telecommunications and energy. Section 2.5 offers some conclusions.

## 2.2 The Internal Market: EU Method and Economic Analysis

### 2.2.1 Mutual Recognition and New Style Harmonisation

#### *A New Regulatory Strategy*

In 1985 the incoming Commission, led by Jacques Delors, presented a White Paper, entitled *Completing the Internal Market*, to the European Council meeting in Milan. It argued that in the interests of efficiency and competitiveness, the EC must remove the internal barriers by 'completing' the internal market. The White Paper set out in detail the measures necessary to 'complete' the market and a timetable for their legal enactment. It grouped the 300 measures necessary to complete the market under three headings:

- ◆ The removal of physical barriers to trade and competition, including the removal of border posts;
- ◆ The removal of technical barriers—the most obvious of these being different national standards for health, safety, environment, consumer protection and sector regulation; and
- ◆ The removal of fiscal barriers—in particular, the approximation of excise duties and indirect taxes across the EC.

The White Paper was endorsed by the European Council and underpinned by the treaty changes introduced by the Single European Act (SEA). In assessing the significance of market integration in the overall process of European integration, there is a strong case for adopting a broad definition of the Single European Market

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<sup>1</sup> We would like to thank members of the NESC Council who provided helpful comments on an earlier draft. Lorcan O'Broin of the CSO provided a special tabulation of trade data used in the analysis for this paper.

(SEM) (Armstrong and Bulmer, 1998). The SEM, which we often refer to as the internal market programme (for reasons discussed below), should be defined to include not only the White Paper, but also the SEA. In addition, certain market integrating measures not included in the White Paper but added subsequently—such as the internal market in energy, changes in external trade policy and support for trans-European networks—should be included in the SEM. Indeed, some changes introduced in the Maastricht Treaty, particularly the principle of subsidiarity, could also be included in the SEM.

Substantively, the internal market programme involved the deepening of the common market in goods, and the extension of market integration and cross-border competition to services and public procurement. This was a major change, given the importance of services—such as banking, insurance, capital markets, telecommunications, road haulage, air transport, the professions and post—and the scale of public contracts in all member states. The SEM also developed EC policy in the area of social regulation, regional development, environmental protection and research and technological development. While some of this development consisted of codification of policies that had grown without a treaty basis in the previous decade, there were significant initiatives, particularly in ‘economic and social cohesion’ (see below). The completion of the internal market led directly to the addition of a new Merger Regulation to the Community’s existing competition policy.

The complex set of changes embodied in the internal market programme, the SEA and the Treaty on European Union (TEU) has given the EU a new regulatory strategy for achieving and governing the internal market. This consists of a political, a judicial and a regulatory panel, summarised by Pelkmans (1997) in Table 2.1.

**Table 2.1** EU Regulatory strategy

	<b>Political</b>	<b>Judicial</b>	<b>Regulatory</b>
<b>Core</b>	Qualified Majority voting	Judicial mutual recognition (given equivalent Objectives or if Article 36 does not Apply)	Free Movement No internal frontiers Subsidiary Minimum approximation/harminisation Regulatory mutual recognition
<b>Subject</b>	A few expectations	Proportionally (member states)	Proportionally (EC level)

Source Pelkmans (1997).

The internal market programme, and this new regulatory strategy, became the 'big idea' around which European integration was revitalised. The programme, and the huge amount of work done on it, have to be viewed in both analytical and rhetorical terms. The enormous 'Cecchini studies' were used to sell the idea of the internal market, disseminate a technical language for discussing it and provide analytical insights into its effects (European Commission, 1988). Thus there emerged a language or set of ideas which galvanised political support, motivated business action and, to a significant extent, describe the emerging system of European governance. The language includes: 'the single market', 'non-tariff barriers', 'liberalisation', 'deregulation', the 'level playing-field', 'mutual recognition', 'home-country authorisation', 'host-country regulation', 'new approach harmonisation', 'minimum essential requirements', 'third-country reciprocity', 'economies of scale', 'intra-industry trade', 'competition-driven innovation'. The dissemination and use of this language is itself a significant aspect the modern European context.

A central innovation in the internal market programme was the introduction of 'mutual recognition'. Mutual recognition of the legality of products and services, deriving from the *Cassis de Dijon* ruling of the ECJ (1979), was adopted as the default principle. This established the principle of free movement, even where member states invoke Article 36 (EEC) on grounds of health and safety, so long as the national regulatory objectives are 'equivalent'. This greatly reduced the range of national laws and policies that need to be harmonised to create a European market

But it was clear that, in many sectors, mutual recognition is not acceptable or not wise. Examples include manufactured products which can pose a threat to health and safety and services—such as finance, energy, telecommunications and professions—in which regulation is necessary to address asymmetry of information, systemic risk, monopoly power and consumer safety. In these cases, mutual recognition must be preceded by harmonisation of national regulatory provisions. Here, further important changes were introduced. Where harmonisation or 'approximation of laws' was deemed necessary, qualified majority voting (QMV) was introduced on most internal market matters, by means of the revised Article 100a.

A second innovation in the internal market programme was the 'new approach' taken to standard setting and certification. The traditional approach, of seeking agreement in the Council of Ministers on detailed European standards and provisions, was replaced by an approach which defined the 'essential requirements' which products or services must meet (Pelkmans, 1997). These were defined in 'horizontal' directives, such as the Machinery Directive or the Chemicals Directive, rather than directives on each type of machine or chemical. There follows a procedure in which European standards organisations—such as CEN, CENELEC or EMEA—define a harmonised standard. Firms that comply with it can 'self-certify', subject to the operation of a quality assurance scheme, such as ISO 9000. But the harmonised standard is not compulsory on companies. They can choose to adopt an alternative specification, as long as compliance with the 'essential requirements' is demonstrated, through a third-party certification body. The 'CE' mark can then be affixed to the product, indicating that it complies with the essential requirements of all relevant directives. At that point the principle of mutual recognition should apply.

In solving the problem of technical harmonisation in a diverse, quasi-federal, union, the EU may have solved a governance problem which now confronts business and policy world-wide. Over 70 countries, including the US and Japan, have adopted at least some of the EU directives, such that they are becoming global standards, giving a single compliance process for access to many markets. Many EU companies are demanding that their non-EU suppliers comply with the EU directives. Rather than writing laws that state the specifics of every product, the EU directives are generic in nature. 'They are written so that they do not need to be updated every time there is a technological advance' (Bailey and Bailey, 1997).

The balance between mutual recognition and harmonisation determines the balance between deregulation and re-regulation in the internal market. That balance varies across sectors, across member states and across professional groups. Without a detailed account, we can illustrate the possible combinations of deregulation and re-regulation, and effects which these have had. In sectors which had separate national markets, such as defence equipment, the overall process has greatly increased the level of competition. In sectors where there are enduring reasons for a significant level of regulation, such as banking and insurance, the internal market has meant increased competition in the context of a complex re-regulation and a virtual sector policy at EU level (Moran, 1994; Molyneaux, 1996). The internal market programme encouraged more vigorous implementation of existing EU policies, particularly competition policy, in sectors which had seemed too difficult or sensitive before, such as passenger air transport. In certain sectors, the internal market programme has provided an institutional framework favourable to high quality production through voluntary quality standards. In sectors where mutual recognition could pose a danger to health, safety and consumer protection, the internal market programme has provided a remarkable new mechanism for establishing standards, as noted above. The EU has sought to define the regulatory environment in new sectors, such as telecommunications, the development of which is dependent on a clear definition of property rights (Grande, 1996). In some new technology sectors, where problems of collective action may limit the emergence of market-driven standards, EU technology policy actively promoted a European standard (High Definition Television, HDTV in televisions and GSM in mobile phones, see Dai *et al.* 1995). The EU is seeking to create a European market in certain sectors, such as energy, which have not been internationalised autonomously by business, as we discuss in Section 2.4. Young concludes that, overall, 'it is more appropriate to describe the SEM as reregulatory than deregulatory' (Young, 2010: 119)

This deregulatory and re-regulatory impact of the internal market is sometimes discussed in terms of 'negative integration' and 'positive integration'. Negative integration, which historically occurred through the European Court of Justice (ECJ) striking down national rules, was revived by the mutual recognition principle. The internal market programme and the Single Act altered the institutional framework for 'positive integration' – agreeing common rules to replace national ones. Table 2.2 gives an indication of the balance between deregulation/negative integration and re-regulation/positive integration in the internal market. It is clear that, even in market integration, there is a very significant amount of positive integration and regulation. 'With regard to economic regulations—such as controls on prices or competition—

the SEM has been liberalising. With regard to social regulation, such as consumer protection or environmental product standards, the SEM has tended to increased competition among European firms, but by producing relatively stringent common rules' (Young, 2010: 124-4; Sbragia, 1992, Peterson, 1997; Scharpf, 1998; Young and Wallace 2000).

**Table 2.2** The Significance of different modes of market integration

Type of integration	Mode	Description	Estimated share of intra-EU trade accounted for by affected products
Negative	mutual recognition principle	different national standards assumed to be equivalent in effect	50%
Positive	'new approach'	common objectives with reference to voluntary standards	20%
	approximation	common detailed rules	30%
	common authorisation	common approval of individual products	Pharmaceuticals, GM crops and food required

**Source** Young (2010) and European Commission (2002)

**Note** No percentage available for pharmaceuticals, GM crops, and food.

### 2.2.2 Analytical Approaches

In its 1989 report *Ireland in the European Community: Performance, Prospects and Strategy* the Council provided a detailed review of the theory of economic integration. Much of that analytical work remains relevant in reviewing Ireland's experience of European integration since the early 1990s.

First, that study highlighted ways in which changes in the international economy—such as intra-industry trade, industrial concentration and technological innovation—were prompting developments in the economic theory of trade and market integration. Departure from the neo-classical assumption of constant return to scale, allowing for increasing returns, has profound effects on our understanding of the key subjects of trade theory: patterns of trade, international and inter-regional specialisation, the gains from trade and the equalisation of returns across countries (NESC, 1989).

Second, that analysis drew attention to developments in the theory of European integration. This had yielded important revisions of Balassa's famous stages of economic integration (Balassa, 1961). In particular, the most important proposition to emerge in the 1980s was that the market integration of mixed economies is political. Given that all states participating in European integration had highly mixed economies—with complex forms of state intervention, public ownership, regulation and institutional embedding of the economy—the creation of a single European market involves not only the removal of national barriers, but a great deal of re-regulation and institutional construction (NESC, 1989: 42-44).

### *Competition and Scale*

The Commission study of the SEM, *The Economics of 1992*, included an inventory of the main non-tariff barriers, estimation of the losses in welfare resulting from the fragmentation of the European markets—the so-called 'costs of non-Europe'—and analysis of the likely effects of the SEM programme. The analysis identified two main channels through which the SEM programme would impact on business and the economy, 'size' and 'competition'. 'Size' referred to the possibility that reduced costs, increased demand and better market access would allow firms to exploit economies of scale. The race to acquire scale and the subsequent competition to lower costs could initiate a major restructuring. 'Competition' referred to the possibility that increased competition would force previously sheltered firms into competition with each other, inducing them to differentiate their product by means of innovation. The operation of this mechanism led some to expect that the SEM would have a dynamic impact on those sectors in which non-tariff barriers were high, technological development was significant and the outlook for market growth was good (Emerson *et al.*, 1988).

While exploitation of economies of scale and increased competition are not necessarily inconsistent—so long as the market can sustain enough firms—there are, in fact, considerable differences in thinking between those who stress the benefits of economies of scale and those who stress competition and innovation (Geroski, 1989). This is one of the most important questions concerning European market integration. If a significant part of the increased competition created by the SEM takes the form of cost reduction based on scale expansion, then the fear naturally arises that small firms will find it difficult to compete. Furthermore, if the SEM implies increased firm size, then barriers to entry of various sorts may be increasing—even though market completion also means increased competition between those dominant firms in a given industry (Venables, 1985). If the emphasis on competition and innovation is correct, then the increased competition takes other forms, such as technological activity aimed at product and process development, product differentiation, market segmentation and redefinition of firms' specialisation (Ergas, 1984; Geroski and Jacquemin, 1985). The argument between these two views, turns on a number of analytical and empirical issues concerning the effects of the SEM on the size of firms, the relationship between competition and innovation, the historical significance of economies of scale, the effects of technical and organisational change on scale economies, and the role of small firms in economic regeneration (NESC, 1989). While these are complex phenomena, which will take time to work themselves out, some impression of the tensions they create can be gained by reviewing firms' response to the SEM and the actions of the EU in competition, merger and other policy areas.

Before considering these responses, it is important to clarify what should be expected from the SEM and to note an ambiguity in the term 'Single European Market'. Although the 'single market' became a powerful rhetorical device, it can be highly misleading if used as a guide to corporate strategy or economic development in the new Europe (Kay, 1990). There have long been price differentials across Europe for various product and services—such as cars, pharmaceuticals, insurance and domestic appliances—differentials that would be eroded if there was a truly single market. It is unlikely that the removal of a wide range of non-tariff barriers, achieved by the internal market programme, has created a single market of 420 million people for many goods and services. Nor is there a single United States market for most of the goods and services produced and sold in the US. Several factors explain this. Much of the fragmentation reflects diversity of cultures, traditions and consumption patterns. There is a distinction between a European *market* and a European *industry*. Production is integrated internationally for many goods, such as cars, even where there are segmented national markets. Furthermore, far from seeking a single market, incumbent firms frequently wish to preserve the geographic segmentation of the European market, since the resulting price differentials generate high profits (e.g., airlines, cars). Europe-wide or global markets are more common in commodities, such as grain, or intermediate inputs, than in consumer goods.

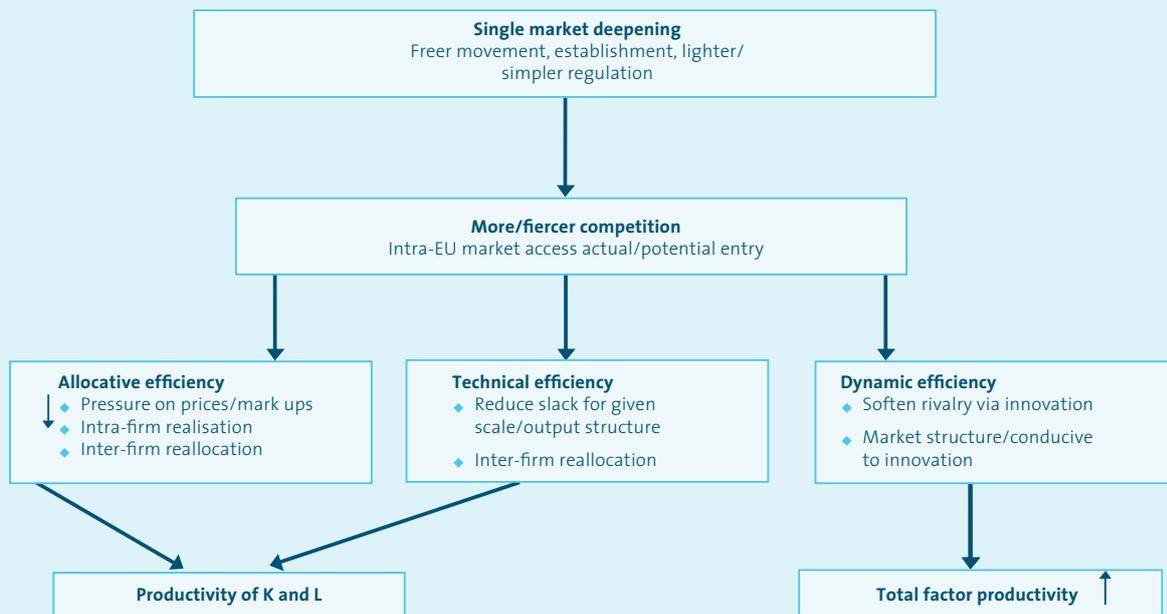
What the single market programme does is to reduce obstacles to the creation of European industries, where these are appropriate (and, for that matter, where they are not) and, to a smaller degree, it has the effect of making segmentation of the economic market more difficult (Kay, 1990: 22-23).

These analytical distinctions help explain corporate responses to the SEM and why many markets and industries remain national, or even local. But they also explain why many of those sectors in which significant European firms and industries are emerging, also display a strong global dimension. The geographical dimension of industries and firms are determined by the economies of scale and scope, not just in production but also in distribution, organisation and planning (Kay, 1990). Even where sales and production are predominantly national, there may be advantages to global organisation and planning. Where distribution or production or research are continental, there will usually be pressures for global organisation or global sales, or both.

### Productivity and Growth Effects of the Internal Market

The idea that the internal market might enhance Europe's productivity and growth is summarised in Figure 2.1, derived from Pelkmans (2006). It separates the effect of greater cross-border completion on (a) allocative efficiency via the reallocation of factors within and between firm; (b) technical efficiency (often called X-efficiency) via movement to the production possibility frontier; and (c) dynamic efficiency, via the mechanisms of innovation described above.

Figure 2.1 How Single Marketing Deepening Boosts EU Productivity



Source Pelkmans (2006)

## 2.3 Ireland in the Internal Market

### 2.3.1 Mobilisation and Institutional Development

The internal market programme was successfully communicated throughout Europe and greatly increased interest in, and knowledge of, European integration. As noted above, the Government requested the NESC to analyse the possible implications of SEA and the internal market for Ireland. Government and its industrial policy agencies organised a major programme to inform Irish economic and social actors of the threats and opportunities arising from the deepening of the common market and its extension to new sectors. Both employers' associations and unions were actively involved in this information sharing, analysis and preparation. For Irish companies that had survived the shake-out of the early 1980s, and for new firms, the internal market provided both new market opportunities and a focus for their business strategy. Every sector and company was invited to analyse its readiness for intensified competition and wider market opportunities. Issues of peripherality and market access were widely discussed, and the role of improved infrastructure and sophisticated logistics were explored.

A critical aspect of the internal market programme was increased EC monitoring and control of state aids which distort competition between firms in different member states. The European internal market significantly altered the relationship between Government and prominent Irish companies and sectors, such as Irish Steel, Aer Lingus and the beef processing industry (McAleese, 2000: 183). Importantly, it did not entirely undermine the state's developmental role, as the EC has allowed more leeway for state aids in Objective 1 regions. In addition, as we discuss in Section 2.4, the internal market was the cause of radical change in public utilities—telecommunications, electricity, gas and postal services.

Overall, the internal market programme started in the mid-1980s re-shaped Ireland's approach to market regulation and the relationship between market, state and society. One way to see this is to list the independent regulatory agencies established since accession, particularly those created since the internal market programme in the late 1980s. The process began with the creation of the Employment Equality Agency in 1977 and the Director of Consumer Affairs, in 1978, both the direct result of EC policy. As the internal market programme took hold, we saw the creation of the Health and Safety Authority, in 1989, and the Pensions Board in 1990. There followed a torrent of institution-building with the establishment of the Competition Authority in 1991, the Environmental Protection Agency and the Radiological Protection Institute in 1992, the Irish Aviation Authority and the National Milk Agency in 1994, the telecommunications regulator in 1997 the Food Safety Authority in 1998 and a new energy regulator in 1999.

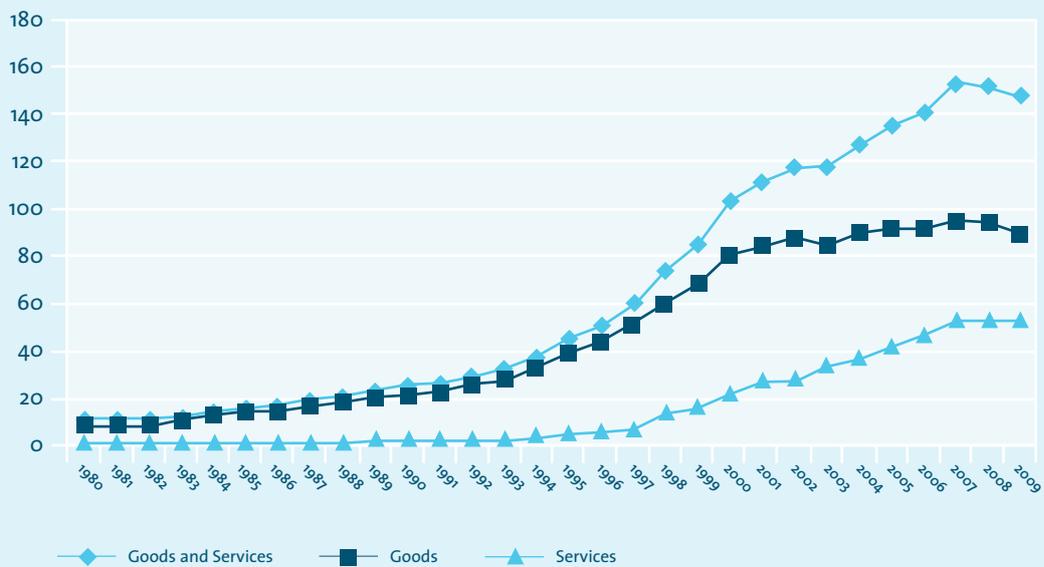
These regulatory agencies have three important characteristics. First, they are independent of government and politics. The independence from government contrasts with the traditional approach, in Ireland and most other EU countries, which involved public ownership of public utilities—such as electricity, gas, postal services, and telecommunications—and direct state responsibility for the setting and enforcing rules in highly-regulated sectors, such as financial services. Second, they separate supply of a product (or provision of a service) from regulation. Previously, state agencies such as An Bord Bia or An Bord Bainne had responsibility for both the commercial development of these sectors and for standards within them. The creation of the Food Safety Authority and National Milk Agency assigned the regulatory function to a separate agency. Third, most of these new agencies are a part of a network of European regulatory agencies. For example, the Environmental Protection Agency works in a network with the European Environmental Agency and the agencies in other member states. Research at EU level suggests that involvement in these European networks enhances both the technical expertise and professional standard of independent regulatory agencies (Sabel and Zeitlin, 2008).

This reconfiguration of market regulation is a major change in Irish public administration and policy. While it moves certain functions from government departments to independent agencies, the internal market programme nevertheless intensified the interaction between the Irish administration and Europe. It increased the EU workload in those departments which had existing relations with the Union, and brought European policy issues, directives and regulations to new departments, such as those regulating services and public utilities.

### 2.3.2 Trade and Foreign Direct Investment

From the early 1990s Ireland's exports of both goods and services entered a period of dramatic growth (Figure 2.2). From 1993 to 2000 exports of goods and services increased threefold in real terms. After 2000 the growth of goods exports slowed while services exports continued their rapid growth up to the current crisis, with a more than doubling of the real volume of services exports since 2000. The exceptional expansion of Irish exports commenced from around the time of the formal completion of the single market at the end of 1992. This raises the question as to what is the relationship between the completion of the single market and Ireland's export boom. Before seeking to answer this question, this section will discuss pertinent characteristics of Ireland's exports and their growth since the early 1990s.

Figure 2.2 Exports of Goods and Services in Constant (2000) Prices (billions), 1980-2009



Source European Commission, Ameco database.

### *Characteristics of Ireland's Goods Exports*

Ireland's export boom since the 1990s was driven by multinationals. Between 1994 and 2000, the *Census of Industrial Production* results show that the manufacturing exports of foreign-owned companies grew at an annual rate of 23 per cent in nominal terms compared to a growth rate of 6 per cent for Irish-owned companies. Since 2000 goods exports have on average shown modest growth. In 2007, foreign-owned companies generated just over 90 per cent of the value of manufacturing exports. This however understates the economic significance of exports by Irish-owned companies as these companies have substantially lower import requirements and profit repatriations. It is estimated by Forfás that the expenditure in the Irish economy on wages and purchases of goods and services represents 65 per cent of sales for Irish-owned manufacturing companies compared to 17 per cent for foreign-owned manufacturing companies.

The growth of goods exports during 1990s was driven by high-tech sectors. There was exceptionally strong growth in exports of chemicals and pharmaceuticals (annual growth of 28 per cent in nominal terms between 1993 and 2000) and machinery and equipment (annual growth of 25 per cent over the same period). Machinery and transport includes exports of office machines, communications equipment, and electrical machinery. The strong growth of exports in the 'miscellaneous manufacturing' category (14 per cent annual growth) was boosted by exports of professional and scientific equipment (including medical equipment) and software. Food and drink exports grew by an annual average of 2.4 per cent while traditional exports generally showed slow growth.

During the current decade, goods export growth became increasingly reliant on chemicals and pharmaceuticals. The nominal value of exports of chemicals & pharmaceuticals and professional & scientific equipment exports grew by an annual average of 6 per cent between 2000 and 2008. By contrast, the nominal value of machinery and transport exports declined at an annual average of 7 per cent, influenced by price declines. By 2009 chemicals represented 57 per cent of the gross nominal value of all Irish goods exports while the share of machinery and transport had fallen to 16 per cent. Food and drink exports represented 9 per cent of the value of goods exports in 2009.

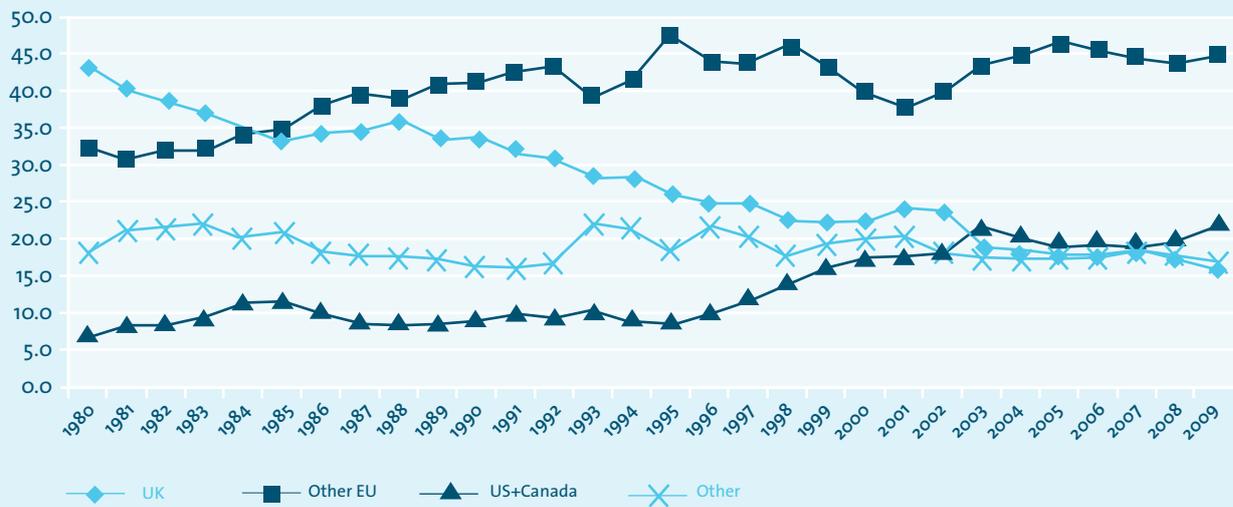
**Table 2.3 Annual Percentage Growth in Nominal Terms in Irish Goods Exports, 1987-2009**

	1987– 1993	1993– 2000	2000– 2008	1987– 2008	2009 (% Change)	2009 (€ billion)
<b>Food &amp; Drinks</b>	7.1	3.0	2.4	3.9	-11.8	7.3
– Meat	7.1	2.6	4.0	4.4	-8.7	2.2
– Dairy	4.2	2.0	2.7	2.9	-22.8	1.1
– All other food	7.6	2.6	0.9	3.3	-8.6	3.0
– Drinks	11.5	7.9	3.9	7.4	-13.3	1.0
<b>Crude materials</b>	1.0	6.9	4.2	4.2	-26.0	1.0
<b>Mineral fuels etc</b>	7.2	9.8	14.3	10.7	-28.5	0.6
<b>Animal &amp; vegetable oils</b>	9.7	2.7	5.3	5.6	-51.6	0.0
<b>Chemicals</b>	19.6	28.0	6.2	16.9	8.5	48.0
<b>Leather, textiles etc</b>	3.4	4.4	-2.1	1.6	-25.1	1.2
<b>Machinery &amp; transport:</b>	9.3	24.6	-7.4	7.2	-26.0	13.6
– Office machines	8.4	22.9	-8.9	5.8	-31.0	6.4
– Communications	13.4	37.1	-12.2	9.6	-24.1	1.0
– Electrical machinery	13.8	29.8	-6.1	10.5	-30.4	3.3
<b>Miscellaneous manufacturing</b>	13.5	14.0	0.1	8.3	3.2	9.2
<b>Other commodities</b>	6.2	21.4	-3.2	7.2	24.4	2.5
<b>Total goods exports</b>	<b>10.8</b>	<b>18.8</b>	<b>0.4</b>	<b>9.2</b>	<b>-2.6</b>	<b>84.1</b>

Source CSO website, [www.cso.ie](http://www.cso.ie)

There has been a long term trend in the geographical diversification of Irish exports with a shift from the UK to other EU destinations and the US. The rise in the share of goods exports to continental EU member states reached a peak in 1997 at 47 per cent; by 2009, 45 per cent of exports went to these member states. There was an exceptionally large increase in exports to the US so that the US share of Irish goods exports has increased from 8 per cent in 1995 to 21 per cent in 2009. By 2009, the UK accounted for less than one fifth of Irish goods exported (16 per cent).

Figure 2.3 Goods Exports by Destination  
(Percentage of Total Goods Exports), 1980-2009



Source CSO website, www.cso.ie.

The absolute growth of exports to the EU during the 1990s was very strong. Between 1993 and 2000, the nominal value of goods exports to the UK increased at an annual rate of around 15 per cent while exports to the rest of the EU increased annually by 19 per cent. The nominal value of exports to the US grew at an extraordinary annual rate of 28.4 per cent while exports to other countries grew at an annual rate of 17 per cent.

There is considerable variance in the destination of different types of exports (see Table 2.3). Food exports have a high reliance on the UK market with almost half of food exports (49 per cent) going to the UK. By contrast chemicals exports have an unusually low reliance on the UK market (11 per cent) with half of these exports going to other EU member states and almost one quarter going to the US. In the case of machinery and transport, 17 per cent of exports go to the UK and 41 per cent to other EU countries.

Table 2.4 Goods Exports by Broad Sector and Destination, 2008

	UK	Rest of EU	US	Other
<b>Food</b>	49.1	32.0	1.1	17.8
<b>Chemicals</b>	11.0	50.2	24.3	14.5
<b>Machinery + Transport</b>	16.6	41.1	10.4	31.9
<b>Other exports</b>	26.6	35.7	23.6	14.1
<b>Total</b>	<b>18.4</b>	<b>44.0</b>	<b>19.3</b>	<b>18.4</b>

Source Derived from special tabulation provided by the CSO.

Irish-owned manufacturers rely considerably more on the UK than multinational exporters. In 2007, 47 per cent of the exports of Irish-owned manufacturers went to the UK compared to 17 per cent for foreign-owned manufacturers. This leaves indigenous exporters highly exposed to the volatility of sterling. There was a correspondingly lower orientation by Irish-owned exporters to the rest of the EU (36 per cent), the US (7 per cent) and all other countries (9 per cent). The corresponding figures for foreign-owned manufacturers were 54 per cent for exports to the rest of the EU, 18 per cent for exports to the US and 14 per cent for exports to all other countries.

There has been a strong shift in the geographical source of imports. In 1993, the EU (excluding the UK) represented one fifth of goods imports (20 per cent) while by 2009 this had risen to 29 per cent. There was a broadly based decline in imports from elsewhere over this period. The UK continues to be the single largest source of Irish imports (31 per cent of imports in 2008).

### *Characteristics of Services Exports*

The volume of services exports has grown very strongly since the early 1990s and this has continued during the current decade. As with goods exports, the larger part of the growth has come from multinationals but there has also been strong growth by Irish-owned enterprises in international services. In 2008, 92 per cent of services exports were from foreign-owned companies, based on Forfás figures.<sup>2</sup>

Between 1995 and 1999 it is estimated by Forfás that exports by foreign-owned services enterprises grew in nominal terms at an annual average rate of 41 per cent, while the exports of Irish-owned enterprises also showed impressive annual growth of 21 per cent. Software exports over the same period grew at an annual rate of 30 per cent for foreign-owned enterprises and at even higher rate of 42 per cent for Irish-owned enterprises. During the current decade the exports of Irish-owned services enterprises grew in nominal terms by an annual rate of 10.4 per cent, considerably faster than the corresponding growth rate for foreign-owned enterprises (7.1 per cent).

**Table 2.5** Annual Percentage Growth in Exports of Internationally Traded Services by Nationality of Ownership, 1990-2008

	1990– 1994	1995– 1999	2000– 2008	2008 € billion	Percent of Total
<b>Irish-owned</b>	6.6	21.4	10.4	3.4	7.5
<b>Foreign-owned</b>	27.8	41	6.9	41.9	92.5
<b>Total</b>	<b>25</b>	<b>39.6</b>	<b>7.1</b>	<b>45.3</b>	<b>100.0</b>

Source Forfás, *Annual Business Survey of Economic Impact*, various issues.

<sup>2</sup> Forfás data on services exports refers to enterprises in sectors supported by Enterprise Ireland and IDA Ireland. Tourism and some professional services are not included. Forfás estimates for total services exports are considerably lower than the official estimates published by the CSO.

The CSO provides more comprehensive estimates than Forfás of the level and composition of services exports. In 2009 the largest sectors of services exports were computer services (36 per cent of services exports) and business services (31 per cent). These were followed by insurance services (11 per cent of services exports), financial services (9 per cent), tourism and travel (5 per cent) and transport (4 per cent). The relative domestic impact of tourism and travel would be greater than implied by these figures as there would be lower profit outflows and imported inputs in tourism and travel compared to IDA-supported services.

In 2007 just over one fifth (22 per cent) of services exports went to the UK while 41 per cent of services exports went to the rest of the EU. Services exports have a considerably lower exposure to the US market than goods exports with just 9 per cent of services exports going to the US compared to 19 per cent for goods in the same year. Tourism and travel relies considerably more on the UK than other services exports with around one third of tourism and travel earnings coming from the UK and another third from other EU countries; the US provides 18 per cent of tourism and travel earnings.

### *Gravity Models of Exports*

Gravity models are used to explain the geographical pattern of exports. Lawless (2009) used gravity models to examine the geographical pattern of Irish exports. A basic gravity model in which exports to a particular destination are modelled as a function of GDP in the destination market, distance and use of the English language fitted the data very well; in addition she found that Irish exports were positively related to a well developed communications infrastructure.

### *Exports and the Economic Crisis*

Total Irish exports have performed reasonably well during the crisis (Barry and Bergin, 2010). In 2008 the volume of exports of goods and services for Ireland fell by 1 per cent while on average for the EU (27) exports increased by 1 per cent. During 2009 Irish exports declined by 2.3 per cent; this was lower than the decline in any other EU country. The average decline in exports for the EU (27) in 2009 was 12.3 per cent. This comparatively strong performance in 2009 applies to both goods and services. The ERSI *Quarterly Economic Commentary* (QEC) of Summer 2010 projects growth in Irish exports of 5 per cent in 2010. The concentration of Irish exports in chemicals, pharmaceuticals and medical devices has contributed to the relatively strong performance. However, the fact that roughly half of Irish goods exports consist of chemicals and pharmaceuticals, a sector that accounts for a small percentage of manufacturing employment,<sup>3</sup> means that the export figures can give a misleading impression of general export performance. Excluding chemicals, goods exports fell by over 14 per cent in value terms in 2009. Food exports fell by 13 per cent and exports of machinery and equipment (which includes office machines and electrical machines) fell by 26 per cent in 2009. Services exports in 2009 benefitted from continuing growth in exports of business services and stability in exports of computer services (software). The nominal value of services exports fell by just 2 per cent in 2009.

<sup>3</sup> Chemicals represented 11 per cent of manufacturing employment in 2007. Organic chemicals represented 20 per cent of the value of goods exports in 2006 but the 2006 *Census of Industrial Production* showed that employment in this sector was only 2.7 per cent of manufacturing employment.

The volatility of sterling against the euro has added to the current problems of the Irish economy.<sup>4</sup> It particularly affects indigenous manufacturing, tourism and the retail sector in border areas. The abrupt movement of currencies of participants in the internal market is a significant weakness. In the absence of all EU member states adopting the euro, it would be desirable to at least have an arrangement to co-ordinate exchange rate movements within the EU. There is in fact such a mechanism, the Exchange Rate Mechanism II. Participation however is voluntary, and unfortunately for Ireland, the UK has chosen not to participate. There is no simple solution to this problem. The additional pressure on competitiveness from sterling reinforces the urgency of addressing competitiveness through other means. In the short term there is a pressing need for cost reductions across the economy. From this perspective the fall in property prices is desirable. However the continuation of commercial rents that reflect pre-crisis levels of economic activity is a cause for concern. The long standing concerns regarding competition in the Irish economy need to be addressed with more urgency. Addressing broader dimensions of competitiveness, including innovation, education and training, can reduce the vulnerability of the economy to exchange rate movements.

#### *Impact of the Single market on Ireland's Export Boom*

The evidence from gravity models is that the geographical pattern of Irish exports can be explained by GDP in Ireland's destination markets, distance, the English language and the condition of communications infrastructure. However, the absence of evidence of a single market effect on the *geographical pattern* of a given level of exports does not preclude the single market as being an influence on the development of Ireland as a major exporter to both EU and wider markets.

It has been shown above that Ireland's export boom was dominated by the exports of multinationals. This implies that foreign direct investment (FDI) played a crucial role. The late 1980s saw a major increase in the flow of FDI to Europe. Much of this increase is attributed by the US Department of Commerce to the single market (as quoted by Barry, Bradley and Hannon, 2001). At the same time Ireland's share of US FDI to Europe quadrupled from the late 1980s to the early 1990s while the UK share of this rising investment was static over this period (Barry *et al.*, 2001).

The dramatic increase in Ireland's share of US FDI cannot simply be attributed to the single market. There are a range of factors that have made Ireland an attractive location for FDI. The adoption of a consistent policy approach underpinned by social partnership and the resolution of macroeconomic problems in the late 1980s meant that Ireland was better placed to capitalise on its other attractions for FDI including a workforce with relevant skills, low corporate tax and an effective investment strategy.

The single market could also have been a key additional element that allowed Ireland at this stage to gain the benefits of its other attractions for FDI. Mac Sharry and White (2000) point to the single market as playing a key role. They describe the concerns of the IDA in the early 1980s at the tactics adopted by other agencies in Europe seeking to attract inward investment. These tactics involved covert forms of protectionism, including threats that access to publicly funded purchases of products (hugely important in both

<sup>4</sup> In January 2007, €1 was worth £0.66 sterling while in January 2009, €1 was worth £0.89 sterling. This represents an appreciation of 35 per cent of the euro against sterling over the two year period to January 2009. In September 2010, €1 was worth 0.84 sterling.

health care and IT) could be affected by the location of investment. These concerns were sufficiently strong to be raised by the then Taoiseach at an EEC Summit meeting in 1983. According to Mac Sharry and White:

These threats to Ireland were not satisfactorily dealt with until the single market initiative was launched by the European Commission with considerable fanfare in 1985. This set about removing the very non-tariff barriers that the government and the IDA had complained about (Mac Sharry and White, 2000: 206).

Another channel of influence through which the single market is likely to have contributed to Ireland's export boom is its impact on market growth. Prior to the emergence of the Celtic Tiger phase of Ireland's growth, Kennedy (1993) had speculated that one of the necessary conditions for Ireland to achieve the type of economic growth it needed to reduce unemployment, given projected labour force growth, was a return to 'Golden Age' type growth rates that were experienced prior to the oil crisis of 1973 among Ireland's trading partners. High growth among Ireland's trading partners would facilitate rapid export growth and economic growth in Ireland. During the 1990s the US did indeed achieve strong economic growth. However Ireland's largest trading partner is the rest of the EU which represented the market for over two thirds of Ireland's goods exports in the early 1990s. The EU had a recovery of economic growth during the 1990s but did not return to 'Golden Age' type rates of growth. Yet, despite this, Kennedy (2000/2001) points out, the EU countries did experience very strong import growth during the 1990s with annual import growth (for goods) for the EU (15) of 8.1 per cent between 1993 and 2000 compared to growth of 3.7 per cent between 1980 and 1993. Technically this meant a substantial increase in the 'import elasticity' of demand in EU (15) countries, from 1.9 in 1980-1993 to 3.2 in 1993-2000. Annual import growth in the US rose sharply from 6.7 per cent in 1983-2000 to 12.1 per cent in 1993-2000.

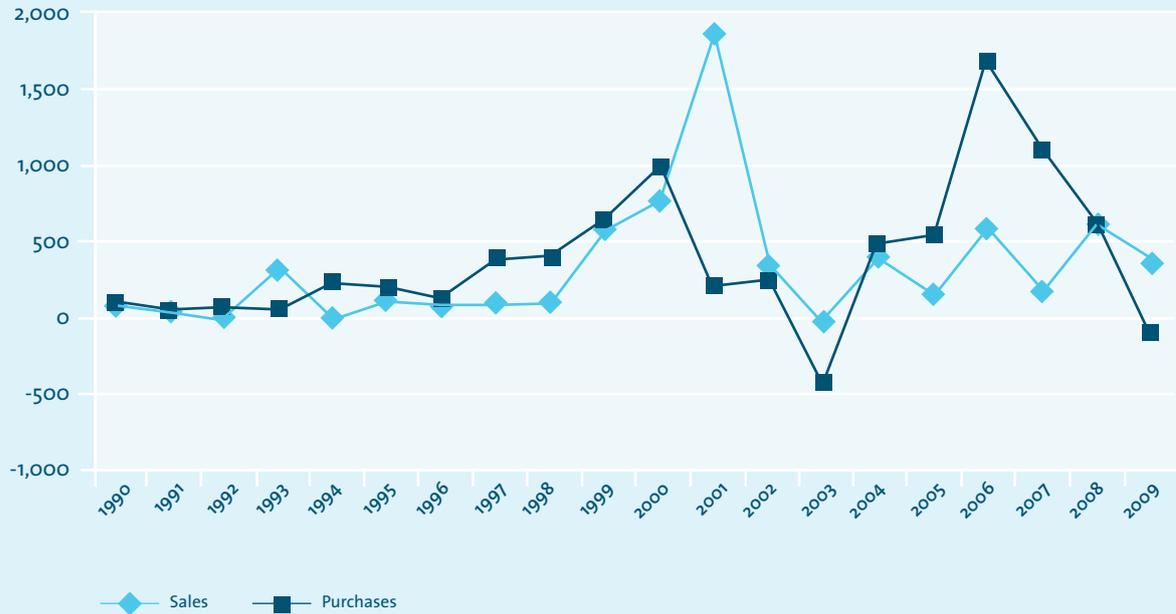
The question arises as to why the EU at this stage experienced a substantial increase in its import elasticity of demand. Kennedy speculates that the European single market was a key factor in this rise in import elasticity.

### 2.3.3 Mergers and Acquisitions

There was an expectation that the completion of the internal market would lead to increased merger and acquisition (M&A) activity, both due to the pressure of increased competition and the enhanced opportunities offered by the internal market (Ilzkovitz *et al.*, 2007). It is difficult to disentangle the influence of the internal market on M&A from the forces of globalization which also led to increased merger and acquisition activity across the global economy. However, both Pelkmans (2006) and Ilzkovitz *et al.* (2007) infer from the evidence that the internal market has been a significant influence on M&A in the EU.

Trends in the value of M&A cross-border transactions for Ireland are shown in Figure 2.4 below. While the series is erratic—large individual transactions can dominate the total value of transactions in a given year—it is also clear that there has been strong growth in cross-border mergers and acquisitions both in terms of sales and purchases. The recession, however, led to a sharp decline in the value of M&A activity. As with the EU, the internal market appears to have contributed to the long run growth of M&A transactions involving companies based in Ireland.

**Figure 2.4** Index of Cross-Border Mergers and Acquisitions:  
Ireland 1990=100



Source United Nations Conference on Trade and Development (UNCTDA), <http://unctad.org>.

### 2.3.4 Prices

There is evidence across the EU of increased economic integration leading to reduced dispersion in final consumer prices. It was estimated that the coefficient of variation for final consumer prices across the EU (15) in 1991 was 20 per cent while in 2005 it had fallen to 13 per cent. Price convergence was even stronger among in the EU (25) with the coefficient of variation falling from 39 per cent in 2005 to 26 per cent in 2005. This price convergence typically reflected above average inflation in lower income member states and below average inflation in the rich member states.

In the first half of the 1990s Ireland's inflation was below the EU average. From the late 1990s, Irish inflation moved well above the EU average so that by 2003 the relative consumer price level in Ireland was the second highest in the EU along with Finland (13 per cent over the EU (15) average) while Denmark had the highest price level (28 per cent over the EU (15) average). Above average inflation in Ireland was particularly evident in the early years of the euro; during the years 2000 to 2003, inflation in Ireland averaged 4.5 per cent compared to 2.3 per cent for the euro area as a whole, based on the harmonised index of consumer prices (HICP). In 2009 prices fell faster in Ireland than other euro or EU countries; the vast majority of EU member states had positive inflation in 2009. Ireland had deflation of -1.7 per

Table 2.6 Inflation (HICP) in Ireland and the Euro Area, 1997 to 2009

	Goods		Services		All Items	
	Ireland	euro	Ireland	Euro	Ireland	Euro
1997	0.8	1.3	2.3	2.5	1.3	1.7
1998	1.7	0.8	3.1	2	2.1	1.2
1999	1.7	0.9	3.8	1.6	2.5	1.2
2000	5.0	2.5	5.6	1.5	5.3	2.2
2001	2.6	2.3	6.1	2.5	4.0	2.4
2002	2.6	1.7	7.6	3.2	4.7	2.3
2003	2.4	1.8	6.1	2.6	4.0	2.1
2004	1.2	1.9	3.7	2.6	2.3	2.2
2005	1.3	2.1	3.2	2.3	2.2	2.2
2006	1.7	2.3	3.8	2.0	2.7	2.2
2007	1.5	1.9	4.4	2.5	2.9	2.1
2008	2.9	3.8	3.4	2.6	3.1	3.3
2009	-4.1	-0.9	1.2	2.0	-1.7	0.3

Source Eurostat

cent in 2009 as measured by the HICP compared to +0.3 per cent in the euro area. According to the Consumer Price Index (CPI), Ireland had deflation of 4.5 per cent in 2009, with the larger fall in the CPI due to the inclusion of mortgage payments. In 2009 Ireland's relative consumer price level was the fourth highest in the EU after Denmark, Finland and Luxembourg.

It is in services that Ireland has experienced persistently high inflation up to the current crisis. Over the period 2000 to 2008, services inflation in Ireland averaged 4.9 per cent compared to 2.3 per cent for the euro area. Successive Central Bank *Quarterly Bulletins* have highlighted the particularly high inflation in administered services (i.e., services whose prices are set wholly or partially by a regulatory process). These include energy, health insurance<sup>5</sup>, rail, bus and taxi fares. Administered services inflation remained positive during 2009 when overall inflation was negative.

<sup>5</sup> Since 2008 the Minister for Health and Children no longer has a role in setting health insurance premiums. However, health insurance is covered by special regulation (community rating etc) that has implications for prices.

The question arises as to why Ireland has had persistently higher inflation than other euro countries. Honohan and Lane (2003 and 2004) emphasise the influence of exchange rates on Ireland's inflation. Between 1996 and 2000, Ireland experienced a larger nominal exchange rate depreciation than any other euro country. Honohan and Lane (2003) point out that Ireland is more affected than other euro countries by movement of the euro against other currencies (particularly the dollar and sterling) as it has a proportionately much higher reliance on imports from non-euro countries; almost a third of Irish aggregate demand is met by non-euro imports. They view the large rise in Irish inflation in 2000 as the lagged effect of the weakness in the late 1990s. Honohan and Lane (2004) point to the subsequent appreciation of the euro as explaining the fall in inflation in Ireland during 2004, a time when domestic demand was strong in the Irish economy. At this stage Irish goods inflation fell below the euro average and this has continued since then.

The evidence put forward by Honohan and Lane concerning the role of exchange rates in driving Irish inflation is persuasive. Exchange rates are not, however, the only influence on Irish inflation; in particular, exchange rates cannot explain why services inflation in Ireland has been persistently higher than in other euro countries. The other major factor in Ireland's relatively high inflation (up to the current recession) has been the strength of demand in the Irish economy. This high demand was sustained until recently by exceptionally high levels of credit expansion. Fiscal policy was also a contributory factor in adding to demand and inflationary pressure, notwithstanding the fact that there were budgetary surpluses in almost every year of the current decade. In particular the fall in the government surplus by more than five percentage points of GDP between 2000 and 2002 added to inflationary pressures.

### 2.3.5 Productivity and Innovation

#### *Expectations of the Single market*

The single market project was designed to contribute to the reinvigoration of the European economy. There was an expectation that more intense competition across an integrated European market would promote higher productivity. There are a number of ways through which increased competition could be expected to contribute to higher productivity, as discussed above. It has been clearly established that the single market resulted in increased integration across European economies and there is empirical evidence that the single market reduced price mark-ups, particularly in the sectors most affected by the single market. In addition there is micro-economic evidence of the single market leading to increased research and innovation in manufacturing in the EU. Nonetheless a review by Ilzkovitz *et al.* concluded that: 'While the effect of the Internal Market on R&D and innovation has been positive, it has not been strong enough to significantly improve the innovation and productivity growth performance of the EU' (Ilzkovitz *et al.*, 2007: 53). For the EU as a whole and for most EU countries, innovation performance has continued to lag the US and Japan. 'Initial expectations that the Internal Market would be a launching pad for a more dynamic, innovative and competitive economy at world level have not been met' (Ilzkovitz *et al.*, 2007: 6).

There is an extensive literature on the explanations of differences in the EU and US in regard to productivity and innovation. Business dynamic appears to be a significant factor.<sup>6</sup> Notwithstanding recent progress in the EU, it continues to be more difficult to establish a new business in most EU countries compared to the US. In addition, the growth rate of surviving new businesses is higher in the US, implying that the US is better at allocating resources to new and more productive activities. This is an indication that financial markets are better at business growth in the US while higher administrative costs also appear to affect the expansion of firms in the EU in their initial years.

The EU remains weaker than the US in terms of a number of innovation inputs including public and private R&D. The incomplete nature of the internal market is also a relevant factor in Europe's innovation performance, particularly in services. European services markets remain somewhat fragmented while the concept of the European Research Area, characterised by seamless movement of researchers and knowledge and effective co-ordination of research across the EU, has not been fully realised.

#### *Productivity Developments in Ireland*

The 1990s saw an acceleration in productivity growth as measured by GDP per worker and per hour worked and also in the corresponding GNP-based measures. However the GDP-based measures are prone to overstate productivity growth on account of the exceptionally high returns on intangible assets used in certain sectors by multinationals. GNP is not affected by this problem but GNP per worker is also an imperfect measure of productivity as its growth is affected by trends in debt service. The preferred measure of productivity used by Honohan and Walsh (2002) was GDP less all multinational profits. By this measure, there was no productivity acceleration in the 1990s. This however probably understates the 1990s productivity performance.

These measurement issues make it difficult to consider the impact of the internal market on productivity growth in Ireland. However, it was argued above that the internal market was significant in increasing FDI to Ireland. It is also well established that value-added and wage levels per person engaged are on average higher in foreign-owned companies compared to Irish-owned companies in manufacturing in Ireland. It is reasonable to infer that the internal market has boosted productivity in the Irish economy. There has also been a marked acceleration of productivity growth in utilities. This is connected to the internal market since the internal market introduced increased pressure for efficiency in these sectors (see section 2.4 below).

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<sup>6</sup> This paragraph and the following one draw on Ilzkovitz *et al.* (2007).

**Table 2.7 Annual Percentage Change in Measures of Productivity Growth, 1961-2007**

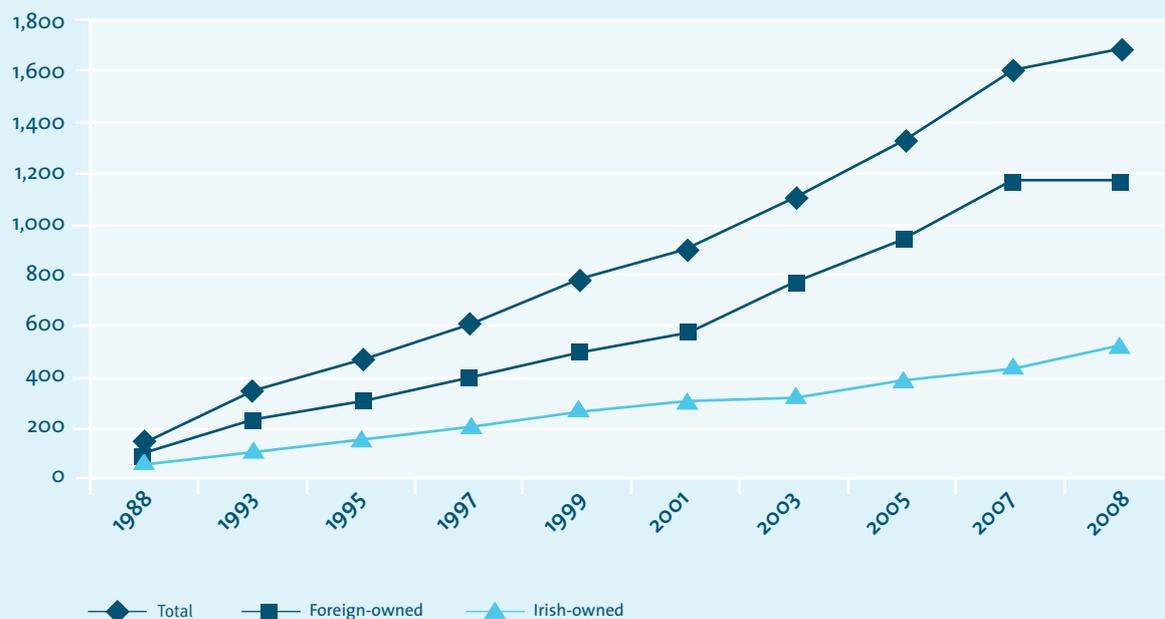
	1961– 1973	1973– 1979	1979– 1987	1987– 1993	1993– 2000	2000– 2007
<b>GDP per worker</b>	4.2	2.9	2.5	3.0	4.4	2.0
<b>GNP per worker</b>	4.1	2.3	1.4	2.4	3.7	1.2
<b>GDP per hour worked</b>	5.1	3.5	3.0	1.6	5.0	2.6
<b>GNP per hour worked</b>	5.0	2.9	1.8	1.0	4.4	1.8

Source ESRI databank; CSO, *National Income and Expenditure* and Gronigen database

### *R & D and Innovation in Ireland*

In the years prior to the completion of the single market there was a large increase in business expenditure on research and development (BERD) with a nominal increase of around 160 per cent between 1988 and 1993. Strong growth continued so that by 2008 expenditure on BERD in nominal terms was over 12 times what it had been in 1988. This is potentially significant for innovation as research shows that companies that are engaged in R&D have a higher probability of engaging in both product and process innovation (Hewitt-Dundas and Roper, 2008). Total expenditure on BERD in 2008 in foreign-owned enterprise was more than 16 times what it had been in 1988 while it was more than

**Figure 2.5 Business R&D Expenditure as a Percentage of GNP, 1998-2008**



Source CSO/Forfás (2009), *Business Expenditure on R & D 2007/2008*, preliminary findings, Forfás (2007), *R & D Statistics in Ireland 2006* and Forfás (1995) *Research and Development in the Business Sector 1993*.

8 times higher in Irish-owned enterprises. Around 70 per cent of BERD in Ireland is in foreign-owned enterprises. In 2008 BERD in Ireland was 1.1 per cent of GNP; this share has doubled since 1988. This was approximately the same as the EU (27) average (1.14 per cent of GDP). This remains below the OECD average, which in 2008 was 1.63 per cent of GDP. Total expenditure on R & D (public and private) in Ireland was 1.71 per cent of GNP in 2008. This means that the overall level of investment is now close to the EU average (1.81 per cent of GDP). However, it remains significantly below the OECD average, in 2008, of 2.33 per cent of GDP.

There are several influences on the growth of BERD including supportive policy measures. Insofar as the single market was a factor in the growth of Ireland's FDI, this would in turn have indirectly contributed to growth of BERD. The opportunities and competitive pressure of the single market are also likely to have contributed to BERD growth in Irish-owned enterprises.

Comparative information on Ireland's innovation performance is available from the Community Innovation Survey. This survey measures innovation in industry and selected services sectors in enterprises employing ten or more people. The results from successive surveys have shown relatively high rates of innovation in Irish enterprises. The 2004 to 2006 survey placed Ireland as seventh highest among the EU (27) in terms of percentage of enterprises engaged in innovation; Germany had the highest percentage of innovation active enterprises.

More recent information on innovation from the Community Innovation Survey is available for Ireland. The 2006 to 2008 survey found that the share of enterprises in Ireland engaged in innovation was 45 per cent of all enterprises in the survey. Almost 28 per cent of enterprises were engaged in product innovation while 35 per cent were engaged in process innovation; almost one in five enterprise (19 per cent) were engaged in both product and process innovation. The innovation rate was higher in foreign-owned enterprises (61 per cent) compared to Irish-owned enterprises (41 per cent). The innovation rate was also higher for industrial sectors (52 per cent) than for services sectors (41 per cent).

**Table 2.8** Innovation Activity Rates by Nationality of Ownership and Broad Sector (Percentage of Enterprises), 2006-2008

	Industrial sectors	Selected services sectors	All enterprises
<b>Irish-owned</b>	49.0	36.7	41.3
<b>Foreign-owned</b>	66.5	57.3	60.7
<b>All enterprises</b>	52.3	40.6	44.9

Source CSO/Forfás (2010), *Community Innovation Survey 2006 – 2008*.

### 2.3.6 EU Competition Policy

Competition in the Irish economy is governed by both EU and Irish competition law. In 1991 Irish legislation was comprehensively overhauled and became similar in key respects to the EU approach. In particular, the two key provisions of domestic Irish legislation (the banning of collusion and abuse of dominant positions) are closely modelled on the corresponding articles of the EU Treaty (now Articles 101 and 102 of the Treaty on the Functioning of the European Union, TFEU). However, enforcement in Ireland differs in significant respects from other EU member states. First, under current Irish legislation, breaches of criminal law are a criminal offence which is not the norm in other EU countries. Second, while the European Commission and competition authorities in most member states can make decisions on whether firms are engaged in anti-competitive behaviour and issue fines, these functions in Ireland are reserved for the courts (Massey and Daly, 2003).

From 2004 major reforms of EU legislation were brought into force. The enforcement of Articles 81 and 82 (i.e., the current Articles 101 and 102) was mainly devolved to member states. A new network was established, the European Competition Network (ECN), to facilitate close co-operation of national competition authorities (NCAs) and the European Commission in the joint enforcement of these articles. All cases concerning breaches of the relevant articles are notified to ECN and the case is dealt with by the member of the NCA that is best placed to do so effectively. Some cases are dealt with by the Commission. Within the ECN, there are several expert groups that discuss common concerns including groups on banking, telecommunications, energy, health care and abuse of dominance. Over the period 2004 to 2009, Ireland's Competition Authority notified 11 cases to the ECN. National procedures are followed in the devolved enforcement of EU competition law.

One case of note involving EU competition law in Ireland over this period was that undertaken by the Competition Authority against the Beef Industry Development Society (BIDS). The BIDS was established to promote rationalisation and modernisation of the beef processing sector; these plans included payments by major players in the sector to those who exited. The Competition Authority claimed that the plans violated Article 81 (now Article 101 of the TFEU). The High Court ruled against the Competition Authority in 2006 who then appealed to the Supreme Court. The Supreme Court referred the case to the European Court of Justice (ECJ); in a preliminary ruling, the ECJ found that the BIDS plan was incompatible with Article 81 (1). In November 2009 the Supreme Court ruled that the plan was a restriction on competition and incompatible with Article 81 (1). However it referred the case back to High Court to consider whether the plan meets the conditions for exemption that are provided for in Article 81 (3).

Notwithstanding the considerable impact of the EU on competition in the Irish economy, competitive forces in parts of the Irish economy remain weak (OECD, 2009, National Competitiveness Council, 2010a). Examples of sectors where there is a need for enhanced competition identified by Forfás include solicitors, barristers, banking and non-life insurance, transport, energy and waste services, medical and paramedical professions. Stronger competition in the Irish economy requires addressing public restrictions on competition as well as effective enforcement of competition legislation. There is considerable scope for domestic action to

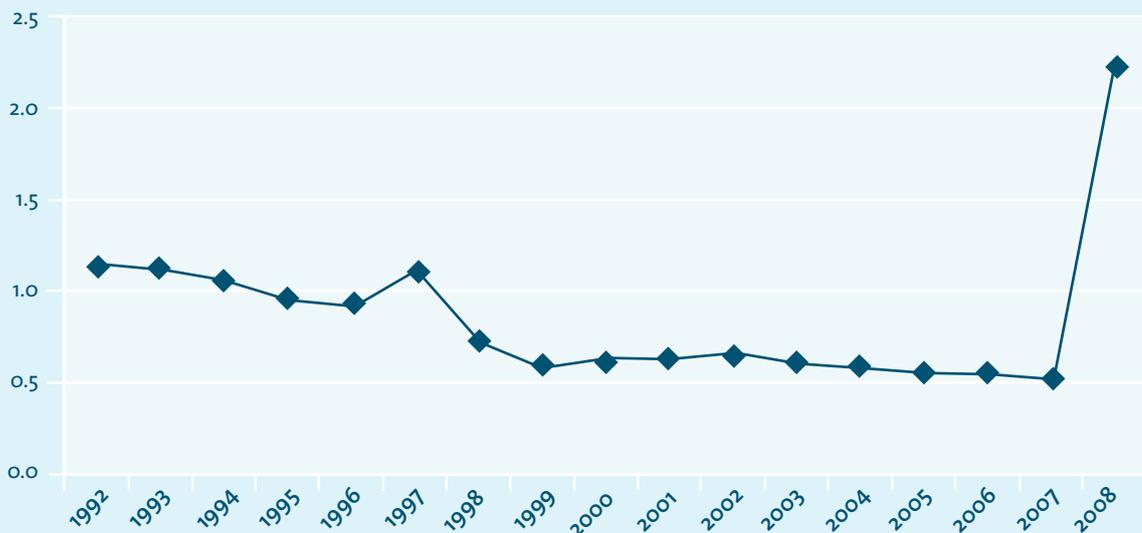
enhance competition in Ireland while the implementation of the Services Directive offers the prospect of bringing greater external competitive pressure to previously sheltered parts of the economy.

### 2.3.7 State Aid

There is a general prohibition in the Treaty on state aid that would distort competition in such a way as to affect trade between member states (Article 107 of the TFEU). The Treaty provides a range of exemptions from this general principle. Key categories of aid that may be considered compatible with the internal market include aid for the economic development of regions characterised by serious unemployment and abnormally low living standards and aid for certain economic activities (for example training) 'where such aid does not adversely affect trading conditions contrary to the common interest' (Article 107). There is also special provision to deal with economic crises: aid may be provided 'to remedy a serious deficiency in the economy of a Member State' (Article 107). All state aid must comply with EU law and in many cases must be notified to the European Commission for prior approval.

Prior to the 1990s major exemptions to the general prohibition were allowed (Pelkmans, 2006). As part of the internal market programme, a more rigorous approach to state aid was adopted from the 1990s. State aid in the EU fell sharply from 1.1 per cent of GDP in 1992 to 0.5 per cent of GDP in 2007. As a result of the economic crisis there has been a sharp increase in state aid with aid across the EU rising to 2.2 per cent of GDP in 2008. The increase in aid in 2008 was driven primarily by increased aid to the financial sector.

Figure 2.6 Total State Aid for the EU (27) as a Percentage of GDP, 1992-2008



Source European Commission, <http://ec.europa.eu/competition/state>. Railways are not included.

State aid in Ireland had also fallen until the current crisis; total state aid in Ireland in 1992 was 0.8 per cent of GDP while it fell to 0.6 per cent in 2007. State aid to industry and services went from 0.5 per cent of GDP in 1992 to 0.3 per cent in 2007. A more rigorous approach to state aid by the EU has had implications for the way the Irish state has dealt with companies such as Irish Steel and Aer Lingus as noted above. The European Commission is at present conducting an investigation into whether the subsidies provided to Dublin Bus and Bus Éireann are compatible with state aid rules. At the same time it has been possible to continue with a range of developmental supports. This has been facilitated by the regional classification adopted within Ireland and there has also been increased emphasis on research, development and innovation (RDI) support.

There was an unprecedented recorded increase in state aid in Ireland in 2008 to over 20 per cent of GDP. This is due to the granting of the guarantee on bank liabilities in Ireland. It is very difficult to put an accurate value on the guarantee in terms of state aid. In the absence of information on the aid component of the guarantee, the approach of the European Commission is to consider that 10 per cent of the value of the guaranteed liabilities represents aid; this resulted in the increase in Irish state aid of almost 20 percentage points. The nominal value of new bank guarantees provided by Ireland in 2008 represented 44 per cent of the total value of new guarantees provided in the EU in that year.

Since the late 1990s there have been significant reforms to modernise and simplify the process of state aid. A regulation adopted in 1998 gave the European Commission the authority to exempt entire categories of state aid from the requirement for prior notification to the Commission. The Commission launched further reforms in 2005 with the publication of a State Aid Action Plan (SAAP). In 2008 it simplified and consolidated its regulations regarding exemption from the requirement for prior notification of aid into a new General Block Exemption Regulation (GBER). Key categories of aid covered by the GBER include support for small and medium enterprises (SMEs), R&D, innovation, training, renewable energy and regional development. Also in 2008, a new simplification package was adopted including a procedure whereby decisions on straight-forward cases would be made by the Commission within one month. The Commission is encouraging affected parties to seek enforcement of EU state aid rules in national courts. In 2009 it issued revised guidelines on the role of national courts in the enforcement of state aid rules.

The European Commission adopted special measures on state aid in response to the economic crisis. In 2008 it adopted a temporary framework allowing member states to provide additional support to business on a temporary basis without the need to provide prior notification of individual allocations of aid. In Ireland two special schemes have been introduced during the crisis: the Employment Subsidy Scheme (now closed for new applications) and the Enterprise Stabilisation Fund. A series of communications have been issued by the Commission on state aid for the financial sector.

A dedicated communication was issued by the European Commission on the treatment of impaired assets, such as those to be managed by NAMA (European Commission, 2009a). This recommended that in the first instance assets should be valued at market value. Where assets are transferred with a value higher than

market value, this represents state aid. The Commission considers that assets transferred on the basis of their long term economic value as compatible with its approach to state aid. The Commission approved the NAMA scheme in February 2010 (European Commission, 2010). It indicated that the scheme constituted state aid but that it was compatible with EU rules. Some amendments will be made to the methodology to be used for valuing loans. The Commission will separately assess the actual prices paid in transferring assets to NAMA.

### 2.3.8 Public Procurement

The internal market has involved the opening up of public procurement to cross-border competition. All public procurement contracts must adhere to principles of non-discrimination while contracts above specified thresholds must follow EU specified procedures.

There is a perception in the Irish business community that public procurement rules are implemented more rigorously in Ireland than in other EU member states; for example, in relation to the printing industry, see NCPP (2009). A group was established by the Department of Enterprise, Trade and Employment to examine public procurement in Ireland and reported in 2009 (Procurement Innovation Group, 2009). This group issues a series of recommendations both to strengthen the innovation return from public procurement and to improve the access of SMEs to public contracts. Its recommendations included professionalising the public procurement function, sub-dividing contracts into smaller lots to facilitate SME access, improving the quality of procurement information, avoiding disproportionate qualification requirements in tender documents and increasing the visibility of low value contracts. The European Commission also encourages member states to facilitate access by SMEs to public procurement and to use procurement as a means of promoting sustainability.

### 2.3.9 Conclusion

The formal completion of the single market coincided with a marked acceleration in the growth of Ireland's exports of both goods and services. There are reasons to believe that the single market has been a critical influence on the growth of Ireland's exports. First, it is seen as a significant factor in increasing overall US FDI to Europe in the late 1980s which benefitted Ireland. Second, Ireland quadrupled its share of US FDI into Europe from the late 1980s to the early 1990s. The single market is likely to have influenced this by addressing forms of covert protectionism that had been of concern to policy makers in Ireland prior to the launch of the programme to complete the internal market. Third, the single market is likely to have contributed to Ireland's export growth by contributing to faster import growth in the EU than would be implied by the historical relationship between exports and GDP.

There was an expectation that the internal market would lead to higher productivity through the impact of increased competition on productive and allocative efficiency as well as being a stimulus to a higher level of innovation. Notwithstanding positive effects, the impact of the internal market at EU level has not been strong enough to significantly improve the EU's innovation and productivity performance. Conventional measures of productivity growth (GPD and GNP per worker) show that Ireland experienced an acceleration of productivity growth

from the early 1990s. However, difficulties with the measurement of productivity in Ireland mean that there is uncertainty on the extent to which there was faster productivity growth in the 1990s. Insofar as the single market contributed to a higher level of FDI, it would have contributed to higher productivity in Ireland.

Since the late 1980s Ireland has experienced a large increase in investment in R&D by the business sector with nominal expenditure increasing more than 12-fold in the period 1988-2008. The single market was probably a positive influence on this expansion. The large increase in cross-border M&A activity in Ireland was also probably influenced by the single market.

Ireland's exports of goods and services during the current crisis appear relatively resilient at an aggregate level. Goods exports were boosted by the continuing growth of exports of chemicals and pharmaceuticals but other goods exports fell substantially in 2009. The value of services exports was maintained in 2009, boosted by continuing expansion of business exports. The volatility of sterling against the euro has added to the problems of the current crisis and is an unsatisfactory dimension of the current internal market.

## 2.4 Internal Market: Network Sectors

### 2.4.1 Introduction

Typical network industries include telecommunications, post, electricity, gas and broadcasting; transport is also considered a network industry although it differs in some respects from the other networks. Network industries typically have a natural monopoly element in at least part of the business; for example the electricity distribution network. They were almost invariably state-owned monopolies in Europe up to the 1980s (Pelkmans, 2006). Universal service obligations—a requirement to provide a service to all residents of a country at the same price or an affordable price—are a significant characteristic of these industries.

Network industries get special treatment in the Treaty. They are referred to as 'undertaking entrusted with the operation of services of general economic interest' in Article 106 (2) of the TFEU. This article states that competition rules apply to these enterprises but only 'insofar as the application of such rules does not obstruct the performance in law or in fact, of the particular tasks assigned to them'. Until about two decades ago these industries had been treated as if they were exempt from competition but this has now changed. Complex issues arise with the application of competition in these industries, such as the terms of access to networks, the interaction of competitive and monopoly elements of the same business and arrangements for universal service obligations in the context of competition.

This section illustrates the approach adopted to liberalisation in two sectors: telecommunications and energy. In each case the key developments at EU level are described followed by an outline of developments in Ireland. The performance of the sectors in Ireland in the context of the changed environment is then discussed.

## 2.4.2 Telecommunications

### *Telecommunications in the EU*

The provision of telecommunications services in the EU up to the early 1980s was controlled by public monopolies. A complex process was initiated in 1983 that culminated in full liberalisation, subject to economic regulation, in 1998.

National regulatory authorities (NRAs) were established to regulate competition in this market. Significant revisions to the regulatory system were introduced from 2002. The revised system was based on a lighter approach to regulation, recognising the increasingly competitive nature of the industry. National regulators were required to undertake comprehensive market analysis and could only use regulatory interventions in situations where it was shown that the market was not competitive. The 2002 regulatory framework required member states to guarantee the independence of NRAs, in particular their independence from service providers. At the same time arrangements were introduced to improve the consistency of regulation of the telecommunications market across the EU. The 2002 framework introduced a requirement for NRAs to notify the Commission and other NRAs of their market analysis and proposed remedies where these could affect the internal market. National regulatory authorities are required to take account of the comments of the corresponding bodies in other member states. The 2002 framework gave the Commission the authority to veto the proposals of national regulatory authorities in regard to proposed market definitions and findings of significant market power but not in regard to proposed remedies. In addition a network of regulators was established, the European Regulators Group (ERG), for electronic communications networks and services. This group acts an interface between the national regulators and the European Commission.

A further review was launched in 2007, and at the end of 2009 agreement was reached at EU level on a new telecommunications reform package. These reforms are to be transposed into national legislation by June 2011. The reforms continue the increased emphasis on competition rather than economic regulation; it is proposed to remove the requirement for *ex-ante* regulation from major parts of the telecommunications sectors; in these markets, normal redress under competition law will become the norm. The reforms aim to strengthen the harmonised approach to telecommunications regulation across the EU. The ERG has been changed to a stronger European Telecoms Authority, with the title of Body of European Regulators for Electronic Communications (BEREC). This will continue to function as a network of regulators but is more formally part of the regulatory process. While the ERG operated only on consensus, the BEREC will take decisions on the basis of simple majority or two thirds majority of votes. The first meeting of the new BEREC took place in January 2010.

The Commission's powers under the procedure whereby national regulators inform the Commission of their proposals are to be strengthened. The new rules give the Commission enhanced power to oversee the remedies proposed by national regulators to address problems of significant market power. BEREC will have a prominent role in these procedures. Among other things, it will give opinions on the

Commission's analysis of remedies notified by NRAs. The Commission is required to take 'utmost account' of the opinion of BEREC while the NRAs are required to take utmost account of the positions of the Commission and of BEREC. If an NRA decides not to adopt the final recommendation of the Commission on a proposed remedy, it must provide a reasoned justification.

The reform package recognises that in rural parts of the EU, a substantial share of the population still lacks access to a broadband connection. The reform package provides two remedies for this: making radio spectrum effectively available for wireless broadband services in affected regions and allowing member states to expand universal service provisions to cover broadband; the possibility to apply universal service obligations in regard to broadband is potentially significant. Consumers are to be given a range of new rights including the right to change their fixed or mobile operator in one working day, while keeping their old number.

Citizens' rights regarding internet access are strengthened. Any national laws on internet access must respect the European Convention for the Protection of Human Rights and Fundamental Freedoms.<sup>7</sup>

#### *Telecommunications Liberalisation in Ireland*

The liberalisation of telecommunications in Ireland was largely driven by the EU-level developments. Ireland participated in the gradual liberalisation of telecommunications over the 1990s with full opening of the market in Ireland from 1 December 1998. In 1997 the Office of Director of Telecommunications (ODTR) was established to oversee the required liberalisation of the industry. In 2002 the ODTR was replaced by the Commission for Communications Regulation (ComReg) with a mandate to regulate all communications markets (including broadcasting and post).

Ireland invested heavily in telecommunications in the 1980s and this was important for Ireland's attractiveness for FDI. Telecom Éireann was the provider of almost all telecommunications services in Ireland up to the 1990s. A partial sale of the company to KPN/Telia was completed in 1996.

Telecom Éireann was launched as a public company quoted on the stock market in 1999 and the State sold its remaining majority share in the company. In advance of the floatation, the staff acquired a very substantial share (14.9 per cent) in the company through an Employee Share Ownership Trust (ESOT). The privatisation of Telecom was not a requirement of the new liberalised market. EU policy is neutral with regard to ownership; in some EU countries the previous national phone company was sold but in others the state retained whole or partial ownership. Telecomm Éireann had suffered from some inefficiencies, in particular overstaffing, and privatisation seemed to offer a way of addressing this.

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<sup>7</sup> This limits the 'three strikes' laws that a number of member states had adopted on illegal file sharing. Under these laws, consumers who engaged in illegal file sharing (for example of music) could be cut off from the internet after three offences. According to the EU Telecoms Commissioner, "Three strike laws' which could cut off internet access without a prior fair and impartial procedure or effective and timely judicial review, will certainly not become part of European law" (Europa Press Release, 5 November 2009).

The regulation of telecommunications in Ireland was criticised by Massey (2004). He cites several decisions of the regulator that in his view protected competitors at the expense of competition. For example, the regulator eased the price cap on Eircom in 2003 on the basis that other operators had requested this so that they could achieve the increasing returns expected by their financiers.

### *Telecommunications Performance in Ireland*

The telecommunications market in Ireland as elsewhere has changed radically in recent years. The movement to liberalisation was associated with a fall in prices. From the end of 1996 to the end of 2001 the CSO telephone price index for consumers fell by 24 per cent in nominal terms. From the end of 2001 to the end of 2008 the CSO index for telephone and communications services increased by 5 per cent in nominal terms, implying a fall in real terms. The real fall in prices that occurred cannot simply be attributed to liberalisation as technological change was also a major driving force.

A major concern with Ireland's telecommunications performance over the past decade is in regard to the availability, quality and cost of broadband. Investment in broadband in Ireland was slow to develop. Ireland's slow investment in broadband is related to Eircom's strategy and indirectly to the policy of privatisation as a way of implementing the new EU regime. Eircom reduced its capital expenditure from a peak of €600 million in 1999/2000 to just €200 million in the years 2001 to 2003 (Sweeney, 2004). This was a time when investment was rising sharply elsewhere and the Irish economy was among the fastest growing in the EU. The company has experienced six ownership phases since privatisation. Some of the owners have extracted considerable value from the company. It is estimated by Sweeney (2004) that during the Valentia phase of ownership from November 2001 to March 2004, the investors (including the ESOT) had a total gain from the company of €954 million while their initial investment was €676 million.

In recent years Ireland has experienced rapid catch up in terms of broadband connection but continues to lag the best performers. As of January 2010, Ireland had 22.2 subscribers per 100 population compared to the average EU (27) of 24.8. The highest level of connection was in the Netherlands and Denmark. These figures exclude mobile broadband. If mobile broadband connections are included, Ireland's coverage rises to 32.7 per 100 population; this is above the EU (27) average for combined connections of 30 (ComReg, 2010). Broadband coverage internationally is associated with the degree of urbanisation with the highest level of connections in the more urbanised countries. Finland however is a notable exception to this; it has a below average share of population in urban areas but well above average level of broadband connections.

A second area of concern in regard to broadband is the quality and cost of service available. The speed of broadband connections in Ireland has improved but is still a cause of concern. In January 2010, 9 per cent of broadband connections in Ireland were above 10 Megabit per second (Mbit/s) which was well below the euro area average of 20 per cent (National Competitiveness Council, 2010b).

The quality of telecommunications infrastructure in Ireland is of critical concern in terms of Ireland's attractiveness for high quality investment and for mobile knowledge workers. Looking ahead there is a vital need to address the provision of 'next generation networks'—these involve the replacement of copper-based telecom networks with fibre and old telecommunications exchanges with digital switches. A public consultation has been undertaken on next generation networks and a policy paper has been published by the Department of Communications, Energy and Natural Resources (2009). Forfas have expressed concern at the slow pace of development in this area:

Unless a way to stimulate additional private investment in next generation broadband networks is found, particularly in terms of access networks or the State makes the necessary investments itself or in partnership with the private sector, Ireland risks allowing a competitiveness threat for Irish firms to open up as significantly faster speeds become widespread in other countries (Forfas, 2010: 7).

It is vital that action is taken to avoid repeating the unsatisfactory experience of Ireland's initial investment in broadband.

### *Conclusion*

While telecommunications prices have fallen and services improved, Ireland has lagged considerably in the availability, quality and cost of broadband. While there has been a considerable improvement in recent years, Ireland continues to lag the best performers on broadband. It is vital for Ireland's competitiveness to learn from experience and to more effectively address the challenge of next generation networks.

The effective application of the EU liberalisation strategy in a small country had demanding policy requirements. Ireland's relative underperformance in telecommunications compared to other small EU countries suggests that domestic policy could have achieved better outcomes within the EU-defined telecommunications policy environment.

### **2.4.3 Energy**

#### *EU Developments*

Liberalisation of the EU electricity market was initiated by directives on gas and electricity in the second half of the 1990s (Directive 96/92/EC on electricity and Directive 98/30 IEC on gas). Both of these directives are regarded as weak. They were followed by two stronger directives in 2003: Directive 2003/54/EC concerning common rules for the internal electricity market and Directive 2003/55/EC for the internal gas market. These two directives set deadlines for the full opening of the market: 1 July 2004 for all business customers and 1 July 2007 for households.

Concerns that the internal energy market was not functioning effectively led the European Commission to undertake a formal investigation. The final report from this investigation was published in 2007. This report found significant problems with the functioning of competition in the energy sector. The investigation found high levels of concentration in wholesale gas and electricity markets.

It found that the concentration in electricity generation was such that the main generators had the ability to withdraw capacity to raise prices. Notwithstanding the regulations concerning unbundling, the inquiry found that new entrants often lacked effective access to networks. Another serious concern was inadequate investment in infrastructure (European Commission, 2007a).

The Commission has responded in two ways to the findings of this inquiry. First, it is using all of its competition enforcement tools to pursue individual cases that could make the market more competitive. Second, it made proposals for a third legislative package on the internal market.

This legislative package has now culminated in two new directives on electricity (2009/72/EC) and natural gas (2009/73/EC). These directives have the goal of developing true internal markets in electricity and natural gas. The new directives have stronger requirements to secure effective unbundling of transmission systems and networks from other activities. The requirements do not go as far as requiring full ownership unbundling; this had been sought by the European Commission but was strongly resisted by some member states.

A series of networks have been established to facilitate discussion among stakeholders in the electricity and gas markets and to work towards the creation of internal energy markets. The Electricity Regulatory Forum or Florence Forum was established in 1998 to discuss the creation of an internal electricity market. It has a broad membership including NRAs, member state governments, the European Commission, transmission system operators, electricity traders, and consumers. A similar forum exists for the gas sector, known as the Madrid Forum. In addition there are smaller networks of regulators. The Council of European Energy Regulators (CEER) and the European Regulators' Group for Electricity and Gas (ERGEG) were established to promote co-operation among national energy regulators and to work towards the creation of an internal market for electricity and gas. The CEER is a voluntary body while the ERGEG was established by the European Commission and is an official advisory body to the Commission.

While the European Commission considers that the ERGEG has made a very positive contribution to the completion of the internal market, it has been concerned that the co-operation supported by ERGEG would not be sufficient to complete the internal energy market: 'It has led to a number of non-binding codes and efforts to reach agreement on common approaches through gradual convergence but has not led to real decisions on the issues that now need to be taken' (European Commission, 2007b: 1). The Commission notes that most of the relevant technical standards differ across member states making cross-border trade difficult and often impossible.

The third legislative package includes new measures to secure improved co-operation among national regulators. It has been decided to establish a new Agency for the Co-operation of Energy Regulators (ACER). The new agency will have the ability to make binding decisions on delegated, technical issues related to the internal energy market, including the terms and conditions of access to cross-border energy infrastructure. It will monitor and report to the Commission on co-operation among transmission system operators.

### *Impact of Liberalisation in the Electricity Sector*

Electricity is a natural monopoly a feature shared with a number of other network industries. However, the electricity industry has a number of other characteristics. Demand for electricity must be met instantaneously as there is very limited ability to store it. Demand is characterised by large fluctuations so there must be a sufficient margin of capacity to meet peak demand. Investment involves large sunk costs. The characteristics of the industry interact and are complex (Helm, 2003).

There are four components in the electricity industry: generation, transmission distribution and supply. Transmission is the transmission of power on high voltage lines, while distribution refers to the distribution of power to homes and businesses. Both transmission and distribution are monopoly businesses. Supply is the sale of electricity to customers. Both generation and supply can, under certain conditions, be competitive businesses in liberalised markets.

The liberalization of electricity has proved more complex and contentious than other networks. While reforms are generally accepted in most of the network sectors, the electricity sector seems to be different: 'In many countries electricity sector reforms are incomplete, either moving forward slowly with considerable resistance or moving backwards' (Joskow, 2008: 10)

The perspective of Helm (2009) is that the EU internal energy market for both electricity and gas is a good idea but there have been key weaknesses in its implementation. First, the internal market lacks physical interconnections, the creation of European electricity and gas grids. 'The Commission's emphasis has been on creating a market *before* the physical infrastructure is in place – to have competition without connectivity' (Helm, 2009: 145). Second, the competition directorate has facilitated a wave of energy mergers so that the energy market is now dominated by a very small number of players. Both of these features have limited the extent to which liberalisation has increased competition.

Helm (2003) argued that 'the markets are being *liberalized*—as they are in oil—but *de facto* market power is replacing *de jure franchises*' (Helm, 2003: 5). Whether this model is better than the alternatives is, in the view of Helm, increasingly an academic question: 'The mergers have taken place, the market is consolidated around just three large companies and there is no realistic prospect of break-up' (Helm, 2003:5). It is in this context that the development of the Irish market takes place.

Within Europe, the Britain and the Nordic countries are regarded as the most successful cases of liberalisation of electricity markets. It is argued by Helm (2009) that the model of liberalisation adopted in Britain worked well in the context of excess supply in the 1980s and 1990s:

The task in hand was to sweat the assets not to invest. The new electricity model was well designed to do this, and the excess supply conditions in the face of upstream and downstream competition drove prices down to well below the European averages. For the network companies, RPI-X regulation drove prices down, too, though not before major financial engineering and CAPEX games had produced extraordinary high returns for what were relatively unpromising and low-risk businesses (Helm, 2009: 313).

However, Helm (2009) argues that this model is less well suited to meeting current challenges:

Eventually the assets would need to be replaced, and the new climate agenda would mandate heavy investment. As the replacement cycle bites in the next decade, and given the scale of the expenditure on wind, there are considerable doubts as to whether the privatized industry structure, with liberalization and competition is up to the task (Helm, 2009: 313-314).

The European Commission perspective is that the liberalisation of EU energy markets has contributed to the rejuvenation of the energy sector but is concerned that the full benefits of liberalisation have not been realised (European Commission 2009b). Its third legislative package seeks to foster stronger competition and it is also seeking to promote investment in interconnection of both electricity and gas markets

### *Liberalisation of the Irish Energy Market*

It was noted above that the electricity industry has a number of distinctive characteristics. In addition to these the liberalisation of the Irish electricity market has taken place in the context of a number of additional features that apply to the electricity industry in a small, geographically isolated country. First, the margin of capacity needed to meet peak demand tends to be larger in small countries; this arises because the insurance offered by the diversification of plants is less in small countries. Second, the number of viable competitors is smaller. Third, the impact of any new plant is proportionately greater. In a small market a single new plant affects the economic value of all plants. If the market is open to competition, any new entrant has to consider that the value of any investment undertaken could be affected by a subsequent entrant (Helm, 2003).

The electricity and gas markets have been liberalised on a phased basis, faster than required by EU Directives (NESC, 2003). The electricity retail market was liberalised from February 2005 and all customers can now choose their electricity supplier. ESB retail prices are regulated by the Commission for Energy Regulation.

Since November 2007 the wholesale market for electricity in Ireland operates on an integrated, all-island basis. The market is structured around what is known as a 'pool': all electricity generated on the island or imported must be offered to this central pool while all wholesale electricity for consumption or export must be purchased from this pool. There are also additional payments to generators for having capacity available. The ESB has agreed to reduce its share of the generation market to 40 per cent by 2010 on an island of Ireland basis.

There has been separation or unbundling of the range of activities that had been undertaken by the ESB, as required by EU legislation. The transmission system is now operated by a separate company Eirgrid, the independent transmission system operator. The transmission assets are still owned by the ESB but the Government has decided to transfer the assets to Eirgrid. The local distribution network is managed by an ESB subsidiary, ESB Networks. Both the transmission and distribution systems are monopoly businesses. The ESB now has further separate units engaged in generation and supply (sales to customers) on a competitive basis.

Since 2004 the gas market was open to competition for larger industrial and commercial customers. The whole retail market has been open since July 2007. The gas network is still a monopoly business run by Bord Gáis Éireann. Large customers are allowed to connect to the network and purchase gas on the international markets directly.

### *Performance of Irish Energy Markets*

The period since liberalisation of Irish energy markets has seen large increases in both electricity and gas prices followed by some reductions since 2008. Irish electricity prices for industrial consumers in 2009 were the fifth highest in the euro area; Irish prices were 5 per cent above the euro area average. The margin between Irish and EU prices for industrial customers has fallen considerably (National Competitiveness Council, 2010b).

A study by Deloitte and Touche (2005) identified that the single biggest influence on Ireland's relatively high electricity prices was the fuel mix; i.e., Ireland's high reliance on oil and gas for electricity generation. It was estimated by Deloitte and Touche that this factor accounted for 73 per cent of the difference between Irish and EU (15) electricity prices in 2005. The report identified the following factors as explanations for the remaining 27 per cent difference: higher labour costs, lower productivity and diseconomies of scale. It was estimated that Irish labour costs in generation were 20 to 30 per cent above the EU average.

While there is now competition in the generation market, Diffney *et al.* (2009) point out that 'much of the ESB's business in building and maintaining the transmission and distribution systems has only been subjected to limited competitive pressures' (Diffney *et al.*, 2009: 481). They suggest that there is scope to reduce costs by more contracting out of work in areas such as building and maintaining the distribution and transmission systems. As of the first quarter of 2010, hourly earnings in electricity, gas and water in Ireland were 41 per cent higher than earnings in manufacturing.

The success or otherwise of liberalisation cannot be judged simply on the basis of price trends. Prior to the establishment of the regulator prices were under political control and may have been set at too level a level having regard to the need for investment in generation and networks (Thompson, 2007). By contrast, Thompson notes that the period since liberalisation has been characterised by a high level of investment in the both networks and generation in Ireland.

Interconnection with Britain will help reduce the problems of a small energy market and is of particular value from the perspective of renewables. Research by Diffney *et al.* (2009) shows that for Ireland a high penetration of wind generated electricity is only economically sound with increased interconnection to Britain. The period of liberalisation has been able to accommodate a substantial increase in renewable generation. In 2009, 14 per cent of Ireland's electricity consumption was provided by renewables and Ireland is on target to meet the Government target of 15 per cent of renewable energy from renewables in 2010.

In addition there have been improvements in productivity. The ESB has reduced costs and increased productivity through a series of programmes. Another significant development has been the extension of the gas network to many parts of the country for the first time.

In EU countries generally there is a need for huge investment to replace ageing electricity plant and to meet the EU targets on carbon emissions and renewables. This contrasts with the situation in the 1980s and 1990s when there was excess supply and will put upward pressure on EU costs and electricity prices. The need for investment materialised earlier in Ireland as a result of strong demand growth in Ireland in the 1990s.

The slow development of competition in the energy sector (and other networks) is criticised by Massey (2004). Helm (2003) however has argued that the small size of the Irish market limits the scope for effective competition while the need for a high level of investment also implies a strong case for retaining elements of vertical integration and taking a gradualist approach to change.

### *Energy Challenges and the Single Market*

Both the EU and Ireland share the same energy policy objectives: competitiveness, sustainability and security of supply. The challenge of reducing greenhouse gas emissions to address climate change has major implications for how energy is produced and consumed. The European Commission argues that an effective single energy market is essential to the achievement of all three objectives of energy supply (European Commission, 2007c). It can keep costs at the lowest level consistent with other objectives of energy supply. The emissions trading system is planned to play a major role in reducing the energy sector's emissions; the effective operation of emissions trading depends on a working single market. The single market can also enhance security of supply.

The European Commission is encouraging investment in Trans European Networks for gas and electricity with a view to creating an effective internal energy market and supporting security of supply. Limited financial assistance, around €25 million a year, is provided by the European Commission to encourage this; the funding is mostly allocated to feasibility studies. However, during the current economic crisis, additional funding is being provided for energy infrastructure under the European Energy Programme for Recovery (EER). In March 2010, the European Commission approved funding of €2.3 billion for electricity and gas interconnection projects. It is envisaged that this will leverage total investment of €22 billion in energy infrastructure. This follows approval of investment of almost €1.5 billion in 2009 for offshore wind and carbon capture and storage. Ireland's electricity interconnector with Britain is being constructed with credit from the European Investment Bank.

One step towards further development of an interconnected market was taken in December 2009 when nine member states, including Ireland, signed a political declaration on the North Seas Countries Offshore Grid Initiative.<sup>8</sup> This initiative

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<sup>8</sup> Norway subsequently signed the agreement in 2010.

will examine the construction of an offshore grid in the North Sea and the Irish Sea. This will build on, among other things, the work of the Irish Scottish Links on Energy Study (ISLES) project which is to examine the feasibility of the construction of an offshore electricity transmission network linking potential offshore sites for the generation of renewable energy in the coastal waters of Ireland, Northern Ireland and Western Scotland. The North Seas project could enable Irish wind farms to connect to continental Europe and is potentially a step towards a European supergrid that would link offshore energy plants in Baltic Sea, the North Sea and the Atlantic.

### *Conclusion*

The EU has had a major impact on the Irish energy sector. The liberalisation of the electricity sector is complex. Liberalisation has not reduced prices but the period since liberalisation has seen major investment in electricity and gas networks, and conventional and renewable electricity generation. Both Ireland and the EU face major challenges to ensure sustainable and secure energy supplies. There are limits on the ability of increased competition in itself to address the major challenges of Irish energy policy. There are ambitious EU and national targets for the development of renewable energy. The expansion of renewable energy will enhance sustainability and security of supply. Electricity interconnection with the UK is important for security of supply and the ability to expand wind generation.

## 2.5 Conclusions

The Irish economy has experienced periods of both poor and strong performance since joining the EU. There was a marked improvement in performance since 1987 and exceptional performance from the mid-1990s followed by the severe contraction after 2007. The exceptional diversity in Ireland's economic performance inside the EU, i.e., the swing from weak to strong performance and now its strong contraction, underlines two central lessons. The first is that domestic economic policies and institutions retain their critical capacity to influence national economic performance despite the advance of the single market, monetary union, and the growing reach and complexity of EU economic governance. The second is that, whether relatively weak (as prior to 1987 and after 2007 today) or relatively strong (as between 1987 and 2007), the Irish economy needs the EU; without it, strengths do not emerge as strengths to at all the same extent while episodes of weakness are much more damaging.

The first lesson is illustrated most forcibly by the circumstances in which Ireland's economic performance swung from weak before 1987 to strong thereafter. The first two decades of EU membership proved that membership could not compensate for poor domestic policy while the following 15 years proved that membership increased the rewards associated with good domestic policy. The fiscal discipline that was embraced in the Programme for National Recovery, the wage moderation in exchange for reductions in income tax, the priority given to retaining low corporation tax and to ensuring work paid for those on low earnings (introducing a national minimum wage, taking earnings at its level out of the income tax net),

etc. are examples of domestic policies that effectively leveraged major benefits to the Irish economy from the single market and monetary union.

Ireland's experience of the liberalisation of network industries also points to the continuing significance of domestic policy choices in a phase of major restructuring, driven by EU directives. For example, the suboptimum performance in terms of telecommunications infrastructure along with some recent improvement was significantly influenced by how the EU liberalisation approach was implemented. There are particular complexities in the energy sector in a small economy that need to be addressed.

The second key lesson is that, 'in health and in sickness, for richer and for poorer', the Irish economy is better off within the single market and monetary union, and being part of the Lisbon Strategy, with their associated systems of EU economic governance. In the swing from weak to strong performance, it is true that major factors additional to EU membership came into play, principally the surge in US FDI as the US economy continued its longest post war expansion during the 1990s and the happy coincidence between the unfolding ICT revolution and having an English-speaking, well-educated and young workforce. However, Ireland's niche inside the single market magnified the ability of domestic policy to lever these non-EU developments to national advantage.

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