PA Consulting Group

Evaluating the value of the economic relationship between the United Kingdom and Ireland: Volume II

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PA Head Office:
PA Consulting Group
123 Buckingham Palace Road
London SW1W 9SR
Tel: +44 20 730 9000
www.paconsulting.com

PA Ireland
2nd Floor, Embassy House Herbert Park Lane
Ballsbridge, Dublin

PA Northern Ireland
1st Floor, Potters Quay 5 Ravenhill Road
Belfast BT68DN

Cambridge Econometrics
Reuben House
Covent Garden
Cambridge
CB1 2HT

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A shared economic history, current challenges and future opportunities: Volume II

This is Volume II of the Final Report 'Evaluating the value of the economic relationship between the United Kingdom and Ireland'. It sets out analysis of the:

- Macro-economic context for collaboration between UK and Ireland
- Micro-economic context for collaboration in the six sectors identified in the Joint Statement
- Results of a wider literature review

It complements Volume I of the Final Report which presents findings drawing on this analysis.

Generally, data in this report is drawn from a limited number of consistent, official sources, so as to enable read-across between the two economies where possible. These sources include Eurostat, CSO (Ireland) and ONS (UK). This, occasionally, leads to the use of data sets which are less recent than alternative sources. In all cases we use the most recent available historical data. In some cases (where we want to directly compare UK and Ireland) we are limited to whichever data source has information for both countries on a consistent basis (for example the long term trends data on GVA and employment, which comes from the EU KLEMS database, for which the last year of consistent historical data is 2007).

Due to the manner in which the 'deep dives' into the topics have been undertaken, the most relevant statistics have been sourced in each area, albeit with a 'jagged edge' to the historical data. An alternative approach would have been to have limited data to a small number of 'headline' indicators for each topic. However, this approach would severely limit the narrative that could be derived from the analysis. Also, it was not within scope to produce a forecasting model. Where forecasts have been used these are generally from consistent, official sources.

Contents

1 Macro-economic analysis

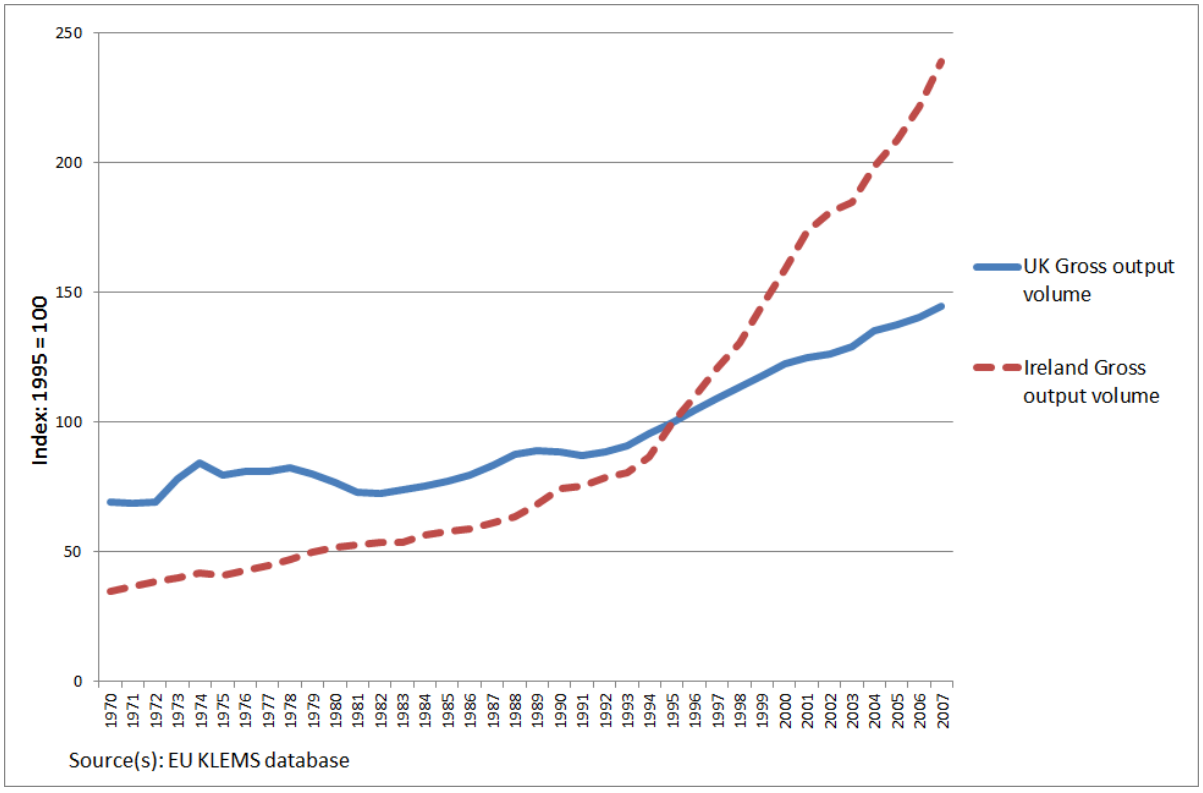
Below we present an initial macro-economic analysis. This sets out emerging findings on:

- Long-term trends
- Recent developments
- Future prospects
- Drivers and constraints.

1.1 Long-term trends

In the period since 1970, output has been growing more rapidly in Ireland than in the UK[1] (see Figure 1: Gross Output Volumes). However, changes in compensation per hour worked (taken as a proxy for worker productivity) have changed similarly in the UK and Ireland over the period, suggesting that productivity has not been the driver of the rapid increases in Irish output.

Figure 1: Gross Output Volumes (for more recent data see section 1.2 Recent Developments)



While historically changes in total employment in the UK have largely followed the economic cycle, not withstanding the resiliance of the UK labour market since the 2008 economic crisis (see Figure 2: UK Employment), Ireland experienced a sustained increase in employment in the period from the early 1990s to the second half of the 2000s (see Figure 3: Ireland Employment). While agriculture and manufacturing continued to decline over this period, strong growth across other sectors, particularly construction, wholesale and retail trade and finance and business services, resulted in an extended

[1] Data from: EU Klems NACE 1.1 Database

period of expansion of the labour market, from employment of just over 1.2m in 1994 to just under 2.1m in 2007.

Employment in the UK also increased over this period, from 25.7m to 29.9m, driven by increases in financial and business services, at a time when manufacturing employment was declining rapidly.

Figure 2: UK Employment

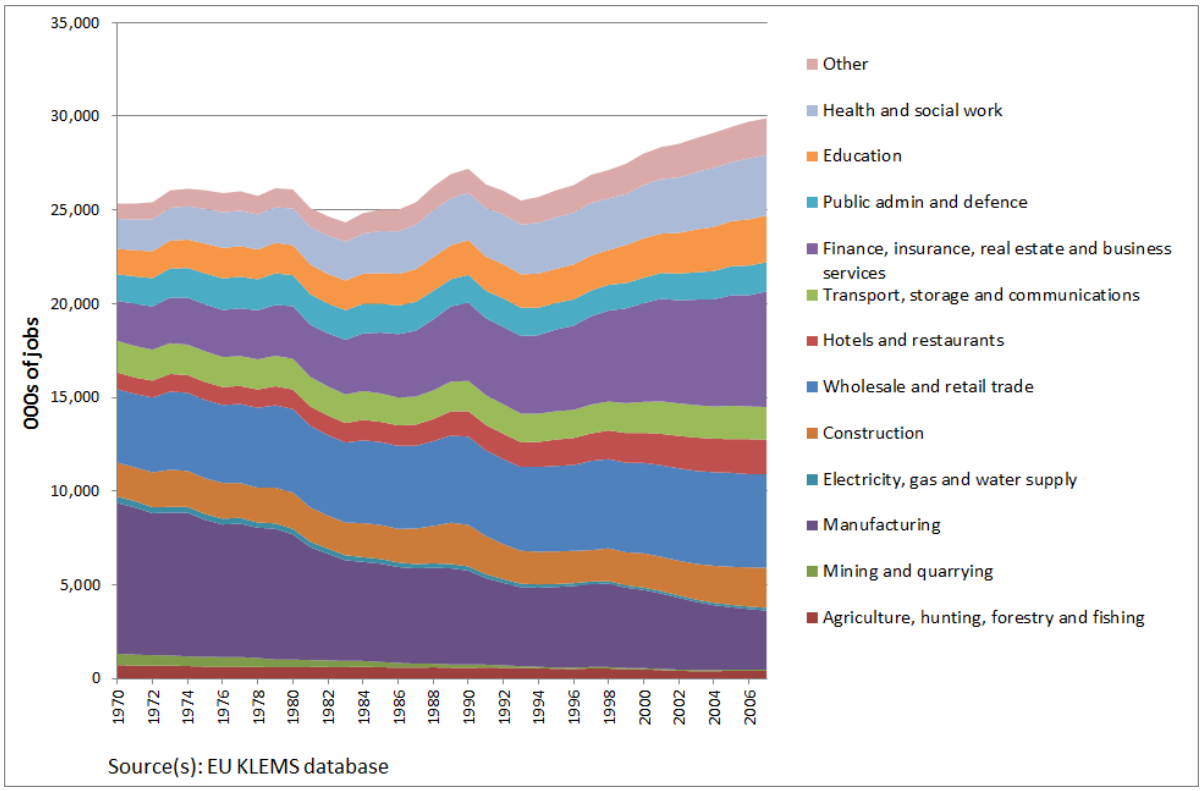
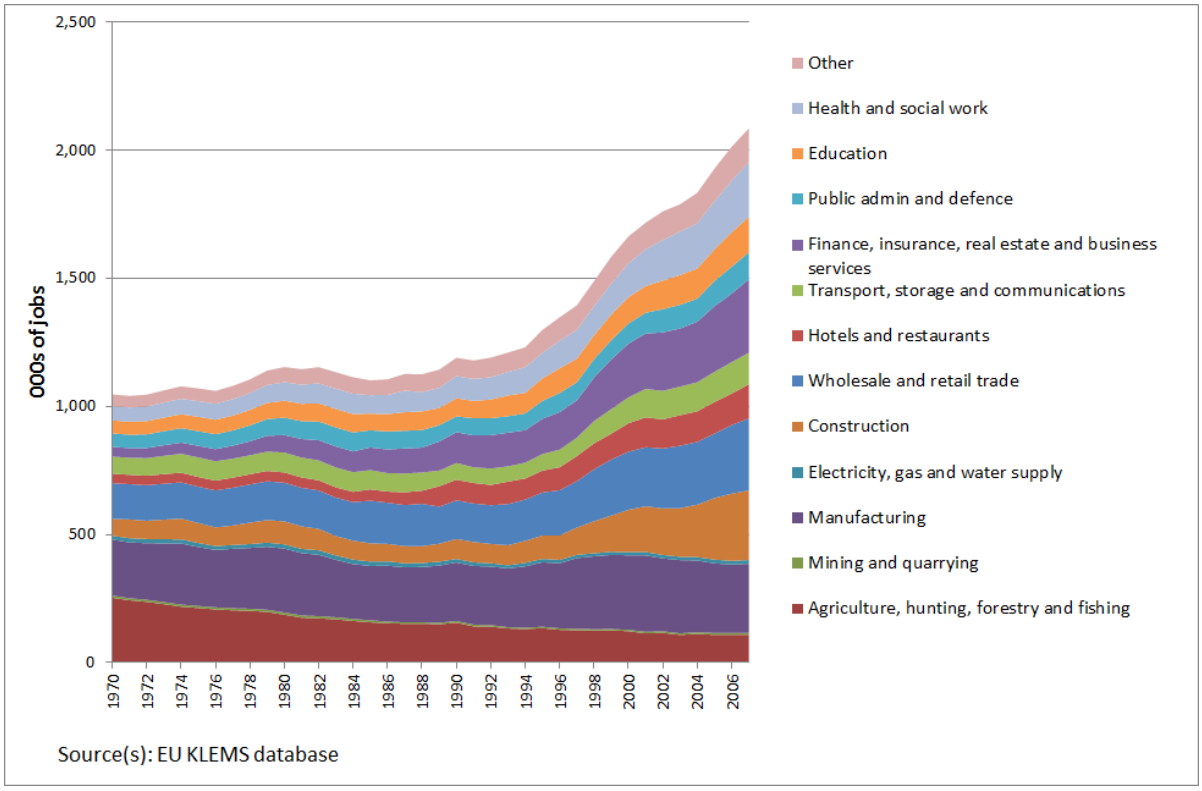


Figure 3: Ireland Employment



1.2 Recent developments

In this section is set out analysis of:

- Wider context
- Output and employment
- Trade and exchange rates
- Labour market
- Knowledge economy
- Foreign Direct Investment

Where appropriate, areas for collaboration arising from this analysis are highlighted.

1.2.1 Wider context

Many countries across the globe have been experiencing below-trend economic growth since the financial crisis (often judged to have started in earnest on the bankruptcy of Lehman Brothers in September 2008). The sudden retrenchment of the banking sector, and the subsequent downturn in economic activity as the supply of credit fell, exposed and exacerbated the highly-leveraged position of many national governments (particularly in the Eurozone).

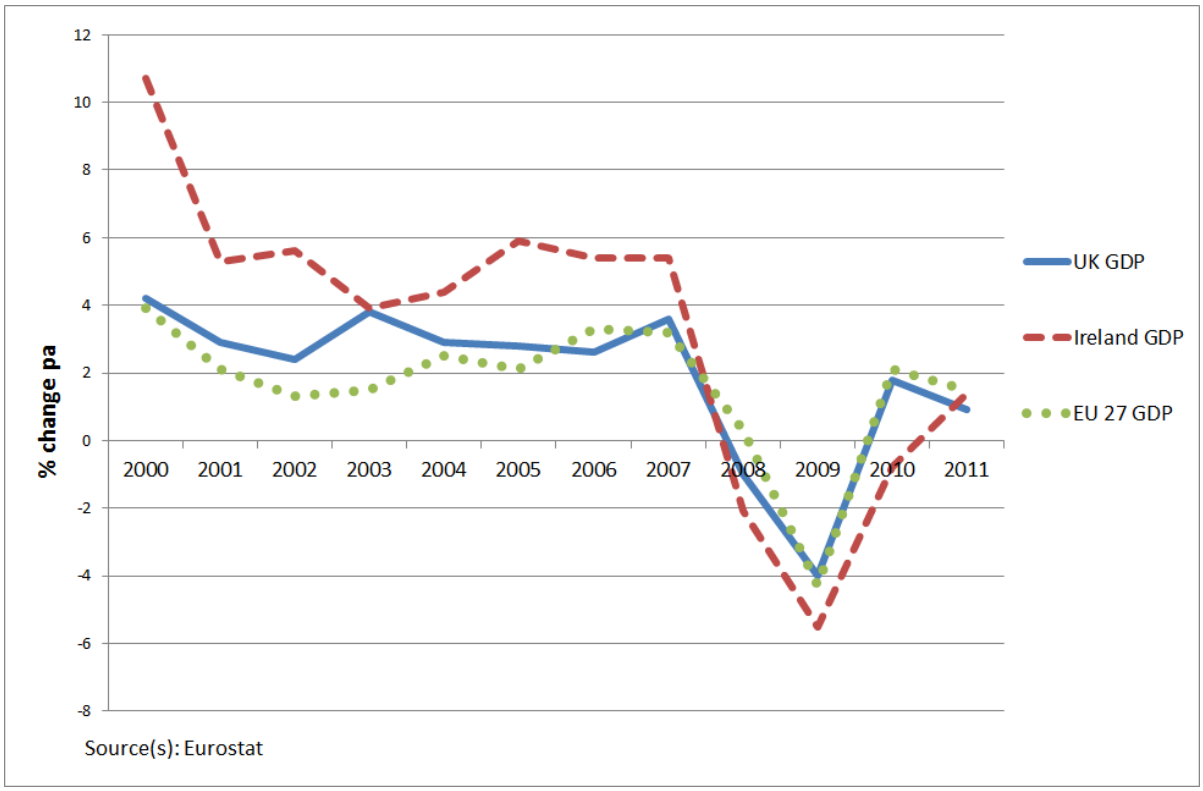
Ireland has been particularly severely affected by the financial crisis, as it coincided with a collapse in property prices in Ireland. The resultant domestic banking crisis resulted in two major banks in the country being nationalised (Anglo Irish Bank and Irish Nationwide initially with EBS and Allied Irish Bank being nationalised later in the crisis) and, with resultant liabilities increasing, in 2010 the Irish government had to seek a 'bailout' from EU and IMF, on condition of harsh austerity measures being introduced. The net effect of these crises was a sharp recession over 2008-10, as the relatively large construction sector shrank rapidly and both public and private sector investment contracted sharply.

While the UK, outside of the Eurozone, has been able to use monetary policy to attempt to lessen the impact of the recession (through keeping interest rates at a historic low of ½% since mid-2009 and rounds of Quantitative Easing), the Conservative-Liberal Coalition government, elected in May 2010, has put in place austerity measures to uphold the country's credit rating.

1.2.2 Output and employment

GDP in Ireland fell each year between 2008 and 2010 (by 2.1%, 5.5% and 0.8% respectively[2]), a more substantial cumulative loss than that experienced in the UK, where GDP fell by 1% in 2008 and 4% in 2009 before growing in 2010 (see Figure 4: Change in GDP).

Figure 4: Change in GDP



In the UK, productivity has fallen, both in absolute terms and relative to the EU27, since the onset of recession, unlike previous recessions, with total employment rising more rapidly than output (which has, since emerging from recession, been subdued). However in Ireland, while output continued to fall through 2009 and 2010 worker productivity increased (both relatively and absolutely). Gross National Product[3] (which measures the volume of goods/services produced, removing financial flows) per employee was broadly constant over this period, suggesting that it was profits of Irish-based firms that fell, rather than damage to the real economy. However, the primary driver of the productivity growth was a rapid deterioration in the labour market.

The relative severity of the recession in the two countries was reflected in the labour market data; while the employment rate in the UK had dropped by around 2½ percentage points from its peak in

[2] Data from: Eurostat - Annual National Accounts

[3] Data from: CSO - National Accounts

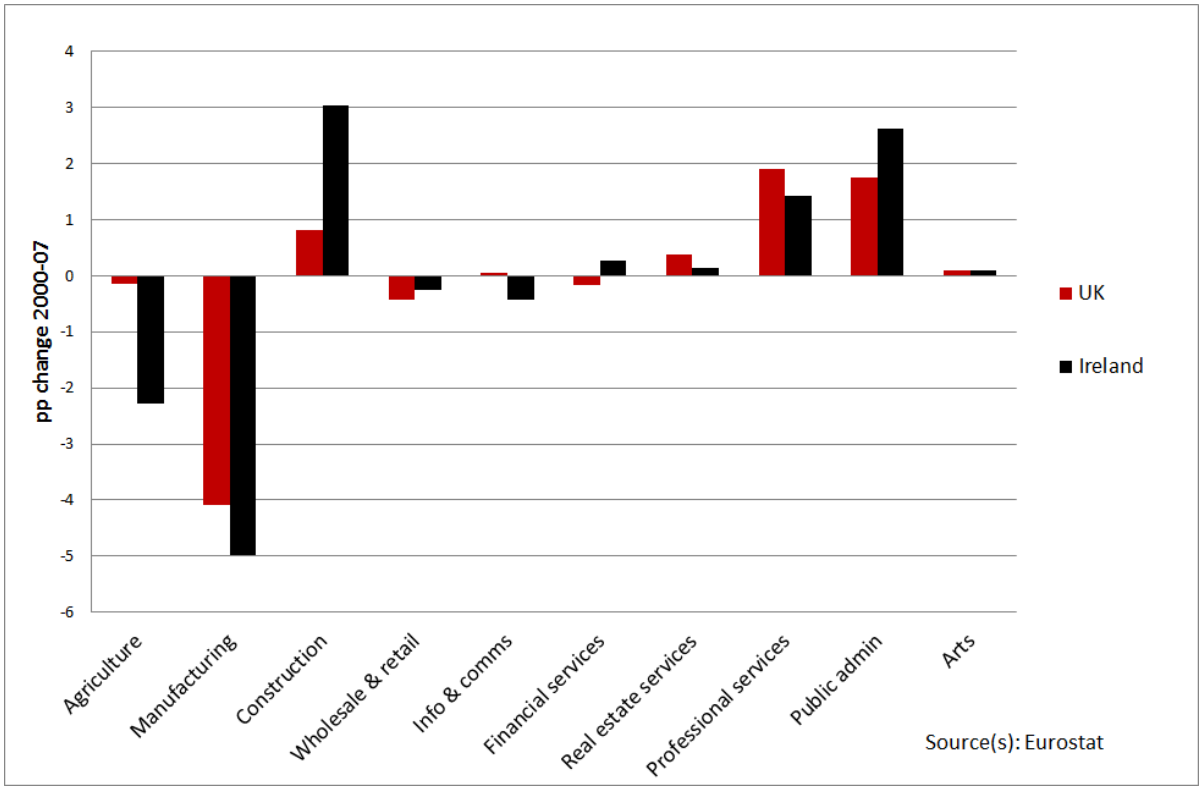
2008[4], in Ireland the equivalent drop was of almost 10 percentage points (see Figure 5: Employment Rate).

Figure 5: Employment Rate

Employment trends both pre- and post-recession have been broadly similar in the UK and Ireland. Over 2000-07, manufacturing's share of total employment fell significantly, while the shares for professional services and public administration, health & defence increased (see Figure 6: Change in Employment Shares 2000-07) - the only significant differences between the two countries was in agriculture, where Ireland's share of total employment fell rapidly and the UK's remained static (it accounts for around 0.5% of total UK employment; given this low level of employment, and the relative inelasticity scope for further decline was limited), and construction, with Ireland's construction sector growing (relative to total employment) more rapidly than in the UK; this can be largely attributed to the property bubble that was developing, particularly in the housing sector. Subsequent data shows a significant decline in employment in the construction sector in Ireland, to well below 2000 levels of employment.

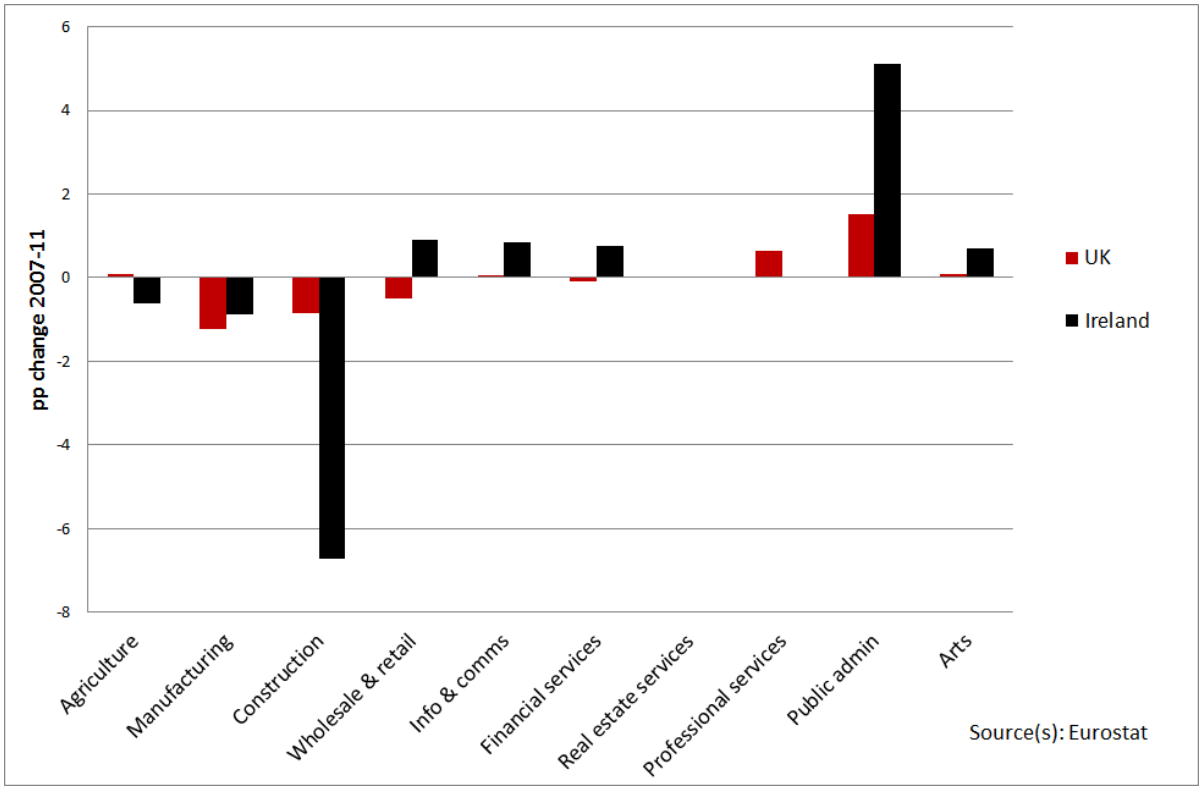
[4] Data from: Eurostat - Annual National Accounts

Figure 6: Change in Employment Shares 2000-07



During and after the recession, these differences have been exacerbated. In Ireland, the share of total employment accounted for by construction shrank (by significantly more than it had risen in the period to 2007), and it is the sheer scale of this collapse that results in the modest increase in shares of total employment for many of the service sectors (see: Figure 7: Change in Employment Shares 2007-11). Public administration, defence & health and information & communications were the only sectors in which absolute employment increased over 2007-11.

Figure 7: Change in Employment Shares 2007-11



Areas for collaboration

This analysis clearly highlights that while both the UK and Ireland were exposed to the impacts of the recession, their presence in some different sectors and different stages of the supply chain resulted in differing impacts on the macro-economy. Further development of the close economic ties between the two countries could help to mitigate the risks posed by future economic shocks, while also insulating a larger proportion of economic demand.

1.2.3 Trade and exchange rates

The UK and Ireland engage in significant levels of trade, both with one another and with third party countries. The UK is responsible for just under 1% of total global exports ($39.5bn in 2011), while Ireland produces around 0.25% ($10.47bn)[5]. In value-added terms, the UK was the origin of 4.5% of total exported value added in 2009, compared to 1.15% from Ireland[6].

Table 1.1 OECD Trade in Value Added, 2009

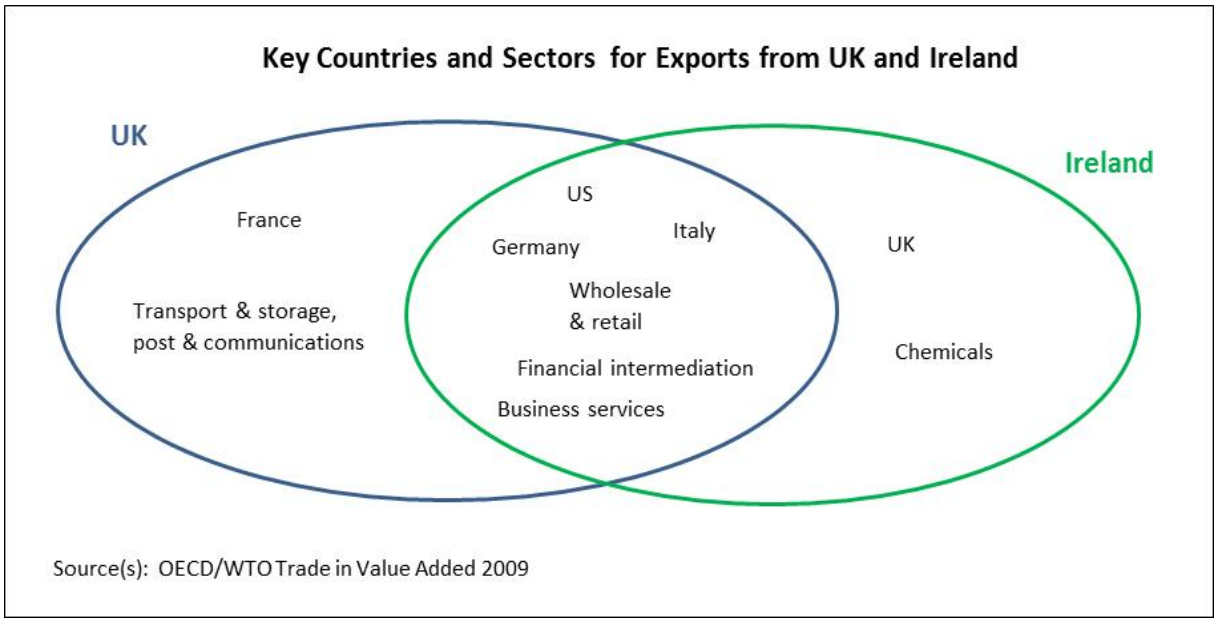
Exporting - Importing country	UK (US dollars m)	Ireland (US dollars m)	World (US dollars m)
UK	-	15,156.7	453,272.9
Ireland	24,262.3	-	116,139.0
World	48,8505.8	80,914.9	1,681,667.7

[5] OECD International trade, 2011

[6] OECD/WTO Trade in Value Added Data, 2012

Bilateral trade in value added between the two countries totals almost $40bn in 2009 (see Table 1.1 OECD Trade in Value Added, 2009). The UK and Ireland share a common strong trading relationship with the US, along with significant (albeit much smaller) trade volumes with Germany and Italy. Primary export markets for both countries are in financial and professional services, although Ireland has also developed a large amount of chemicals (pharmaceutical) exports, and the UK exports significant value added in transport & storage (see Figure 8: Key Countries and Sectors for Exports from UK and Ireland).

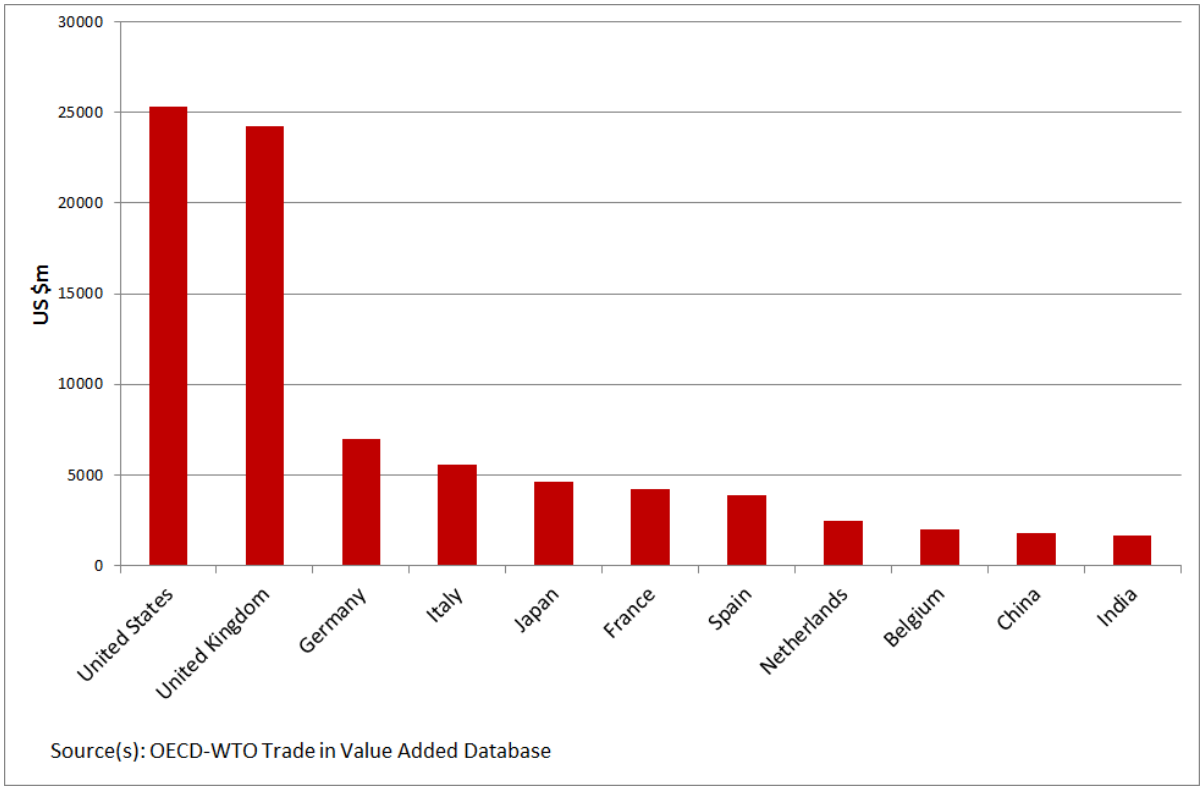
Figure 8: Key Countries and Sectors for Exports from UK and Ireland



Irish value-added[7] features most prominently in foreign final demand of the US and UK, highlighting its strong trade links with these countries and the prominent role it plays in supplying consumers in these markets (see Figure 9: Ireland Value Added Embodied in Foreign Final Demand, 2009). Ireland's presence in these markets dwarfs all other export markets, although Ireland's exports to Germany and Italy are the most significant amongst its Eurozone partners, while the fifth-largest export destination for Irish value added was Japan, significantly above its gross output ranking.

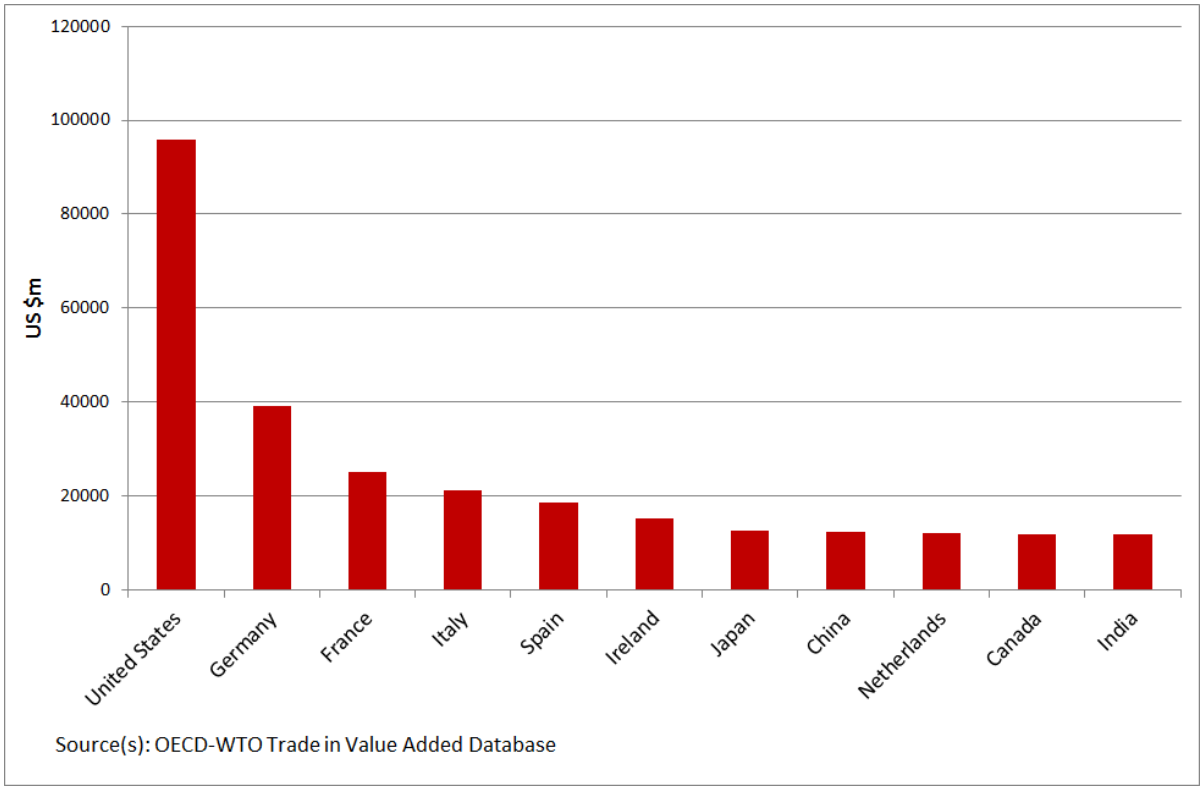
[7] Data from: OECD -WTO Trade in Value Added database

Figure 9: Ireland Value Added Embodied in Foreign Final Demand, 2009



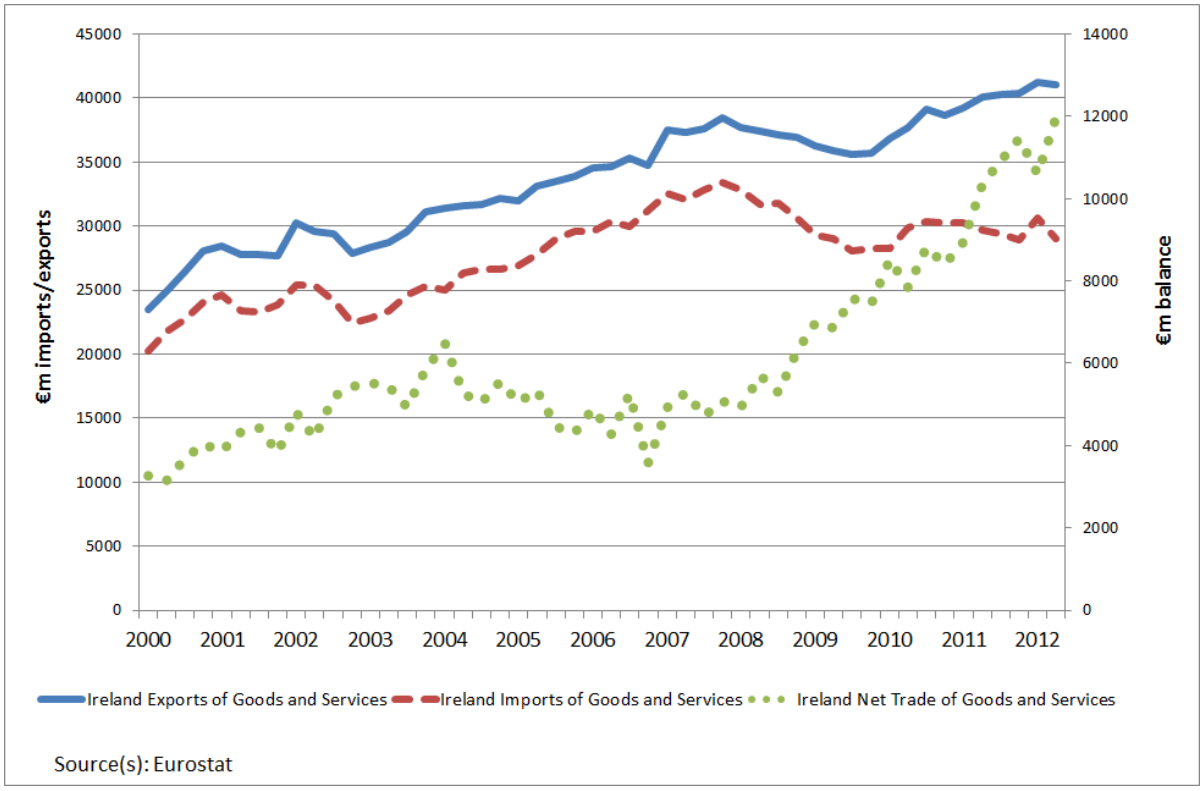
The UK's primary export market in value-added terms is still the US; indeed the US share of total UK exported value added is higher than its share of gross trade (see Figure 10: UK Value Added Embodied in Foreign Final Demand, 2009). The UK runs smaller trade deficits with many countries in value added terms as compared to gross trade, including Ireland, China and France. However, the size of the deficit it runs with Germany is larger in value-added terms, while the size of the UK's surplus with the USA is reduced (as value-added imported from the US is also larger).

Figure 10: UK Value Added Embodied in Foreign Final Demand, 2009



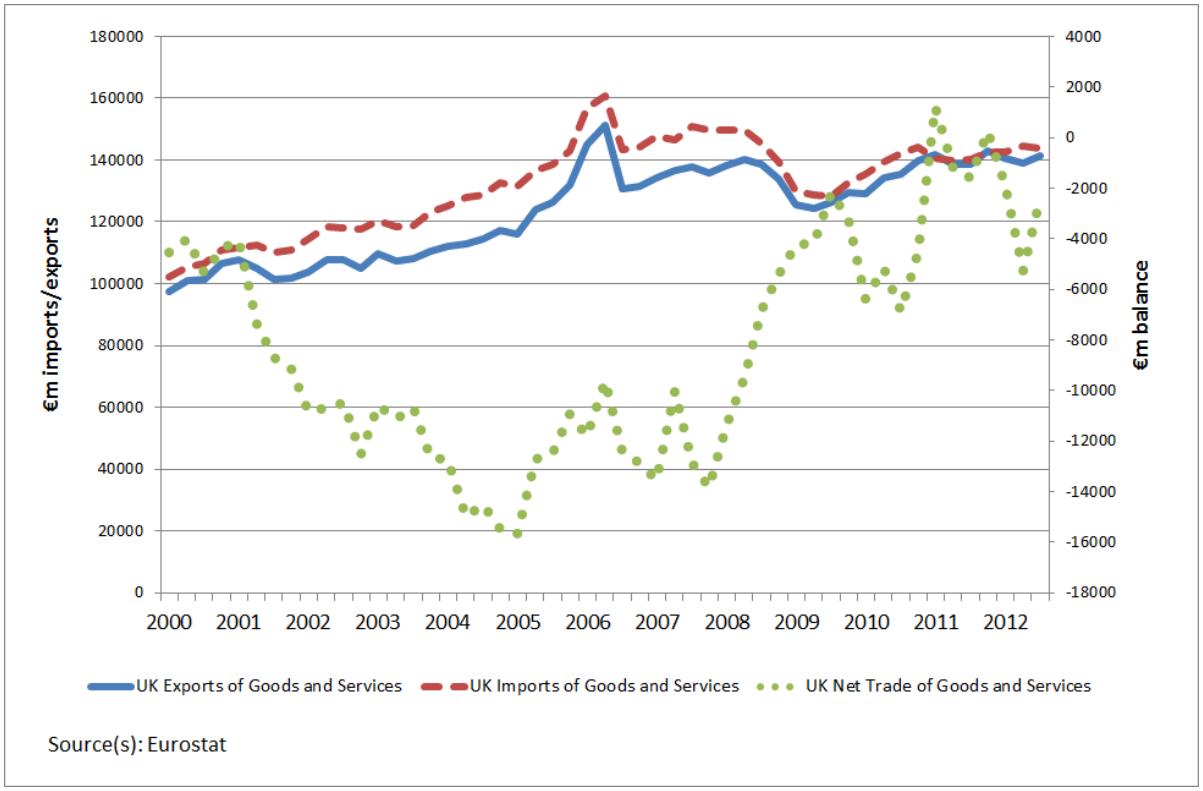
The financial crisis and subsequent downturn had significant impacts globally, depressing domestic demand and reducing trade flows. In this context, the steady improvement seen in Ireland's total net trade position since the second half of 2007 is worthy of note (see Figure 11: Ireland Quarterly Trade in Goods and Services). While import levels have declined slightly (primarily during 2008, and holding steady since) exports, after recovering from an initial dip, started to increase at a similar rate to that seen pre-recession.

Figure 11: Ireland Quarterly Trade in Goods and Services



In comparison, while the UK trade deficit has narrowed somewhat, there has been no dramatic improvement, and imports and exports have tended to move together (see Figure 12: UK Quarterly Trade in Goods and Services).

Figure 12: UK Quarterly Trade in Goods and Services



However, while Ireland runs a trade surplus overall, its relationship with the UK is somewhat different, in that it ran (and continues to run, despite the improvement in its overall position since the onset of recession) a trade deficit with the UK. Bilateral trade declined in the immediate aftermath of the financial crisis but has picked up since the start of 2010.

This feature holds for both manufactured goods and services, although it is clear that the nature of the trade in manufactured goods is significantly different for each partner country; while the UK exports a broad range of goods to Ireland (see Figure 13: UK Manufacturing Exports to Ireland), Irish exports in the reverse direction are clearly focussed in three product groups - food, drink & tobacco, chemicals and machinery & equipment (see Figure 14: Ireland Manufacturing Exports to the UK).

Figure 13: UK Manufacturing Exports to Ireland

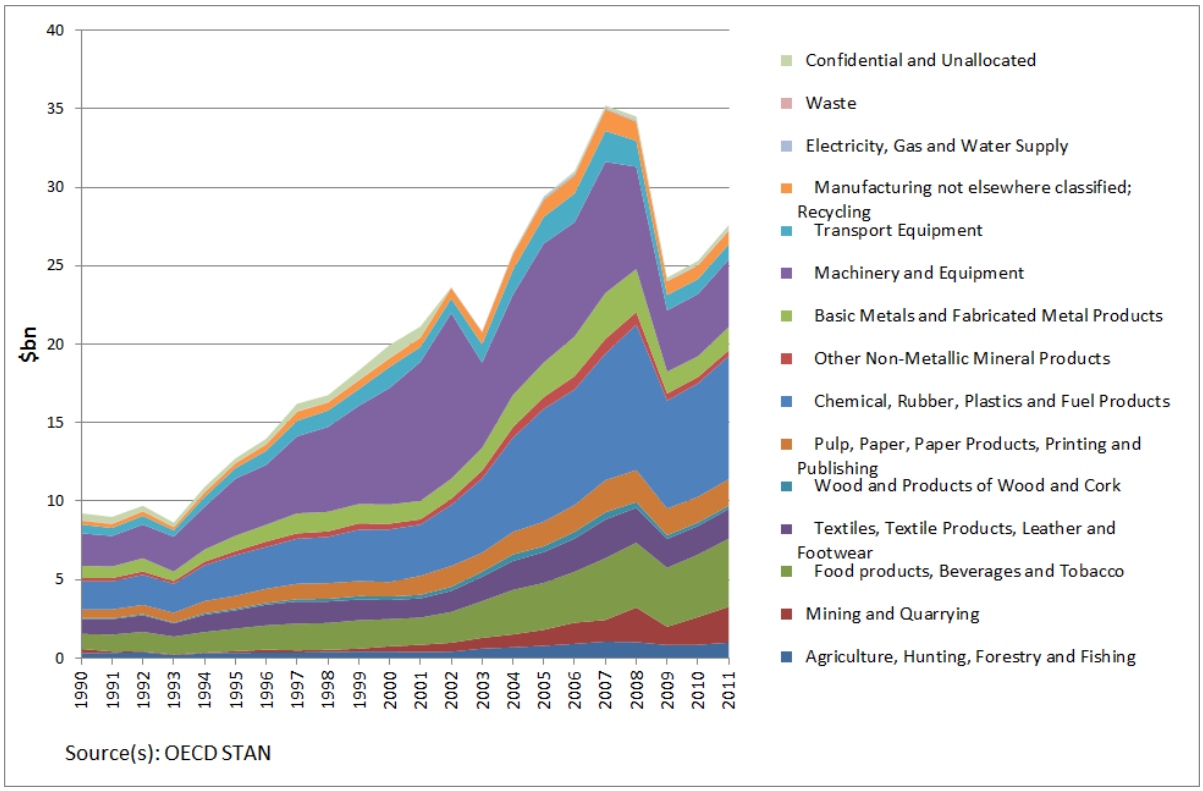
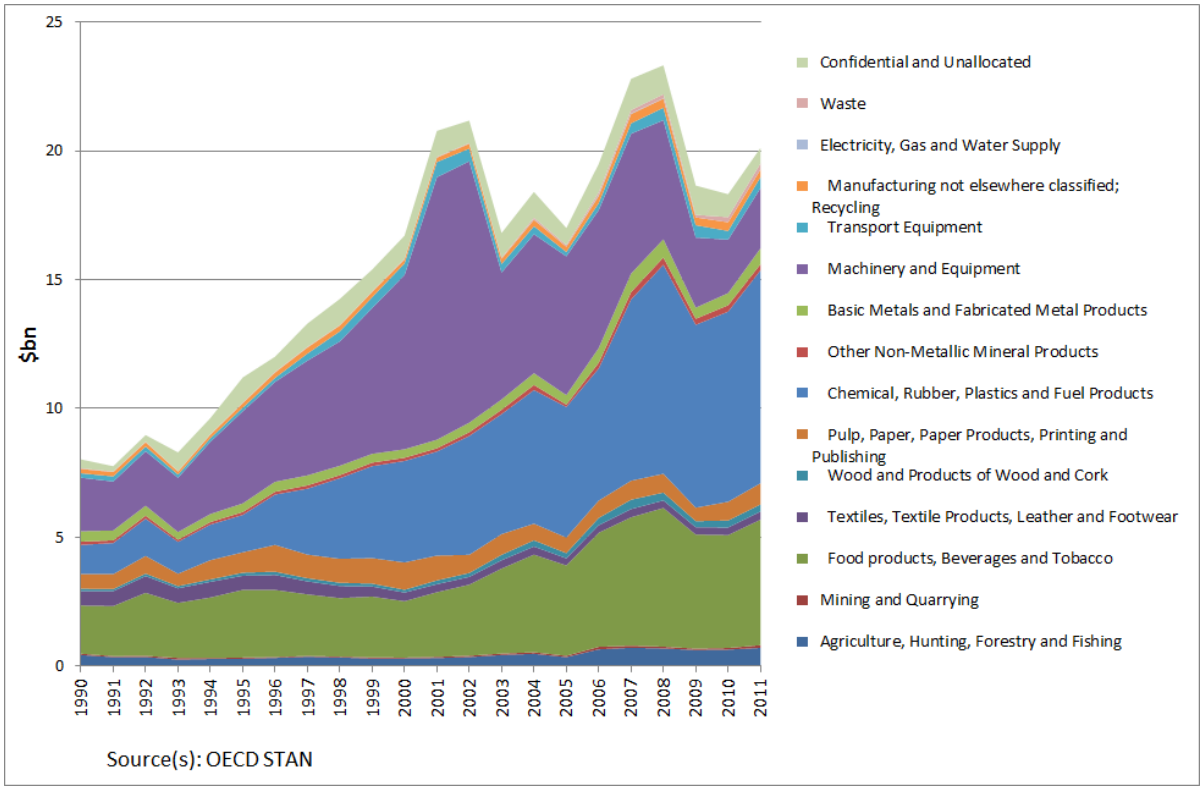


Figure 14: Ireland Manufacturing Exports to the UK



This highlights one of the key differences in the trading relationship between the UK and Ireland - while the UK (both to Ireland and to other major trading partners) exports a wide range of manufactured goods, Ireland concentrates on three distinct areas (and with its long-distance trading partners, such as the US, concentrates on just two; chemicals and machinery & equipment).

These data come with one significant caveat, however. The HMRC regional trade statistics (see Table 1.2) show that the UK region that is the largest importer of Irish goods is the East of England (some 26% of total imports), which receives large amounts of chemicals (i.e. pharmaceuticals, both final and intermediate) from Ireland. Given the UK's significant expertise in the pharmaceuticals sector, and the significant transport infrastructure in the East of England (linking both to mainland Europe through ports such as Felixstowe and Harwich and to key UK markets such as London and the South East), this flow is likely to represent an intermediate step on the movement of these products from Ireland to final markets across Europe, or a location of the latter stages of production for intermediate goods, rather than the location of the final demand itself. The next largest importers of Irish goods are London and Northern Ireland. Exports from UK regions to Ireland have no such outliers.

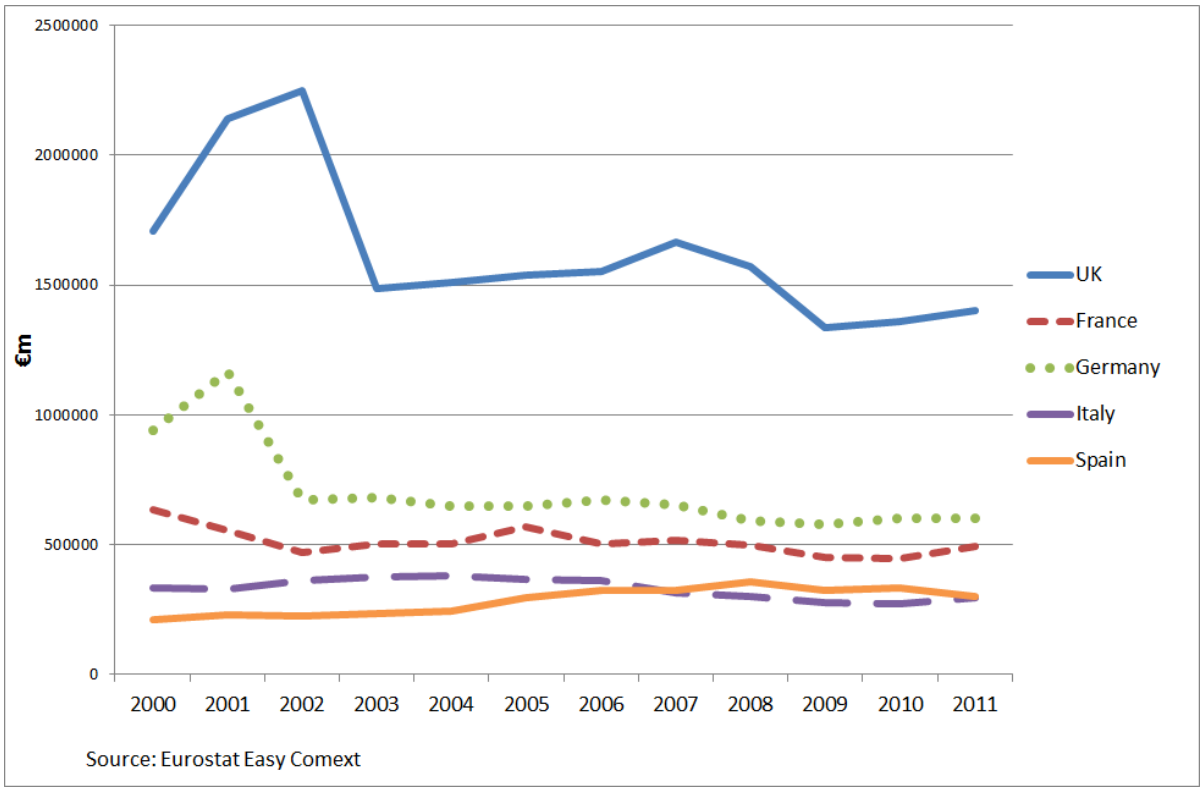
Table 1.2 Trade between the UK regions and Ireland, 2012

	UK exports to Ireland by region (£000s)	UK exports to Ireland by region (% of total)	UK imports from Ireland by region (£000s)	UK imports from Ireland by region (% of total)
East of England	1,706,743	10.12	3,369,181	26.47
East Midlands	1,048,240	6.21	2,297,77	1.80
London	1,803,779	10.69	1,670,953	13.13
North East	289,790	1.72	60,742	0.48
North West	1,123,739	6.66	717,491	5.64
South East	1,797,286	10.66	1,366,790	10.74

South West	529,020	3.14	380,344	2.99
West Midlands	772,682	4.58	1,089,445	8.56
Yorkshire & the Humber	909,850	5.39	486,445	3.82
Northern Ireland	2,001,367	11.87	1,493,418	11.73
Scotland	347,509	2.06	175,592	1.38
Wales	144,1720	8.55	99,244	0.78
Unknown	3,094,981	18.35	1,591,248	12.50

The UK is one of the most important export partners for the Irish economy[8] (see Figure 15: Value of Irish Manufacturing Exports by EU Destination). This is perhaps unsurprising, considering the proximity of the two countries and common language, but does highlight that countries that share Ireland's currency have not replaced the UK as Ireland's main export partner.

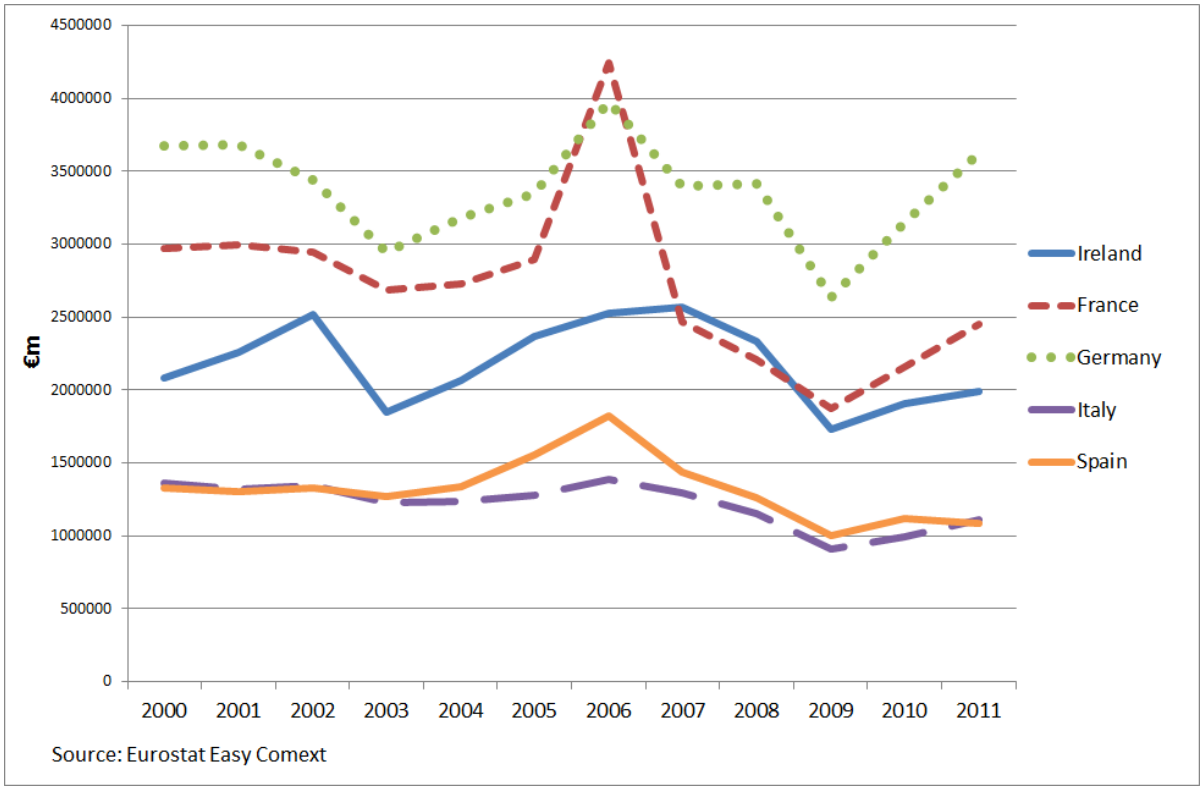
Figure 15: Value of Irish Manufacturing Exports by EU Destination



The relationship from the UK perspective is similar (see Figure 16: Value of UK Manufacturing Exports by EU Destination). While the UK exports more to both Germany and France than to Ireland, Ireland is the destination for a remarkable amount of exports considering the relative size of its population and economy. While exports to Ireland have fallen considerably since 2007 (as they have to other key EU markets), they have recently shown signs of growth.

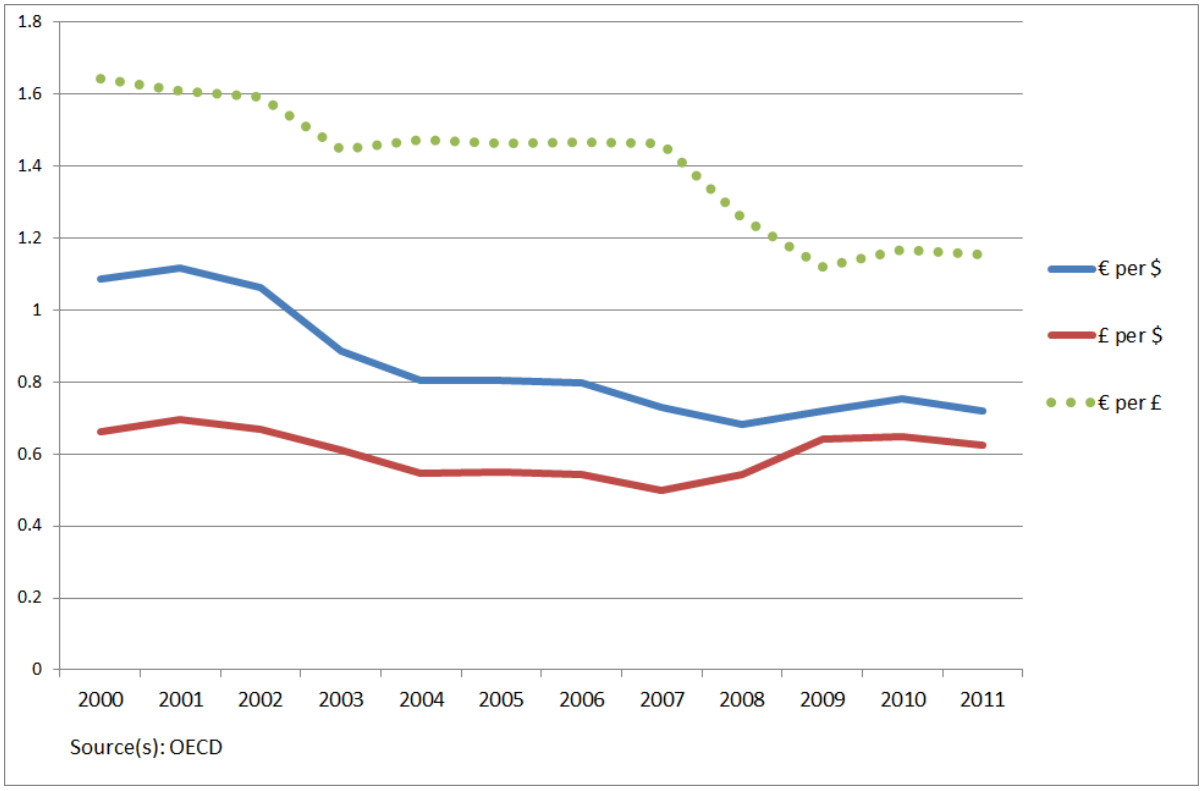
[8] Data from: HMRC regional trade statistics

Figure 16: Value of UK Manufacturing Exports by EU Destination



Trade volumes, both bilaterally between the UK and Ireland and with third-party countries, can be significantly affected by exchange rate movements. Since the introduction of the Euro in Ireland in 1999, the currency has steadily strengthened against sterling (see Figure 17: Exchange Rates). This might be expected to increase demand within Ireland for UK exports (as they would appear cheaper in Ireland) and reduce demand for Irish exports in the UK, however across much of this period bilateral trade flows moved together, suggesting that other macroeconomic factors were responsible for fluctuations in trade. Despite this, both countries remain susceptible to trade balances being upset by changes in the exchange rate; this is particularly relevant in Ireland, given the communal nature monetary policy and exchange rates within the Eurozone.

Figure 17: Exchange Rates



Areas for collaboration

This analysis highlights the strong economic links that already exist between Ireland and the UK, serving both as intermediate and final destinations for a range of goods and services. The strength of the relationship between the two countries (greater than ties with any other EU member state) could be further expanded to maximise the benefits that the two have from a strong trading position with the USA as well as expanding their offering in existing (EU) and developing (BRICs) markets.

1.2.4 Labour market

Typically, in economies with similar income levels such as Ireland and the UK, migrants tend to occupy high value-added occupations within specialised sectors reflecting the need for workers with a particular skill set which is not fully reflected in the native workforce. However, the close proximity of the UK and Irish markets, as well as the significant shared culture, has resulted in a far wider range of migrant workers than might otherwise be expected[9] (see Figure 18: UK Nationals Working in Ireland by Sector and Figure 19: Ireland Nationals Working in the UK by Sector).

[9] Data from: ONS - Long Term International Migration estimates from the International Passenger Survey

Figure 18: UK Nationals Working in Ireland by Sector

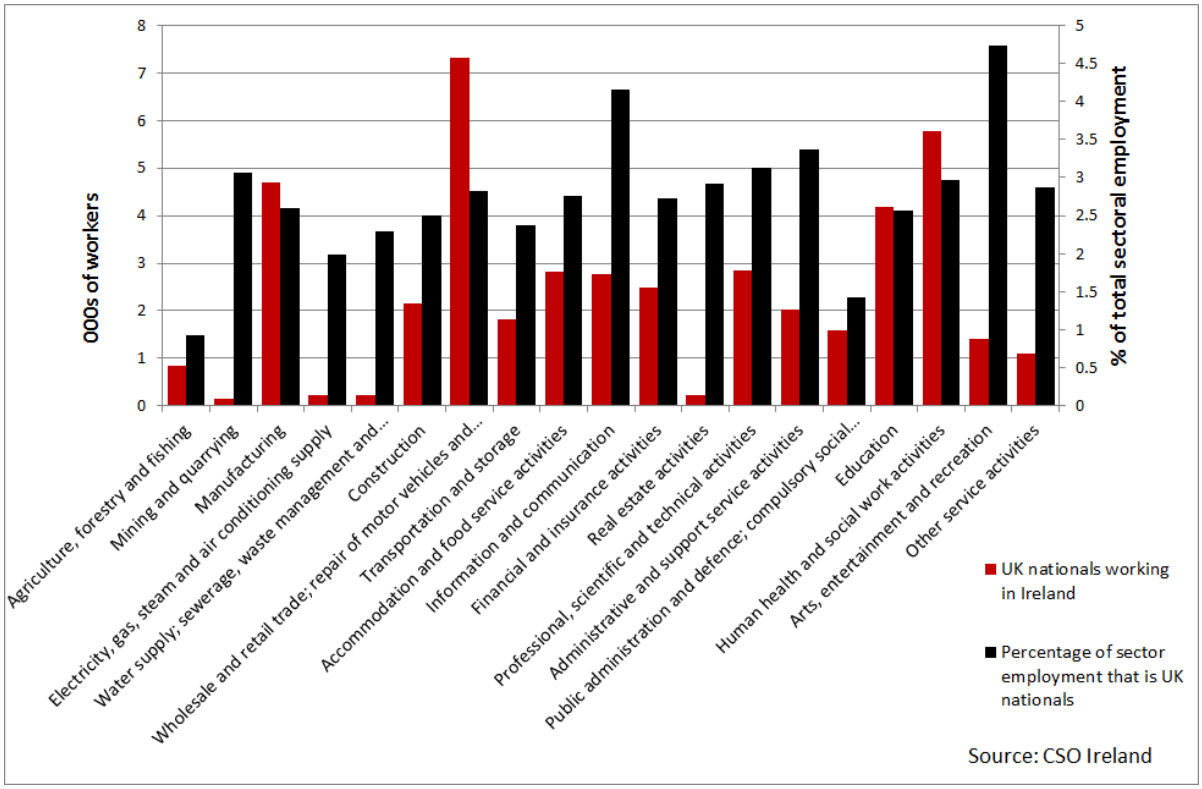
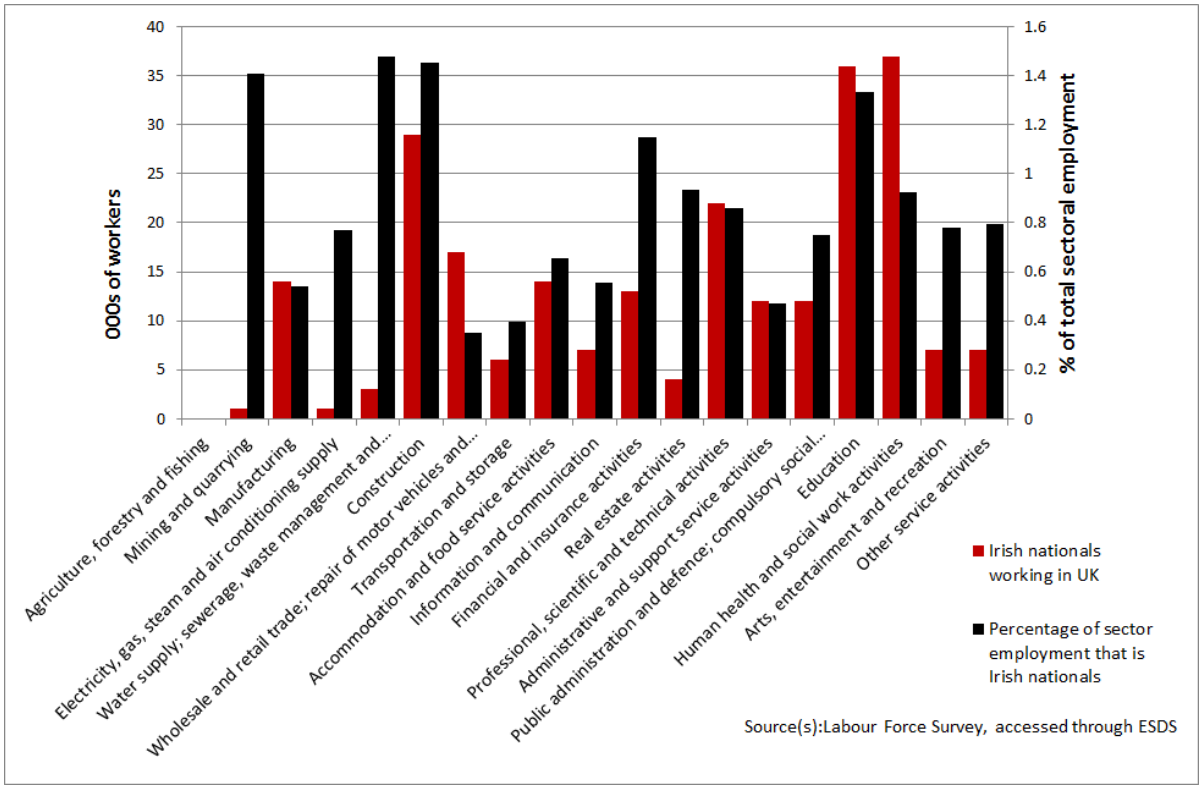


Figure 19: Ireland Nationals Working in the UK by Sector

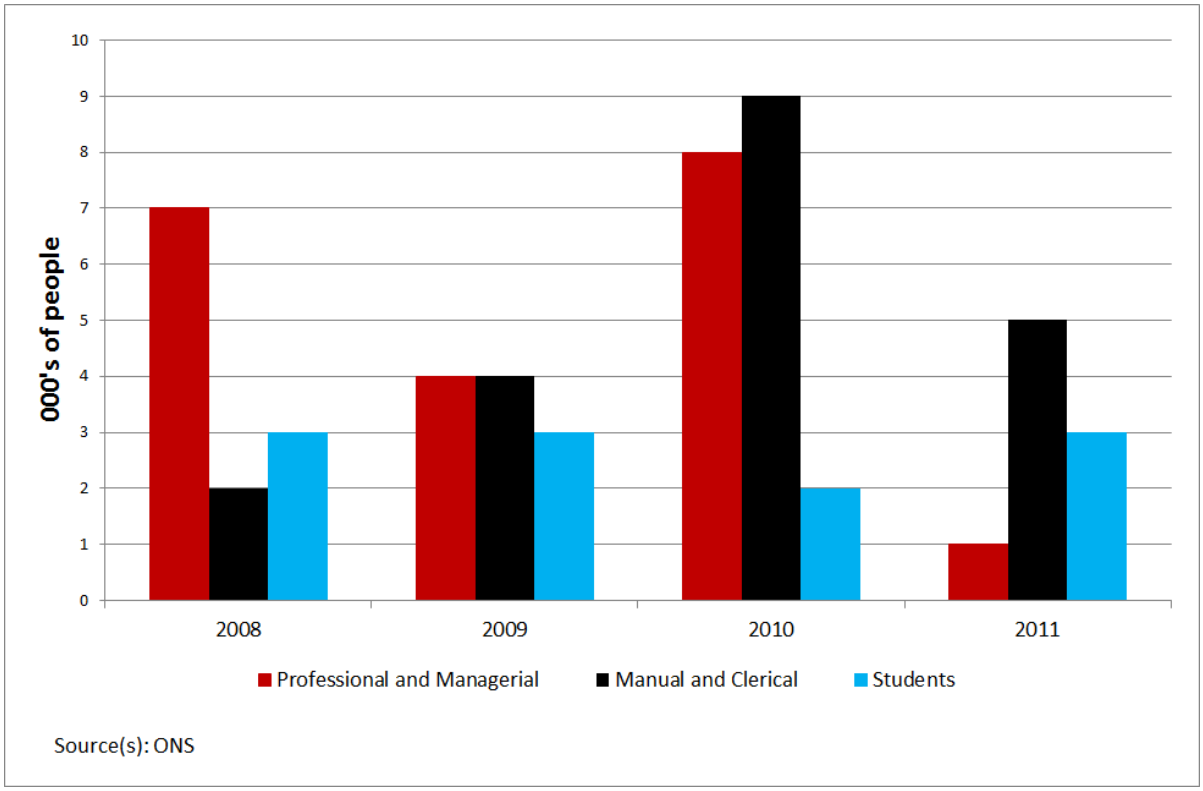


The data illustrate that while there has clearly been some specialisation amongst migrant workers; a large proportion of UK nationals work in real estate in Ireland, which was, until the recession at least, a high value-added sector in the economy. While a large number of Irish nationals in the UK are working in professional services, there are also migrants reacting to other economic forces. There are a large

number of Irish nationals working in the UK construction sector, where prospects are better than in the Irish domestic market (but still weak), while there are also significant numbers working in the public sector. There are relatively high numbers of migrants (in both directions) working in relatively low-skilled jobs in the wholesale & retail and accommodation & food services, suggesting that not all migrants are being dictated to by economic circumstances. Overall however, the three largest sectors in which Irish nationals are employed are health and social work, education and professional services - all sectors which employ well-educated specialists.

This trend is reinforced by the data on bilateral migration by occupation. While migration from the UK to Ireland declined very rapidly after 2008, migration from Ireland to the UK increased; particularly amongst manual & cleric workers, a large proportion of which are likely to be those previously working in the Irish construction industry hoping to find similar jobs in the UK (see Figure 20: Migration to the UK from Ireland by Occupation). Migration amongst manual & clerical workers peaked in 2010, before declining in 2011 (as did the number of professional & managerial migrants).

Figure 20: Migration to the UK from Ireland by Occupation



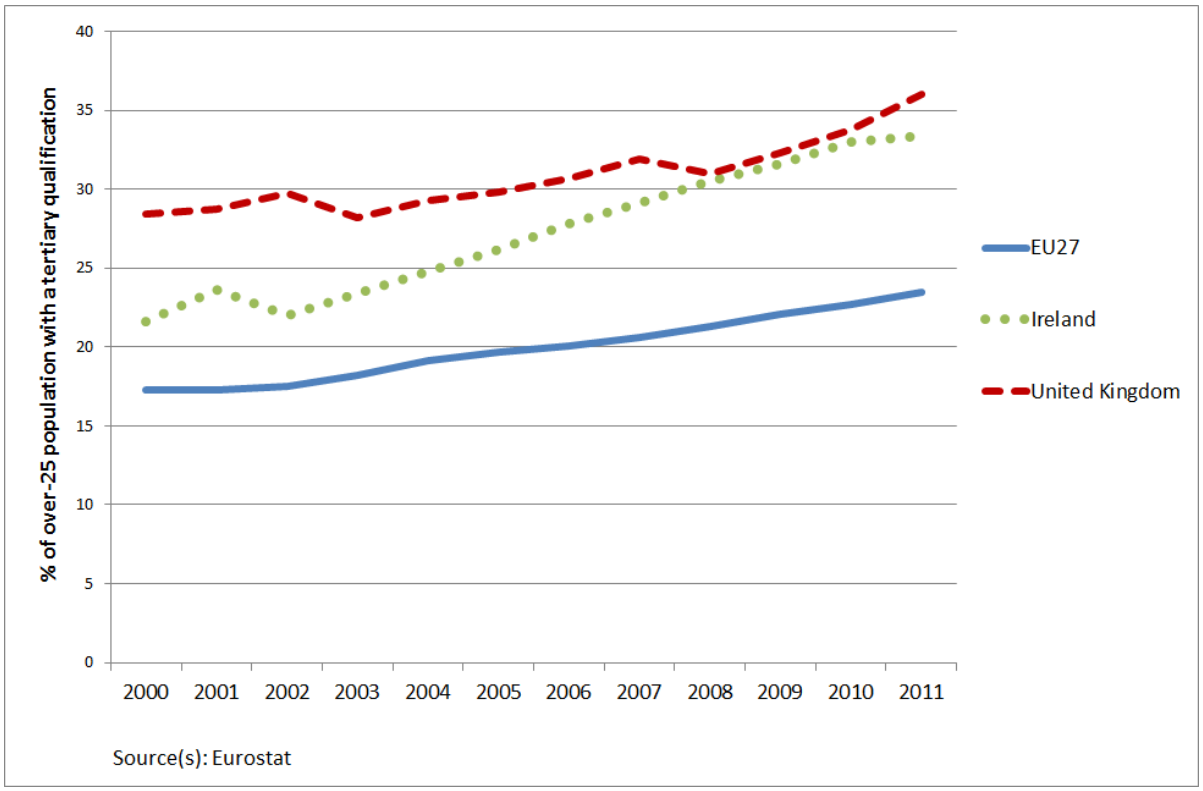
Areas for collaboration

The high levels of migration between the UK and Ireland present an opportunity. There is some evidence that these links expedited the speed with which the labour market adjusted to the shock of the recession (e.g. through the movement of Irish construction workers to the UK). The free movement of labour (as well as the lack of cultural/linguistic barriers) between the two countries, as well as the strength of their educational institutions, should result in a fluid and highly-skilled workforce able to adjust to the requirements of future changes in demand.

1.2.5 Knowledge economy

Tertiary education rates are well above the EU27 average in both the UK and Ireland[10] (see Figure 21: Percentage of Over-25s with a Tertiary Qualification). Historically Ireland has lagged behind the UK, although since 2008 the percentage of the population achieving a tertiary qualification in Ireland has closely matched that in the UK.

Figure 21: Percentage of Over-25s with a Tertiary Qualification



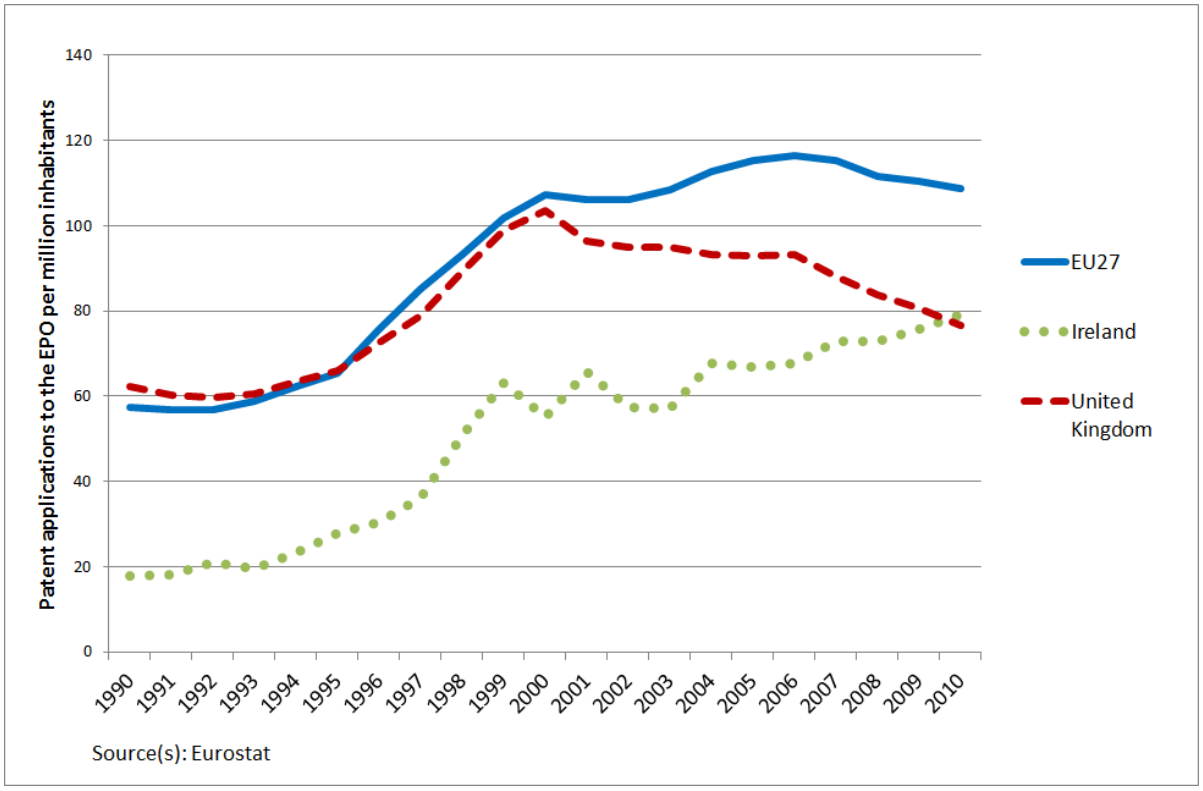
However, there appear to be some issues in the UK in converting this highly-skilled workforce into driving innovation (see Figure 22: Patent Applications to EPO per million inhabitants). While Ireland has seen the number of patents it registers (per million population) increase steadily throughout the 2000s as the economy was expanding, in the UK the rate has been dropping steadily, to the extent that in the most recent year of data (2010) Ireland had a higher rate of patent applications than the UK[11]. The 2011 Innovation Union Scoreboard[12] highlighted the fragmented nature of demand-side policy, which could explain the relatively poor performance of the UK up to that point; however it also highlights the Small Business Research Initiative (SBRI) as an example of good policy, and it is hoped that the scheme, and the extended powers granted to the Technology Strategy Board from 2011, may help to improve the UK's performance.

[10] Data from: Eurostat - Education indicators

[11] Data from: Eurostat - Patent Statistics

[12] European Commission Innovation Union, Country Reports, UK

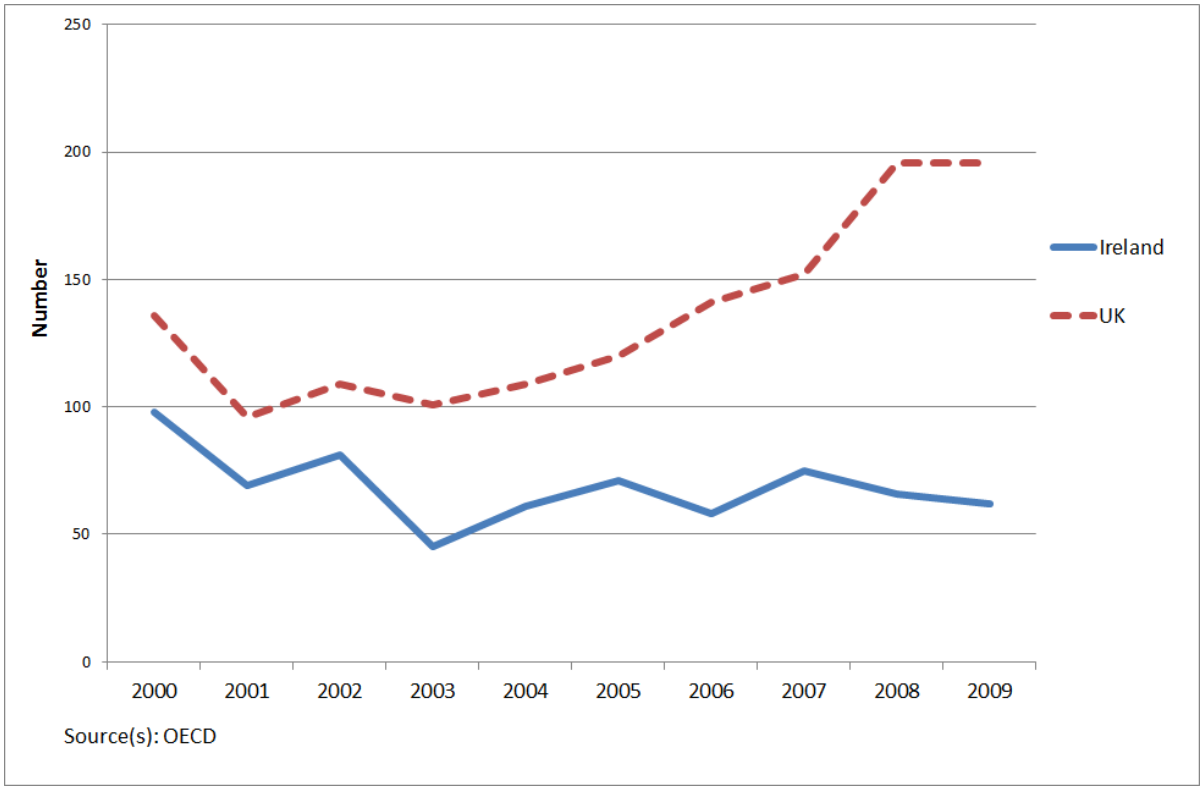
Figure 22: Patent Applications to EPO per million inhabitants



Of the patent ideas that originate in Ireland, more have their first filing in the UK than in the country they were created in. This is unsurprising considering that the UK market is larger, and therefore patent protection in this market will be more valuable than in the domestic market (see Figure 23: Patents Originating in Ireland by First Filing Office[13]).

[13] Note that this figure refers to national patents, while EPO figures refer to patents applicable across Europe

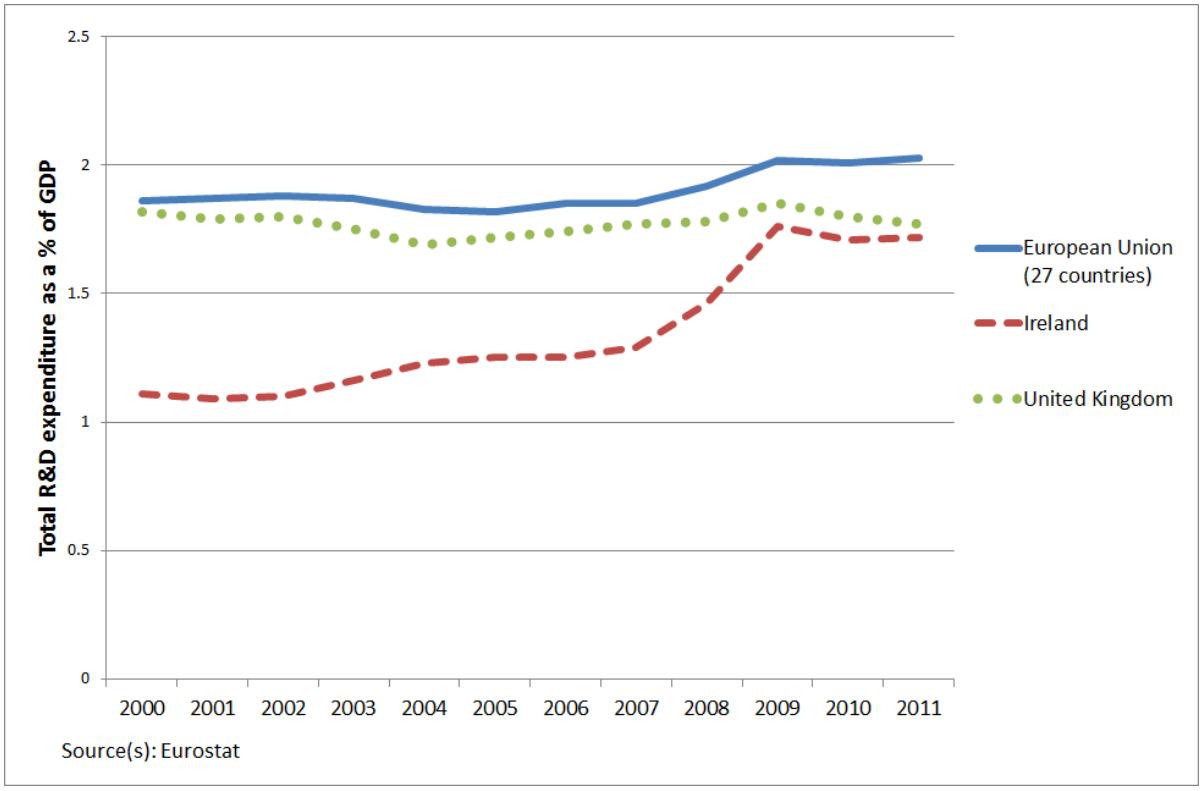
Figure 23: Patents Originating in Ireland by First Filing Office



Both Ireland and the UK currently spend a similar proportion of their total GDP on research and development[14] (see Figure 24: Total R&D Expenditure). UK spending on R&D has remained relatively constant (as a share of GDP) since 2000, while spending in Ireland (both as a share of GDP and in absolute terms) has risen, even while the economy was shrinking in 2008 and 2009. While government expenditure on R&D has been growing particularly rapidly since 1990, both the public and private sectors have contributed significantly to growth from under 0.3% of GDP in 2000 to over 0.5% of GDP in 2011. By contrast, the United Kingdom's level of R&D expenditure has remained constant at around 0.55% of GDP over the entire period.

[14] Data from: Eurostat - Statistics on research and development

Figure 24: Total R&D Expenditure



Areas for collaboration

The skills-level of the workforce in both the UK and Ireland is well above the EU average, yet R&D expenditure levels (and patent registrations) remain below average. There remains the potential for more significant cross-over of R&D activities between the two countries, which could maximise the gains from investment and also ensure that niche specialisations (particularly relevant in the smaller economy of Ireland) can receive sufficient funding to be fully exploited.

1.2.6 Foreign Direct Investment (FDI)

Data on FDI are typically in one of two forms; either analysis of investment projects or financial data. Our research here concentrates on the former, which is more susceptible to government policy.

The Ernst & Young European Investment Monitor provides a consistent source of information for the UK and Ireland on projects that result in new facilities or new jobs (see Figure 25: Key Countries and Sectors for FDI in the UK and Ireland).

Figure 25: Key Countries and Sectors for FDI in the UK and Ireland

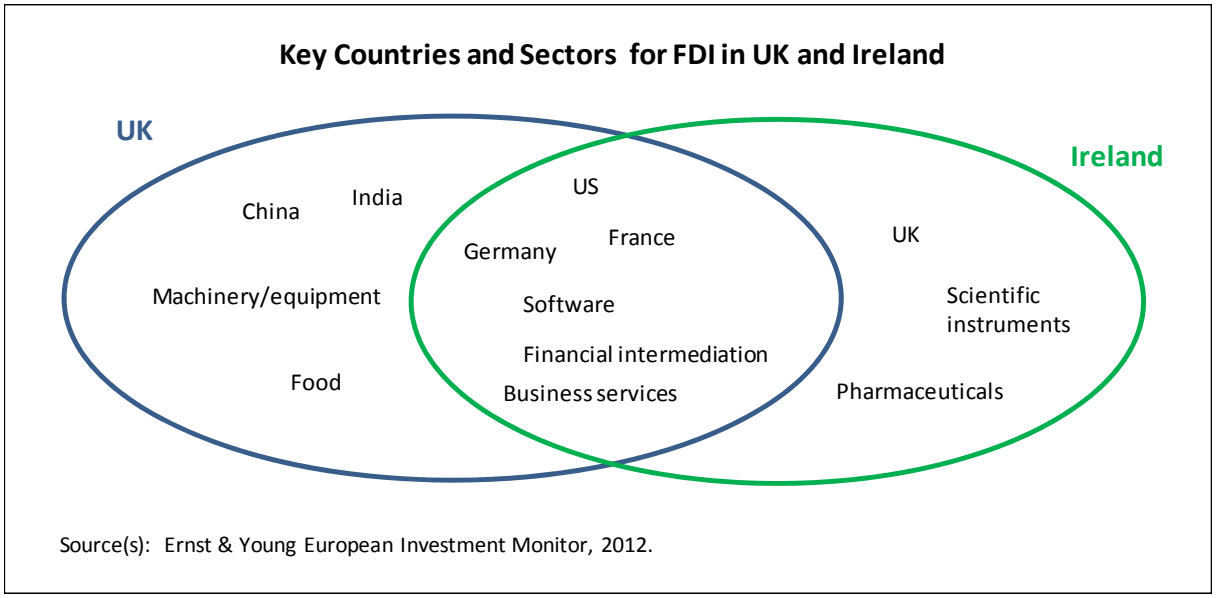


Table 1.2: Overseas FDI to the UK and Ireland (Stock, 2010)

	UK (US dollars millions)		**Ireland (US dollars millions)**
US	31,3471	US	30,651
Germany	79,245	Germany	10,155
France	106,137	France	21,236
China	628	UK	39,013
India	4,353		
	UK		**Ireland**
Telecoms	8,4363	Telecoms	1,296
Financial intermediation	274,991	Financial intermediation	169,194
Business services	104,366	Business services	No available data
Mechanical products	11,520	Scientific instruments	No available data
Food	62,185	Pharmaceuticals	14,952

Source: OECD (2012). Note that there are significant differences between 'inbound' and 'outbound' reporting which account for difference between the UK in Ireland figure of $39.01bn in table above and headline figure below of $69.21bn reported below.

The key mutual trading partners for both nations are the US, Germany and France, while shared product areas are software, financial intermediation and business services. These are partners, and products, where the UK and Ireland find themselves in direct competition for funding. In contrast, while the UK also has significant FDI inflows from China and India, Ireland is reliant upon the UK for alternative sources of FDI. Given the competitive pressures that the Irish pharmaceuticals market is

under from China and others it is likely that in the future, unless collaborative action is taken, Ireland and the UK will find themselves increasingly competing against one another for the available FDI funds rather than attracting alternative sources.

Information on outflows of FDI from the UK and Ireland is limited; however it highlights the relative breadth of the UK's investments in comparison to Ireland. The UK holds positions in both China and Brazil (approximately $9bn and $10bn respectively in 2010) which dwarf their Irish equivalents. OECD data suggests that for both countries their primary destination of FDI flows is each other; the only geographical market in which they both have significant positions is the US (where, in 2010, Ireland's position was larger than the UK's).

Data from UKTI takes a broader measure of FDI, including expansions and merger & acquisitions as well as new projects. These data show that Italy and Japan are also important sources of FDI, and that the US accounted for around 25% of all FDI projects in 2011/12 and that EU countries sourced around a third of all projects[15]. The sectors receiving most FDI projects include life sciences, environmental technologies and ICT in addition to those identified in the E&Y report, and suggest that within the machinery/equipment sector the investment is made in advanced engineering activities. Most projects (almost 45%) focused on services operations, while around 20% involved HQ functions, more than were focused on manufacturing facilities. Around 10% of the projects were for R&D activities. IDA Ireland's analysis of the history of FDI in Ireland confirms the E&Y snapshot, that the key sectors have been manufacturing, life sciences, software, financial services, software/internet related and R&D[16].

Data on FDI published by national statistical offices (which are on a very different basis to the project-level data discussed so far) show FDI is more than twice as important to Ireland's economy as it is to the UK economy (as measured by stock of inward investment and outward direct investment as a share of GDP)[17] The UK accounts for around 12% of the total FDI position in Ireland and is mainly in financial services and other non-business services. In contrast, Ireland accounts for just 1½% of the UK's total FDI position and is mainly in financial services, retail/wholesale and food and drink. The stock of UK's Foreign Direct Investment (FDI) in Ireland in 2011 was $69.21bn; Ireland's stock in the UK was $65.19bn[18]. While total investment from the UK in Ireland doubled over the period 2001-2011, total Irish investment in the UK increased by a factor of seven over the same period, reflecting the rapid economic growth seen over this period and the increasing expansion of US activities in Ireland, which formed the base for wider EU operations.

Net flows from Ireland to the UK have proved relatively stable, while flows from the UK have been much more volatile, reflecting changes in shares of net profits (see Figure 26: FDI Flows between UK and Ireland).

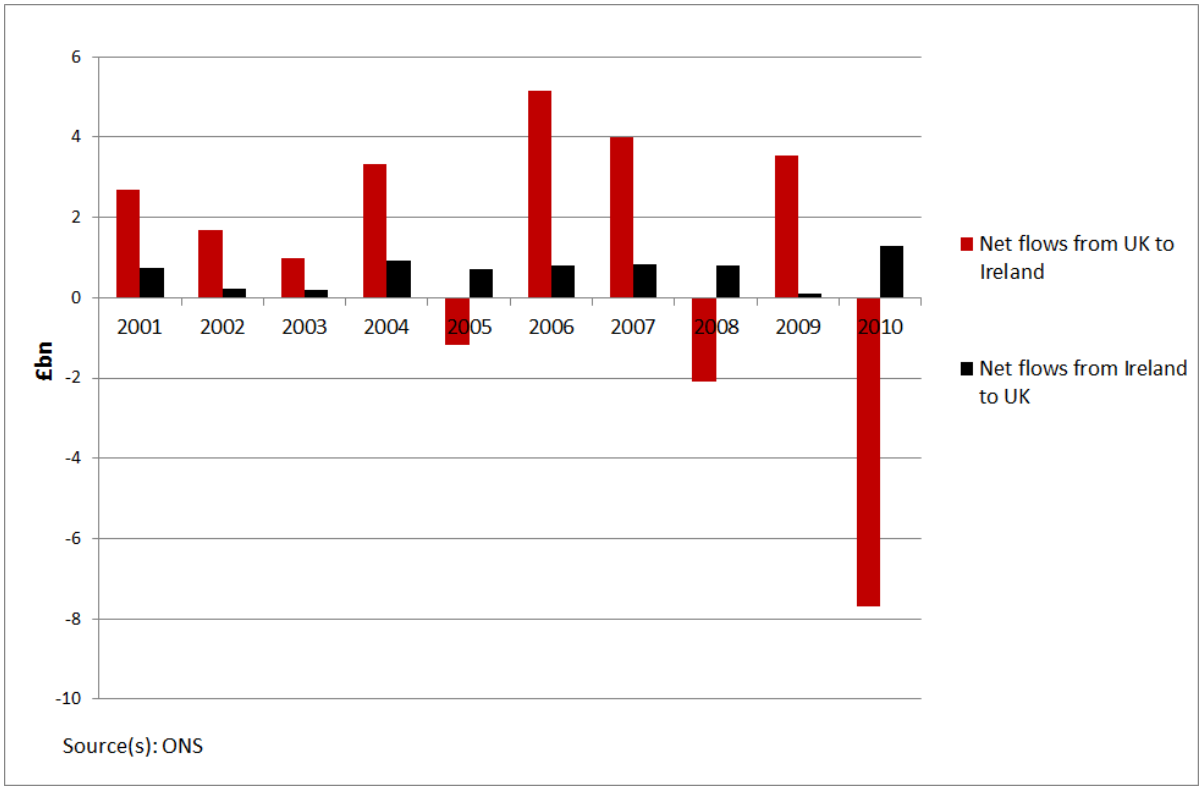
[15] Great Britain and Northern Ireland Inward Investment Report 2011/12, UK Trade & Investment.

[16] Horizon 2020, IDA Ireland Strategy, March 2010.

[17] UNCTAD World Investment Report, 2011.

[18] Data from: OECD FDI Positions (2012)

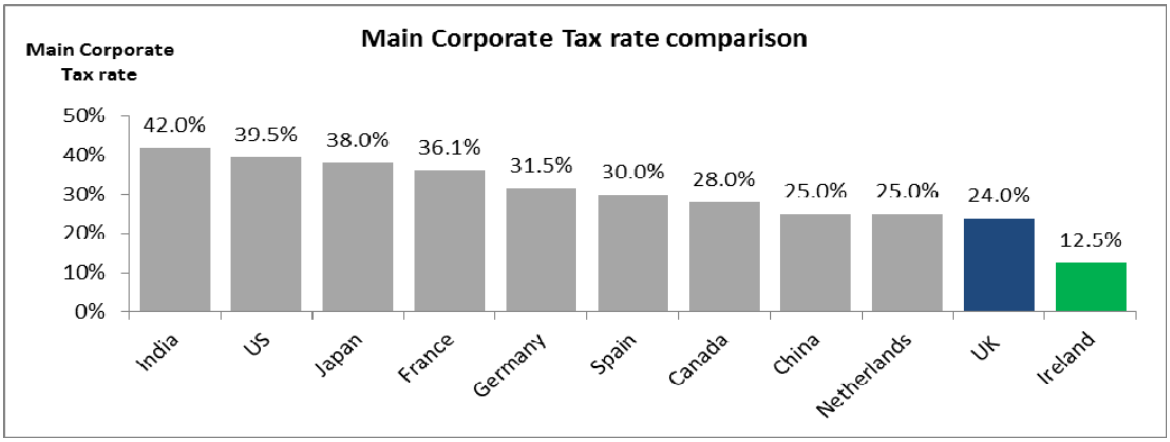
Figure 26: FDI Flows between UK and Ireland



There are a number of factors which influence globally-mobile FDI decisions and across most factors UK and Ireland are more similar to each other than they are to EU or international comparators. This includes on:

- Main corporate tax rates - although Ireland's rate (at 12.5%) is almost half that of the UK's (24%), both are significantly lower than many other major EU economies such as France, Germany, Spain and Netherlands (see Figure 27: Corporation Tax Rates), while in both economies headline rates are close to the effective tax rate (unlike in a number of other EU member states)

Figure 27: Corporation Tax Rates



- Flexibility/rigidity of employment - with the 'Rigidity of Employment Index (2012)'[19] indicating that both UK and Ireland both have a score of 10 (see Table 1.3: Rigidity of Employment Index), i.e. a

[19] IFC/World Bank 'Doing Business 2013' Rigidity of Employment index

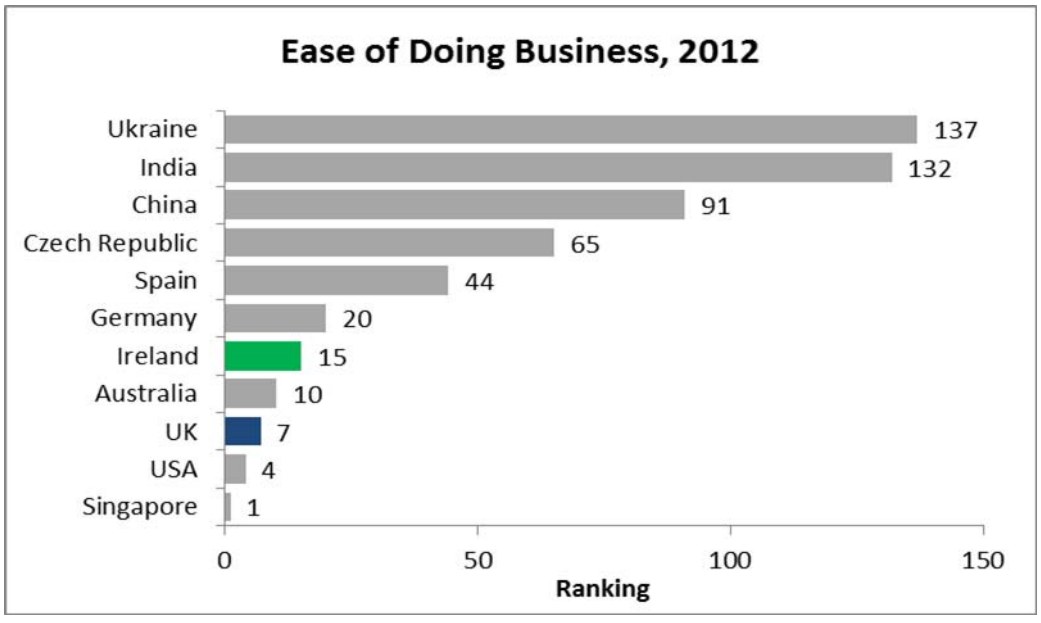
relatively flexible labour market. This indicator reflects how easy it is to hire new workers, the degree of flexibility on hours workers can be asked to undertake, and the ease with which workers can be made redundant.

Table 1.3: Rigidity of Employment Index

Country	Index Score20
Spain	49.00
Ukraine	38.00
Germany	28.00
China	27.00
India	23.00
Czech Republic	11.00
Ireland	10.00
UK	10.00

- Ease of doing business - although UK ranks well above Ireland, they are both part of a group of advanced 'western' economies (see Figure 28: Ease of doing Business Ranking, 2012).

Figure 28: Ease of doing Business Ranking, 2012



[20] A higher score (max value 100) reflects more rigid employment legislation

Areas for collaboration

The UK has thus far had significantly more success in gaining traction in developing markets such as China and India - a more joined up policy between the UK and Ireland could clearly benefit Irish firms attempting to enter these markets. Similarly, Irish firms have had more success in attracting investment in areas such as pharmaceutical manufacturing whereas UK efforts focus on attracting R&D; successful strategic tie-ups could also present opportunities for both UK and Irish firms.

1.3 Future prospects

In this section is set out analysis relating to:

- Over-arching issues
- Government policy
- Output and employment
- Trade and exchange rates
- Labour market
- Knowledge economy
- FDI

1.3.1 Over-arching issues

There are a number of issues, not directly covered in the themed analysis, which will clearly influence the direction of growth in the UK and Ireland (through being global issues), including;

- Increasing globalisation of supply chains will lead to increased interdependencies across almost all markets, and price will become an ever-increasing factor in investment decisions; the cost base of businesses in the UK and Ireland will therefore come under increasing pressure.
- Improved healthcare will lead to increases in the ageing population; this will lead to a shift in demand patterns (for example increased investment in geriatric medicines) as well as putting pressure on existing welfare structures (both public and private).
- Decarbonisation of the economy will provide challenges to energy-intensive sectors in both countries, but also opportunities in terms of technology and infrastructure development.
- The rise of large new economies such as the BRICs, who have typically not been close trading partners with the UK and Ireland, will provide challenges to both the UK and Ireland, who must develop their offering to these economies and consider how to open themselves up to investment from these regions without it being to the detriment of their close economic ties with other large economies such as the US.

1.3.2 Government policy

Ireland[21]

Since taking office in March 2011 the Irish Government has prioritised fixing the public finances, restoring the banking system to health, and supporting job creation and economic growth.

Since entering a programme of support with the EU-IMF in late 2010, Ireland has met all the targets agreed as part of the programme. To restore order to the public finances significant fiscal consolidation has been implemented, and in 2011 the underlying Government budget deficit was in

[21] Information provided by Department of the Taoiseach; all statements have been verified

line with the targets agreed with the EU-IMF. Ireland remains on target to reduce its deficit to below 3% of GDP by 2015.

The exchange in February 2013 of the promissory notes used to support the banking system for long term bonds will lead to a €20 billion reduction in borrowing requirements in the next decade. As a result of these efforts Ireland has been benefitted from improved international confidence in the country, evidenced by renewed bond issuance to private investors.

To deal with the serious issues in the banking sector, a comprehensive strategy was adopted in March 2011 to return to a fully functioning banking sector that serves the needs of the Irish economy. This involved the creation of two universal pillar banks from the two largest banks, which compete with each other and with other foreign banks operating in the Irish economy. The more problematic institutions were ring-fenced into a single entity and in February 2013 a special liquidator was appointed.

The recapitalisation of the banks following comprehensive stress tests was achieved on time at the end of July 2011. Despite a challenging international environment the Irish economy returned to growth in 2011 with GDP increasing by 1.4 per cent, the first annual increase in GDP since 2007.

While unemployment remains high, the most recent quarterly figures show that the large decreases in the numbers in employment has ended. The number of people unemployed has shown the first year on year decline in recent years; there was net growth of almost 12,000 in private sector employment over 2012.In early 2012 the Government published its first annual Action Plan for Jobs, which contained over 270 measures aimed at taking action right across Government to support enterprises to grow, and to create and retain jobs. Over the course of the plan 92% of the measures were successfully implemented. In tandem with the Action Plan on Jobs the Government launched Pathways to Work, which sets out a fundamental reform of the way jobseekers are supported. A key element of the strategy is the rollout of the new integrated Intreo employment and support service, which provides individualised supports to jobseekers to assist them in getting back to work and increasing their employability.

The 2013 Action Plan on Jobs published on 22 February contains a further 333 measures to be implemented this year. Among the new initiatives is JobsPlus, which will see the state pay €1 of every €4 it costs an employer to recruit a long-term unemployed person off the Live Register.

UK

The UK Government's economic strategy set out in the June Budget 2010[22] is designed to protect the economy through the recent period of global uncertainty, to maintain market confidence in the UK and to lay the foundations for a stronger, more balanced economy in the future.

The UK Government is taking action through: monetary activism and credit easing, stimulating demand, maintaining price stability and supporting the flow of credit in the economy; deficit reduction, returning the public finances to a sustainable position and ensuring that fiscal credibility underpins low long-term interest rates; reform of the financial system, improving the regulatory framework to reduce risks to the taxpayer and build the resilience of the system; and a package of structural reforms, rebalancing and strengthening the economy for the future, including an ambitious housing package and programme of infrastructure investment.

Although growth has remained sluggish (with most recent estimates suggesting a 0.2% increase in GDP in 2012[23]), employment has remained relatively buoyant.

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[22] http://cdn.hm-treasury.gov.uk/budget2013_complete.pdf

[23] ONS 2nd Estimate of GDP (2013)

The Banking Reform, implementation of the Industrial Strategy and recommendations of the Heseltine report form part of key actions to build sustainable growth back into the UK:

- The Banking Reform programme is progressing, in February 2013, the Financial Services (Banking Reform) Bill[24] was introduced to Parliament. The Bill brings forward the most significant reforms to the banking sector in a generation, and will make the banking sector safer, more resilient and more resolvable.
- The Government's 2012 industrial strategy, builds on the 2011 Plan for Growth which aims to achieve 'strong, sustainable and balanced growth that is more evenly shared across the country and between industries.'
  It focuses on access to finance, partnerships with sectors; support for emerging technologies; creating a pipeline of skilled workers; and finally, government procurement and the development of supply chains.
- The Heseltine Review[3] recommends five areas of focus to return to sustainable growth:
  - "Localism – building on our strengths" recommends a radical shift in responsibility from central to local government to better support local growth
  - "Whitehall – a confident, strategic centre for government" - emphasises the role of central government towards driving growth according to an agreed growth strategy
  - "Government and Growth – Catalyst, Enabler, Partner" - focuses on government procurement and recommendations to improve the efficiency, effectiveness and value for money of state spending
  - "Private sector – broadening the capacity for excellence" - focuses on UK businesses' need to perform better, and that business organisations including Chambers of Commerce could play a more significant role in engaging with, and growing, businesses
  - " Education and Skills – the foundation of growth and prosperity" - focuses on the need for a stronger link between local economic need and both the education and training systems, including stronger business engagement in schools, improvements to work experience, and local devolution of skills funding

1.3.3 Output and employment

There is expected to be a gradual upturn in fortunes in both countries in the short-to-medium term. DG ECFIN's European Economic Forecast, Spring 2013[25] shows accelerating growth in GDP through 2013 and 2014 in both countries. In Ireland, growth will be driven by strong growth in exports (2.7% in 2013 and 3.7% in 2014) while domestic demand will continue to contract in 2013 with only a modest increase in 2014. Employment growth will lag behind output, with a negligible increase in employment expected in 2013 and a rise of 0.9% in 2014. In the UK, GDP growth is expected to be 0.6% in 2013 and 1.7% in 2014, with domestic demand acting as the primary driver, although exports are also expected to grow rapidly (by 1.3% and 3.9% in 2013 and 2014 respectively.

These forecasts put both Ireland and the UK towards the front of the EU recovery - Ireland is projected to have the third highest growth in the Eurozone in both 2013 and 2014 (1.1% and 2.2% respectively) with growth in the UK around ½ percentage point slower.

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[24] http://www.hm-treasury.gov.uk/fin_stability_regreform_icb.htm

[3] https://www.gov.uk/government/publications/no-stone-unturned-in-pursuit-of-growth

[25] http://ec.europa.eu/economy_finance/publications/european_economy/2013/ee2_en.htm

In the longer term, data from CEDEFOP[26] highlights the forecast shifts in employment in the period to 2020. In Ireland, there is expected to be something of a recovery in the construction sector, with significant gains over 2010-2020, although even by 2020 employment in the sector will remain below 2000 levels. Manufacturing employment is expected to decline, although much more slowly than over the previous decade. Business services will be the key driver of growth, with employment increasing by 10.6% over 2010-20, contributing to overall growth in employment of 5.6% over the period. This growth will be almost exclusively amongst workers with medium or high levels of qualifications, while the number of employed workers with low skills will fall by over 30%.

In the UK, manufacturing employment is expected to continue to decline over 2010-2020, albeit at a much shallower rate than over 2000-10. Distribution & transport employment will increase by 4.6% over the period, faster than the rate over the previous decade, although the primary driver of overall employment growth of 5.1% over 2010-2020 will be business & other services, where the number of jobs will increase by 13.1%, a slower rate than seen over 2000-10. The shift from low-qualified to medium- and high-qualified employment will be even more stark in the UK than in Ireland, with a decrease of 44.4% in the number of low-qualified workers, while the number with medium and high qualification levels will increase rapidly, by 15.7% and 19.4% respectively, further exacerbating the trends seen over 2000-10.

1.3.4 Trade and exchange rates

Future trade prospects are largely dependent, in the short term, upon prospects for the Eurozone. The slow recovery which is predicted in the CEDEFOP projections (with total employment increasing by only 3.4% over 2010-20) will limit increases in domestic demand across the EU Member States. Against this backdrop, however, growth in the US (a key export market for both the UK and Ireland) is expected to remain strong, while the expansion of the highly-competitive UK service sector (a key driver of UK exports) should allow continued expansion of trading relationships. Key to both the UK and Ireland is the ability to expand the export of services to developing markets in the BRICs and elsewhere and maintaining their competitive advantage in trade with global partners in the face of continuing cost pressures from foreign markets.

1.3.5 Labour market

The CEDEFOP forecasts clearly demonstrate the rapidly-changing nature of the demands of the labour markets in both the UK and Ireland, and up-skilling the workforce at the same rate as the demand for high and medium qualified workers will provide a key challenge to governments in both the UK and Ireland. At the same time, the rapid growth in many developing economies may provide an increasing challenge to both the UK and Ireland in retaining their own highly skilled workers as well as competing for foreign nationals who have typically been drawn to highly-paid vacancies in western economies.

1.3.6 Knowledge economy

The macroeconomic forecasts, as well as recent trends of increased levels of R&D in China and other developing nations, poses challenges for the sector in the UK and Ireland. R&D flows from overseas will increasingly be targeted at new nations, as expertise levels increase (although subsequent expected increases in wage costs may mitigate some of these effects). At the same time, the investment in new and growing areas (such as the UK's expertise in onshore wind) present a clear opportunity for partners in the sector to grow their offering to become world leaders in these fields.

[26] European Commission, CEDEFOP, Future skills supply and demand in Europe

1.3.7 FDI

Going forward the key challenge for both economies will be expanding their offering in eastern markets; in the case of the UK this will mean deriving full benefit from their existing relationships with China and India, while Irish companies will have to look beyond typical partnerships with UK and US firms to grow their attractiveness to new investors from the BRICs.

1.4 Drivers and constraints

There are four core drivers of the strong economic relationship between the UK and Ireland:

- The first is the **geographic proximity of the two countries**. The reduced costs of business due to the ability to both travel and transport goods quickly and cheaply between the two countries has meant that trade relationships, as well as linkages in other areas such as the labour market and education, are very strong. The fact that the UK is Ireland's largest export market, and that Ireland is the fifth largest export market for the UK, highlights that trade between the two constitutes a significant part of both country's economies. The Irish economy runs a trade deficit with the UK, while simultaneously running a large trade surplus with the wider world, which highlights the difference between the import and export markets of the country. Whereas Ireland's exporting industries are globally competitive, and do not rely on geographical proximity for support, the domestic import market is relatively small and relies to a large extent on imports from its nearest neighbour. This has resulted in 16% of total Irish imports coming from the UK, while less than 3% of total UK imports are from Ireland
- The second is the **familial connections**. Irish migration to the UK is an important factor in the politics and labour markets of the two countries. Irish people have been the largest minority group in Britain for centuries, regularly migrating across the Irish Sea. From the earliest recorded history to the present, there has been a continuous movement of people between the islands of Ireland and Great Britain due to their proximity. This tide has ebbed and flowed in response to politics, economics and social conditions of both places. As of the 2011 census, there were 869,000 Irish-born residents in the United Kingdom.
- The third is **gradual alignment of both Governments over time**. Today, Irish and British citizens are accorded equivalent reciprocal rights and entitlements (with a small number of minor exceptions) and a Common Travel Area exists between the Ireland, United Kingdom, and the Crown Dependencies. The British-Irish Intergovernmental Conference acts as an official forum for co-operation between the Government of Ireland and the Government of the United Kingdom on matters of mutual interest generally, and with respect to Northern Ireland in particular. Two other bodies, the British–Irish Council and the British–Irish Parliamentary Assembly act as a forum for discussion between the executives and assemblies, respectively, of the region, including the devolved regions in the UK and the three Crown dependencies. Co-operation between Northern Ireland and Ireland, including the execution of common policies in certain areas, occurs through the North/South Ministerial Council
- Finally, the linkages between the two countries are strengthened further by the **shared cultural and linguistic background** of the two nations. This is particularly significant in terms of the labour market exchanges between the two countries, resulting (as mentioned above) in a higher number of migrant workers, in a more diverse range of industries and occupations, than would normally be expected between two high income countries.

However, the convenient elements of geography and cultural history are not all that support the economic relationship between the UK and Ireland. Both economies are active participants in the wider global economy which means that much of the trade and interaction between the two takes place in the context of larger global supply chains. From the Irish operations of American

pharmaceutical companies interacting with research institutions and other operations in the UK to European banks based in London sourcing back-office functions from Ireland, the interconnectedness of modern capitalism means that the two countries can now interact as part of much broader supply chains.

However, the two countries are engaged in global trade and this may also pose a constraint on the strengthening of the UK-Irish economic relationship. Should the countries identify more attractive partner countries then it may be the case that these relationships are built at the expense of existing ones. This happened to some extent in the late 1990s and early 2000s, when FDI from the US into Ireland resulted in the UK's share of total investment in Ireland diminishing.

Ireland's large trade surplus, when compared to the UK's trade deficit, highlights an interesting caveat in the broader context of each country's trade linkages. Ireland's use of the Euro as currency means that the usual mechanisms by which a trade surplus would disappear (the strengthening of the currency relative to others, and subsequently less competitive exports) no longer apply. Ireland has a strong incentive to run a trade surplus, as it has no long-term implications for competitiveness. In contrast, the UK's deficit is less significant because sterling's value can adjust to restore some level of competitiveness. The fact that the deficit has fallen since the beginning of the recession suggest that the monetary measures taken to stimulate the economy (such as quantitative easing) may have helped to devalue the pound, making British exports more competitive abroad. Should the UK continue to have a relatively loose monetary policy, and the ECB continue to oppose quantitative easing programmes of the same magnitude as the Bank of England, Ireland's exports to Britain will be less competitive, while British exports to Ireland will be more so. This will encourage trade flows from the UK to Ireland, while discouraging reverse flows.

Despite the current weakness of sterling relative to the Euro, weak Irish domestic demand at present in Ireland means that the level of imports into the country from the UK is falling. Therefore, the weakness of the domestic Irish economy is one of the key constraints holding back the UK-Irish economic relationship.

2 Agri-Food

This section sets out, for the agri-food sector:

- Long-term trends
- Recent developments
- Future prospects

The Agri-Foods sector does not easily fit to the NACE classifications by which the majority of economic statistics are available. The analysis below considers two NACE sectors as the sub-sectors of Agri-Foods;

- NACE classification A Agriculture, forestry & fishing - referred to within the text as 'agriculture'
- NACE classification CA Manufacture of food products, beverages & tobacco products - referred to within the text as 'manufacture of food & beverages'

Similarly, not all data is available for most recent time periods. Unless otherwise stated, the analysis below uses the most recent data available.

2.1 Long term trends

The agri-food sector generated £32,862m in GVA in the UK in 2010[27] and €9,874m in Ireland in 2011[28], 2.51% and 6.81% of total GVA in the respective countries. Figures from CSO and DAFM identify a slightly higher figure of 7.7% of GVA for Ireland.[29]

Employment has fallen constantly over the long-term history in agriculture in Ireland. Over the period 1970-2007, the number of employees has decreased by 24,000 (125%). The number of hours worked has fallen by a lesser proportion of 60% (59 million less hours) over the period 1970-2007, On the other hand, gross output and GVA (in current basic prices) has been increasing in the long-term (see Figure 29: GVA in Agri-Food).

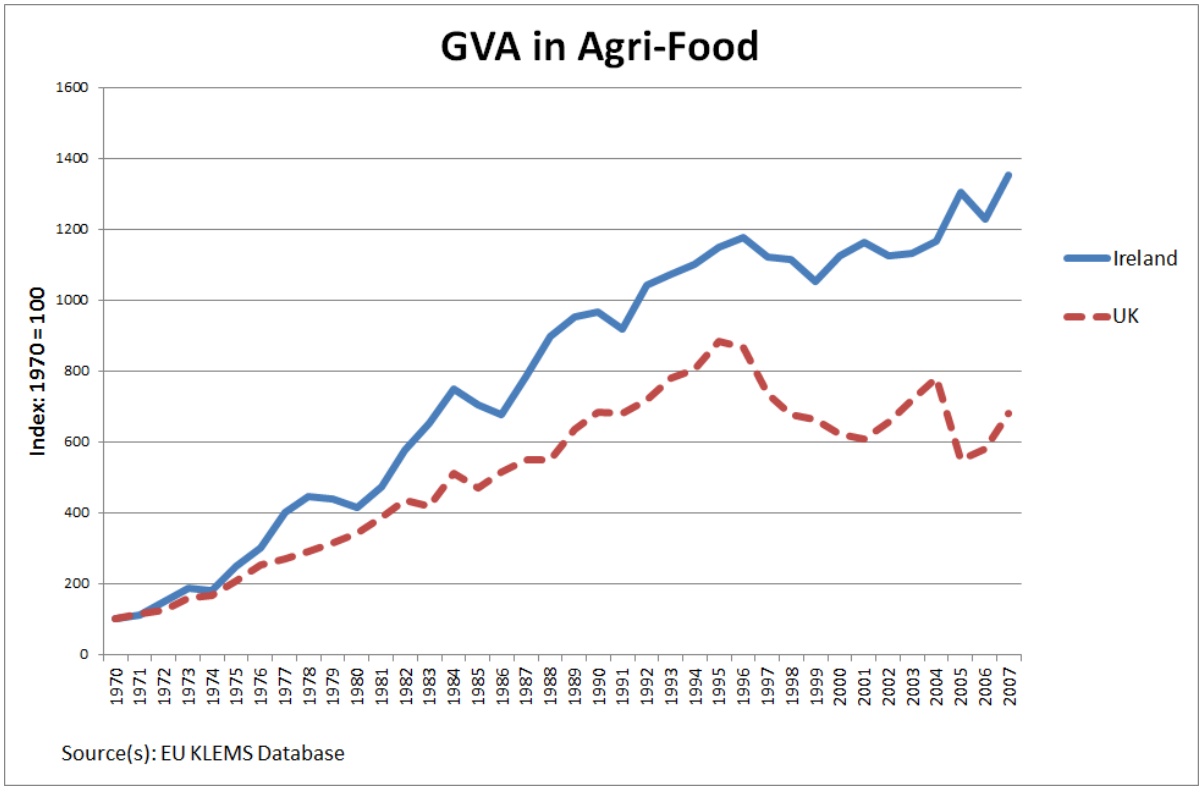
Employment in the UK follows a very similar trend to that witnessed in Ireland over 1970-2007, with the number of employees falling by 257,000 (55%) in agriculture. The number of hours worked has fallen by a larger percentage than the fall in employment in the UK, in contrast to Ireland. The number of hours worked fell by 606m (60%) in the UK. Gross output fell in the late 1990s and continued to fall in the 2000s in the UK, and in 2007 was 90% of the 1995 value. Gross output increased throughout the 70s and 80s in the UK and then flattened out in the 90s. In contrast, Irish gross output in agriculture increased throughout each decade over 1990-2007. In 2005, gross output was around 50% larger than gross output in 1995. GVA has increased more consistently in Ireland than the UK in agri-foods. In the UK, GVA was on the up from 1970-1995, but from 1995-2007 GVA fell fairly sharply. GVA in 2005 was £4.55bn less, in current basic prices, than GVA in 1995.

[27] Data from: ONS National Accounts (Blue Book), 2012

[28] Data from: Eurostat - Annual National Accounts

[29] Fact sheet on Irish Agriculture Dec 2012

Figure 29: GVA in Agri-Food

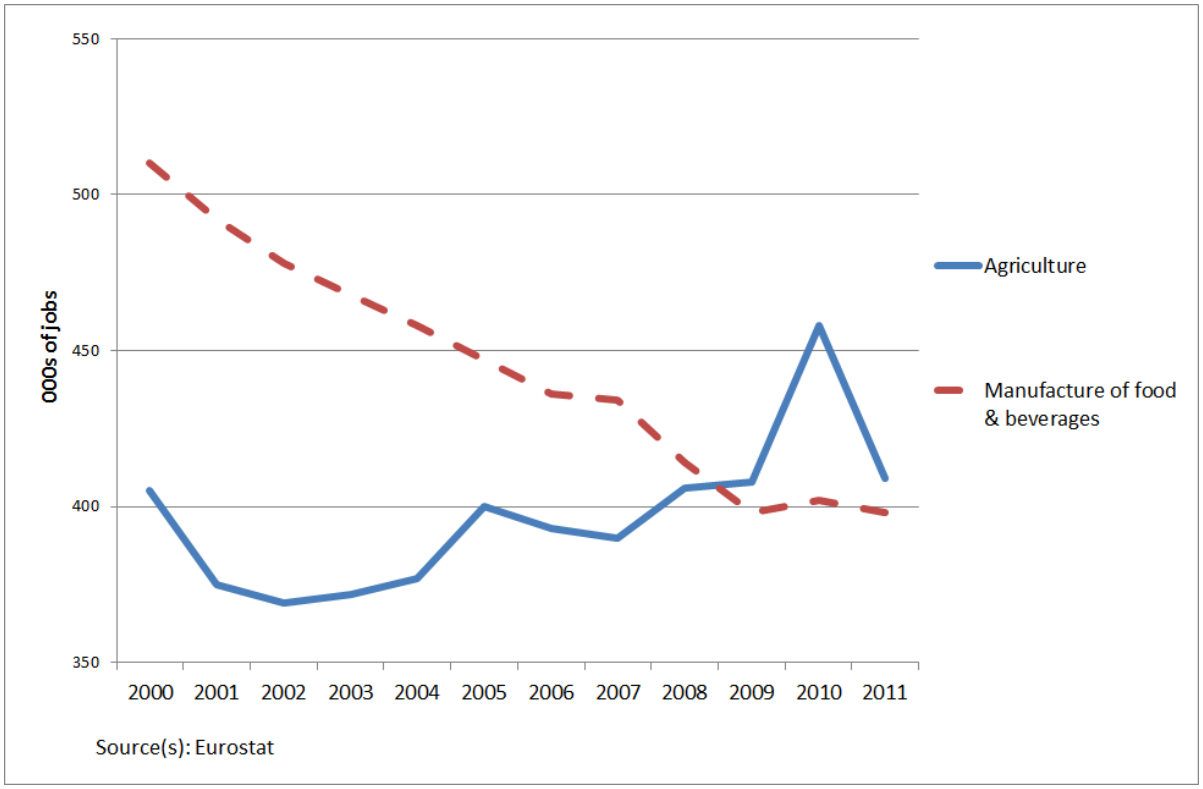


2.2 Recent developments

2.2.1 Employment and productivity

Overall employment in the UK agri-food sector has fallen quite sharply over 2000-11 as a result of strong job losses within food manufacturing (see Figure 30: UK Employment in Agri-Foods Sector). Over 2000-11 employment in the UK in the manufacture of food & beverages fell by around 112,000 jobs (22%). The recent performance of the sector has been more encouraging, with overall employment remaining fairly stable since 2009. In contrast the number of jobs in agriculture in 2011 was similar to that in 2000, though there is some indication of a modest upward trend in employment since 2003.

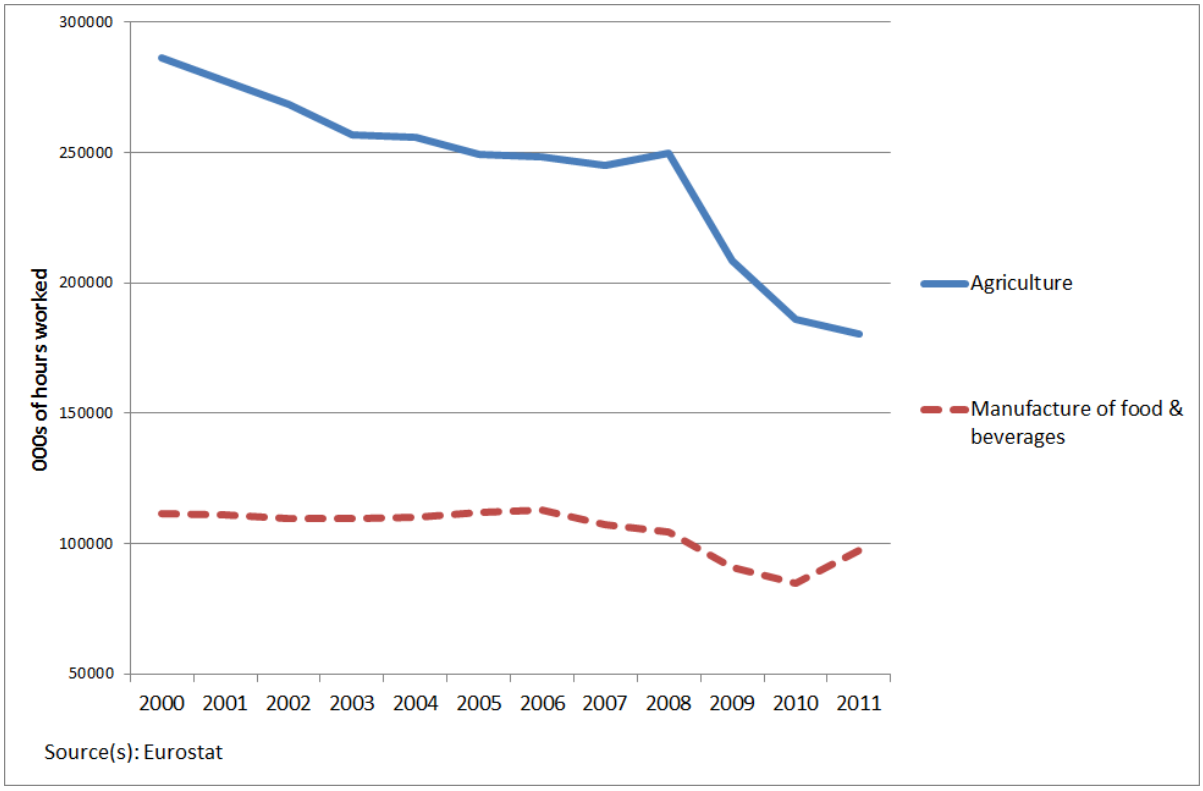
Figure 30: UK Employment in Agri-Foods Sector



Employment in most industries in the UK was badly affected by the recession which began in 2008. However, as shown by the graphs, employment in agri-foods was not adversely affected immediately. The number of jobs in agriculture in 2011 was similar to levels at the start of the recession (in 2008) and while the rate of job losses in 2008 and 2009 was similar to that seen in preceding years, there has been no further erosion of overall number of jobs in the industry since. As the sector meets consumers basic needs it is often viewed as being relatively insulated against the effects of an economic downturn. However, within the sector there will be segments that have performed better than others. There is evidence that consumer spending patterns have become more polar during the recession, with people moving to lower value products from mid-market varieties. This will impact on some segments of the Agri-Food sector.

In Ireland, employment (measured in terms of hours worked) in agriculture fell by approximately 41% over 1998 – 2011, equivalent to around 55,000 full time jobs (see Figure 31: Ireland Hours Worked in Agri-Foods Sector). Both subsectors of the agri-food sector experienced a decline in employment during the recession; the largest falls are in agriculture, where many of the jobs are part-time, and so the employment levels are fairly volatile.

Figure 31: Ireland Hours Worked in Agri-Foods Sector



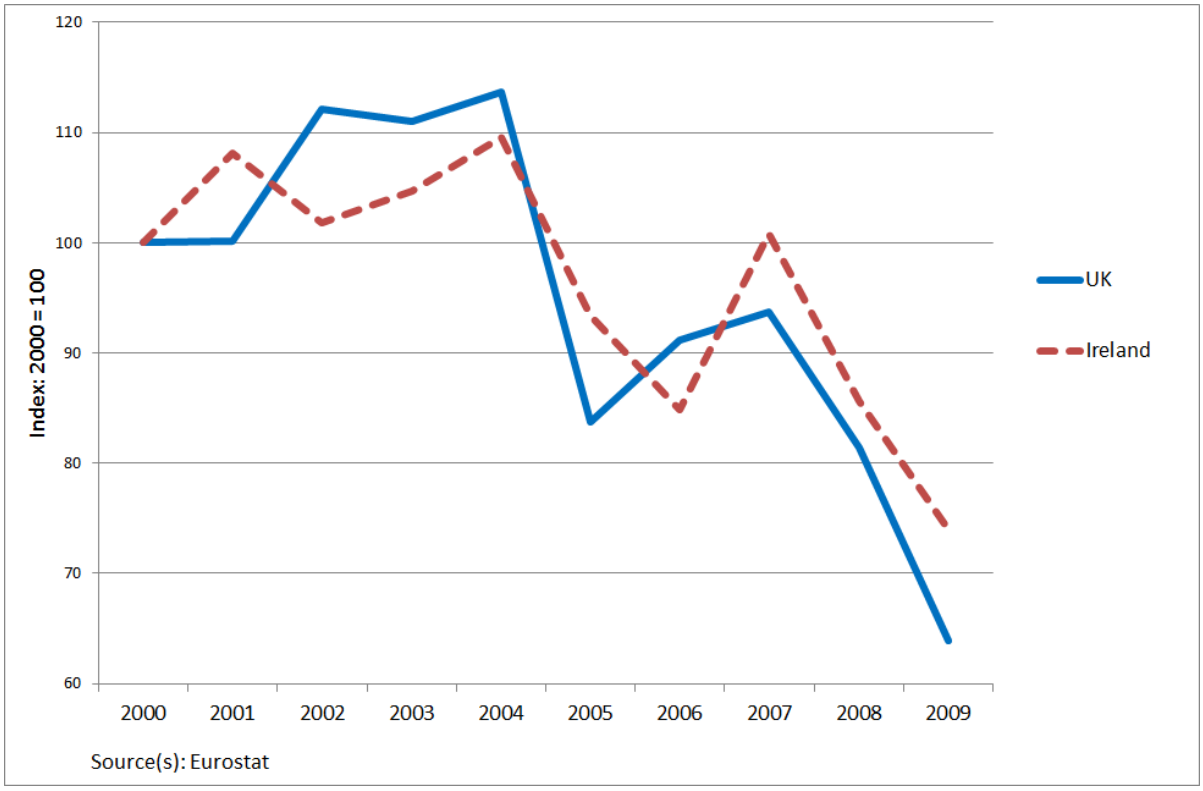
Employment increased in agriculture in the UK during the recession, but the number of hours worked decreased in this sector in Ireland. This might be seen as contradictory, but these two datasets may not tell the whole story. A lot of the additional jobs created in the UK were part-time, and so the overall number of hours worked in the UK may have actually decreased. Additionally, employment, in terms of number of jobs, may have increased in Ireland (this data is not available), but the overall effect has been a decrease in the number of hours worked because the nature of the work is largely part-time. Therefore, the UK employment numbers do not reflect the number of hours worked, and the number of hours worked data for Ireland does not truly reflect the level of employment in the sector.

The index of agriculture labour input is an index showing the changes in the total labour force input into agriculture, measured in annual work units. On this measure labour inputs in Ireland have risen by 11% since 2005, while it has fallen by 3% in the UK and by 20% in the EU as a whole (see Figure 32: Agricultural Labour Input Index). In absolute terms, the agriculture labour input in agriculture in the UK in 2012 was 289.2 and 165.6 in Ireland; i.e. Ireland's agricultural sector requires approximately 43% fewer hours of labour input than the UK sector. The EU's more rapid decline in input into agriculture, in terms of hours worked, indicates that the Irish and UK agricultural sector has performed more strongly than many other EU member states. It could also suggest that the employment levels have been more stable in Ireland and the UK than the EU as a whole (although the precise relationship between hours worked and jobs is not clear – it may be that a reduction in hours worked signals a shift from full-time to part-time work rather than a reduction in the total number of jobs).

Figure 32: Agricultural Labour Input Index

The trends in productivity in the agri-foods sector have been very similar in the UK and Ireland over 2000-09 (see Figure 33: Agri-Foods Productivity). One reason for this may be that Ireland's unit labour costs are only slightly less than that the UK's. Levels of productivity peaked in the UK in 2004 but fell dramatically in 2005. There was an increase in employment levels in agriculture from 2003 to mid-2010 and this could have contributed to decreases in productivity and then a slow recovery, although it must be recognised that the link between employment and output is less clear in agriculture than in many other sectors, as poor weather can have a large impact upon outputs. Overall, productivity in the UK declined significantly over 2000-12. Agricultural productivity levels were around 10% higher in 2012 than in 2005 in Ireland, while they were marginally below the 2005 level in the UK.

Figure 33: Agri-Foods Productivity



2.2.2 Output

In 2011, GVA in agriculture in Ireland was €2,931m; agriculture contributed 2% of total Irish GVA in 2011, a decline from a 3.4% contribution in 2000. In the UK, agriculture's contribution to GVA has shrunk from 1.0% to 0.6% over the 2000-2010. UK GVA from agriculture in 2010 was £8,333m. The sector in Ireland is around than a quarter the size of that in the UK.

Since 2000, nominal GVA in agri-foods has fallen in the UK; by 2010 GVA attributable to the sector was 7% lower than in 2000. Employment in agri-foods has increased since 2000, but total value added has decreased (see Figure 34: GVA in Agri-Foods). This suggests that the agri-food sector has become more labour intensive in the UK, or that productivity has decreased.

Figure 34: GVA in Agri-Foods

In 2011 Irish GVA in agri-foods was 9% lower than in 2000. GVA was been falling consistently up until 2009 where a recovery has been seen since. This has been in stark contrast to the strong growth in GVA seen in the economy as a whole up to 2008, and then a decline since.

The trends seen in overall GVA and agri-foods GVA in Ireland and the UK have been very similar. Growth in total GVA has been mirrored in both countries, although it has grown at a faster rate in Ireland. Changes in the GVA attributed to agriculture have been paralleled in Ireland and the UK, as shown by the graph. This suggests certain similarities in the industries.

2.2.3 Earnings

The Agriculture and food development authority in Ireland reports that "the agri-food sector makes a very significant contribution to the net inflow of funds to the Irish economy. Analysis highlights that the net foreign earnings of the 'bio sector' contribute approximately 30% of the total net earnings from primary and manufacturing industries." [30]

The average number of hours worked per week in the food products sub-sector has been decreasing over recent years, while nominal average earnings per week have been increasing (see Figure 35: Average Earnings per Week and Figure 36: Average Number of Hours Worked per Week). The beverages sub-sector experienced sharp increases in the average number of hours worked per week up until 2001, after which there was a sharp drop since when there has been a modest upward trend. The large drop in hours in early 2000s was accompanied by a drop in average earnings.

[30] Agriculture and food development authority - Agriculture in Ireland:
http://www.teagasc.ie/agrifood/

Figure 35: Average Earnings per Week

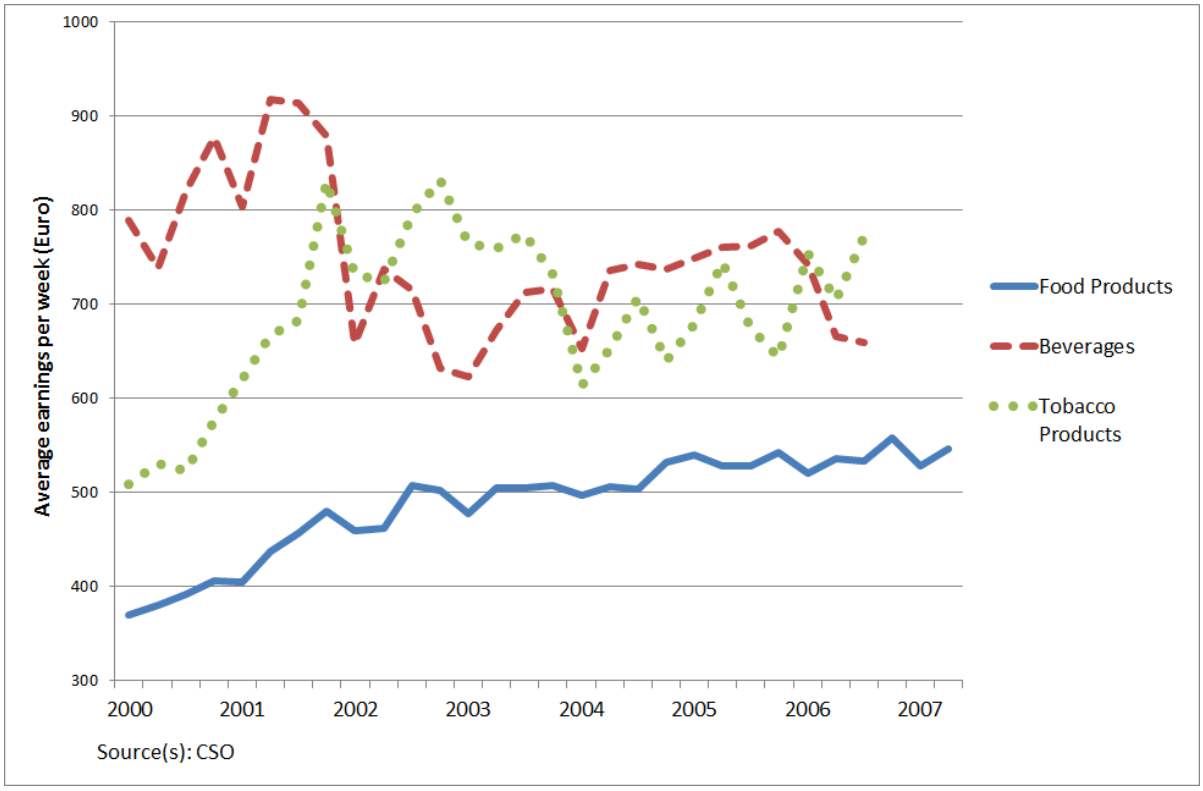
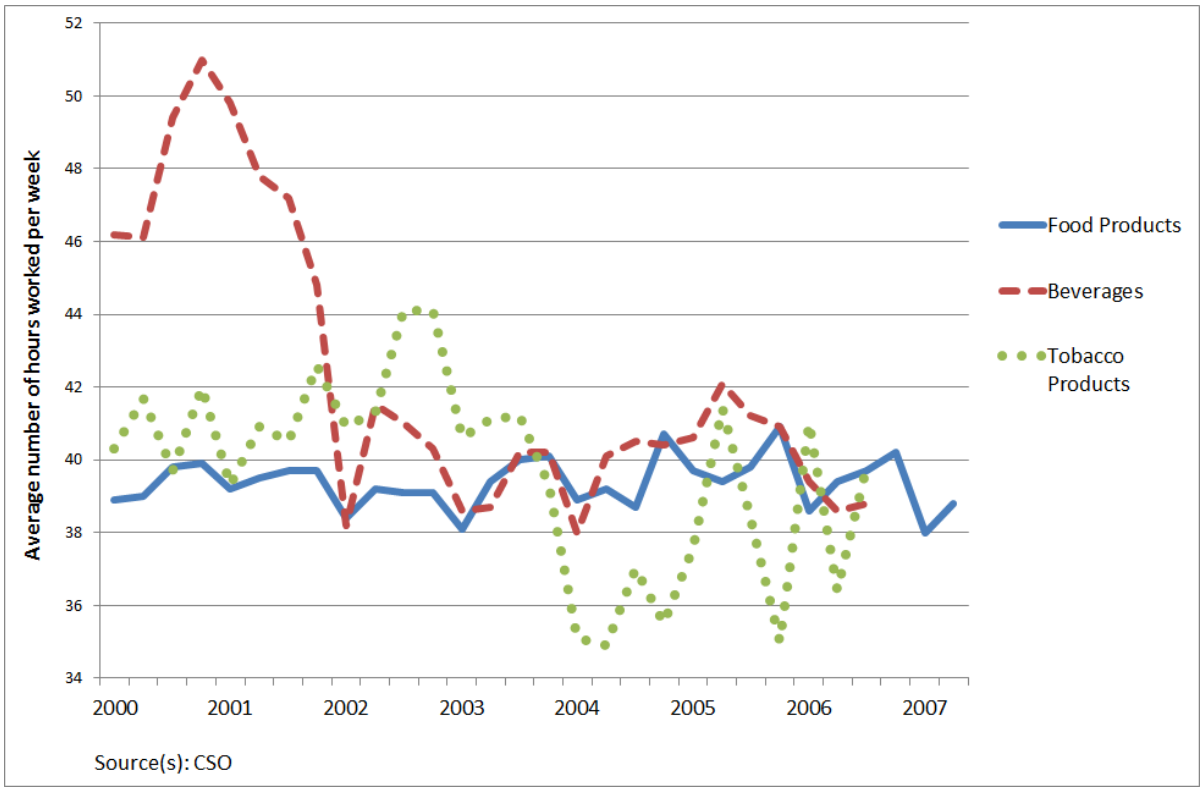


Figure 36: Average Number of Hours Worked per Week

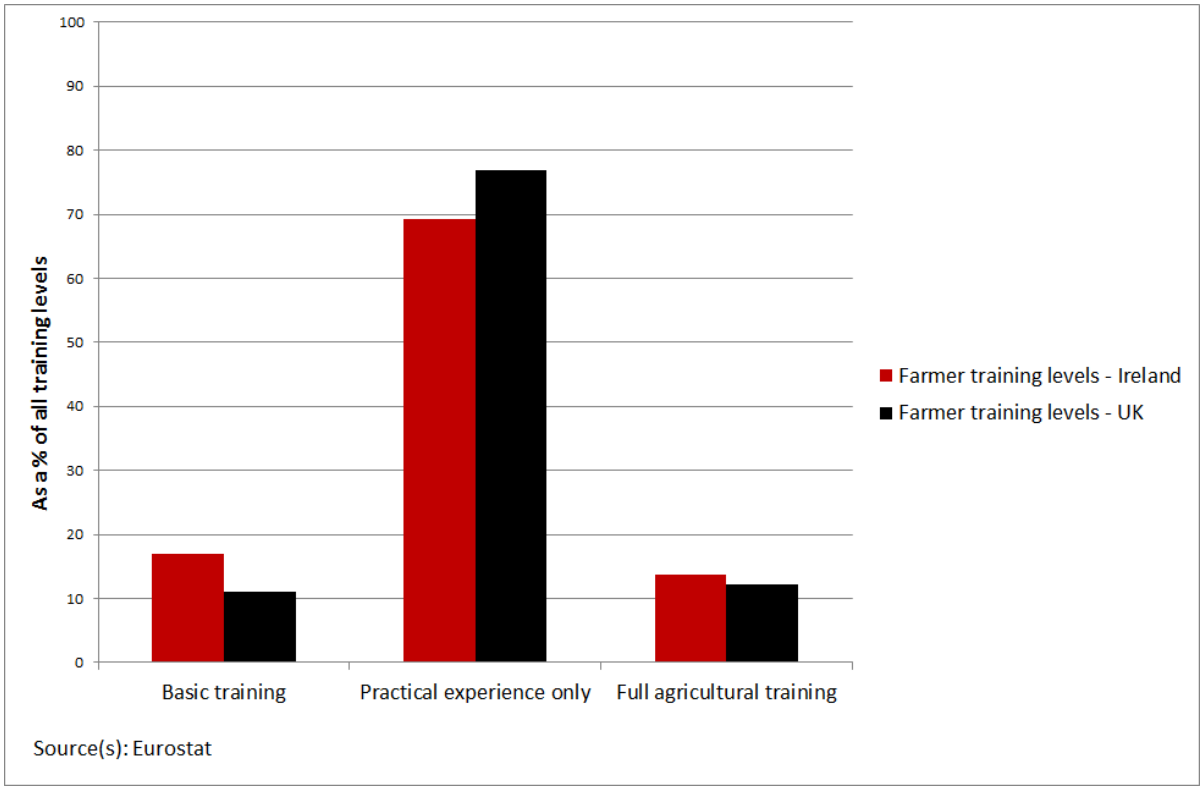


2.2.4 Skills

Although dated, the comparative data for Eurostat shows differences in the training levels in UK and Ireland agriculture sector (see Figure 37: Farmer Training Levels, 2005). Farmers with basic training

account for around 17% of total farmers in Ireland compared to 11% in the UK. Farmers with practical experience account for 69% of the total farming population in Ireland and 76% in the UK. Ireland has a larger proportion of farmers with full agricultural training, with 14% compared to 12% in the UK.

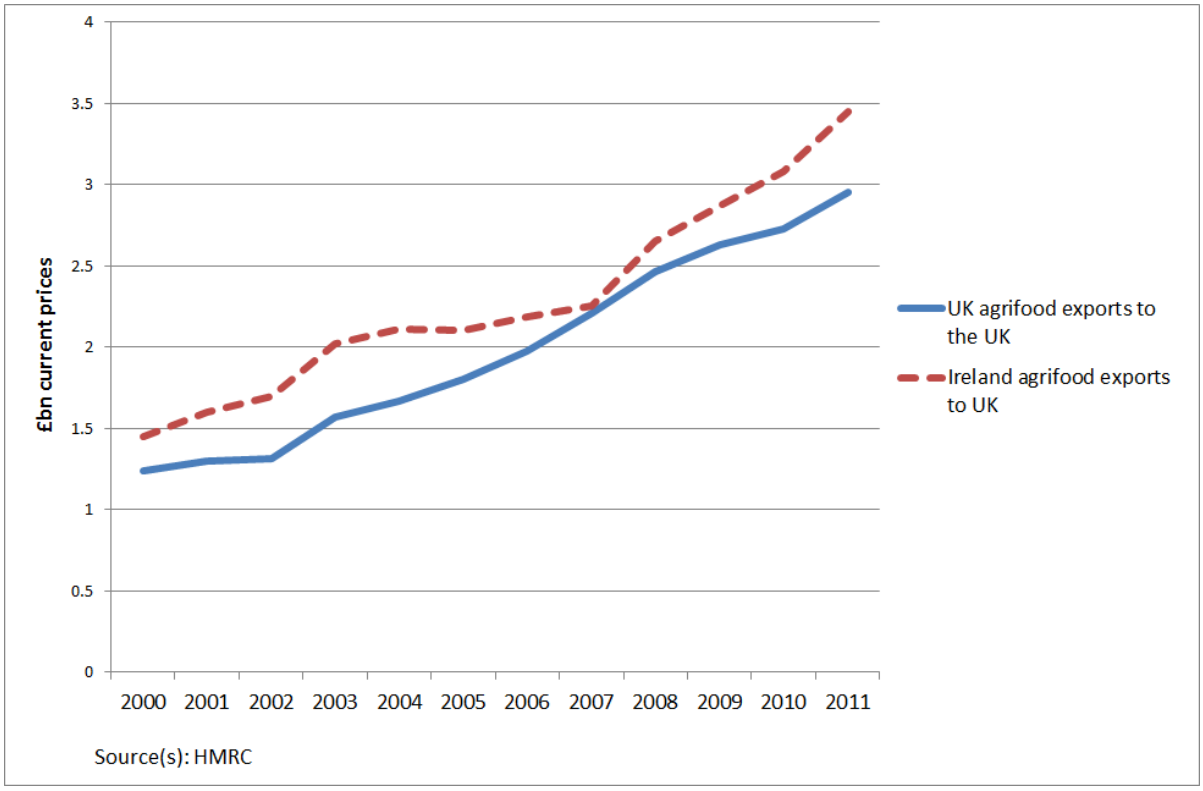
Figure 37: Farmer Training Levels, 2005



2.2.5 Trade

Across the agri-foods industry as a whole in both countries, trade flows between the UK and Ireland are larger than with any other country; that is, the UK's largest export market is Ireland and Ireland's largest export market is the UK. Ireland agri-food exports to the UK are slightly larger than the equivalent flow from the UK to Ireland (see Figure 38: Bilateral Agri-Foods Trade) and both have increased steadily (in nominal terms) over recent history.

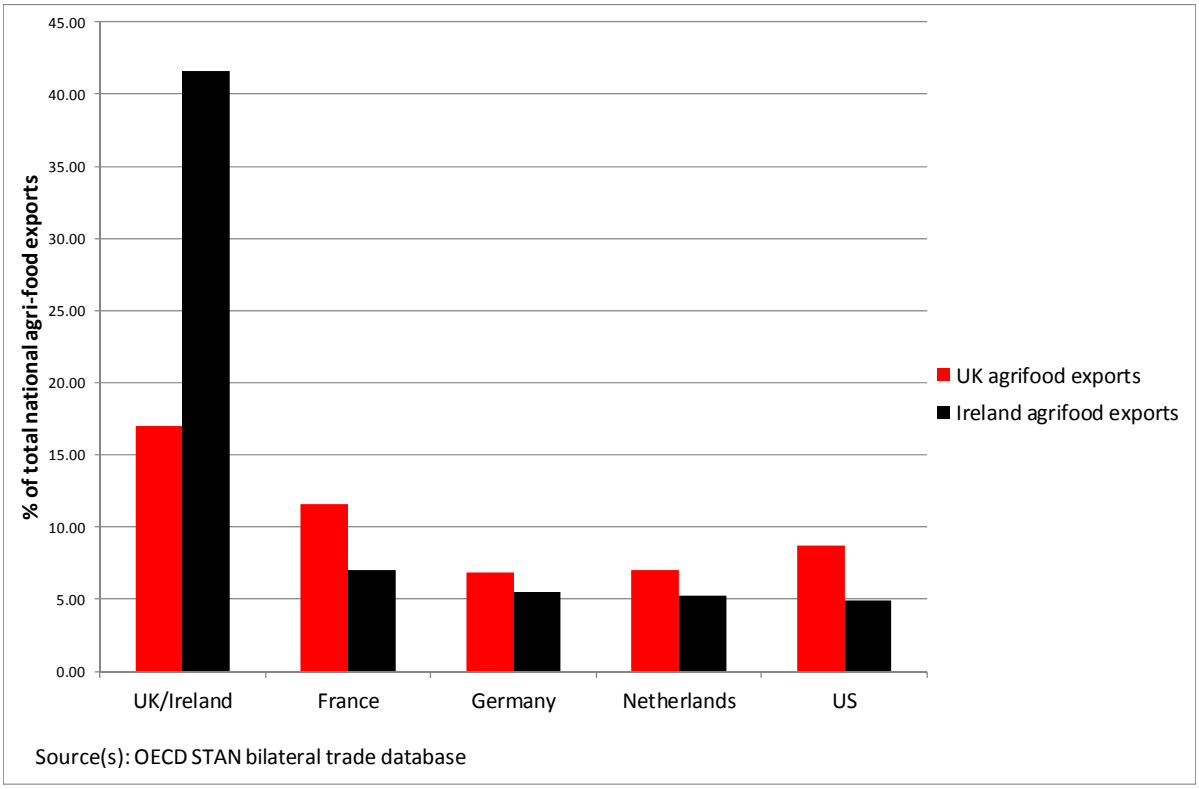
Figure 38: Bilateral Agri-Foods Trade



To put the scale of this bilateral trade in context; UK exports to Ireland are 47% larger than their exports to the next largest market (France)[31], while Ireland exports more to the UK than it does to the remaining 25 EU member states put together - agri-food exports to the UK are around 41% of total Irish agri-food exports (see Figure 39: Agri-food exports by destination, 2011).

[31] Data from: OECD STAN bilateral trade database, 2013

Figure 39: Agri-food exports by destination, 2011



2.3 Future prospects

In 2009, the UK agriculture sector spent €9.541m on research and development. This was some €2.5m lower than in 2007. It is not clear to what extent this was driven by recessionary pressures, or whether it was part of a wider decline in R&D in the agriculture sector. In Ireland, €1.3m was spent on R&D on this sector in 2005[32], a fall of over €2m from its 1999 level, indicating that investment in the sector (in Ireland, and possibly also in the UK) was declining before 2007[33]. More recent data on private-sector Irish R&D in agriculture suggests that spending is holding relatively steady; total spend in 2011 was €3.55m, compared to €3.63m in 2009[34].

"There are over 3.6m published patents in the Agri-Food sector worldwide (approx. 5% of all patents). UK applicants are ranked 8th and account for 4.2% of all worldwide Agri-Food published patents."[35]

The Intellectual Property Office Informatics Team report "A brief overview of the UK agri-food patent landscape" calculated a relative specialisation index (RSI). RSI accounts for the fact that some countries have more patent applications than others in most fields of technology. The UK has an RSI of 0.05, with a worldwide rank of 25, which is "around the level expected given the overall level of patenting from UK applicants". This suggests that the UK "is not a world-leading innovator and is some way behind a number of both developed and developing nations." Ireland scores just over 0.2,

[32] Data from: Eurostat R&D Statistics

[33] R&D data was not available from Eurostat for consistent time periods, with data available for the UK covering 2007-2009 and Ireland from 1999-2005.

[34] Data from: CSO Business Expenditure on R&D

[35] Intellectual Property Office Informatics Team - A brief overview of the UK agri-food patent landscape:

http://www.ipo.gov.uk/informatic-agrifood.pdf

with a worldwide rank of 13, which suggests that there is a higher ability for innovation in the agri-foods sector in Ireland than the UK.

Arable land represented 38.3% of the total agricultural land stock in 2005 in the UK, compared to 27.3% in Ireland; in absolute terms the UK has around three times more arable land than Ireland. However, arable land use is declining in the UK, while the rate of increase in Ireland is likely to be insufficient to cope with increasing demand, placing the sector under increasing pressure in both countries to extract maximum returns from the available space.

3 Construction and physical Infrastructure

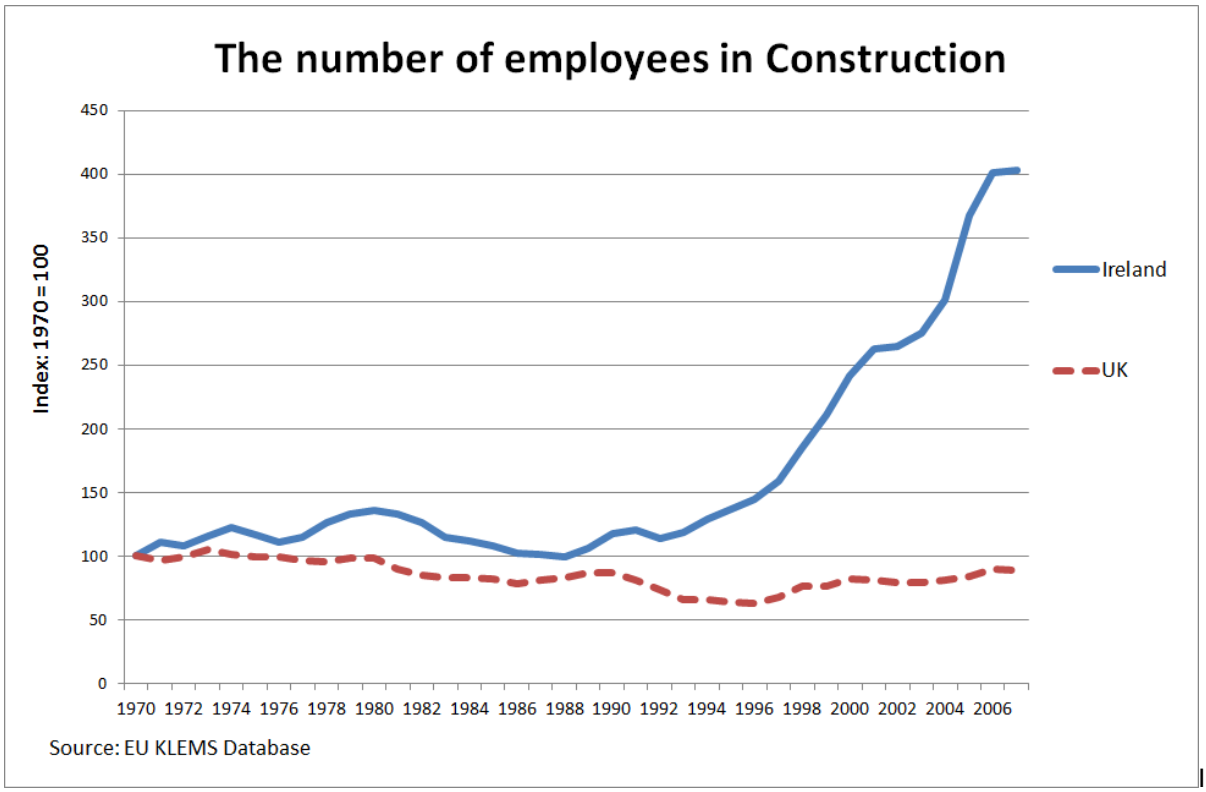
This chapter sets out, for the construction and physical infrastructure sector:

- Long-term trends
- Recent developments
- Future prospects

3.1 Long term trends

Construction activities generated €2,450m of GVA in Ireland in 2011[36], 1.68% of total GVA, and £83,280m[37] in the UK in 2010, 0.64% of the total GVA of the economy.

Figure 40: The Number of Employees in Construction



In Ireland, the level of employment in construction remained relatively stable from the 1970s to the late 1990s, where the number of employees oscillated between 50,000 and 65,000[38]. In the late 1990s and early 2000s, the number of employees in construction increased rapidly, increasing by around 120,000 (153%) from 1997-2007 (see Figure 40: The Number of Employees in Construction). The boom in the property market was the principal driver of the growth seen in employment and hours worked. Gross output and GVA increased consistently from 1970-2007. GVA, in current basic prices,

[36] Data from: Eurostat - Annual National Accounts

[37] Data from: ONS National Accounts (Blue Book), 2012

[38] Data from: EU Klems NACE 1.1 Database

increased by over €13bn over 1997-2007. GVA and gross output started to see very large growth in the latter part of the 1990 decade. Irish gross output in construction increased by an average of 14% pa over the period 1997-2007.

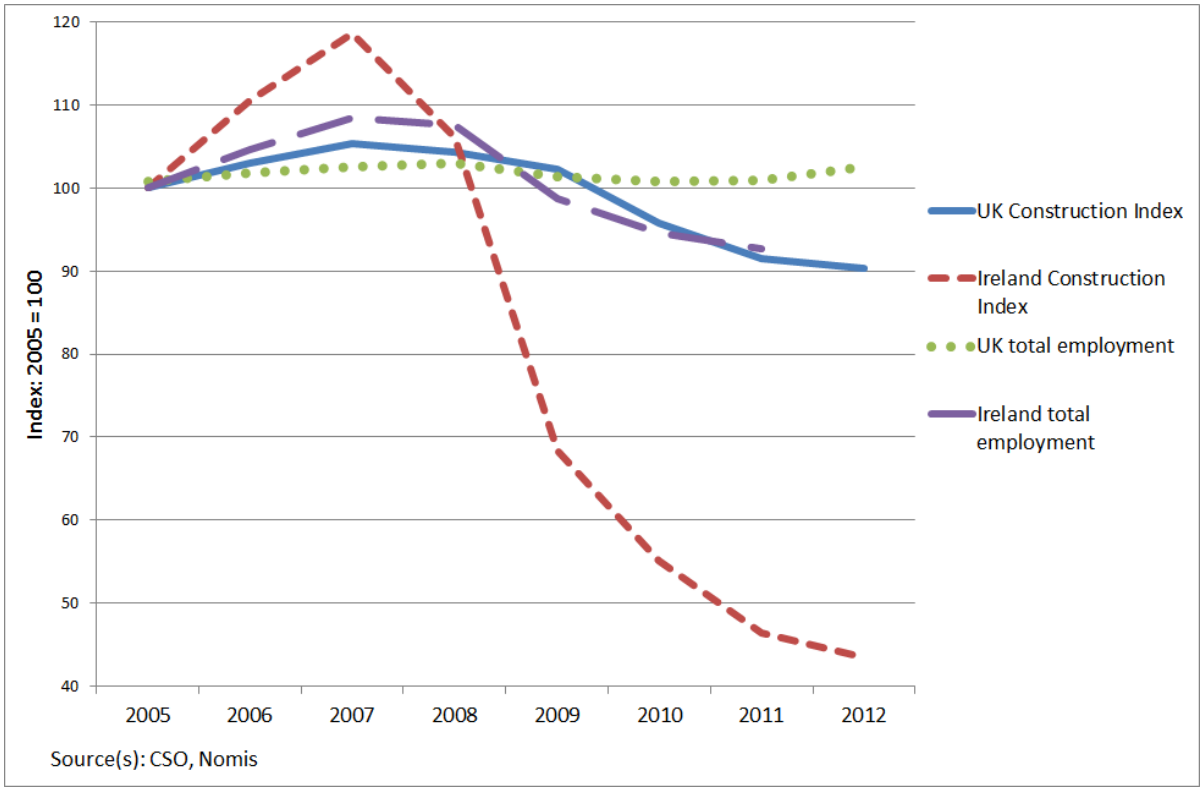
Employment in UK construction decreased consistently year-on-year over 1970-1995. The gross fall in the number of employees over this period was 509,000. Employment in the industry recovered in the late 1990s and early 2000s and increased by around 300,000 (31%) over 1997-2007. GVA, in current basic prices, increased for most of the period 1970-2007, with the exception of year-on-year declines over 1990-1993. The average number of hours worked in the UK construction industry has seen a long term decline, and fell quite sharply in the 2000s. These falls correspond to increasing employment which suggests that the nature of the work has changed in the UK. The average number of hours worked per worker was higher in the UK from 1970-1990, but has since been larger in Ireland.

3.2 Recent developments

3.2.1 Employment

The construction sector in both Ireland and the UK declined following the 2008 financial crisis and subsequent recession. The number of workforce jobs in the UK fell by 294,000[39] (13%) over 2007-2012, and by 171,000 (63%) over the same period in Ireland (see Figure 41: Employment in Construction).

Figure 41: Employment in Construction



[39] Data from: Nomis - Workforce jobs by industry (SIC 2007) and sex - unadjusted

The total number of full-time workforce jobs in the UK decreased consistently over 2008-12, whereas part-time jobs increased over this period. As a result, the proportion of total workforce jobs accounted for by part-time jobs increased from around 10% to 12%.

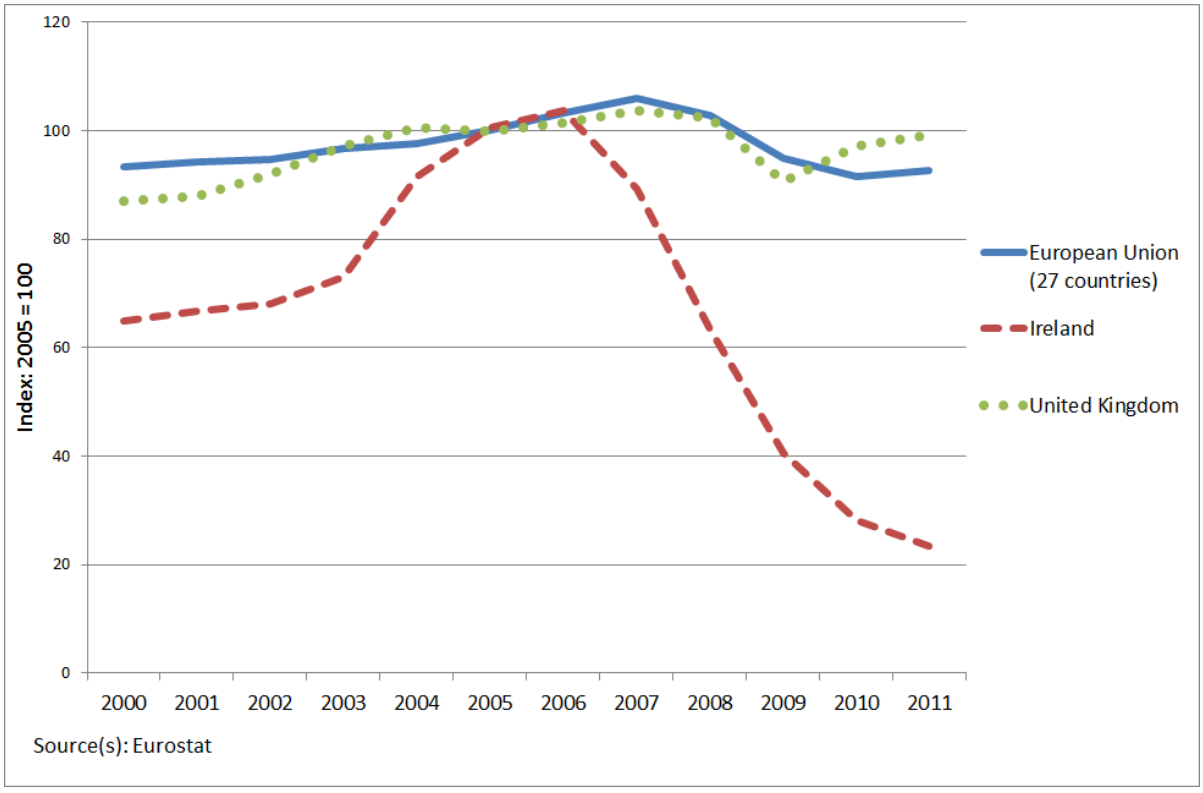
Decreases in employment slowed in both the UK and Ireland in late 2011 and through 2012[40]. The improving position of the UK construction index has mirrored improvements in the overall employment index in the UK to some extent, as the slowdown in the decline of construction employment has corresponded to a period of growth in overall employment. The rate of decline in Irish construction employment also slowed in 2010 and 2011, following sharp falls in 2008 and 2009.

The UK construction industry has seen larger percentage increases in self-employment than either manufacturing or services. Self-employment grew rapidly in the boom years for the UK construction industry during the early 2000s, and although the recession in 2008 caused levels of self-employment in construction to fall, levels have subsequently remained relatively steady.

3.2.2 Output

Output in the construction sector in Ireland has declined dramatically due to the falls in employment, which can be attributed to declining demand. The volume of production of the sector in 2011 in Ireland was only 23% of its 2005 level[41] (see Figure 42: Volume of Production). The volume of work done (measured through hours worked) was 50% of the 2005 value in 2011. As a result, GVA in the construction sector in Ireland has fallen significantly; by 2009, it was less than one-third of the 2006 level[42].

Figure 42: Volume of Production



[40] Ireland data from: CSO

[41] Data from: Eurostat - Construction sector statistics

[42] Data from: CSO - National Accounts

In the UK, the decline in output was a lot less pronounced. The volume of production bottomed-out in 2009 and has recovered to close to 2005 levels in 2010 and 2011. Repair & maintenance work has seen a larger fall in output than new work. The volume of orders for new construction by main contractors in Great Britain in 2009 was 35% less than the volume in 2005[43].

3.2.3 Earnings and Hours Worked

Growth in average earnings per hour was relatively strong in Ireland over 2000-2008[44]. Wages have risen in real terms, suggesting that wages have not been a large factor in the migration of workers from Ireland to the UK.

As a result of falling demand, gross wages and salaries in construction in Ireland have fallen significantly. In contrast, in the UK construction industry gross wages and salaries continued to rise; they were over 25% higher in 2011 than in 2005, even though employment fell by almost 10% over the same period.

3.2.4 Labour market characteristics

In the construction sector, the number of UK workers in Ireland and Irish workers in the UK has been falling. The number of UK nationals working in Ireland in the construction sector was 3073 in 2007 but fell to 1763 by 2009[45]. A similar trend is apparent in the number of Irish national working in the UK in construction, falling from 291 in 2007 to 242 in 2012. In 2011, Irish nationals were around 1.5% of the total construction workforce while UK nationals made up 2.5% of the Irish construction workforce.

The number of government supported trainees in the UK construction industry has been falling dramatically and apprenticeships are becoming scarcer. In 2000Q1, there were around 18,000 government supported trainees, and in 2012Q1 there were only 1,000[46]. The decline took place over 2006-12 (see Figure 43: UK Government-Supported Trainees in Construction), highlighting the changing priority of government spending in the face of austerity and declining demand for the sector overall.

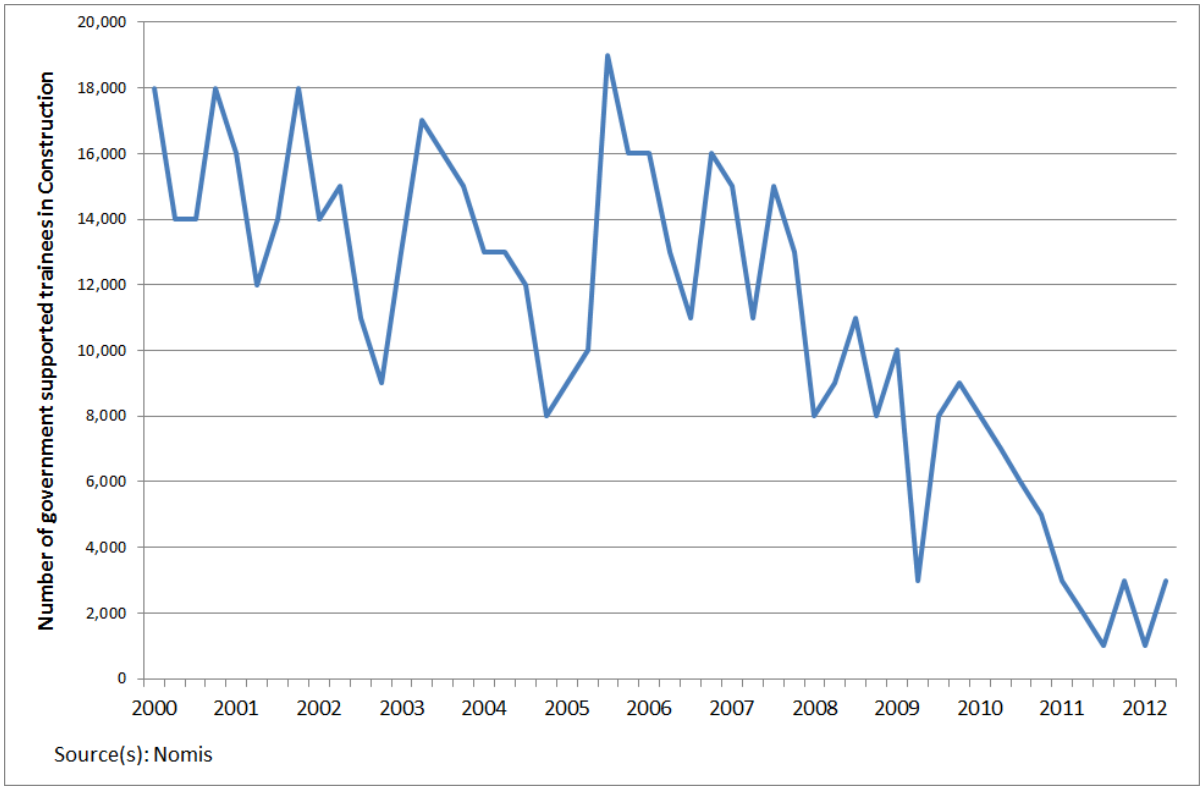
[43] Data from ONS - New Orders in the Construction Industry

[44] Data from: CSO - Earnings, Employment and Productivity by Industry

[45] Data from: ONS - Long Term International Migration estimates from the International Passenger Survey

[46] Data from: Nomis - Workforce jobs by industry (SIC 2007) and sex - unadjusted

Figure 43: UK Government-Supported Trainees in Construction



An absence of suitably-trained workers could lead to a decline in the future productivity of the construction sector in the UK. It also limits the future extent of collaboration between firms in Ireland and firms in the UK. Without the appropriate training, labour may be of a lower quality in the UK than in other countries, and the collaboration between UK and Irish firms may be limited.

More training will benefit the UK in the long term, as there will be productivity and international competitiveness gains. Conversely, if the number of trainees continues to be historically low then other countries may see gains in competiveness in the construction industry.

The lack of training in the construction sector in Ireland and the UK presents an opportunity for public sector collaboration. If common training schemes are set up, or if the UK offers more opportunities for Irish people to train in the UK and vice-versa, then both economies could benefit from more productive workers. Alternatively, as demand is expected to remain fairly stable in the UK, but diminish in Ireland, Ireland could offer more training schemes to British workers as an alternative to employment. The skilled workers who are without jobs in Ireland could offer their expertise in the form of training.

3.2.5 Housing Market

UK housing starts were, in 2012Q1, around half the level they were in 2005Q1. Housing starts in the UK fell dramatically over 2007-2008, but have slowly increased since (a brief dip in 2010 aside)[47].

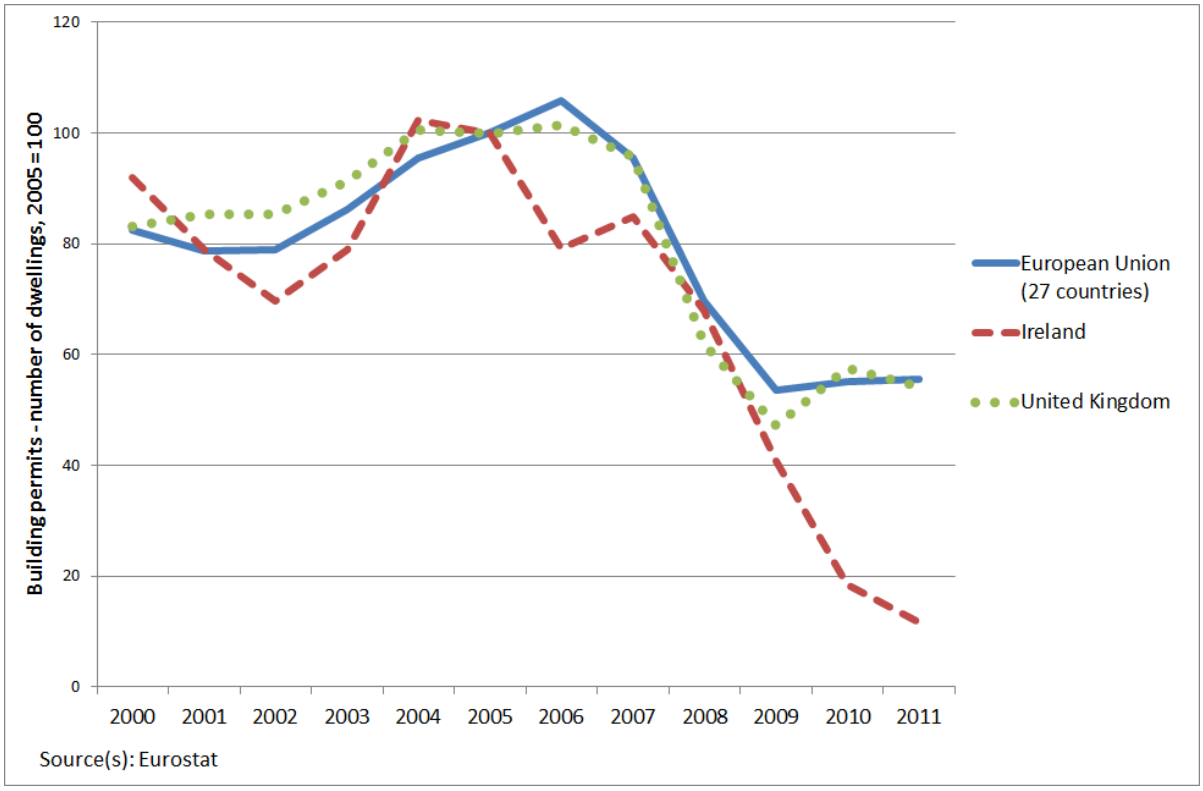
Changes in the number of building permits[48] (the final authorisation to start work on a building project) mirror the trend in the number of housing starts in the UK; however the most rapid decrease was seen

[47] Data from: DCLG - Live tables on house building

[48] Data from: Eurostat - Building Permits

in Ireland, rather than the UK. Ireland now has only 11.7% of the number of building permits it had in 2005 (see Figure 44: Building Permits Index).

Figure 44: Building Permits Index



3.2.6 Investment

On the basis of recently published figures, UK government investment in construction infrastructure is expected to decline over the next few years. Over 2011/12, total spending was £11,614m, and is expected to be £10,586m in 2012/13, £9,908m in 2013/14 and £8,738m[49] in 2014/15. The decreases expected in government expenditure over the next few years indicate that the recovery in the UK construction sector may not be immediate.

The declining investment by the UK government further demonstrates the receding assistance and demand provided by the public sector to the construction sector. The rapid decline of the Irish construction sector, as well as the austerity measures introduced by the public sector, has similarly limited opportunities in Ireland.

3.3 Future prospects

The construction sector in both the UK and Ireland suffered a significant downturn as a result of the recession, following on from a period of sustained growth through the early part of the 2000s. There remain a large number of unemployed workers with skills relevant to the industry; as such the anticipated recovery in the Irish construction sector (with strong employment growth in the period to 2020) should see the re-hiring of the existing skilled labour, although with employment remaining below the level seen in 2000 pockets of structural unemployment will likely persist.

[49] Source for government construction expenditure – HM Treasury

More generally, continued austerity will likely mean that large-scale public sector investment projects are few and far between (although these few 'big ticket' projects, such as HS2 in the UK, will employment large numbers of construction workers). Growth will be largely driven by the private sector, and opportunities exist in areas such as the construction of renewable power generation sites. However, these projects will require specific skills, and this is part of a wider trend of upskilling in the industry. The increasingly demanding requirements of large-scale construction projects will provide challenges for workers and firms alike, with more straightforward construction, such as house building, unlikely to return to the high levels seen before the onset of recession.

4 Energy

This chapter sets out, for the energy sector:

- Long-term trends
- Recent developments
- Future prospects

4.1 Long-term trends

Energy contributed £18,920m to UK GVA in 2010[50], 1.45% of total. In Ireland, the sector generated €2,753m[51], 1.68% of Irish total GVA.

Employment in the UK energy sector has been in decline since the 1980s. In 1980, over 610,000 people were employed in the energy sector, while by 2011 employment had fallen to only 171,000[52]. There have been significant changes in the makeup of employment in the energy sector, as the focus has shifted towards green energy and renewables. Employment in the sector reached its lowest ebb in 2005 (at only 108,000). Since then, employment in the sector has increased, with an additional 63,000 jobs created over 2006-11, during a challenging period for the economy.

Employment in the UK energy sector was once dominated by mining of coal, but the shift in industrial policy in the 1980s saw employment decline rapidly and by 2011 this activity accounted for only 3% of employment in the energy sector, a stark contrast to its 49% share in 1990. Electricity & gas accounts for nearly 72% of all workers in the energy sector today and extraction of oil & gas covers a further 19%, reflecting the changing nature of power generation in the UK (see Figure 45: UK Employment in the Energy Sector).

The productivity[53] of the energy sector in the UK has increased since 1990. While productivity in oil and gas extraction has remained relatively flat, both electricity & gas and other energy sources have increased significantly. The large productivity gains were driven by post-privatisation cost reduction initiatives and efficiency measures when employment levels were significantly reduced.

4.2 Recent developments

4.2.1 Employment and productivity

The largest variations in employment in the energy sector have been in electricity & gas; employment declined sharply in the first half of the 2000s (continuing a long-standing trend), although it picked up sharply towards the end of the decade. Employment levels in the remaining subsectors were relatively stable over this period (see Figure 45: UK Employment in the Energy Sector).

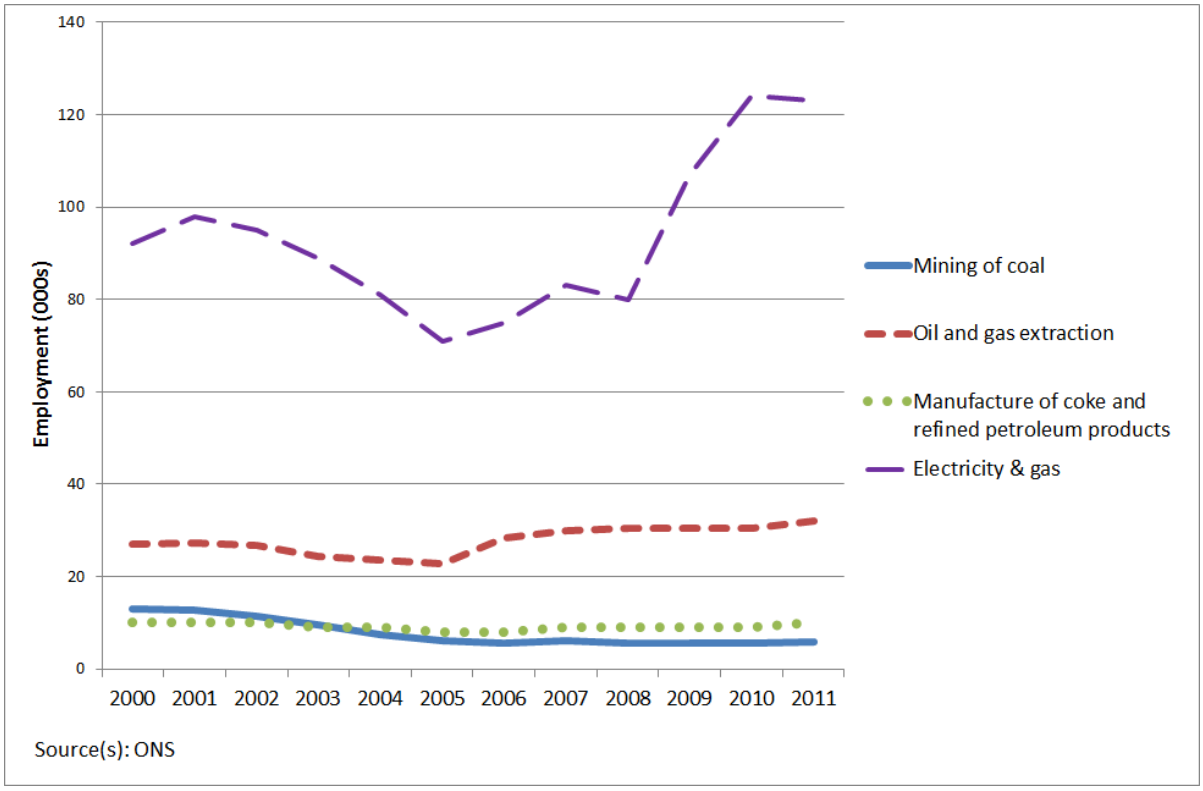
[50] Data from: ONS National Accounts (Blue Book), 2012

[51] Data from: Eurostat - Annual National Accounts

[52] Data from: Eurostat - Annual National Accounts

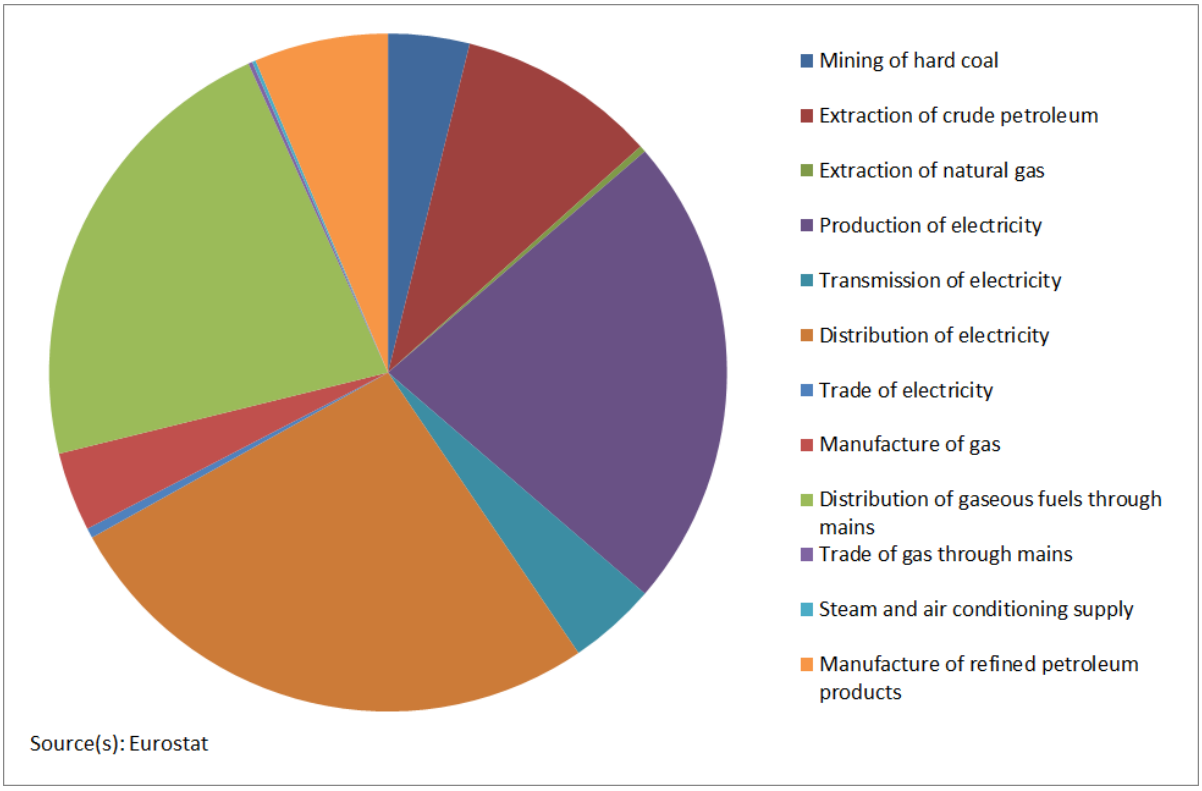
[53] Note that productivity in these industries is likely to be significantly influenced by changes in the price level, both of inputs to energy production and in the retail price paid by consumers.

Figure 45: UK Employment in the Energy Sector



The largest single sub-sector in the UK energy sector, in employment terms, is distribution of electricity, which accounted for 26% of total employment in 2011. Production of electricity accounted for 23%, distribution of gaseous fuels through mains accounted for 22%, extraction of crude petroleum 10% and manufacture of refined petroleum products 6% (see Figure 46: Industry Shares of Total UK Energy Sector Employment 2011).

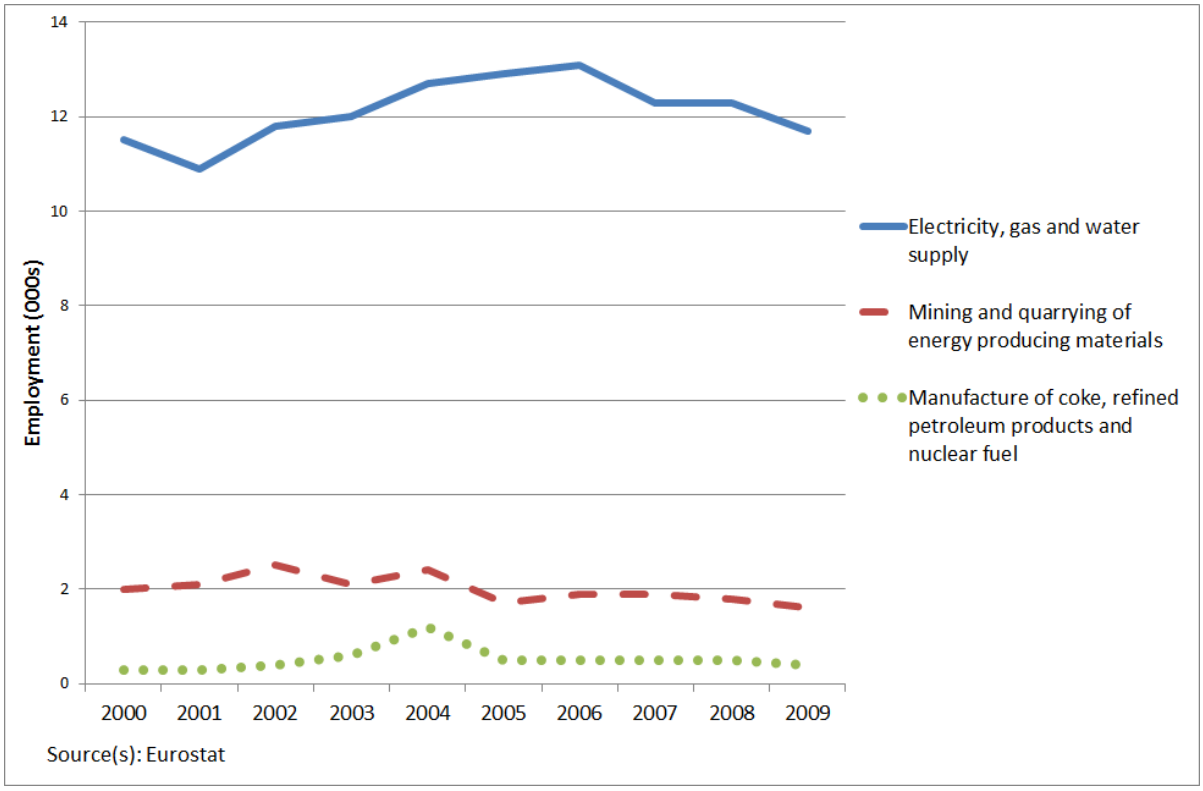
Figure 46: Industry Shares of Total UK Energy Sector Employment 2011



This illustrates that electricity dominates the UK energy employment market, and also highlights that renewable energy generation is not a significant employer. The renewables market is largely capital based and there is a very low labour ratio once construction is completed (for example, wind farms are largely unmanned and the primary employment opportunities are in construction and maintenance). A large proportion of the workers employed in the renewables sector will be employed in the construction of infrastructure, which are outside of the typical Standard Industrial Classifications (SIC) identified as the energy sector (and would appear in the national accounts under construction.

Employment in the energy sector in Ireland increased in the first half of the 2000s, although the impact of the recession resulted in employment returning to similar levels to that seen at the start of the decade (see Figure 47: Ireland Employment in the Energy Sector). Within this, there have been shifting employment trends amongst the sub-sectors, however. Mining and quarrying of energy producing materials has declined as a share of total employment in the sector. In 2000 it accounted for 14½% of total energy sector employment, falling to just over 11½% by 2009. Electricity, gas and water supply increased as a share of total employment by 2 percentage points over this period, to just under 85½% in 2009, while employment in the manufacture of coke, refined petroleum products and nuclear fuel increased to 3% over the same period.

Figure 47: Ireland Employment in the Energy Sector



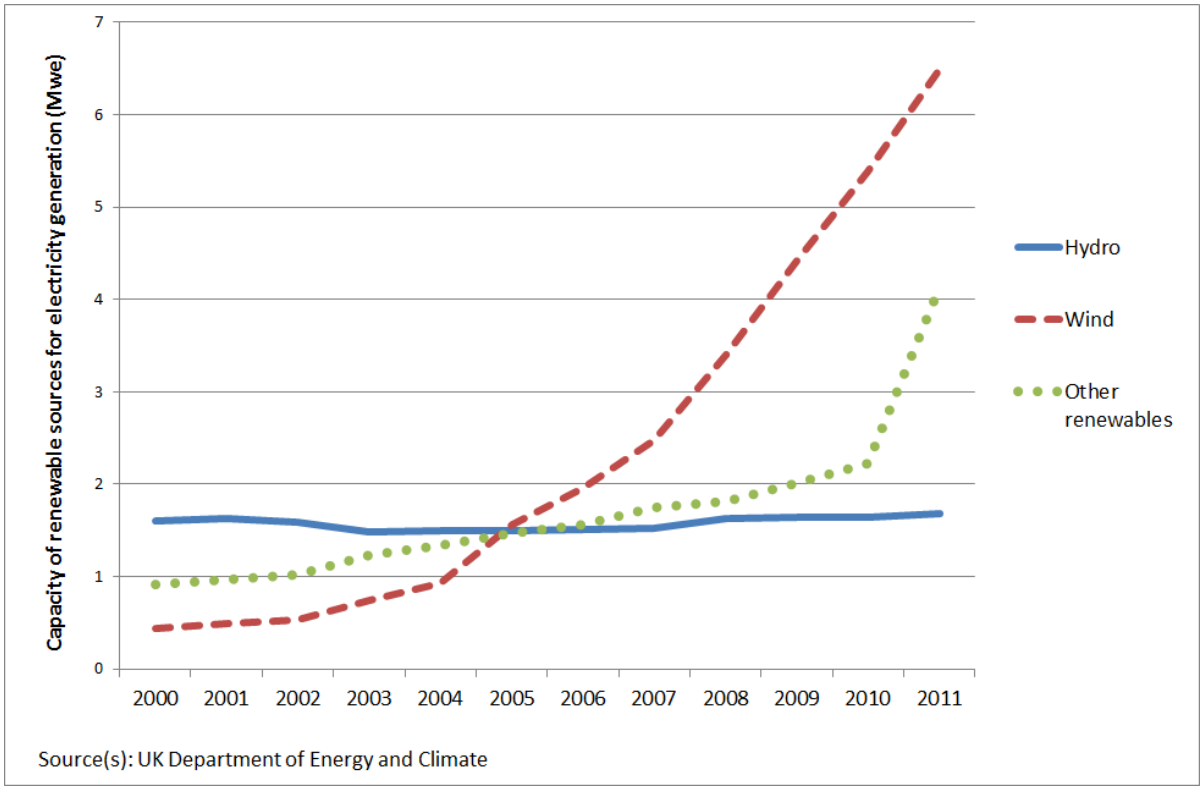
The more recent drop in productivity may be attributable to renewables investment. This reflects the developing nature of renewables technology – significant productivity gains are still being realised, and productivity (in terms of generation) remains lower than other methods of generation.

4.2.2 Electricity generation

The capacity of renewable sources of electricity generation in the UK has increased significantly in recent years, most notably in wind power. In 2007, the UK's total generation from renewables was 19,690 GWh, and in 2011 this had risen to 34,410 GWh[54] (see Figure 48: UK Capacity of Renewable Sources for Energy Generation).

[54] Data from: Eurostat - Energy statistics

Figure 48: UK Capacity of Renewable Sources for Energy Generation



The UK and Ireland are both net importers of energy, along with most other EU member states. In 2011, the UK's ratio of energy production to energy consumption was 0.69 (i.e. the UK produced 69% of the total amount of consumed domestically – although clearly not all of this 69% was used for domestic consumption) and Ireland's equivalent ratio was 0.14. This highlights Ireland's dependence upon energy imports[55].

Ireland's only current market for cross-border flows of electricity is the UK (although an interconnection from Ireland to France is already being considered to give access to other markets). If the electrical interconnection capacity is increased between the UK and Ireland, the electricity markets in both countries may be able to operate more efficiently through trade, as the increased capacity could mitigate intermittency problems attributable to renewables in both countries in the future. There are clear benefits and opportunities in this area to further collaboration between the UK and Ireland. The UK exported 760 GWh of electricity (3% of its total EU electricity out-flows) to Ireland in 2010, and 378 GWh flowed in from Ireland 378 GWh (16% of its total EU electricity in-flows). The UK's primary trading partner for electricity is France, from which it is a net importer. In 2011, the UK exported 4103 GWh to France and imported 8293 GWh[56]. It should be noted that the trading figures with France in fact represent the vast majority of trade with north-west Europe; not all of the energy traded will be directly with France, but due to the existence of an interconnector between Great Britain and France this is where the trade is registered. There is a further interconnector with mainland Europe running from the Netherlands.

The fuels contributing to the UK primary energy supply have shifted over time. Bioenergy and waste now account for around 4% of total primary energy supply, compared with 1% in 2000 (and no supply before 1989). This trend is likely to continue, as renewable energy is supported through government

[55] Data from: Eurostat - Energy statistics

[56] Data from: Eurostat - Energy statistics

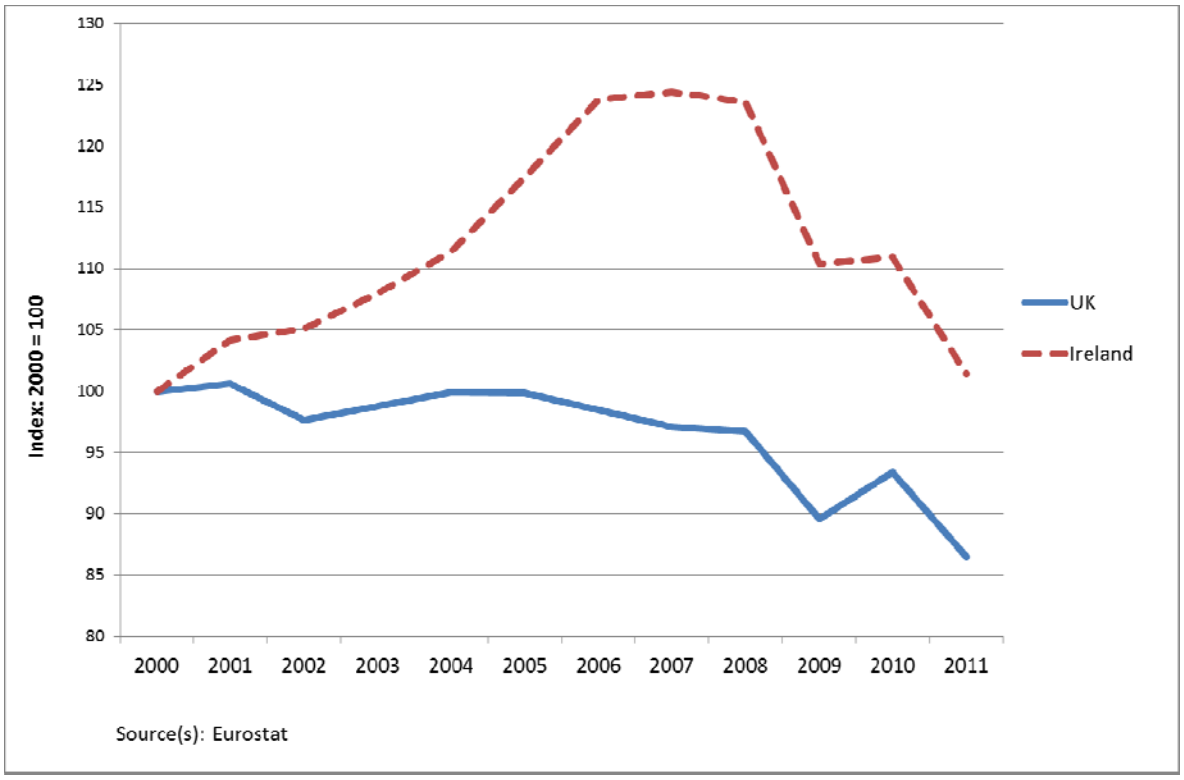
policy. However, a more fundamental shift in energy use is required if the UK is to meet its 2020 targets; currently 9% of energy is supplied by primary electricity (nuclear, hydro, wind and net imports), and this proportion has remained broadly constant over the past 20 years.

Between 2010 and 2011, power generated from renewable sources increased by 1,673 GWh in Ireland[57]. Wind energy generation increased by over 50%, by far the largest increase in absolute generation. The increase in renewable energy generation demonstrates the shifting priorities of energy generation towards renewable generation methods.

4.2.3 Consumption of energy

Final energy consumption in Ireland has increased at a much faster rate than in the UK, although in recent years significant decreases have been realised. While Ireland's consumption levels peaked at 24% above 2000 levels in 2007, by 2011 final consumption was only 1% higher than in 2000. By contrast, the UK's energy consumption level decreased fairly consistently over the period 2000-11, and was 13% lower in 2011 than in 2000, slightly below the 1990 level (see Figure 49: Final Energy Consumption). The reduction is recent years seen in both countries may in part be due to efficiency gains from domestic consumers, but the primary drivers of the decreases in consumption were likely to have been the economic downturn, a number of mild winters and changes in demand due to increases in the price level. Given the one-off nature of many of these factors, it is difficult to extrapolate trends in future usage. In absolute terms, Ireland's final energy consumption was approximately 8% of the level of UK consumption in 2011.

Figure 49: Final Energy Consumption

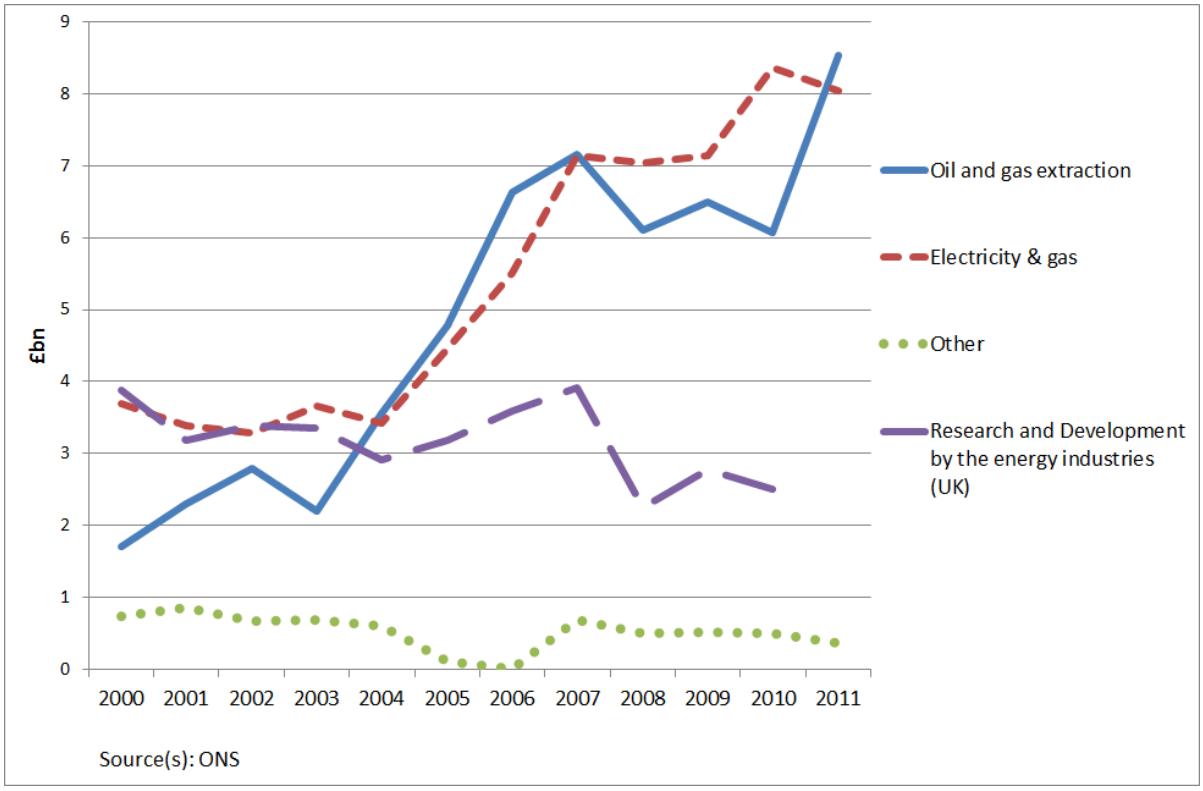


[57] Data from: Eurostat - Energy statistics

4.2.4 Investment and research & development

Investment by energy industries in the UK has increased significantly since 2005[58], driven in part by investment in renewables (see Figure 50: UK Investment by Energy Industries). The previous major increase in UK power generation investment was in the early to mid-1990s, as part of the "dash for gas". After this period, investment in power generation slowed down (as a result of the collapse of Enron and NETA legislation). This lack of investment has resulted in much of the current infrastructure, built in the 1960s and 1970s, being scheduled for retirement in the next decade. The issue in the UK is meeting current demand with existing infrastructure whilst also improving and increasing generation from renewables. Greater investment in capital will continue to drive technological developments and improve efficiency, particularly in the renewables sector where firms tend to be smaller and more prone to realising the benefits of knowledge spillovers.

Figure 50: UK Investment by Energy Industries



In the face of reduced private sector funding, the role of government in promoting R&D has grown stronger, with initiatives such as Ofgem's introduction of innovation funding incentives in 2005 serving to galvanise R&D through the latter part of the decade (as shown by the large increase of £1bn from 2005 to 2008 in R&D, nearly a 35% increase). This presents a potential area for further collaboration between the UK and Ireland. A joint strategy for R&D could allow the development of different stages of a value chain across the two countries, exploiting the natural advantages that both have and allowing the development of strong, independent R&D institutions.

[58] Data from: Eurostat - Statistics on research and development

4.3 Future prospects

4.3.1 Employment and productivity

Employment prospects for the sector in both the UK and Ireland are mixed; while the shift to renewables is likely to create jobs, these will be in the construction and manufacturing sectors, rather than in occupations historically associated with the energy (in particular, gas) sector.

If current technological trends continue, the level of electricity generated from renewables can be expected to increase, helping the UK to move towards its 2020 targets for renewables[59]. However, there remain significant issues to tackle. Some of the largest increases in renewable output and productivity relate to the commissioning of onshore and offshore wind farms. Planning constraints are being tightened for both onshore and offshore wind farms, and as a result commissioning rates may well fall.

Similar trends in productivity have been observed in Ireland; and while capacity issues are likely to be less pressing, further technological developments improving productivity will be required if renewables targets are to be met within the public sector spending constraints of austerity.

4.3.2 Generation and consumption

Public sector policy, both domestically and from the EU, will necessitate increased levels of energy generation from renewables. This is likely to drive increased employment in both the UK and Ireland, although a large proportion of the jobs created will be in the manufacture of capital and the construction of renewables sites. The high-productivity nature of renewables technology is likely to mean that significant increases in generation from renewable resources will create relatively few jobs in the occupations typically associated with the energy sector.

Ireland has been relatively successful in retaining domestically-trained highly-skilled workers in its own renewables sector. However, moving forwards, this may prove more difficult, as the larger size and wider scope of the renewables sector in the UK becomes increasingly attractive. Alternatively, if Ireland maintain its high levels of innovation in its development of renewables, it may be able to draw a limited number of highly skilled workers from the UK, while also retaining its own highly skilled workers.

There are stark implications for both countries. In the long term, an inability to retain highly-skilled workers could limit future productivity gains (through increasing costs of imported technology), and potentially limit the domestic energy generation capacity. It is for this reason that it is of important for both countries to maintain or increase investment in renewable energy and consider realising the potential benefits of collaboration in their research and development of renewables.

4.3.3 Renewable energy targets, and progress towards them

In the AEA report to the DECC Analysis of Renewables Growth to 2020[60], there were a number of constraints on progress towards meeting the 2020 target for renewables generation. These constraints were:

- Network connection

[59] Targets as stated by the European Commission

[60] http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/renewable-energy/2185-analysis-of-renewables-growth-to-2020-aea-report.pdf

- Access to finance
- Skills capacity limits
- Obtaining planning permission for sites with reasonable wind speeds

A further major issue in the development of renewables is the cost of generation compared to other sources. If the cost of renewables does not fall, subsidies will have to remain high to encourage take-up, and rising levels of renewables generation will place increasing pressure on public sector finances. This may present a difficult balancing act for UK and Irish policymakers; without sufficiently high subsidies, the private sector may not pursue renewables generation, resulting in missed targets.

DECC recently reported significant progress in renewables generation between 2010 and 2011, including a 27% increase in overall renewable electricity generated and a 40% increase over the same period in renewable electricity capacity. As a result, over 10% of all electricity generated is coming from renewables, with a 60% increase of offshore wind capacity and a five-fold increase in solar PV capacity. Similar progress has been made in Ireland, where renewables generation increased by 119 GWh (including a 292 GWh increase in generation from wind farms) between 2009 and 2010.

The UK generates a lower proportion of electricity from renewable sources than Ireland[61], although in absolute terms renewables generation in the UK is much higher (see Figure 51: Electricity Generated from Renewable Sources); indeed the UK has established itself as a lead developer of offshore wind energy generation. In 2010, Ireland produced around 13% of its electricity from renewable sources, compared to 7% in the UK. Ireland's official target for 2020 for share of energy produced by renewable sources is 16%, and in 2010 it had achieved levels of 5.5%. Ireland is expected to exceed its target in 2020, and it has the potential to be a net exporter of renewable energy. The UK's target is marginally lower, at 15%, and in 2010 produced 3.2% of energy from renewable sources. The rate of increase in renewables generation in both the UK and Ireland suggest that both should be able to meet their ambitious targets for renewables generation in 2020 (see Figure 52: Progress against 2020 Renewables Targets).

[61] Data from: Eurostat - Energy statistics

Figure 51: Electricity Generated from Renewable Sources

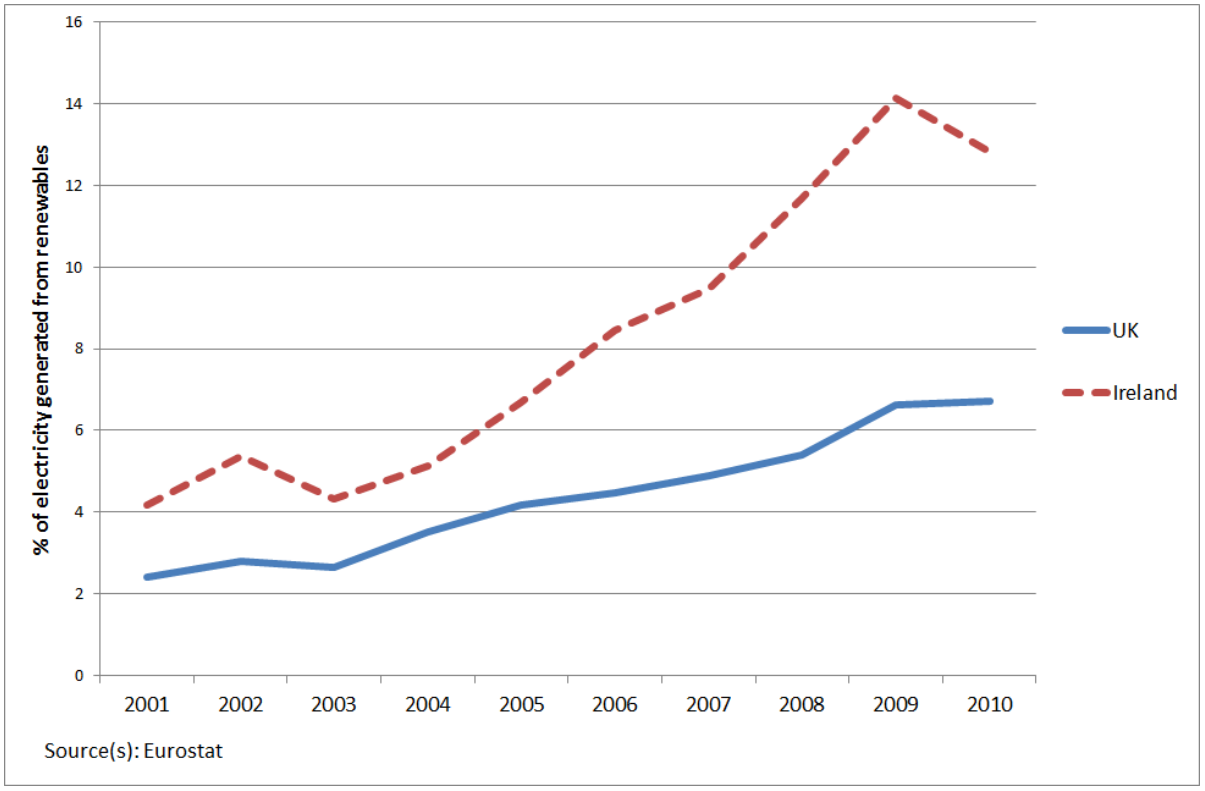
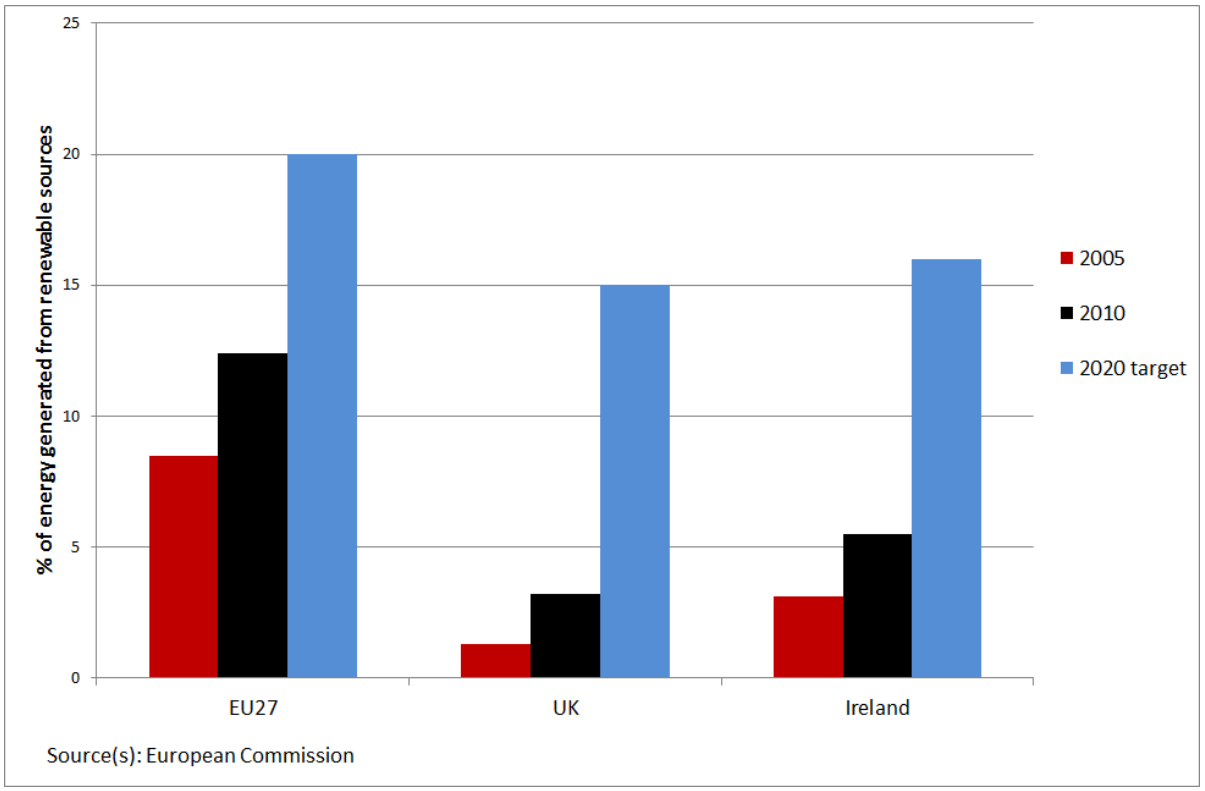


Figure 52: Progress against 2020 Renewables Targets



Although Ireland is currently generating a higher percentage of its energy from renewable energy usage, their reliance on fossil fuels is greater than that of the UK. 87.5% of the UK's energy demands in 2011 were met by fossil fuels, compared to 93.3% in Ireland. In the UK the dependency rate has been declining steadily. However this trend may not continue in the short-term, as investment in large-

scale energy generation is required to replace capacity that is due to be decommissioned. The scale of generation required is beyond the current scope of renewable technologies, so fossil fuel alternatives are likely to be pursued.

4.3.4 Areas for collaboration

Ireland and the UK have great potential to enhance economies of scale by utilising their geographical proximity to greater effect. Currently, there is some collaboration between the two countries; the East West interconnector allows electricity exports in both directions and in addition facilitates the integration of renewable generation on the Irish electricity system. This electricity interconnector has the capacity to power 300,000 homes. Eirgrid, a leading Irish energy business, believes that the interconnector will assist the growth in renewable energy in Ireland.[62]

Within the EU legislation on renewables generation, there exists the capacity for co-operation between countries. Italy and Luxembourg plan to use the cooperation mechanisms when trying to reach their renewable energy target. Luxembourg plans to import a large proportion of biofuel, and nearly two thirds of Luxembourg's renewable energy target will be fulfilled through biofuel imports and the cooperation mechanisms. Clearly, Luxembourg represents a special case, with limited geographical scope for renewables generation. However, this mechanism does show the potential for collaboration through trade in energy and it shows how this can maximise the benefits of each countries generation. A primary purpose of the trading relationship is to assist the UK in reaching their 2020 renewable energy targets, while also providing both countries with the capacity to deal with intermittency in renewables generation and periods of high demand through shared use of low cost fossil fuel plants, which are better equipped (both operationally and economically) for restricted utilisation.

Collaboration in renewables is also likely to instead take the form of shared expertise; deploying specialists between the two countries to advise and assist in the development of renewables projects in both countries. This may facilitate both increased generation and also increased productivity, reducing the required levels of public sector subsidies.

[62] See http://www.eirgrid.com/media/Final%20Press%20Release%20Opening%20of%20EirGrid%20East%20West%20Interconnector%20v2%20with%20image.pdf

5 Financial and professional services

This section sets out, for the financial and professional services sector:

- Long-term trends
- Recent developments
- Future prospects

5.1 Long term trends

Professional and financial services contribute significant GVA to both the UK and Irish economies; GVA attributable to these services totalled €29,899m (20.17% of total) in Ireland in 2011[63], and £319,951m (24.44% of total GVA) in the UK in 2010[64].

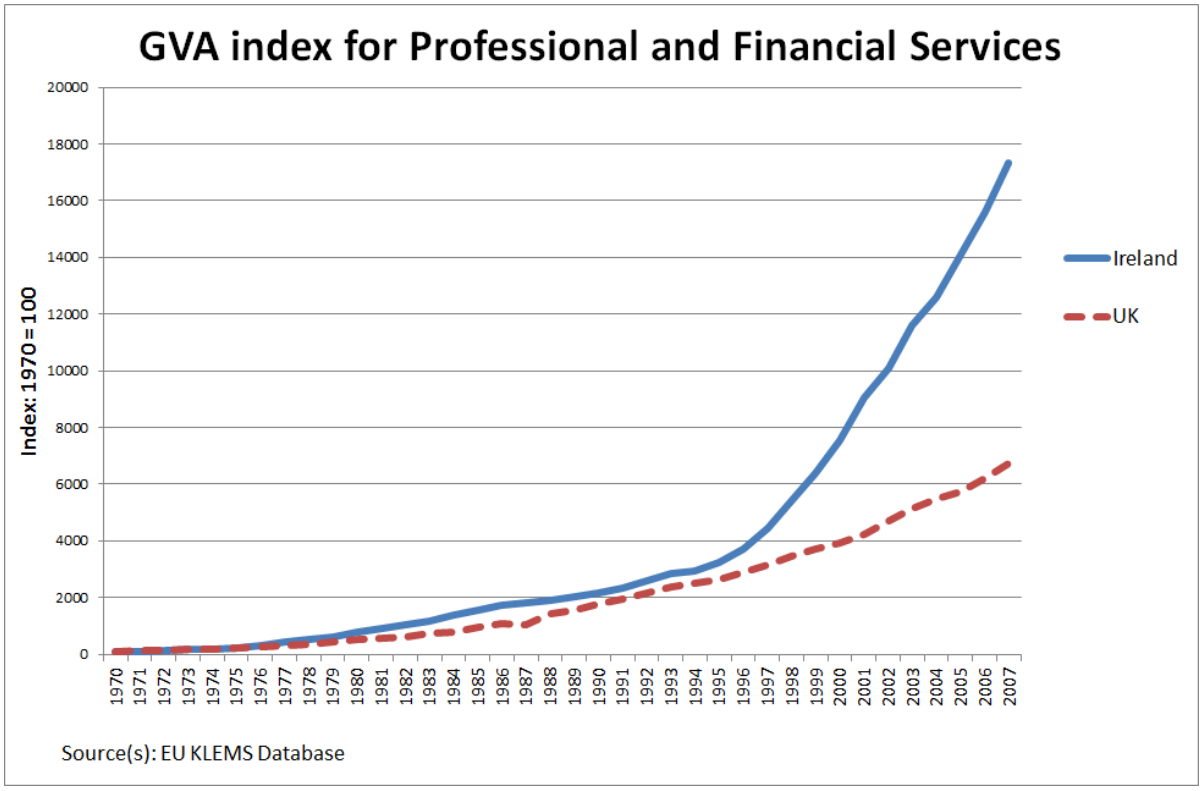
Professional and financial services in Ireland and the UK have experienced a very bright period over 1990-2007, up until the global recession and financial crisis in 2008, where employment and GVA have decreased substantially since. The number of employees in professional and financial, services in Ireland have increased by over 200,000 from 1970-2007, an increase of over 650%. The number of employees across the whole economy in Ireland has increased by around 980,000 (135%). This shows how successful this sector has been in Ireland and how largely and quickly it has grown. The number of employees in the sector in the UK has also seen large, consistent growth. In 2007, the number of employees was nearly 3.5m larger than 1970. Across the whole economy, the number of employees was around 2.3m larger in 2007 than 1970, which highlights the growth of this sector and the importance of the sector in the UK (see Section 5.2, Figure 50, 51 and 52).

Gross Value Added in professional and financial services has increased rapidly in both countries since 1970. GVA began to accelerate at a faster rate in Ireland in the mid-1990s (see Figure 53: GVA Index for Professional and Financial Services). From 1970-1995, GVA had been increasing at very similar rates, but by 2007, GVA was over 17,000 times larger than in 1970 in Ireland compared to 6,700 times lager in the UK. This is largely because Ireland's professional and financial services sector was still developing and being created in the early 2000s, while in the UK the sector was firmly established and gains could not be realised as largely as in Ireland.

[63] Data from: Eurostat - Annual National Accounts

[64] Data from: ONS National Accounts (Blue Book), 2012

Figure 53: GVA Index for Professional and Financial Services



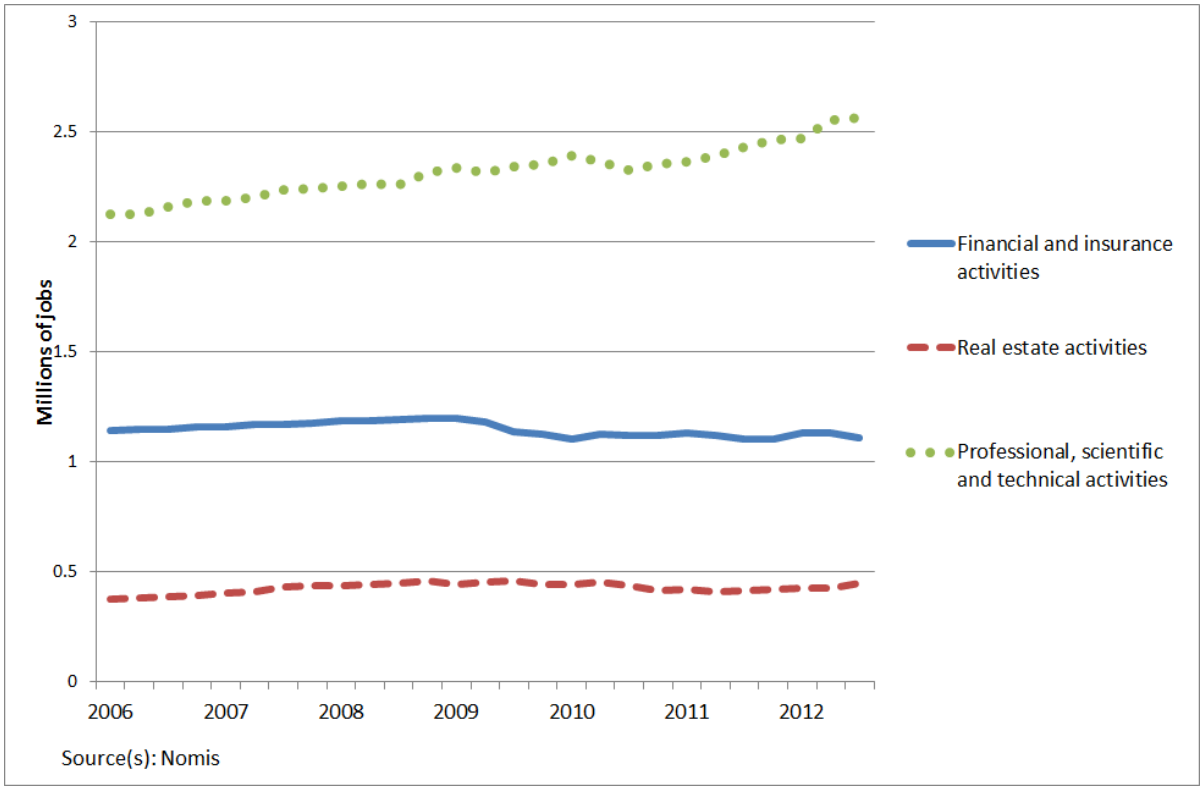
5.2 Recent developments

5.2.1 Employment and productivity

Employment levels in the UK financial and insurance activities industry have been relatively stable over the last decade; with the exception of the losses due to the recession (though overall employment in the sector did not fall until 2008 and since then it has only fallen by 6.7%).The proportion of part-time jobs in the industry is well below the average for the economy as a whole, and has fluctuated between 16-19% over 2006-12.

Employment in the UK real estate activities industry has remained steady (see Figure 54: UK Employment in Professional and Financial Services). In 2012Q1, the total number of jobs in the real estate activities industry was 427,000, with the largest growth over 2006Q1-2012Q1 seen in full-time jobs. In 2012Q1, there were 51,000 more full-time workers in this industry than in 2006Q1. Part-time jobs in the real estate activities sector as a proportion of all jobs have remained higher than other industries in the financial and professional services sector, although just below the average for the UK economy as a whole.

Figure 54: UK Employment in Professional and Financial Services



Both part-time and full-time jobs increased in professional, scientific and technical activities over 2006-12 in the UK. The total number of jobs in 2012Q1 was 348,000 (16½%) higher than in 2006Q1. Full-time jobs, which accounted for around 77% of total employment, increased by 261,000 (16%), while part-time jobs increased by 87,000 (17.3%). The recession in the UK seemed to have little effect on employment in the sector as a whole in the UK.

The number of self-employed workers in the UK increased in all of the professional & financial services industries over 2006-12. Self-employment has increased the most, in absolute terms, in professional, scientific and technical activities.

The number of people engaged in financial institutions in Ireland increased fairly consistently over the period 2000-06[65] (see Figure 55: Number of People Engaged in Ireland's Financial Institutions), although it is likely that employment in the sector fell sharply in the aftermath of the recession and the problems experienced by Irish banks. The professional, scientific & technical and real estate sectors were clearly impacted by the recession. The number of employees in real estate activities decreased steadily over 2008-10, by around 10% in total (see Figure 55: Number of People Engaged in Ireland's Financial Institutions). The number of employees in professional, scientific and technical activities also decreased in Ireland in 2009 and 2010, and levels in 2010 were 13,000 (14%) lower than in 2008.

[65] 2006 is the most recent year of historical data available.

Figure 55: Number of People Engaged in Ireland's Financial Institutions

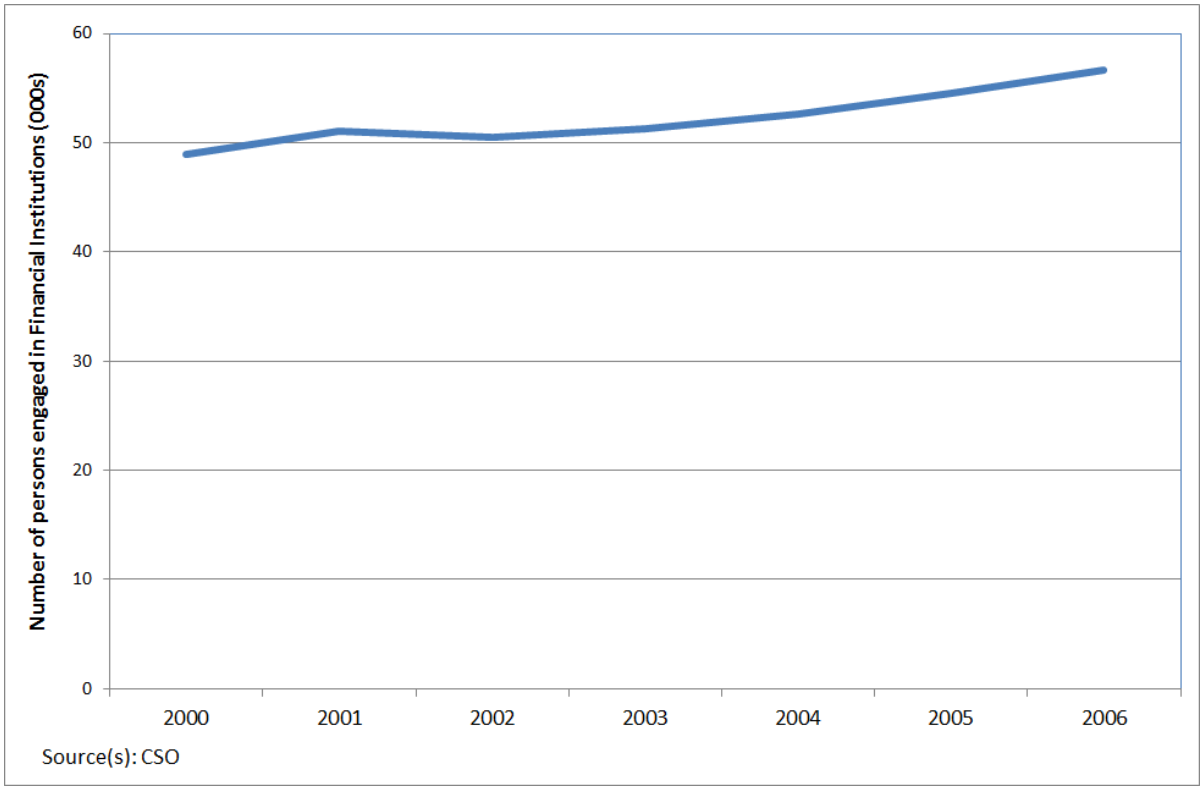
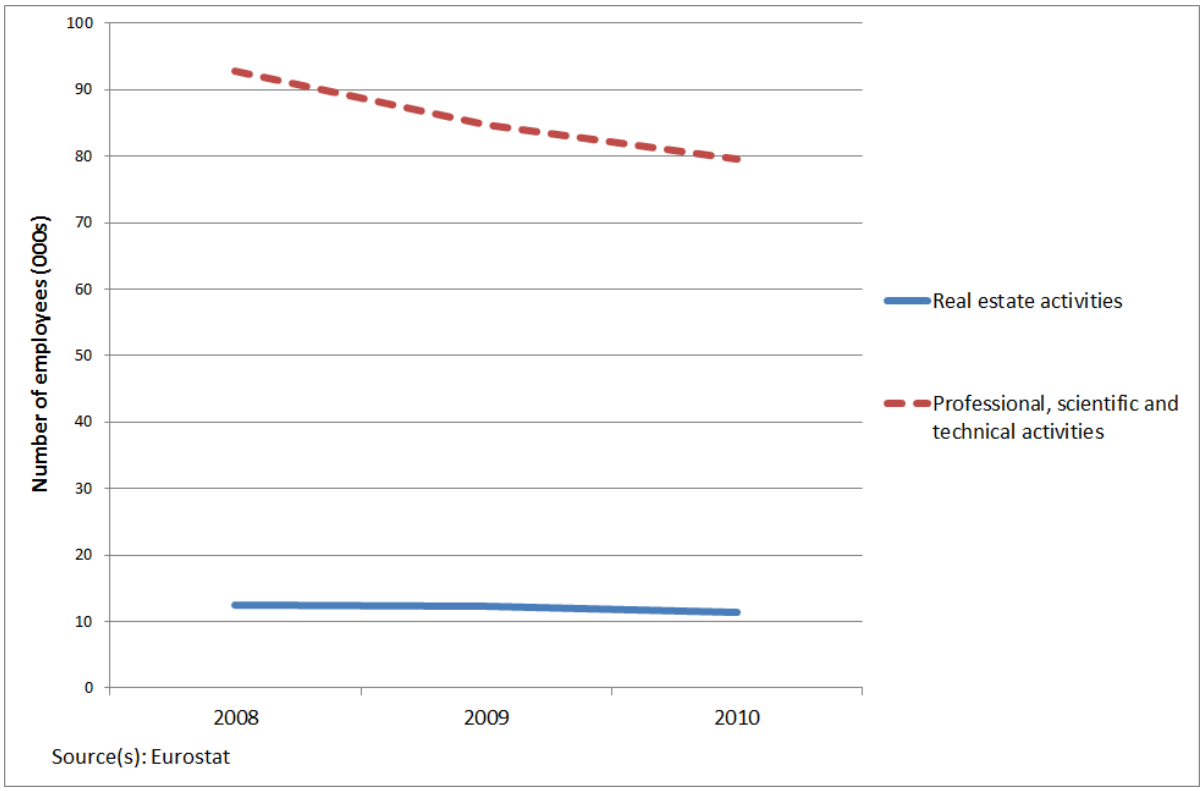


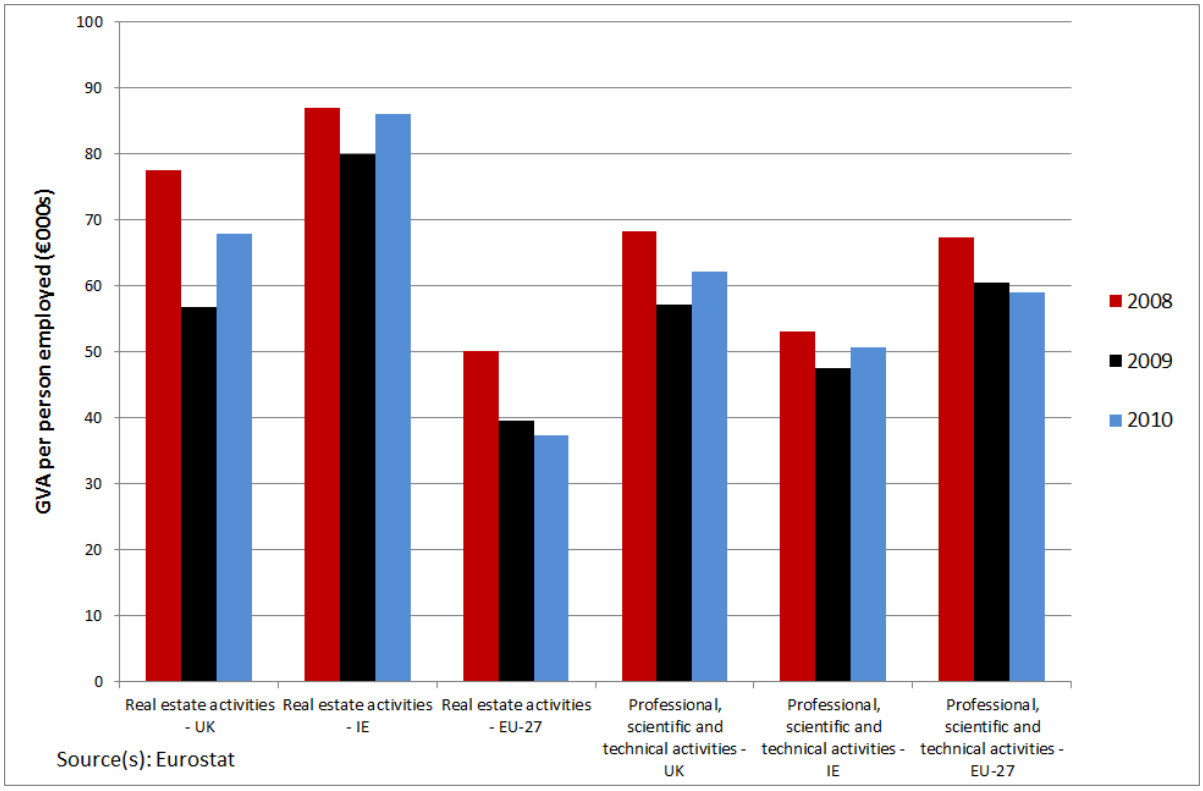
Figure 56: Ireland's Employment in Professional and Financial Services



In 2012Q3, UK output per job in real estate activities and professional, scientific & technical activities were broadly in line with 2009 levels, in contrast to the finance & insurance sector, where output per job was around 6% lower. Productivity, in terms of GVA per person employed, in real estate activities has consistently been higher in the UK and Ireland than the EU27 average; recovering from a dip in

productivity in 2009, unlike productivity in the wider EU27. In professional, scientific and technical activities, productivity in the UK has been consistently higher than in Ireland, and broadly in line with the EU27 average (see Figure 57: GVA per Person Employed in Professional and Financial Services).

Figure 57: GVA per Person Employed in Professional and Financial Services



5.2.2 Output

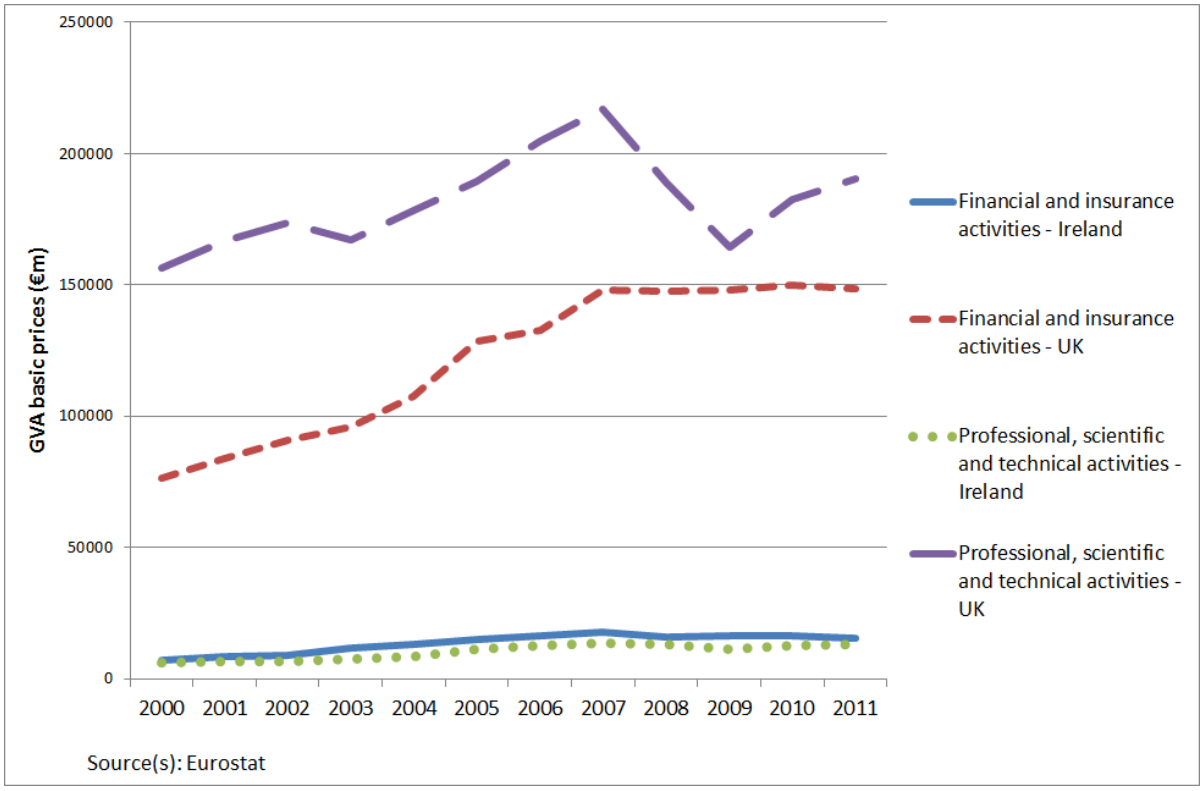
Professional and financial services in the UK are larger than its equivalent in Ireland not just in absolute but also in relative terms. Financial and insurance activities have grown as a percentage of GVA in both countries, although the sectors resilience to the recession in Ireland is unclear (because data are still not available). Together, professional, scientific and technical activities has grown as a percentage of Irish GVA, while shrinking as a percentage of total UK GVA, but the sector, in terms of percentage of total GVA, remains more important to the UK economy than the Irish equivalent.

Nominal GVA in the sector has grown more rapidly in Ireland than the UK, although in absolute terms output of the sector in Ireland is a fraction of that in the UK. In nominal terms, GVA increased by €8.3bn and €72.1bn in the sector in Ireland and the UK respectively.

Growth in financial and insurance activities followed broadly similar trends in the UK and Ireland over 2000-11, and while growth in these activities was stronger in Ireland than the UK the overall size of the sector in Ireland remained very small compared to UK operations.

Over 2007-09, GVA in professional, scientific and technical activities fell in the UK more than in Ireland. There was GVA growth in this industry in 2010 and 2011 in both countries. In financial and insurance activities, GVA started declining in 2007 in Ireland and remained flat in the UK (see Figure 58: GVA in Professional and Financial Services).

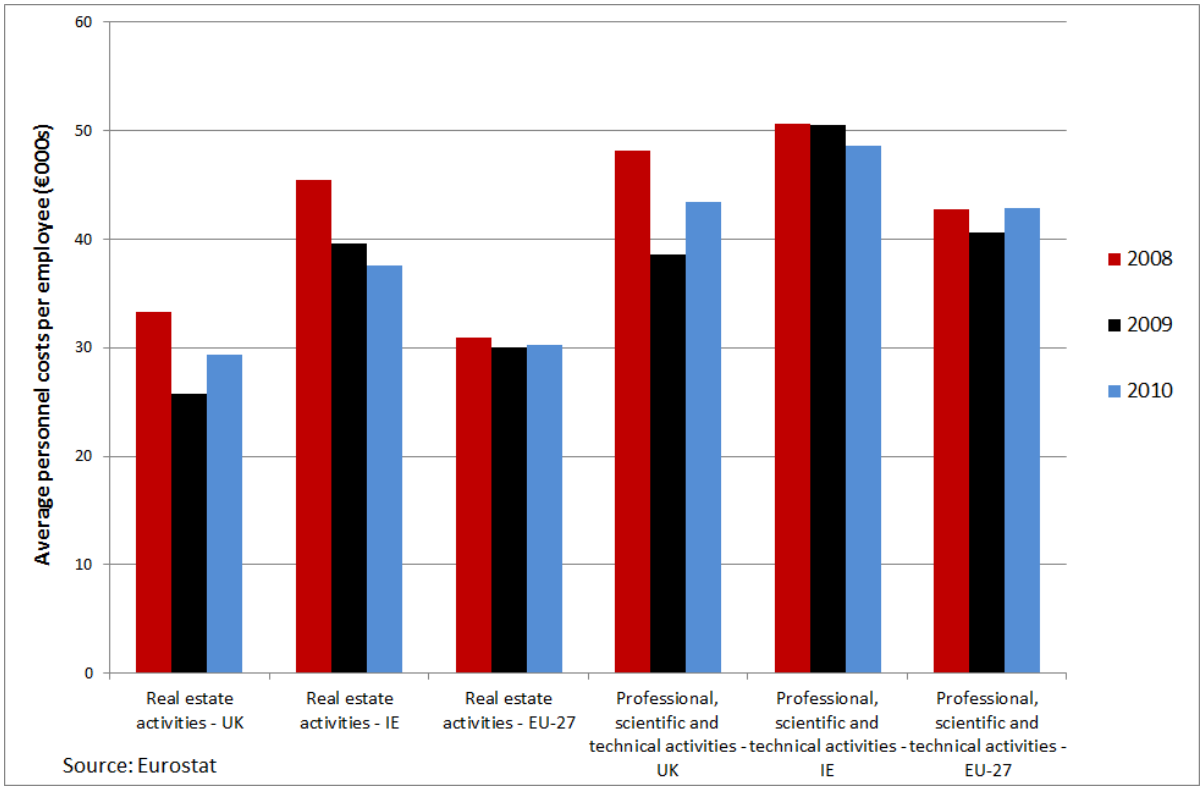
Figure 58: GVA in Professional and Financial Services



5.2.3 Earnings

Despite lower productivity rates, personnel costs in Ireland are higher than both the UK and EU27 average. While these costs have been coming down over the recent history, they remain out of kilter with the above labour productivity indicators. This contrasts with the position of the UK, where personnel costs have varied in line with changes in productivity, and costs are broadly in line with the EU27 average (see Figure 59: Average Personnel Costs per Employee in Professional and Financial Services).

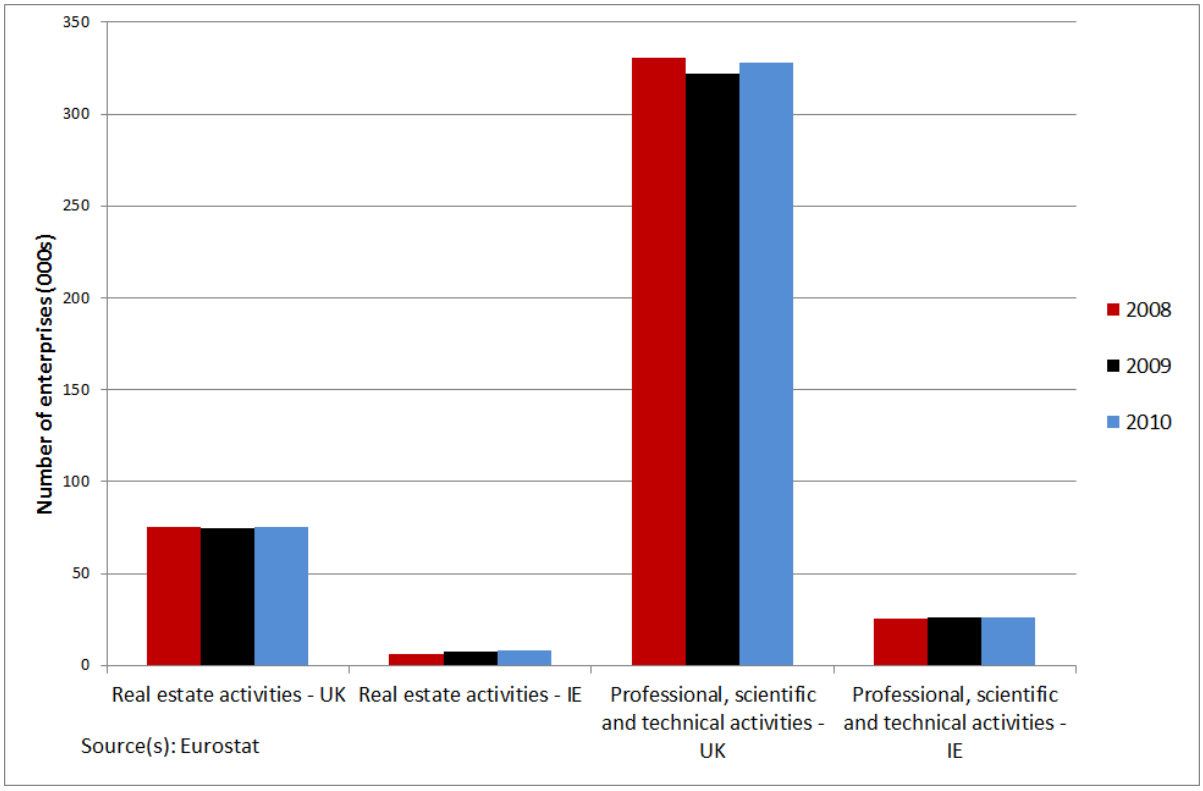
Figure 59: Average Personnel Costs per Employee in Professional and Financial Services



5.2.4 Number of enterprises

In 2010, there were 75,289 enterprises in the real estate activities sector in the UK. In Ireland, despite surprisingly rapid growth in the number of enterprises over 2008-10 during the recession, the number of enterprises remains only a small proportion of that in the UK. The number of professional, scientific and technical activities has not seen large changes over 2008-10 in the UK or Ireland (see Figure 60: Number of Professional and Financial Services Enterprises).

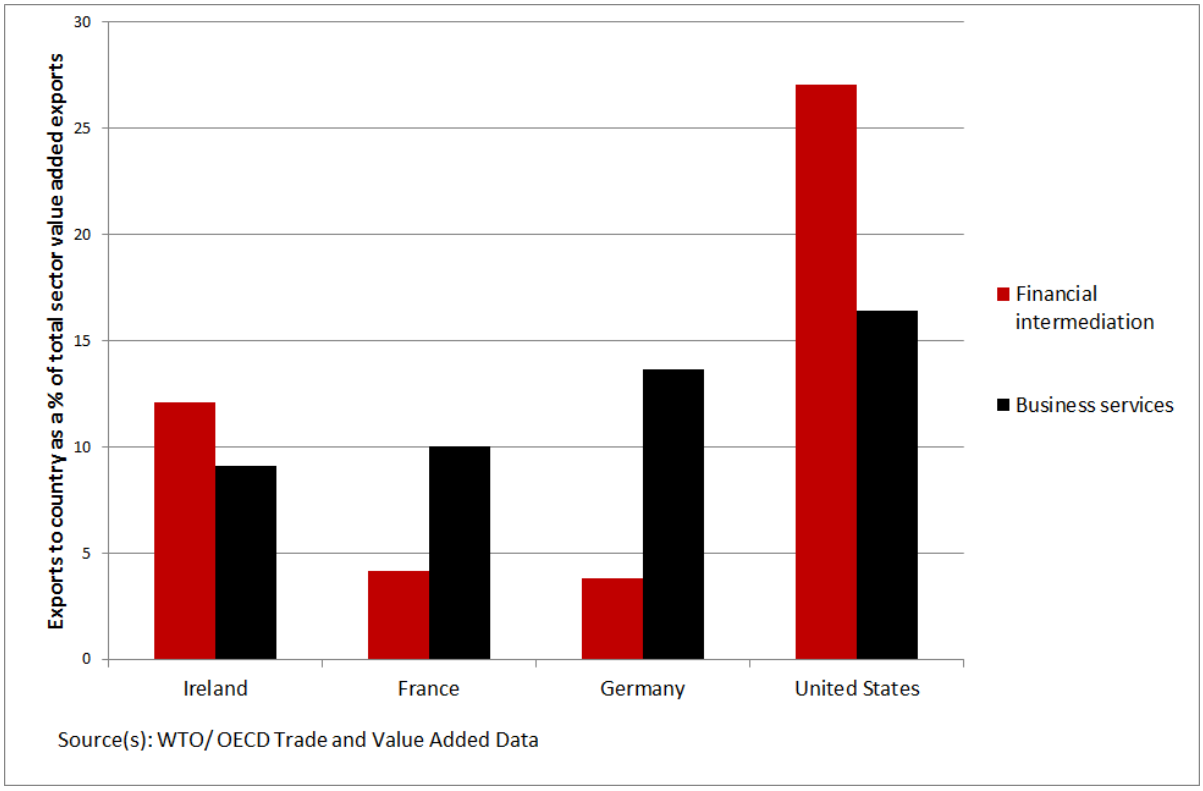
Figure 60: Number of Professional and Financial Services Enterprises



5.2.5 Trade

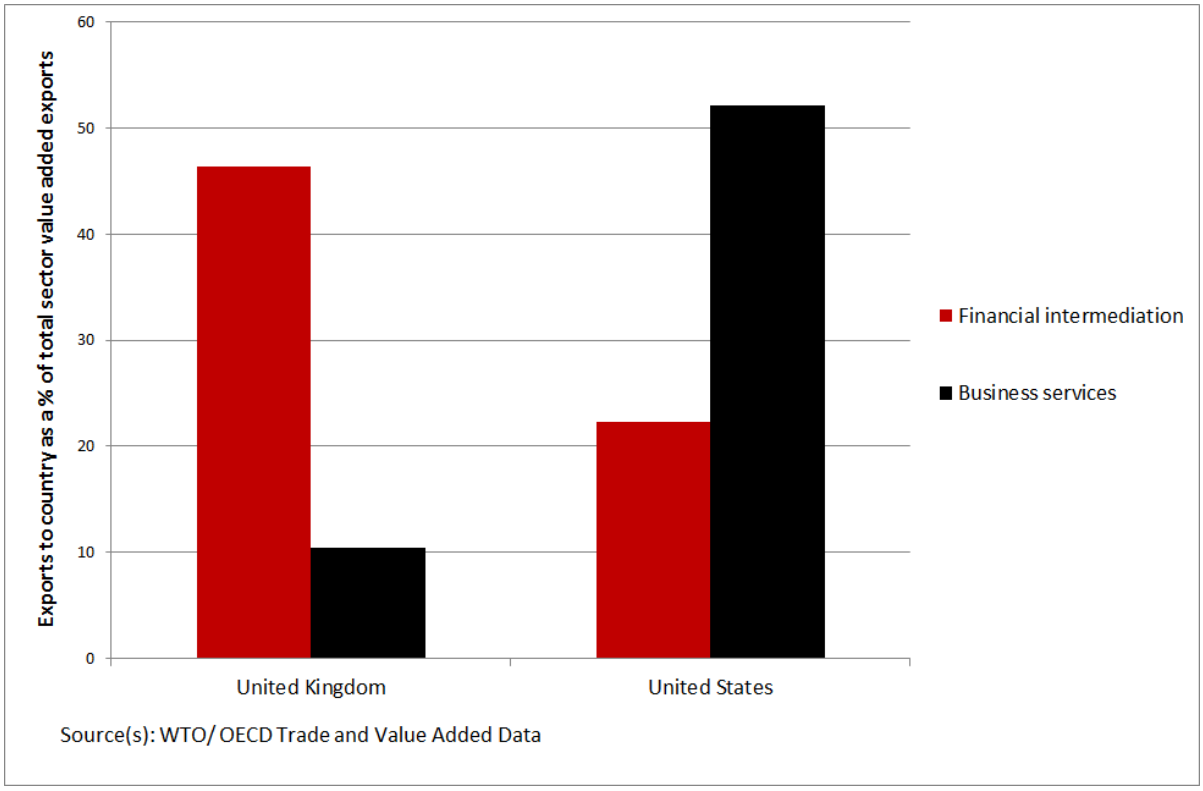
The USA was the UK's largest export market for both financial intermediation and business services in 2009. Over a quarter of the UK's financial intermediation exports went to the USA and over 15% of business services exports (in value added terms) went to the USA (see Figure 61: UK Exports to Main Trading Partners as a Percentage of Total Sector Value Added). The UK's second largest export market for financial intermediation is Ireland, although it is only the fourth largest export market for the UK for business services. Over 2005-09, Ireland's share of UK exports for both sectors have increased.

Figure 61: UK Exports to Main Trading Partners as a Percentage of Total Sector Value Added



The UK was Ireland's largest export market for financial intermediation in 2009 (see Figure 62: Ireland Exports to Main Trading Partners as a Percentage of Total Sector Value Added). Ireland exported 46% of total financial intermediation exports (in value added terms) to the UK, and 22% to the USA. The USA was Ireland's largest export market for business services, with over half of Ireland's exports going there.

Figure 62: Ireland Exports to Main Trading Partners as a Percentage of Total Sector Value Added



5.2.6 R&D and Investment

Expenditure on R&D in Ireland across the professional services sector was larger in real estate, professional, scientific and technical activities than financial and insurance activities in 2009, with expenditure totalling €291m and €157m respectively[66]. Business enterprise R&D expenditure in the UK in real estate, renting and business activities was €8104m in 2009, and the corresponding figure for financial intermediation was €336.85m[67].

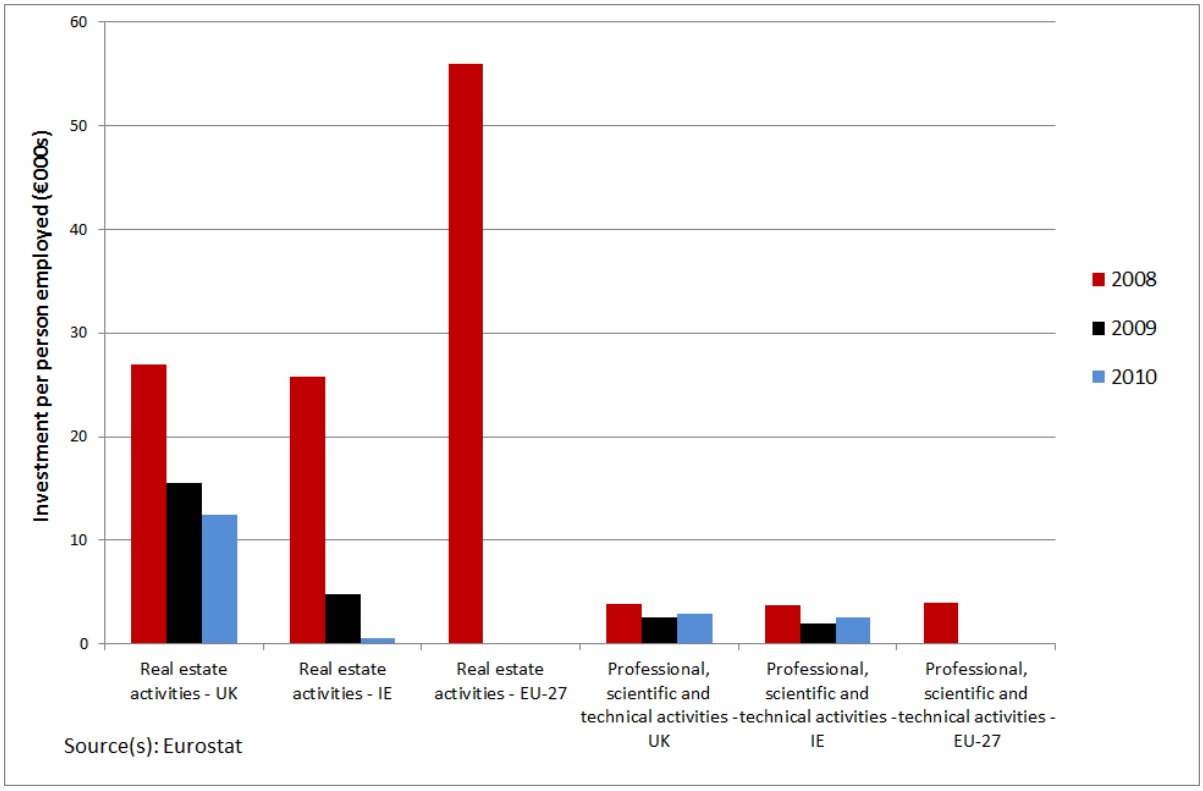
Investment per person employed in real estate activities was significantly higher across the average of the EU27 than in Ireland and the UK (see Figure 63: Investment per Person Employed). Investment per person employed in this industry in 2008 in the EU27 was over double that of the UK. Investment per person fell year-on-year over 2008-10 in both the UK and Ireland in real estate activities.[68]

[66] Data from: CSO Business expenditure on R&D statistics

[67] Data from: Eurostat - R&D expenditure statistics

[68] The only year of data available for the EU27 was 2008.

Figure 63: Investment per Person Employed



Ireland, the EU27 and the UK have had very similar levels of investment per person employed in professional, scientific and technical activities.

5.3 Future prospects

Professional and financial services are expected to retain their position as the key driver of economic growth in both the UK and Ireland going forwards. Employment in the sector will continue to grow, and the demand for medium and high-skilled workers will continue to increase.

In the long term, professional and financial services are likely to come under many of the same pressures as manufacturing has in the past; as developing countries improve their offering in the sector prices will become more competitive. It will be imperative that UK and Irish firms are able to maintain and improve the quality of their offering to remain competitive in their own markets. While the UK financial services sector may be insulated from these pressures to some degree, due to the importance of London as a financial trading centre, operators across many of the professional services will be forced to compete with external firms.

These developments do not only offer potential problems, however. Opportunities to export UK and Ireland's strong services offering are likely to increase as new markets develop and open up, and firms (and governments) must ensure that domestic firms have access to sufficient assets (such as a highly skilled workforce and capital markets) to take these opportunities when they arise.

6 R&D/Innovation

This chapter sets out, for the R&D/Innovation 'sector':

- Long-term trends
- Recent developments
- Future prospects

6.1 Long term trends

Although Ireland has historically created some world leaders in the fields of Chemistry and Physics, Science, Technology and Innovation investment (STI) has been historically low. In the late 1990s it was recognised that Ireland needed to build new capabilities in R&D, with an understanding that success could only be accomplished with a focus on disciplines that allowed Ireland to play on the international stage. The first step was the 1998/99 Technology Foresight Ireland study which focussed on disciplines that could be internationally recognised. These were investigated and reviewed by the Technology Foresight Ireland programme which concluded "A world class research capability in selected niches of ICT and Biotechnology enabling technologies is an essential foundation for future growth. These key technologies required new skills, and in particular the development of world class STI personnel."

The compelling need for this shift in focus was actually based on a deeper understanding of the original growth elements of the Irish economy. Foreign Direct Investment has been 14% of GDP and innovation capability is seen as important in order to attract, retain and extend the operations of such investments[69]. It was also seen as being essential to the development of indigenous technology driven companies that could perform on a world stage. This exercise was followed by the National Development Plan (2000 - 2006) which built on the outputs of Technology Foresight Ireland, including impetus from other groups such as the National Competitiveness Council, the American Chamber of Commerce and. The NDP stated that "There will be a major accelerated increase in Research, Technological Development and Innovation investment (RTDI) with the objectives of:

(a) Strengthening the capacity of the third level institutions and other research establishments to conduct research relevant to the needs of the Irish economy;

(b) Strengthening the capacity of Irish firms to assimilate the results of R&D into their products and processes; and

(c) Providing support for sectoral research in agriculture, food, marine and the environment.

Ultimately, this led to the creation of Science Foundation Ireland which began in 2000 and became operational in 2001 with the vision to strategically invest in the people, ideas and partnerships essential to outstanding research in strategic areas; and to build research of globally recognised excellence and nationally significant economic importance. One strand of SFI investment was Centres for Science, Engineering and Technology (CSETs) which link academic and industrial researchers together on high-end research programmes. Finally, in 2006 the Irish Government produced the Strategy for Science, Technology and Innovation (SSTI) for 2006 – 2011. This outlined a €3.8billion investment programme intended to deliver and support a more R&D driven FDI policy and to increase basic S&T investment. The SSTI also emphasised capability building as very important and does this through the establishment of a Graduate School development (the concept of a 4th Level Ireland is

[69] World Investment Report 2005

articulated in this regard) which would double PhD numbers by 2013 and increase the number of PIs, PDoc Researchers+ support staff.

The PRTLI was established in 1998 to strengthen national research capabilities through investment in physical infrastructure and human capital. This followed the success of the Programme for Science and Technology which had been rolled out by the Government in response to the Tierney report. The overarching vision for the programme was to propel Ireland towards establishing an international profile as a premier location for carrying out world class research and development.

However, R&D in the UK was chronically underfunded through 1980s and early 1990s and the review of several bodies implied that this needed to be addressed. The Spending reviews of 1998 and 2000 started to redress the balance by pump priming investment into these areas. These reviews and subsequent ones projected relevant increases in UK R&D spend to meet that of competitor countries (Japan, USA, France, Germany, and Italy).

The first significant change in emphasis in the UK came in 2006 when the Office of Science and Innovation brought together the Office of Science and Technology and the DTI Innovation Group. This was to reap the economic benefits of science research, to ensure that as much as possible of the UK world-class science is translated into innovation which is successful exploitation of new ideas into new products, processes, services and systems. The concept at that time was that the Office of Science and Innovation (OSI) within the Department of Trade and Industry would bring together the Office of Science and Technology with the Innovation Group to ensure that the UK could do both world-class science and stimulate innovation in industry.

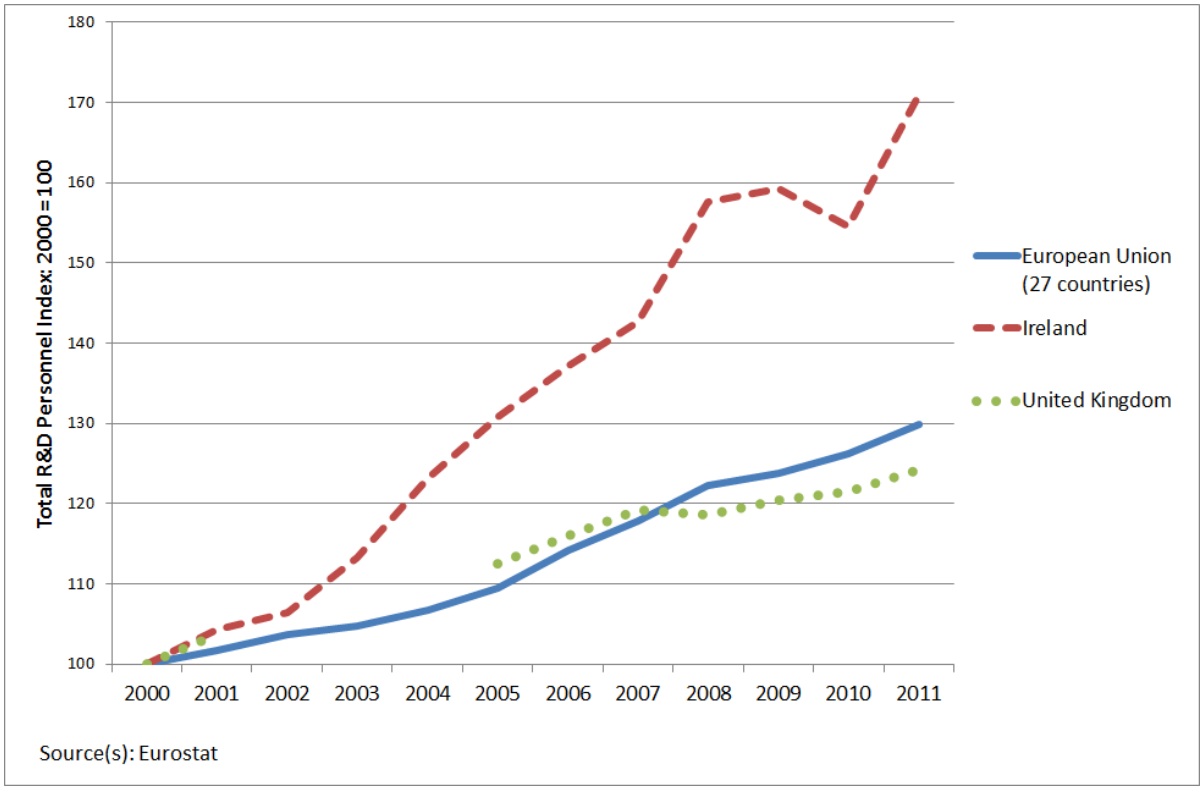
This theme has continued in the UK through the various manifestations of Government departments to the current format of BIS. The Research Councils remain focussed on projects of substantive research and several reports have augmented this, seeking to build a stronger link to innovation and industry. This was followed by the 2007 publication of "The Race to the Top" published by Lord Sainsbury which reviewed historical policies of Science and Technology and proposed greater links to industry and commercialisation. Innovation Nation in 2008 was a White Paper that declared innovation to be essential to the UK's future economic prosperity and quality of life. "To raise productivity, foster competitive businesses, meet the challenges of globalisation and to live within our environmental and demographic limits, the UK must excel at all types of innovation". The Herman Hauser report on The Current and Future Role of Technology and Innovation Centres in the UK saw the UK direction move towards connecting fundamental R&D to Innovation and industry through TICs which were then renamed Catapults. These are currently being established across the UK and seek to link industry to the schools and centres of research to accelerate absorption and commercialisation of research.

6.2 Recent developments

6.2.1 Employment

The rapid increase in R&D spending in Ireland over 2000-09 was accompanied by a large increase in full-time equivalent workers engaged in R&D. In the UK, the number of full-time equivalent personnel increased by 25%; however the sector remains much larger in the UK. The number of personnel (full-time equivalent) working in R&D in 2011 in the UK was approximately 360,000 and 22,000 in Ireland (see Figure 64: R&D Personnel Index).

Figure 64: R&D Personnel Index

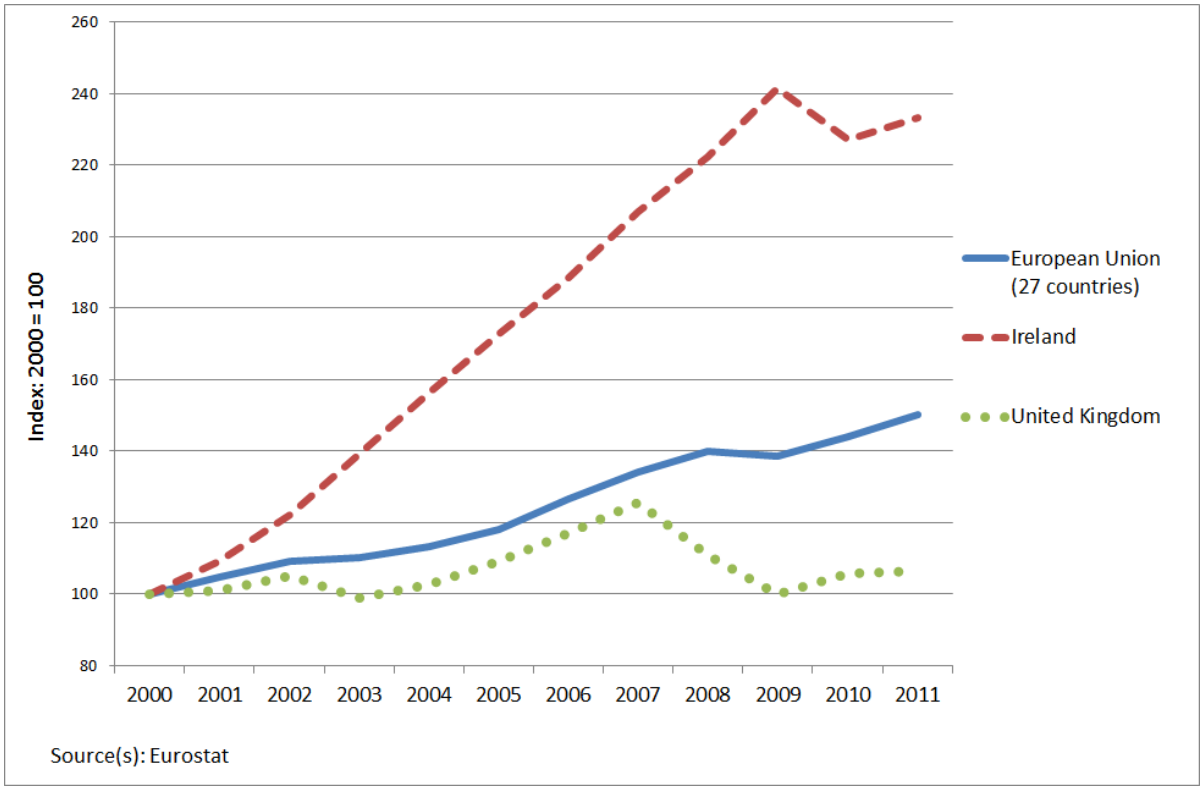


Ireland has also seen large percentage increases in the number of researchers over the same period. In 2000, there were 8,500 researchers (full-time equivalent) in R&D in Ireland, and in 2011, this number had almost doubled to 15,500. In the UK, the number rose from 171,000 to 262,000 over the same period.

6.2.2 Ireland Investment and Funding Trends

Ireland has seen significant increases in research and development (R&D) expenditure since 2000 (see Figure 65: Total Intramural R&D expenditure). In 2000, Ireland's total intramural (internal, i.e. not including overseas collaborations) R&D expenditure was € 1176m, and in 2011 was €2741m, an increase of over 133%. R&D expenditure in Ireland rose steadily over 2000-2009, but fell in 2010 as Government spending retrenched in the light of the fiscal crises. Growth in R&D expenditure in Ireland over 2000-09 was far more rapid than the increases in the UK or the wider EU, although from a much smaller base.

Figure 65: Total Intramural R&D expenditure



The rapid growth in R&D in Ireland over 2000-09 cannot be solely attributed to increased economic output. In 2000, intramural R&D expenditure was 1.11% of total GDP. This figure increased consistently since 2001, and was 1.72% in 2011. However, as a percentage of GDP, Ireland's R&D spending in 2011 was still below that of the UK and EU-27 figures, suggesting that R&D expenditure may continue to increase rapidly in the future in order to close this gap.

6.2.3 UK Investment and Funding Trends

The UK has a strong history in R&D and innovation. There is a well-developed support structure in place, ranging from the Research Councils to the Technology Strategy Board.

In 2010, with a change in Government and spending reductions, commitment to Science and Technology and Innovation has remained strong primarily through the Research Councils and Technology Strategy boards, the overall policy levers have remained the same although there has been a greater emphasis placed on connecting this capability to Trade and Investment activities.

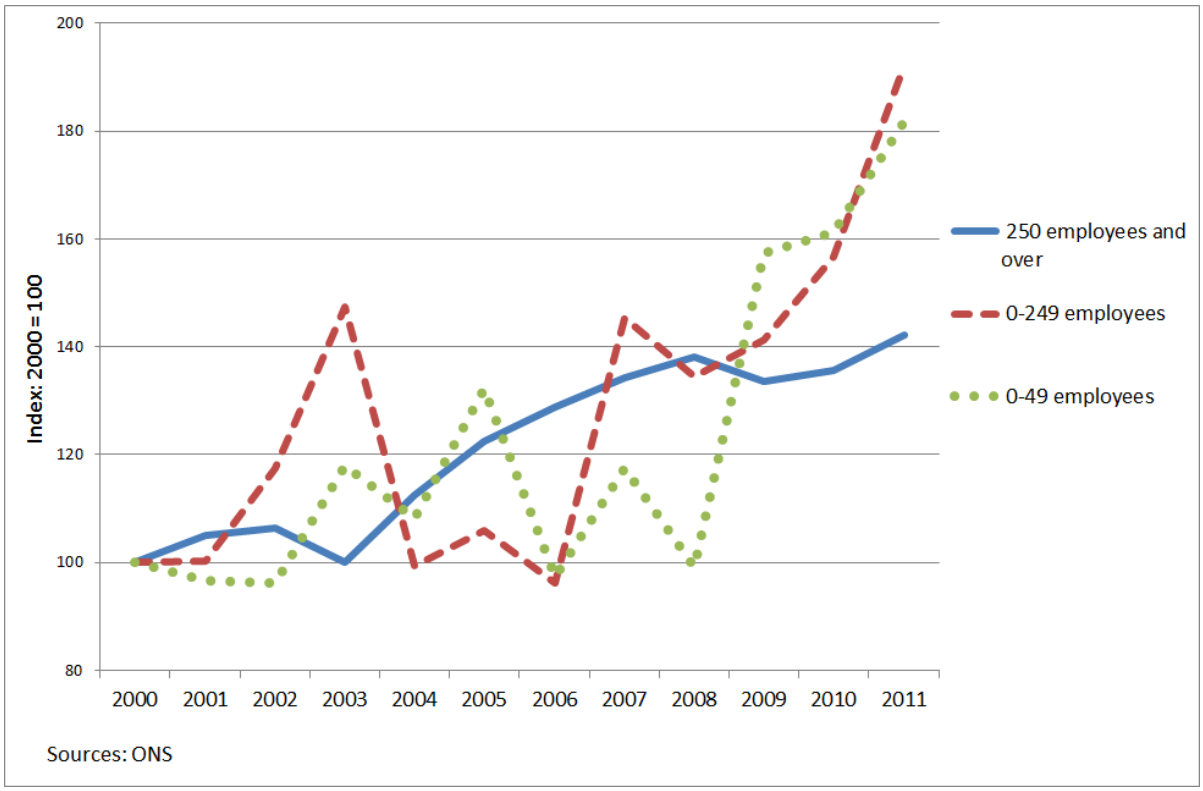
As a result of these policy changes, the UK's expenditure on R&D increased year-on-year from 2000 until the onset of recession in 2007. The UK's expenditure on R&D as a percentage of GDP has hovered around 1.75%, below the EU average in every year since 2000. Ireland's per capita spending on R&D expenditure overtook the UK in 2003, and by 2011 the gap in expenditure was over €100 more per inhabitant.

The proportion of business funded R&D carried out by large businesses (employing more than 500 people) in the UK is among the highest in the EU, at around 73%. "Only Germany (84.1 %), France (73.8 %) and Sweden (73.4 %) have a higher rate (72.8%)".[70]

[70] Eurostat - http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/R_%26_D_expenditure_in_business_enterprises#R_.26_D_expenditure_by_technological_intensity_of_enterprises

Research and development expenditure in the UK increased significantly over 2008-11 amongst SMEs, as part of a wider trend of increasing R&D expenditure amongst firms of less than 250 employees. At the same time, R&D expenditure amongst firms with 250+ employees increased at a slower rate (see Figure 66: R&D Expenditure by UK Businesses).

Figure 66: R&D Expenditure by UK Businesses

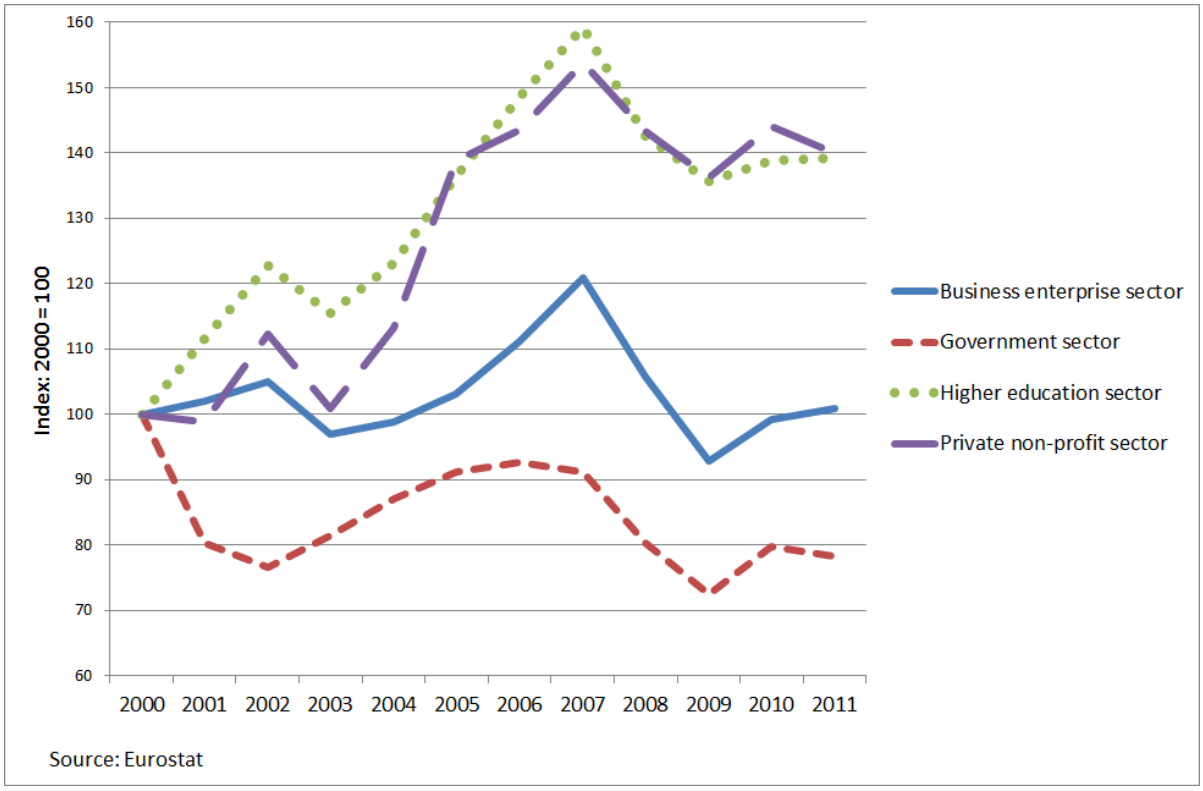


6.2.4 Funding Sources and Research Types

Spending in each area of the economy has grown more rapidly in Ireland than the UK[71], although from a much lower initial level. In the UK the largest growing area in terms of research and development spending has been the private non-profit sector (see Figure 67: UK R&D Spending by Sector). Spending in this sector grew to €740m in 2011. The higher education sector in Ireland now makes up over 28% of total spending in Ireland, up from 21% in 2000. This is an increase of €516m in nominal terms.

[71] There was no data from Eurostat from 2000 onwards on “Private non-profit sector” in Ireland

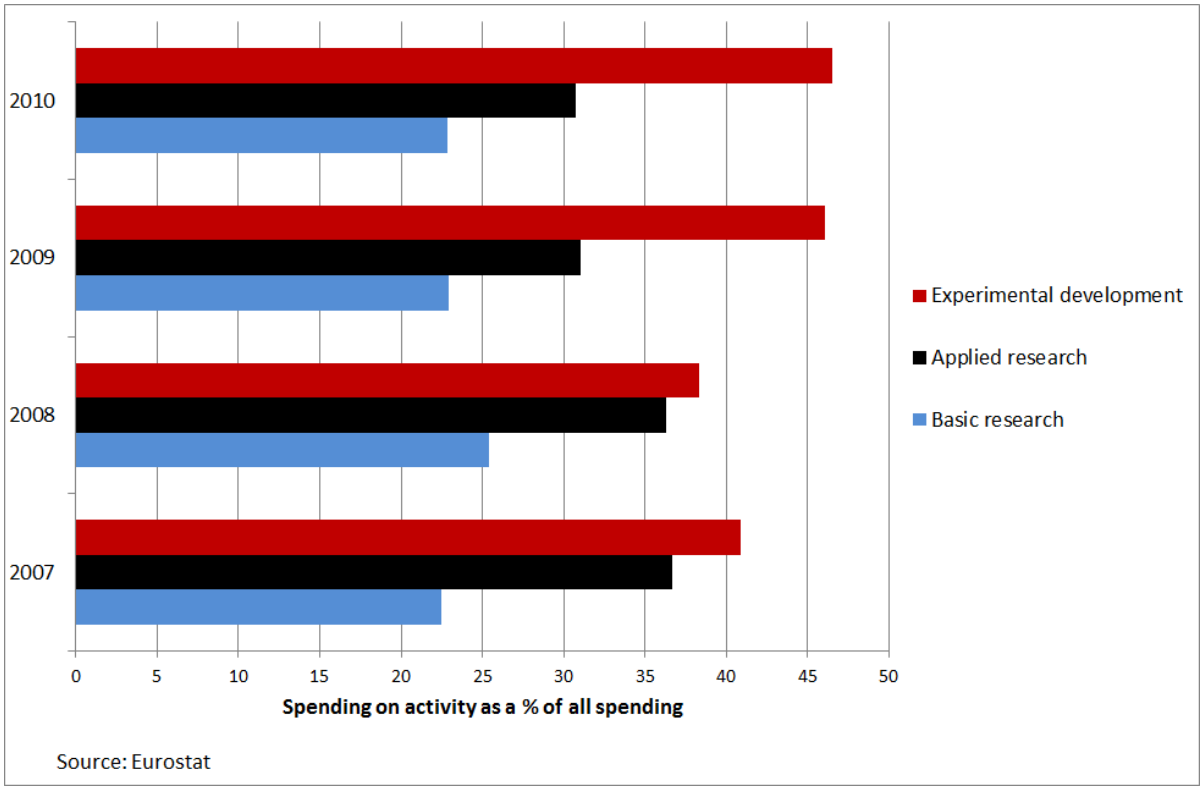
Figure 67: UK R&D Spending by Sector



Ireland's financing from business enterprise sectors has decreased as a percentage of total financing, from 67% in 2000 to 48% in 2011, despite an increase of €881m in nominal terms. Financing from abroad has increased by €423m since 2000, an increase of over 400%. Over 2000-11 in the UK, only business enterprise cut its funding of R&D. Financing from the government sector increased by €1207m over the same period, while both financing from abroad, from the private non-profit sector and from the higher education sector all increased.

Ireland spends a significantly larger proportion of its R&D expenditure on basic research. The UK spent around 9% of its total expenditure on basic research in 2010, compared to 23% in Ireland. The UK spends a larger percentage of expenditure on experimental development than Ireland; around 51% of its R&D expenditure compared to 43% (see Figure 68: Type of R&D Activity).

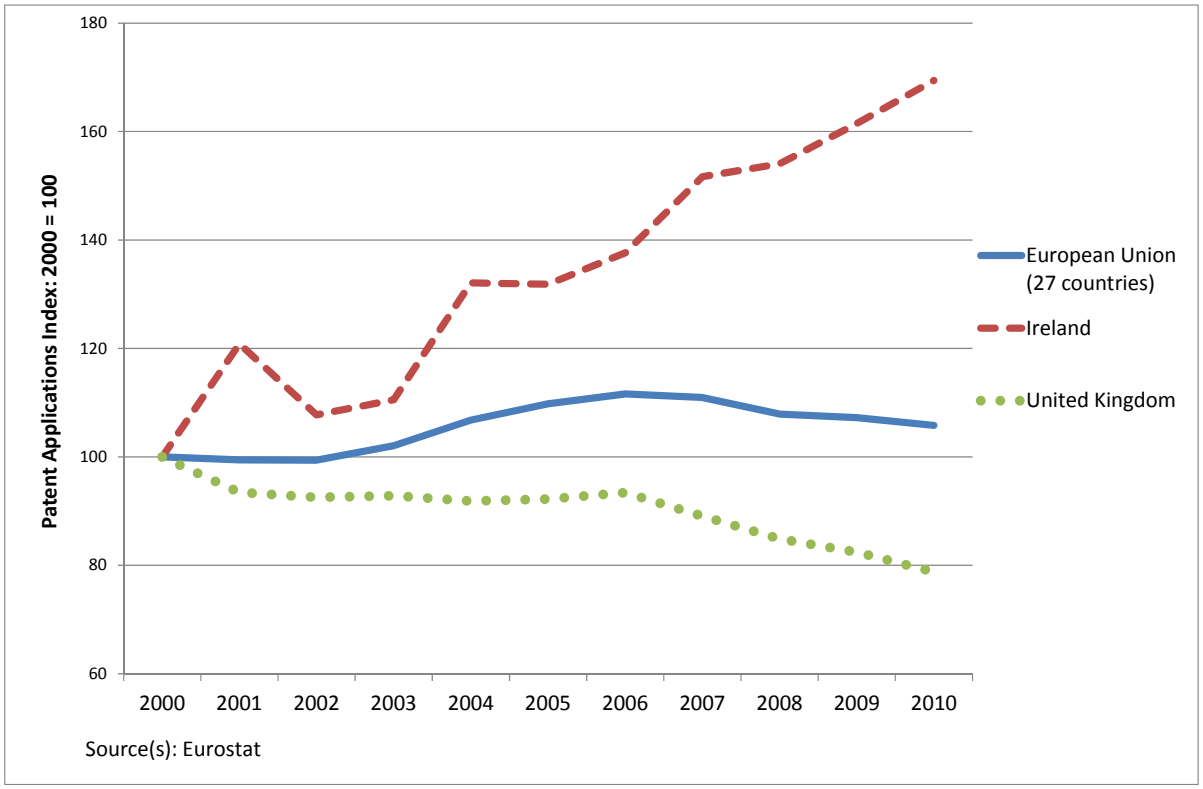
Figure 68: Type of R&D Activity



6.2.5 Innovation

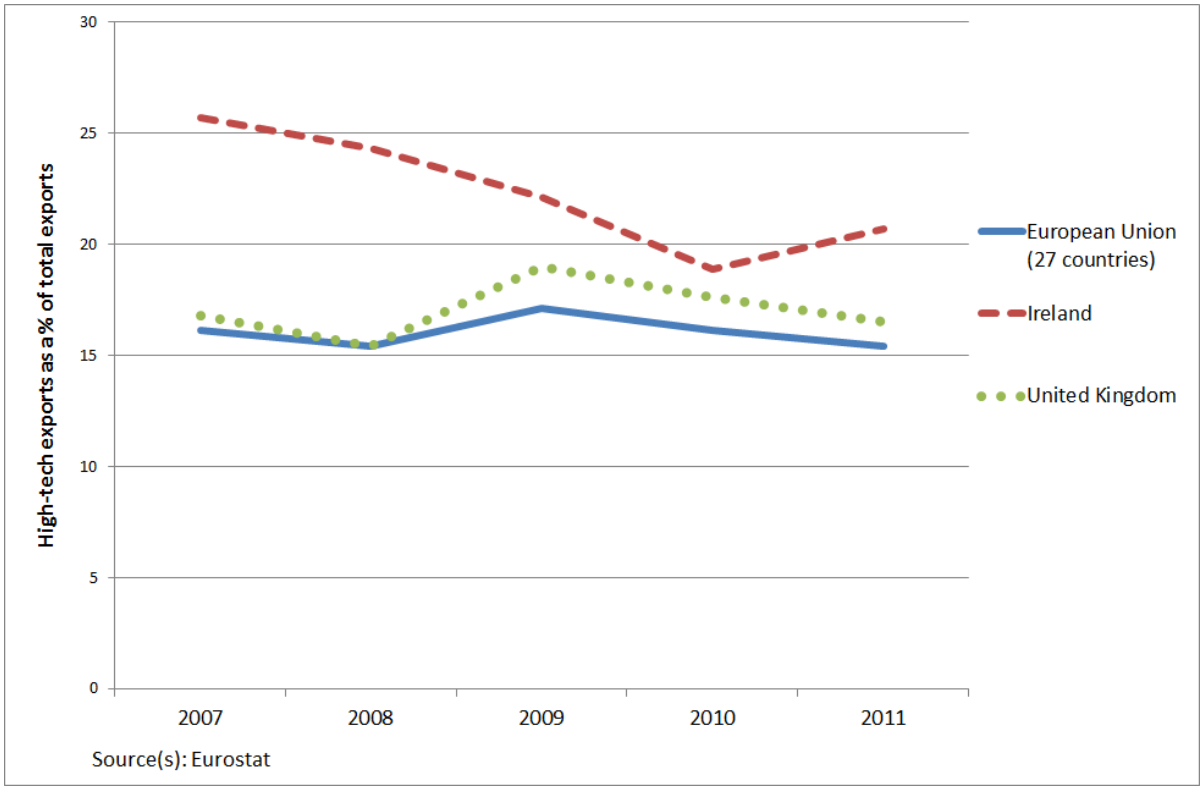
The number of patent applications in Ireland increased sharply over 2000-2010 (see Figure 69: Patent Applications). In the UK, there was substantial growth in patent applications through the 1990s, although they flattened out during the early part of the 2000s before declining in the latter half of the decade.

Figure 69: Patent Applications



The UK unsurprisingly has a larger share of global exports of high-tech exports than Ireland (see Figure 70: Exports of High-Technology Products). However, there are some products in which Ireland exports comparatively large amounts given the size of its economy. Ireland has a larger world market share of global exports of computers-office machines than the UK, while both countries have a notably large share of exports of pharmaceutical products.

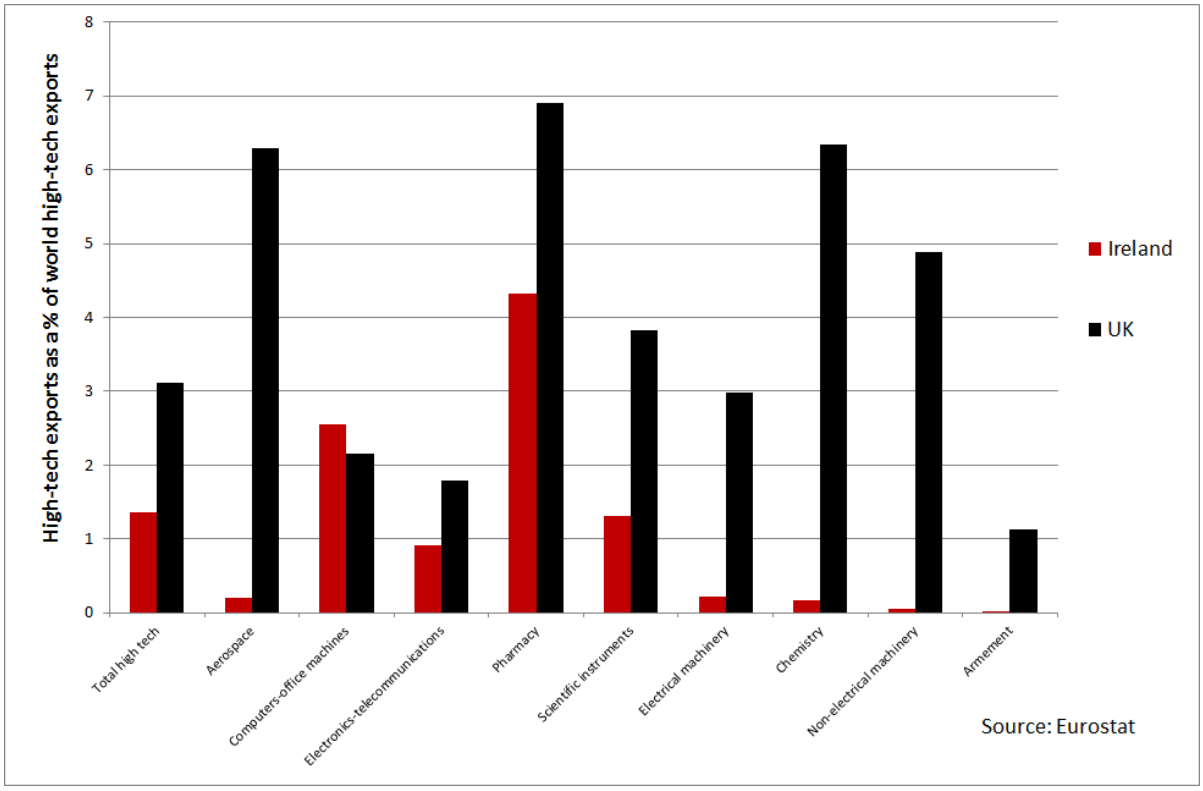
Figure 70: Exports of High-Technology Products



High-tech products are a larger proportion of Ireland's total exports than is the case for the UK or the wider EU27; in 2007, around a quarter of Irish exports were from high-tech products, 10% more than the EU27 average. Although the share of high-tech exports from Ireland has fallen subsequently, it is still well above the equivalent figures for the UK and EU27.

The UK has a larger world share of all high-tech exports, apart from Computer office machines (see Figure 71: World Share of High-Tech Exports). The UK's and Ireland's largest world share is in Pharmacy, at around 7% and 4½% respectively. The UK also exports over 6% of the world's Chemistry and Aerospace goods and services, in terms of value. In total, the UK exports around 3% of the world's high-tech exports, while Ireland accounts for approximately 1½%. Given that the UK exports around 3½ times more than Ireland, Ireland's share of high-tech exports is relatively high, and highlights Ireland's strength as a high-tech exporting country.

Figure 71: World Share of High-Tech Exports



6.3 Future prospects

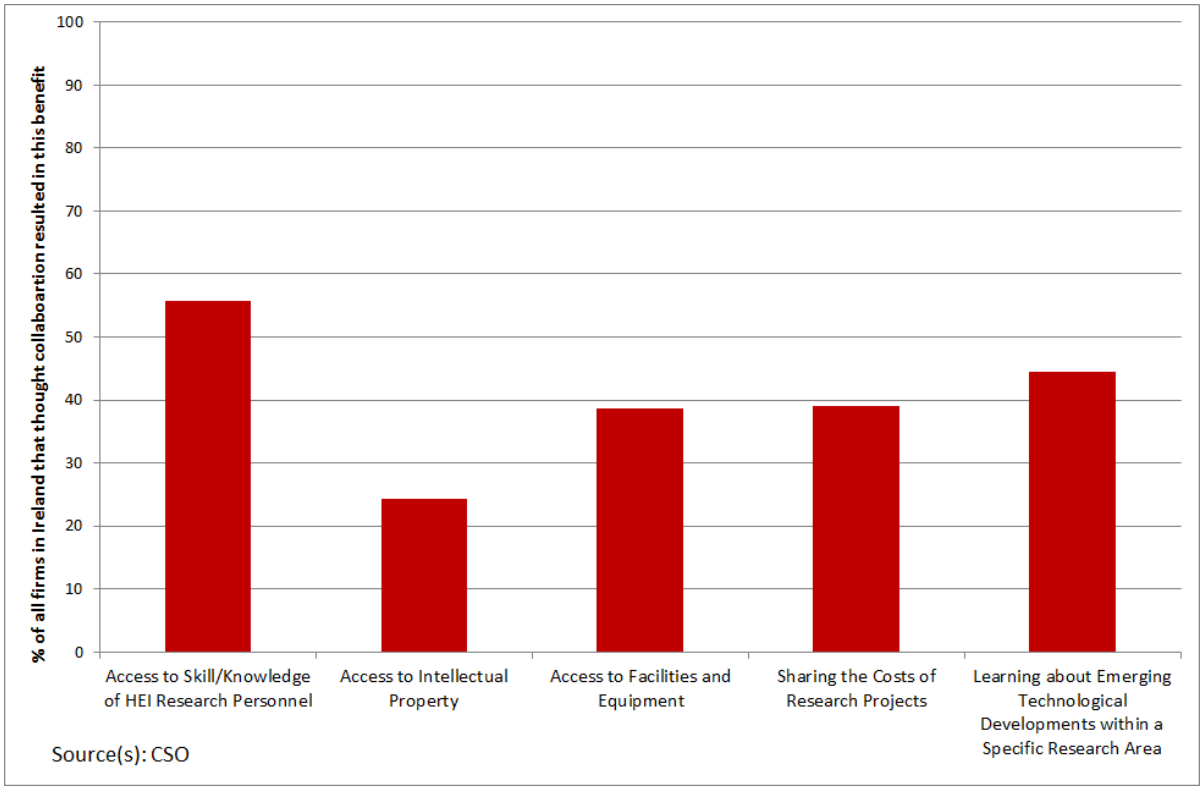
6.3.1 Areas for collaboration

In Ireland, nearly 56% enterprises that are involved in joint industry-HEI R&D collaboration believe that access to skill and knowledge of HEI research personnel is an important benefit of the collaboration. [72] This is the factor that is regarded as of high importance by the most firms in Ireland. Enterprises in Ireland who are involved in collaboration of R&D believe that the five most important benefits of this are access to skill and knowledge of HEI research personnel, access to intellectual property, access to facilities and equipment, sharing the costs of research projects and learning about emerging technological developments within a specific research area (see Figure 72: Benefits to Enterprises Engaged in Joint Industry-HEI Collaboration). These areas can be expanded on and the benefits can be more widespread if the level of collaboration increases and firms assist each other in R&D.

[72] CSO: Business Expenditure on Research and Development 2009/10:

http://www.cso.ie/en/media/csoie/releasespublications/documents/informationtech/2010/berd10.pdf

Figure 72: Benefits to Enterprises Engaged in Joint Industry-HEI Collaboration



7 Tourism and travel

This chapter sets out, for the tourism and travel sector:

- Long-term trends
- Recent developments
- Future prospects
- For the purposes of this analysis, tourism is considered as accommodation & food services and administrative & support services, unless otherwise specified.

7.1 Long term trends

Tourism contributed £98,019m to the UK economy in 2010[73], 7.49% of total GVA. In Ireland, the corresponding figure for 2011 was €9,693m[74], 6.69% of overall GVA.

Bilateral tourism between the UK and Ireland has been a major source of demand for tourist services for a number of years. In more recent years, the increased availability of cheap flights to mainland Europe and beyond has presented a particular challenge for UK-Irish tourism, both in terms of maintaining levels of domestic tourism and attracting visitors from their neighbours.

Total employment in tourism increased year-on-year from the mid-1990s to the latter part of the 2000s[75]. Growth has been more rapid in Ireland than in the UK, albeit from a substantially smaller base.

7.2 Recent developments

7.2.1 Employment

In 2011 tourism employment[76] in both the UK and Ireland was around 7-8% higher than in 2000[77]. The broad pattern of growth has been the same in the two countries and had mirrored the trend in the EU27 as a whole, namely sustained growth to the start of the global recession, and then decline. As the chart clearly shows, the strength of growth and the scale of the decline have been much more severe in Ireland than in the UK or the EU27. The strong growth in Ireland during the first half of the period will in part have been supported by the increasing attraction of the country for European city breaks facilitated by the expansion of low-cost air travel. The scale of the subsequent downturn will itself reflect the relative severity of the recession experienced by Ireland reducing domestic and international tourist activity.

Total employment in tourism in the UK has been fairly stable over the past few years, fluctuating between 3,285,000 and 3,050,000 over 2006-11.

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[73] Data from: ONS National Accounts (Blue Book), 2012

[74] Data from: Eurostat - Annual National Accounts

[75] Data from: Eurostat Tourism employment (LFS)

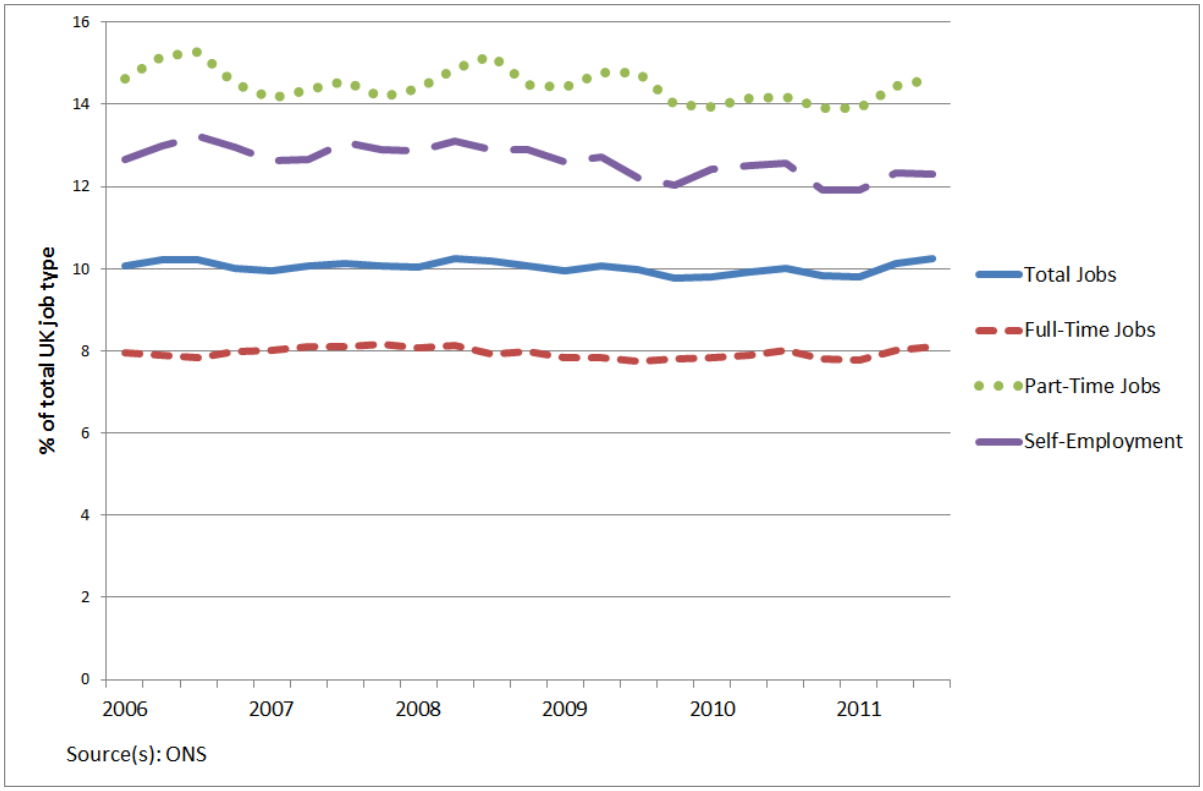
76 Tourism is defined by Eurostat as "the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes".

[77] Data from: Eurostat - Tourism Statistics

Numbers of part-time workers[78] are prone to significant shifts from quarter-to-quarter due to the seasonal nature of much of tourism employment. Total part-time employment has increased across the UK economy since the start of the recession in 2008 as a result of the decline of availability of full-time jobs, with workers increasingly willing to take part-time jobs to supplement income levels.

There has been a slight decline in the number of part-time tourism jobs from 2006 – 2011. The seasonally adjusted level of part-time jobs in 2011Q3 was 1,465,000 compared to 1,485,000 in 2008Q3 (see Figure 73: UK Part-Time Tourism Jobs). The proportion of part-time jobs as a percentage of total jobs in the tourism industry has remained at around 39% throughout the period. This is larger than in the wider UK economy, where part-time employment has averaged 32% of total employment.

Figure 73: UK Part-Time Tourism Jobs



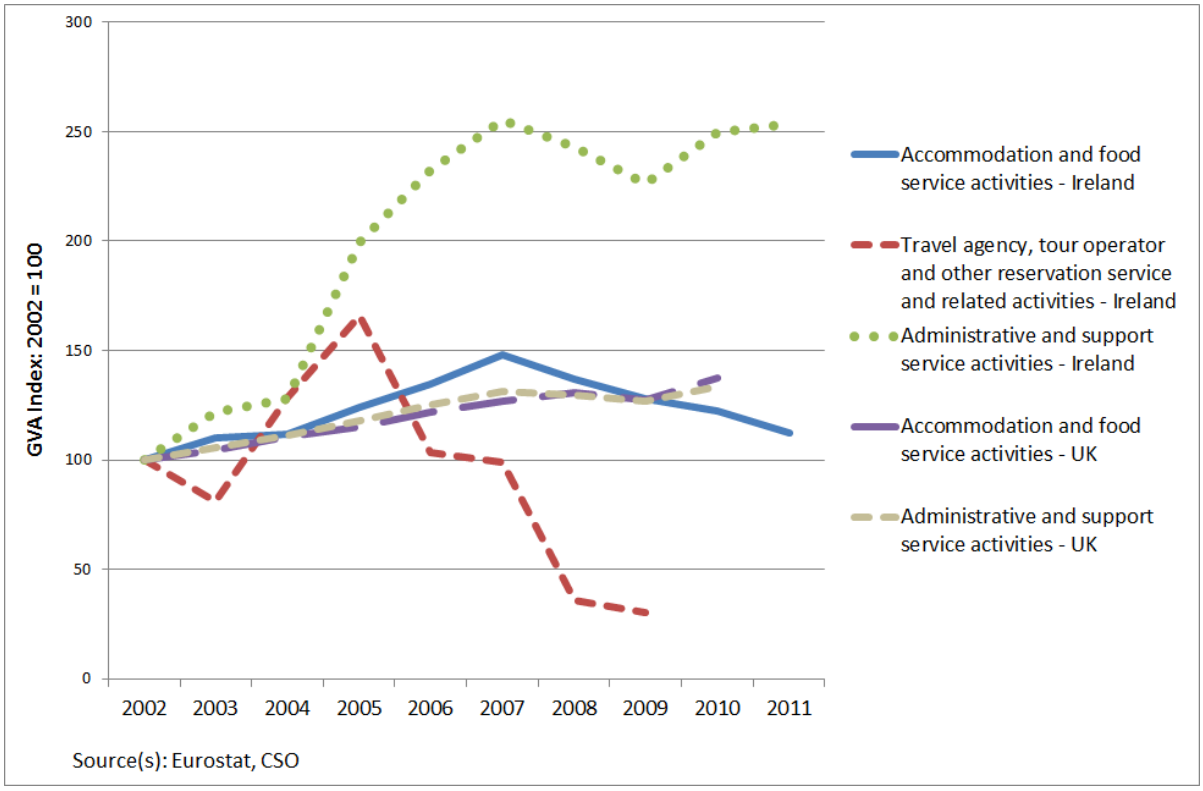
7.2.2 GVA

GVA has remained relatively robust in tourism related industries in the UK, reinforcing the robust performance of employment levels in the sector through the recession. Output in the accommodation and food service followed a similar trend to that seen in Ireland to 2007, although growth continued beyond this point in the UK while the sector decline in Ireland.. Administrative and support service activities have closely matched the growth seen in accommodation and food services; in 2010, GVA was 33% larger than the level in 2002 (see Figure 74: GVA in Tourism Related Industries). While the UK sector has remained relatively resilient to the economic downturn, there was a decrease in Irish

78 The breakdown of jobs in the UK to full-time and part-time is sourced from the ONS. The ONS define tourism as "the activities of persons identified as visitors. A visitor is someone who is making a visit to a main destination outside his/her usual environment for less than a year for any main purpose [including] holidays, leisure and recreation, business, health, education or other purposes….This scope is much wider than the traditional perception of tourists, which includes only those travelling for leisure."

output over 2007-9, and while administrative and support services returned to growth in 2010 the downward trend continued in accommodation and food services.

Figure 74: GVA in Tourism Related Industries



7.2.3 Visitor statistics

Total visitors

Visitors to Ireland have increased since 2000 (see Figure 75: Visitors to Ireland), driven by increasing numbers of visitors from European countries (excluding Great Britain). However, Great Britain remains the largest source of visitors to Ireland, with 2.89m visiting in 2011. Visitor numbers from Great Britain have fallen significantly in the aftermath of the recessions in both countries, with 1.18m fewer visitors from GB to Ireland in 2011 compared to the peak in 2006.

Figure 75: Visitors to Ireland

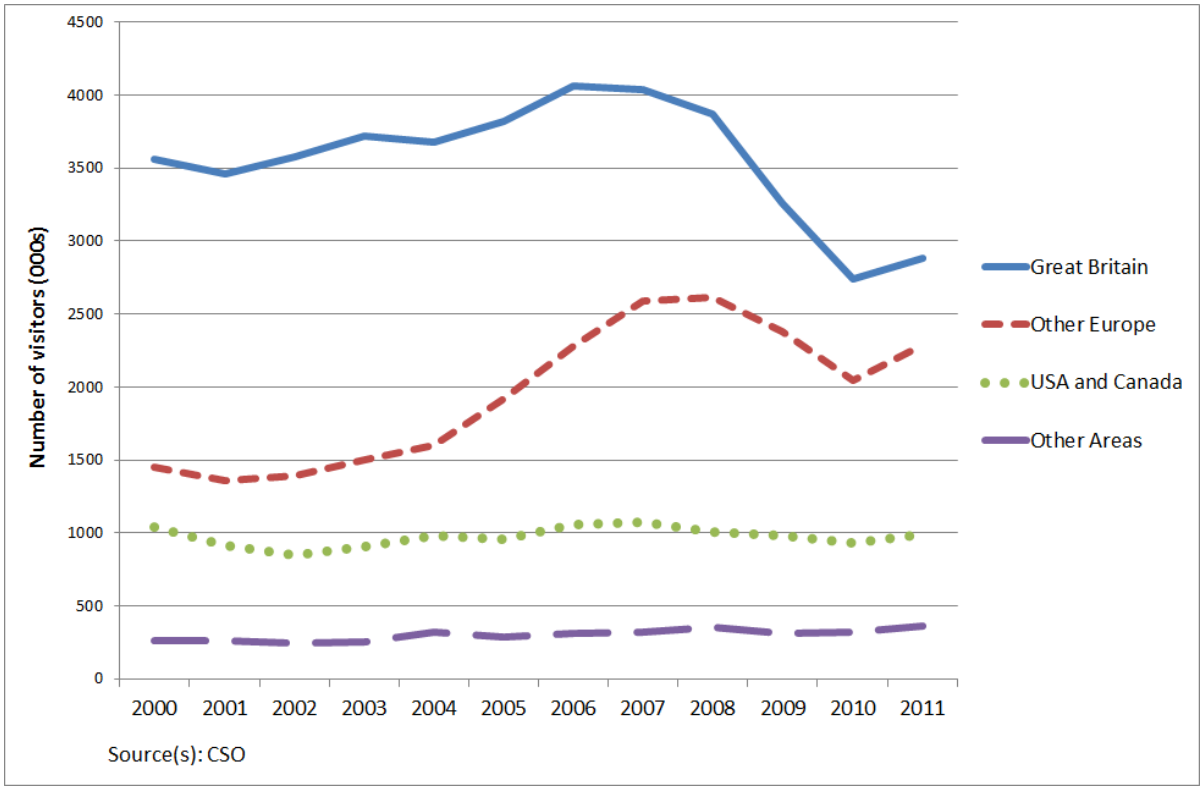
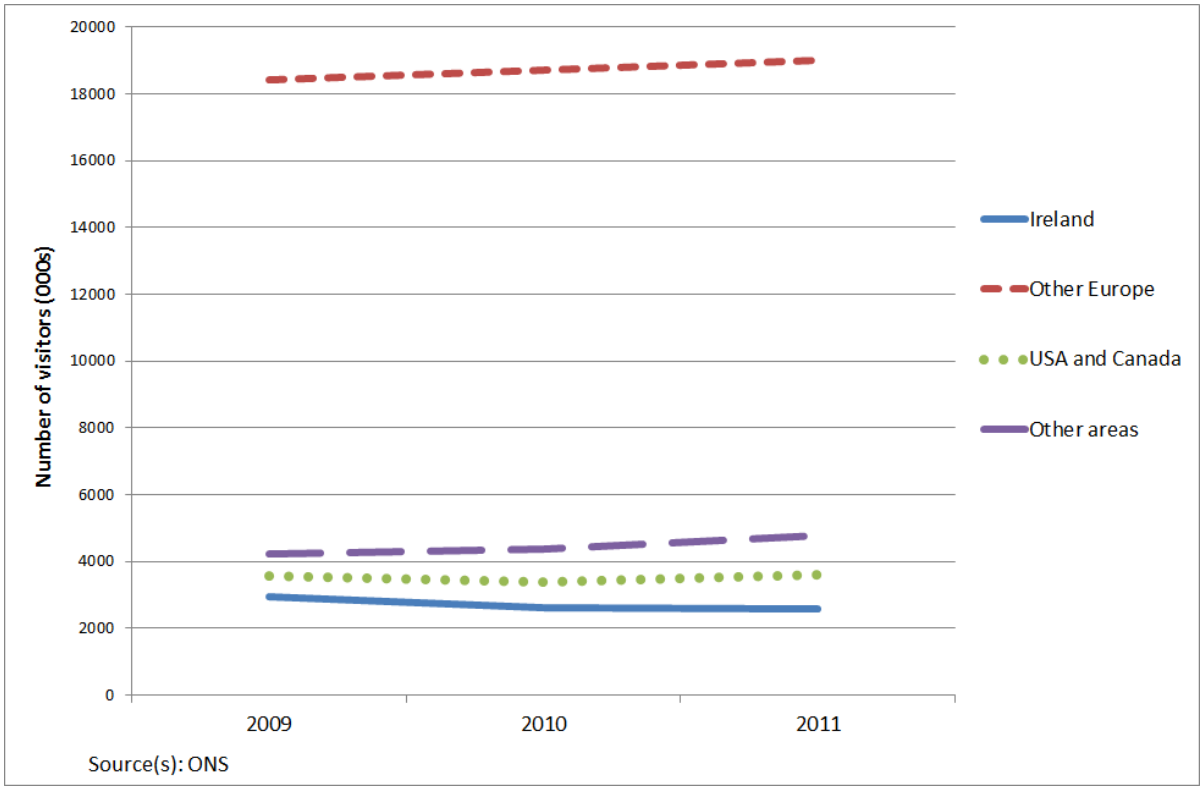


Figure 76: Visitors to the UK



Bilateral tourism

The number of visits from Great Britain[79] to Ireland is larger than the number of Irish visitors[80] to Britain, although the difference in flows is not as large as might be expected given the relative size of the countries.

Data on average spend of visitors shows that, in 2009, visitors from the Ireland to Great Britain spent just over £350 on average per visit, as compared to an average spend of just over £280 from GB visitors to Ireland per visit; however there is no breakdown of the spend available to indicate how much of this difference is accounted for by higher accommodation costs in GB.

The tourism industry in Ireland is heavily dependent upon British visitors, which accounted for over 44% of total visitors in 2011; conversely, visitors from Ireland to GB accounted for only 8.4% of all visits to the UK. The increasing international appeal of both destinations is reflected, however, in the fact that both of these shares have been falling in recent years. In the UK, visits from Europe increased steadily over the first half of the 2000s, although they have fallen back since the onset of recession (reflecting depressed household spending across much of western Europe), while visits from North America have also decreased. In the Ireland, while the number of European visitors has decreased since 2007 there has not been a significant decrease in the number of visitors from North America.

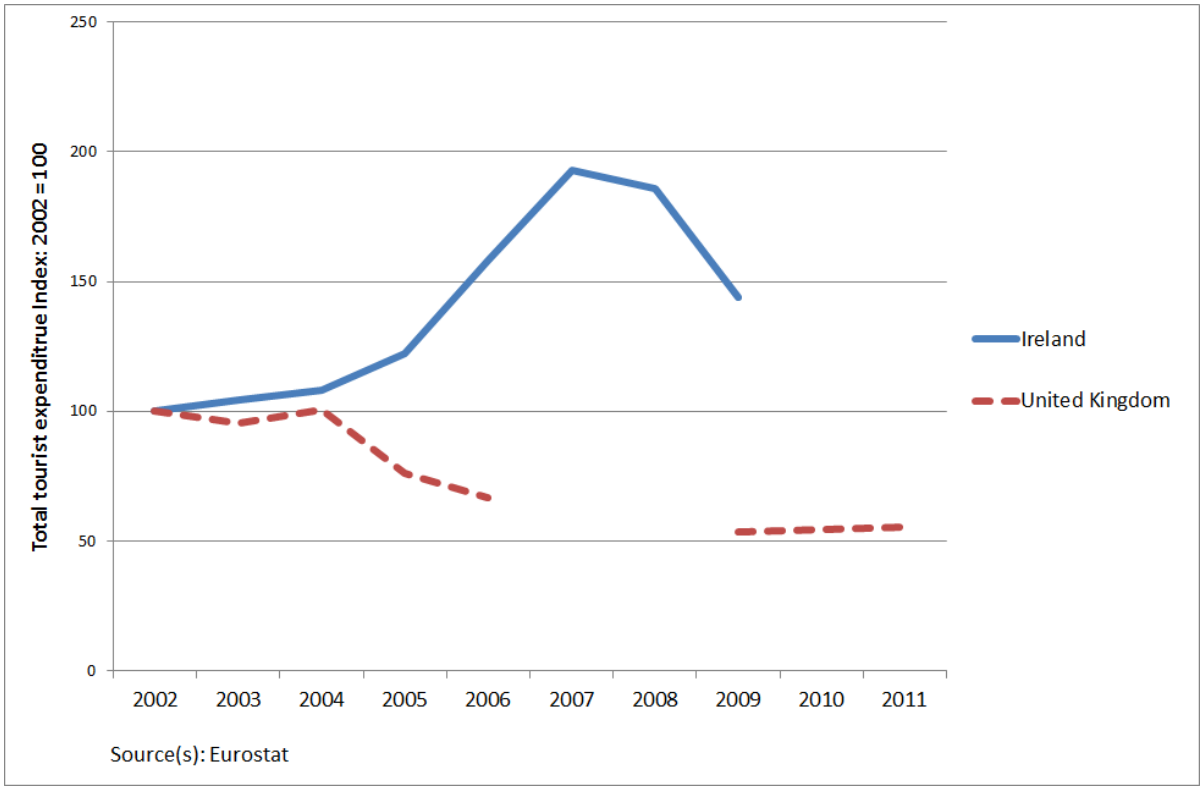
Tourist expenditure

Total tourist expenditure, in nominal prices, in Ireland has followed the profile in tourist numbers, rising quickly in the period to 2007, before falling back. Tourist expenditure per visitor fell in nominal terms over 2001-2009 (see Figure 77: Total Tourist Expenditure).

[79] Tourist statistics commonly differentiate between Great Britain and Ireland, rather than the UK, due to the difficulties in measuring transfers over the non-passported border between Northern Ireland and Ireland.

[80] The CSO and ONS do not publish consistent series in this area; as a result the decision was taken to compare number of visits from GB to Ireland with number of visitors from Ireland to GB (accepting that one visitor may undertake multiple visits in any one year) for illustrative purposes.

Figure 77: Total Tourist Expenditure



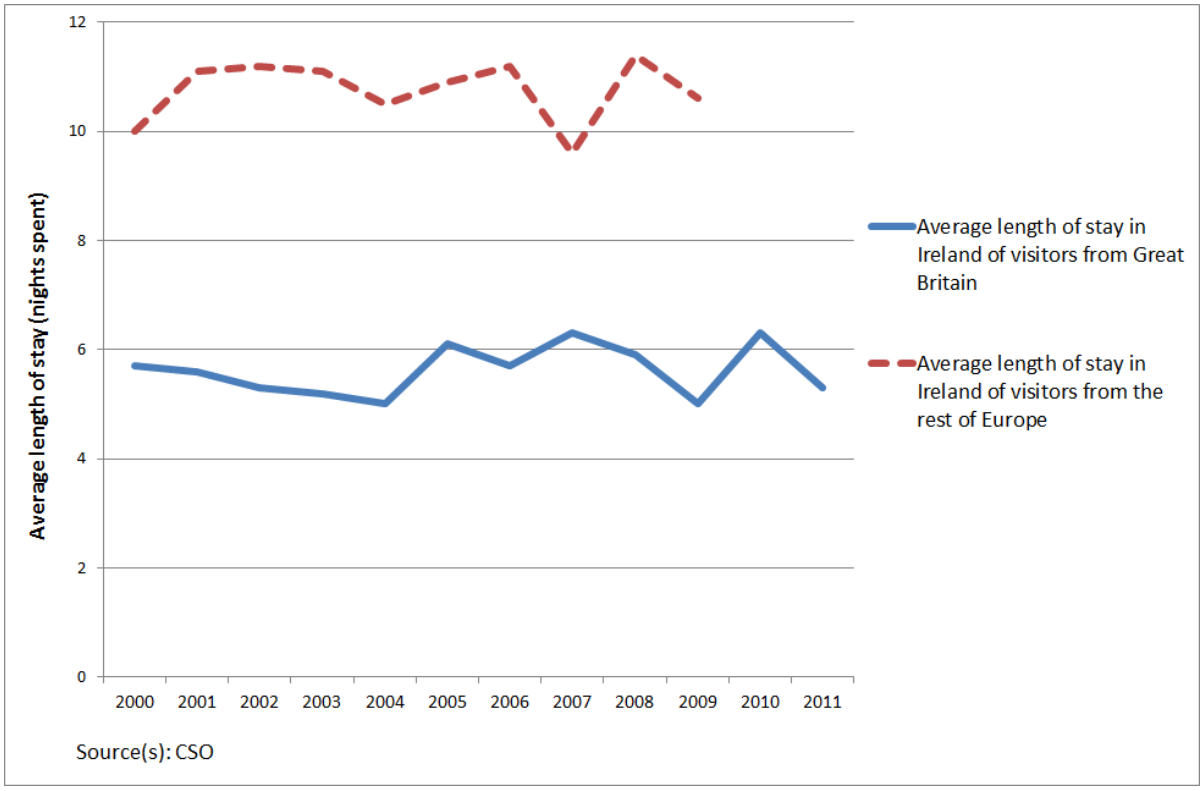
Tourism continues to generate significant revenues not just for Irish businesses but also for the public purse. €1.4b in tax revenues (4.1% of total tax revenue) in 2011, with €0.9bn coming from foreign tourists[81].

Over the period 2002-2011, expenditure by visitors in the UK has been decreasing. In 2011, tourist expenditure was almost 45% lower than the 2002 level. In the UK over 2009-11, the country whose visitors have spent the most in absolute terms was the USA, followed by Germany and France. France spent the second lowest amount per visit in 2011, at £315. The average stay by visitors from Ireland was the lowest (3.6 nights), and France was the third lowest (3.9 nights). Ireland was ranked in fourth in terms of visitor expenditure in 2009, but has since been overtaken by Australia, as visitor numbers from Ireland have fallen. Spending by Irish visitors decreased by £173m over 2009-11. Between 2008 and 2009, total tourist expenditure in the UK increased by 1.85%, and in 2010 it increased by a further 6.51%. This is equivalent to a total increase of around £1.5bn over the period.

The average length of stay in Ireland by visitors from Great Britain and the rest of Europe has been relatively unchanged since 2000 despite the growing popularity of short-stay holidays, trips and weekend breaks. Visitors from Great Britain spend an average of four days less in Ireland than visitors from the rest of Europe.

81 Fáilte Ireland – "Tourism Facts 2011" - http://www.failteireland.ie/FailteIreland/media/WebsiteStructure/Documents/3_Research_Insights/3_General_SurveysReports/Tourism_Facts_2011_v2.pdf?ext=.pdf

Figure 78: Average Length of Stay by Visitors in Ireland



7.3 Future prospects

A gradual recovery in the EU should ensure that growth in the Tourism sector continues to pick up in both the UK and Ireland, as income levels of EU residents increase allowing more visits from these countries. At the same time, an improvement in the domestic situation in both the UK and Ireland will drive demand both for domestic tourism and for bilateral visits.

In the longer term, the sector in both countries face a similar set of challenges; as income levels increase, they must encourage visitors from across the EU as well as domestic to visit the UK and Ireland rather than spending disposable income on travelling further afield. However a key growth market for the sector is likely to be increasing visit numbers from developing markets; ensuring that they have a coherent and enticing offer for tourists from the BRICs.

Appendix A: Data sources and references

A.1 Macro-economic analysis

The table below lists the data sources that have been examined for each 'theme' and the scope of the analysis carried out.

Theme	Data sources	Scope of analysis
Macroeconomy	Eurostat, ONS, CSO data for GVA, employment, population, total imports/exports	Descriptive and comparative analysis of trends in GVA, employment, productivity over recent history (1990-) in context of wider performance of the Eurozone and global trade flows
Trade	Manufacturing trade data from HMRC, ONS, CSO, InterTrade Ireland Bilateral trade data from Eurostat COMEXT database (for manufactured goods) & OECD (services) OECD value-added trade data	Compare UK imports from Ireland (and vice versa) to total output from these markets to identify sectors with high/low degrees of market interaction, and identify areas of opportunity
FDI & Capital Flows	Data from ONS on sectors of foreign direct investment within UK and partner country; FDI Markets (UK and Ireland data)	Analysis of the areas of comparative interdependence with regard to provision of investment - by using this alongside the macroeconomic data, can highlight potential areas of increased efficiency with regard to investment.
Tourism	Tourist numbers between the two countries, as well as the level of revenue generated through tourism between the two countries, from the ONS and the CSO	Analysing the relative importance of the bilateral tourist trade through comparing the level of tourist numbers and spending with other tourist origins.
Labour	Data from the CSO and ONS relating to number of employed in each country from the other, as well as the level of bilateral migration between the two. This includes data on the industry of employment and socio economic group	Analysing the extent to which the labour markets of the UK and Ireland incorporate and gain from bilateral migration, through consideration of the industries and jobs in which these migrants work.
Knowledge	Data on the number of collaborations between Irish and UK Higher Education Institutions	Analysing this data to pull out the extent to which UK and Irish institutions collaborate on research, and how this compares with other partner countries.

A.2 Micro-economic analysis

The table below lists selected data sources that have been examined for each sector. Other sources are attached to the text in volume I.

Sector	Source
Tourism	1) UK Immigration News: Ireland Suggests Joint Irish – UK Visas, Thursday, May 31, 2012 2) Irish Times: Foreigners may not avail of Republic-North visa-free travel, Dec, 2011 3) CEP: Britain, Ireland and Schengen - Time for a smarter bargain on visas, Aug, 2011 4) Government Tourism Policy, John Penrose MP, Minister for Tourism and Heritage, Department for Culture, Media and Sport, March, 2011) 5) "Report claims UK visa process deterring tourists, 17 May 2012 "www.Workpermit.com 6) UNWTO, Tourism highlights, 2012 7) Home office: Immigration Statistics, Jan to Mar 2012 8) Tougher tourist visa application process 'costs UK £2.8bn',Steven Williams, Face the Facts, BBC Radio 4 9) Does the Cost of Visas Affect Tourism Demand", Kurt Janson Sep 2008 10) Interviews with Subject Matter Experts 11) Joint statement by Mr. Damian Green, Minister of State for Immigration, the United Kingdom's Home Home Office and Mr. Alan Shatter, Minister for Justice and Equality, Ireland's Department of Justice and Equality introduction (December 2011)
Energy	1) US Energy Information Administration, http://www.eia.gov/ 2) DCENR Strategy for renewable Energy 2012 - 2020 3) US Energy Information Administration, http://www.eia.gov/ 4) Infrastructure and Capital Investment 2012-16: Medium Term Exchequer Framework (Irish Department of Public Expenditure and Reform) 5) Roadmap 2050 a practical guide to a prosperous, low-carbon Europe: technical analysis 6) Roadmap 2050, Financing for a zero-carbon power sector in Europe 7) Neart na Gaoithe Offshore Wind Farm online consultation 8) Offshore renewable conference 9) EIRGRID: Interconnection Economic Feasibility Report 10) Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Energy 2020, A strategy for competitive, sustainable and secure energy 11) Interviews with Subject Matter Experts 12) COWI, The revision of the trans-European energy network policy (TEN-E), Oct. 2010 13) Ensoe, Regional Investment Plan North Sea, July, 2012 14) Building the Offshore Wind Supply Chain Towards Round 3, BVG Associates 15) The Crown Estate, UK offshore wind report, 2012 16) National Grid, Offshore development Information Statement, Sept. 2011 17) Offshore Wind Cost Reduction Task Force: Report June 2012 18) Department for Energy & Climate change, UK Renewable Energy Roadmap Jul.2011 19) Analysis of renewables growth to 2020, AEA March 2010 20) Making green growth real: UK offshore wind supply chain, The Royal Academy of Engineering, March 2011 21) DECC, Digest of United Kingdom energy statistics (DUKES) http://www.decc.gov.uk/assets/decc/11/stats/publications/dukes/5955-dukes-2012-chapter-5-electricity.pdf 20) Ofgem, Electricity Capacity Assessment, www.ofgem.gov.uk/Markets/WhlMkts/monitoring-

	energy-security/elec-capacity-assessment/
Construction	1) Understanding construction consortia: theory, practice and opinions 2) Interviews with Subject Matter Experts 3) ONS 4) Construction Products Association (CPA): construction industry forecasts 2012-2015 5) European Business Review: Construction in the UK and Ireland on the mend, but recovery is slow and unsteady 6) European Powers of Construction, Deloiitte, 2011 7) Society of Chartered Surveyors Ireland: The Irish Construction Industry in 2012 8) ECITB: UK Engineering Construction Industry Regional Profiles, 2011 9) Catalyst: Facilities Management Sector Report 10) Ovum: Services Market Trends 2011: BPO Forecasts 11) International Journal Of Construction Supply Chain Management Volume 1 Number 1 2011 Adetola, A., Goulding, J., & Liyanage, C. (2011). Collaborative engagement approaches for delivering sustainable infrastructure projects in the AEC sector: A review. EC SECTOR: A REVIEW 12) Forfas: The Cost-Effective Delivery of Essential Infrastructure, June 2011 A: UK outsourcing across the private and public sectors 13) The UK National Infrastructure Plan - http://www.hm-treasury.gov.uk/d/national_infrastructure_plan291111.pdf UK Government Construction Pipeline spread sheet - http://www.hm-treasury.gov.uk/infrastructure_pipeline_data_update.htm 15) Irish Government capital funded infrastructure - http://per.gov.ie/wp-content/uploads/Infrastructure-and-Capital-Investment-2012-2016.pdf 16) Irish Government infrastructure investment priorities - http://www.taoiseach.gov.ie/eng/Building_Ireland's_Smart_Economy/Infrastructure_Investment_Priorities_2010_-_2016 17) A review of Ireland's Infrastructure by Engineers Ireland - http://www.engineersireland.ie/EngineersIreland/media/SiteMedia/communications/publications/TheStateofIrelandReport2012.pdf?ext=.pdf 18) Annual European Powers of Construction Survey – http://www.deloitte.com/assets/Dcom-Austria/Local%20Assets/Documents/Studien/TMT/European-Powers-of-Construction-2011.pdf. Note, 2009 version is last to include country analysis - http://www.deloitte.com/assets/Dcom-UnitedKingdom/Local%20Assets/Documents/Industries/EIU/Infrastructure/UK_EIU_Epoc2009.pdf 19) The Business Services Association - www.bsa-org.com 20) The Construction Industry Training Board - www.cskills.org
Research & Development / Innovation	1) Research Councils UK, http://www.rcuk.ac.uk/ 2) Higher Education Funding Council for England, http://www.hefce.ac.uk/news/newsarchive/2012/name,73740,en.html 3) Engineering and Physical Sciences Research Council, http://www.epsrc.ac.uk/ourportfolio/themes/researchinfrastructure/subthemes/einfrastructure/international/euro/Pages/egi.aspx 4) BIS Innovation and Research Strategy for Growth, http://www.bis.gov.uk/assets/biscore/innovation/docs/i/11-1387-innovation-and-research-strategy-for-growth 5) Key Attributes for Successful Knowledge Transfer Partnerships http://www.cihe.co.uk/wp-content/themes/cihe/document.php?file=1208KTP_TSB.pdf 6) Ireland: A Winning Proposition for Research, Development & Innovation,

	http://www.idaireland.com/news-media/publications/library-publications/ida-ireland-publications/research_innovaton.pdf
Professional & Financial services	1) The future of compliance, KPMG, 2012 2) Spillover report for the 2011 article iv consultation and supplementary information, International Monetary Fund, July 2011 3) Progress in Financial Services Risk Management: A survey of major financial institutions, E&Y 2012 4) The Breedon report, Boosting finance options for business, http://www.bis.gov.uk/assets/biscore/enterprise/docs/b/12-668-boosting-finance-options-for-business
Agri-food	1) Harvest 2020, Milestones for Success, Dept. of Agriculture Food and the Marine, 2012 2) Obesity – a growing problem?, Oireachtas Library & Research service, 2011 3) McDonald's farm forward Forecast, 2012 4) Stimulating Sustainable Agricultural Production through Research & Innovation (SSAPRI), Dept. of Agriculture Food and the Marine, 2012 5) Report of the Research Prioritisation Steering Group, 2012 6) National Obesity Observatory: Trends in obesity prevalence 7) Facts and figures on obesity, Department of Health 8) Obesity Epidemic – Paranoia or Evidence Based? The Bow Group Health & Education Policy Committee, 2011 9), Export Performance & Prospects Irish Food, Drink and Horticulture 2011-2012, Bord Bia 10) Harvest 2020, Milestones for Success, Dept. of Agriculture Food and the Marine, 2012 11) Problems must be tackled if farm sector is to prosper, Irish Times, 17 July, 2012 12) Agriculture in the United Kingdom 2011, DEFRA 13) Business Plan 2012-2015, DEFRA 14) Agriculture in Ireland, Teagasc, http://www.teagasc.ie/agrifood/ 15) A vision for Irish agri-food and fisheries, Food Harvest, Dept. of Agriculture Food and the Marine, 2012 16) Preparing for Export UK Guide 2009, Enterprise Ireland 17) Agri-Food: A Study for Cross-Border Co-Operation September 2011, Inter Trade Ireland 18) Challenges Facing UK Agriculture in a Global Market, Cranfield School of Management, 2006 19) The Future of Food and Farming: Challenges and choices for global sustainability, Gov. Office for Science 20) The Irish Dairy Industry: Challenges and opportunities, Teagasc, 2009 21) Food Research Ireland: Meeting the needs of Ireland's food sector to 2020 through research and innovation, Dept. of Agriculture Food and the Marine, 2012 22) Strategy for Science, Technology and Innovation 2011, Gov. Publication 23) The National Control Plan for Ireland for the period from 1st January 2012 to 31st December 2016, Food Safety Authority & Dept. of Agriculture Food and the Marine, 2012 24) Tackling Obesities: Future Choices, Foresight 25) The 'Fat Tax': Economic Incentives To Reduce Obesity, The institute for Fiscal Studies 24) Food Statistics Pocketbook 2011, DEFRA 25) Annual report 2011, Dept. of Agriculture Food and the Marine

Appendix B: Wider literature review

In this appendix, is analysis of a range of literature concerned with economic policy in Ireland, the UK or both. The structure is as follows:

- Cross-sector
- Agri-food and fisheries
- Construction and physical infrastructure
- Energy
- Financial and professional services
- R&D/Innovation
- Tourism and travel
- Transport

B.1 Cross-sector documents

B.1.1 Delivering A Prosperity Process: Opportunities In North/South Public Service Provision - A Scoping Study Michael D'Arcy, D'Arcy Smyth Associates for The Centre for Cross Border Studies (May 2012).

This study set out recommendations for cross-border collaboration within the island of Ireland. Although the focus was primarily collaboration on public services (out of scope for this study), we carefully reviewed each recommended.

#	Recommendations:	Notes:
1	Management Support: The availability of practical support for managers with responsibility for North/South projects.	Not relevant – related to public service provision
2	Implementation of Projects would be assisted by having a jointly commissioned operational tool box for managers given responsibility to implement a shared North-South public service provision project.	Not relevant – related to public service provision
3	Regional Development: The making of the case collectively for a Cross-Border Economic Development Zone in the Border Region by its local communities is a prerequisite for policy makers' to support its creation.	Identified as a contentious recommendation within the report; will need careful evidence gathering in its own right to progress
4	Health Services: The development of a cross-border health service provision plan to support and accelerate what is being done to share the delivery of certain acute hospital, community health and general medical services.	Not relevant – related to public service provision
5	The exploration of higher education initiatives by third level institutions in both jurisdictions to combine resources to enhance student/enterprise access to certain quality courses, world class knowledge centres and R&D.	Already exploring in context of collaborative R&D/Innovation

6	The creation of a Single Energy Market (or "SEM II") to take full advantage of renewable wind, wave and biomass CHP energy and retain the benefits of the Single Electricity Market (or "SEM I").	Already exploring shorter-term, practical implications of collaborative energy policies
7	The inclusion of North-South co-ordination on treated water in the plans for infrastructure upgrades being progressed by both jurisdictions so as to more effectively tap into the island's "water wealth".	Requires further consideration
8	Mutual Benefit in an EU context: The occasion of Ireland's EU Presidency being shared to the greatest extent feasible to facilitate consideration of issues of mutual concern and showcase the island's 'single market' trade and business achievements.	Not relevant at this level – this is about political tactics within EU context. Already addressing specific issue of collaboration on financial services regulation at EU/supranational level

B.1.2 BIS Economics Paper no. 18: Industrial strategy: UK Sector Analysis (September 2012).

Summary analysis underpinning UK Industrial Strategy. Sets out UK sector priorities, but provides few additional lines of enquiry in this context.

B.1.3 European Commission Work Programme 2013 (Annex I – Forthcoming initiatives).

Considered initiatives under: 'Boosting competitiveness' and 'Building tomorrow's networks today'.

#	Recommendations:	Notes:
9	Energy Technologies and Innovation in a future European Energy Policy (Non-legislative): To foster energy technologies development according to the energy roadmap 2050, to promote energy research, demonstration and market deployment actions at EU level and to remove market, regulatory and behavioural barriers to the market deployment of energy innovation (via the Intelligent Energy Europe III programme). (Boosting Competitiveness).	Already exploring shorter-term, practical implications of collaborative energy policies
10	Proposals for reinforced partnering in research and innovation under Horizon 2020 (Legislative): Leveraging investment and pooling efforts in key industrial sectors and in global development assistance through the renewal and creation of Public-Private Partnerships. These partnerships will leverage substantial private investment in key industrial sectors, such as pharmaceuticals, energy, transport, aeronautics, electronics, air traffic management and bio-based products. (Boosting Competitiveness).	Already exploring in context of collaborative R&D/Innovation and under individual sector hypotheses
11	Reducing the costs of broadband infrastructure deployment (Legislative): The draft regulation aims to substantially reduce the cost of deploying high-speed broadband networks across the EU. This would incentivise investment in line with Digital Agenda high speed internet targets. The Regulation would mainly set out rights and obligations directly applicable to telecom operators and other utilities. (Q1 2013). (Building tomorrow's networks today).	Requires further consideration

12	Action Plan on Wireless Communications for a Connected Europe (Non-legislative): The aim of the Communication is to lay down a policy action plan meeting the challenges the EU is facing in the next few years with regard to dynamic market developments and exponential traffic growth in wireless services. Policy objectives include accelerating the roll-out of wireless broadband networks, fostering shared spectrum use, exploitation of EU R&D results on wireless communications and enhancing global spectrum harmonisation. (Building tomorrow's networks today).	Requires further consideration
13	Follow up to Green Paper: Towards an integrated European market for card, internet and mobile payments (Legislative): While card, internet and mobile payments are the retail payment methods with the highest growth potential, there is significant market fragmentation along national borders. The follow-up to the Green Paper addresses the main obstacles for market integration in these areas (Q2 2013). (Building tomorrow's networks today).	Requires further consideration
14	A Blue Belt for a single market for maritime transport (Legislative / Non-legislative): To reduce the administrative burden for intra-EU maritime transport to a level that is comparable to that of other transport modes by avoiding multiple controls including customs. This will be supported by modern ICT technologies, which permit the reliable tracking of ships and cargo with a sufficient level of certainty when shipping operates within the Single Market. (Building tomorrow's networks today).	Not relevant – relates to EU regulations and funding
15	Framework on the future EU ports' policy including a legislative proposal (Legislative / Non-legislative): Enhancing the efficiency and overall quality of port services, addressing the obligations of Member States regarding the sound planning of ports and hinterland connections, transparency of public funding and port charges, and administrative simplification efforts in ports, and reviewing restrictions on the provision of services at ports. (Building tomorrow's networks today).	Not relevant – relates to EU regulations and funding
16	Internal Road Market - Access to the road haulage market and access to occupation of road transport operator (Legislative): The initiative will improve the economic and environmental efficiency of road freight transport by further lifting the restrictions to cabotage. It will create a more even playing field by including provisions to apply social rules of the host country in the case of long stay of drivers and provisions for a more uniform enforcement. (Building tomorrow's networks today).	Requires further consideration

B.1.4 Trading and Investing in a Smart Economy (DETI, 2010)

The report sets-out the current situation across three key aspects of trade (Transport, Tourism and Innovation) and sets-out a strategic plan until 2015 for developing further these three key components of trade.

Two sets of recommendations are relevant for the study.

#	Recommendations:	Notes:
17	Modify the visa regime to align with the strategy	Collaboration on Visa

	In support of a visa regime that is more in keeping with the needs of enterprise. A mechanism will be established to ensure that the visa regime supports the priorities set out in this Strategy. The Department of Justice and Law Reform will establish a Consultative Group of the relevant Departments (including Enterprise, Trade and Innovation, Education and Skills, Tourism Culture and Sport, Foreign Affairs, Transport) to progress this issue in the coming weeks. This new mechanism will ensure that entrepreneurial, business and tourist travellers to Ireland who can be identified as such are facilitated, and that businesses promoting trade, tourism and investment are not placed at a competitive disadvantage.	issues with the UK are being explored
18	Develop cooperation with other countries Four lines of action are proposed in support of developing cooperation with other countries: Maximising opportunities presented by Joint Economic Commissions; Developing new partnerships with other countries; Exploiting the benefits of the European Single Market; and Ensuring strategic alignment of Double Taxation Agreements (DTAs).	In addition to the joint statement this recommendation justifies further the study

B.2 Agri-food and fisheries

B.2.1 Food Harvest 2020: A vision for Irish Agri-food and fisheries. Department of Agriculture, Fisheries and Food. Ireland.

Considered initiatives for collaboration between Ireland and Northern Ireland that can help achieve the three main objectives of the Food harvest 2020 Vision for Irish Agri-food and fisheries: (1) 'Smart' (sector acting 'smartly' to achieve a competitive critical mass in the international marketplace), (2) 'Green' (development of the 'Brand Ireland' concept to communicate to consumers in key markets that by buying Irish, they are choosing to value and respect the natural environment), (3) 'Growth' (achieving efficient, environmentally sustainable production that delivers significant growth benefiting primary producers, processors and the food-manufacturing sector).

#	Recommendations:	Notes:
19	Achieving competitiveness: Consolidation and restructuring of processing capacity, collaboration of Irish farmers when exporting to international markets, joint farming or partnership arrangements	Already exploring in context of Agri-food sector. Also exploring wider Anglo-Irish collaboration prospect
20	Investing in Human Capital: Developing the skills set of the agri-food and fisheries sector.	Already exploring in context of Agri-food sector. Also exploring wider Anglo-Irish collaboration prospect
21	Securing Ireland's environmental credentials: Building on best practice and altering Irish production methods to reduce carbon intensity per unit of output and to maximise carbon sequestration in soils and forests.	Already exploring in context of Agri-food sector. Also exploring wider Anglo-Irish collaboration prospect

21	Delivering an effective R&D strategy: Investing in R&D to meet changing consumer demands and realise new growth opportunities, to reduce sectoral GHG emissions, and create employment.	Already exploring in context of Agri-food sector. Also exploring wider Anglo-Irish collaboration prospect

B.2.2 Harnessing our Ocean Wealth: An Integrated Marine Plan for Ireland. Roadmap: New Ways, New Approaches, New Thinking, July 2012.

NB: This cuts across a number of sectors.

The report sets out a roadmap for the Government's vision, high-level goals and integrated actions across policy, governance and business to enable Ireland's marine potential to be realised. The three main goals for the plan are the growth of maritime economy, healthy ecosystems, and increasing engagement with the sea.

Implementation of the plan to achieve these objectives will have to be delivered within the over-riding medium-term fiscal framework and budgetary targets adopted by the Government. This government program is not relevant to the scope of this project.

B.2.3 Food 2030: Vision for Secure and Sustainable System for 2030. Department for Food and Rural Affairs, UK.

This study identifies 6 core issues for the UK to address by 2030: (1) Enabling and encouraging people to eat a healthy, sustainable diet, (2) Ensuring a resilient, profitable and competitive food system, (3) Increasing food production sustainably (4) Reducing the food system's greenhouse gas emissions, (5) Reducing, reusing and reprocessing waste, and (6) Increasing the impact of skills, knowledge, research and technology.

#	Recommendations:	Notes:
22	A healthy sustainable diet for all: Help consumers get informed, so they can choose and afford healthy, sustainable food. People can easily find out the nutritional content of their food choices and understand the impacts on their health. This demand is met by profitable, competitive, highly skilled and resilient farming, fishing and food businesses, supported by first class research and development.	Already exploring in context of Agri-food sector. Also exploring wider Anglo-Irish collaboration prospect
23	A resilient, profitable food system: Food is produced, processed, and distributed, to feed a growing global population in ways which: use global natural resources sustainably, enable the continuing provision of the benefits and services a healthy natural environment provides, promote high standards of animal health and welfare, protect food safety, make a significant contribution to rural communities, and allow us to show global leadership on food sustainability.	Further consideration necessary
24	Food production sustainability: Our food security is ensured through strong UK agriculture and food sectors and international trade links with EU and global partners, which support developing economies.	Already exploring in context of Agri-food sector. Also exploring wider Anglo-Irish collaboration prospect

25	Reducing greenhouse gas emission and reusing waste: Ensuring the UK has a low carbon food system which is efficient with resources – any waste is reused, recycled or used for energy generation.	Further consideration necessary
26	Increasing the impact of skills, knowledge, research and technology: Food research is a complex, multi-disciplinary field which requires collaboration between public and private sectors to innovate. Realising the potential of UK science, innovation and skills and translating research into practice.	Further consideration necessary

B.3 Construction and Physical Infrastructure

B.3.1 Infrastructure and Capital Investment 2012-2016: Medium Term Exchequer Framework, Department of Public Expenditure and Reform, November, 2011

This Report presents the findings of a Government-wide review of infrastructure and capital investment policy led by the Department of Public Expenditure and Reform. This review assesses the existing capacity of Ireland's infrastructure and identifies remaining gaps which must be addressed to aid economic recovery, social cohesion and environmental sustainability.

It is relevant as it details the planned Exchequer allocations by policy area over the period. The final section discusses the potential of alternative sources of funding for investment to complement Exchequer funded and semi-State delivered infrastructure.

#	Recommendations:	Notes:
27	Achieve medium term priorities in economic infrastructure – encompassing transport networks, energy provision and telecommunications capacity. Specific priorities include: • Ensuring adequate maintenance of the National Road Network in order to protect the value of previous investments targeting the improvement of specific road segments where there is a clear economic justification, including advancing two key PPP roads projects. Development of the cross city LUAS line, BXD	Already exploring in context of Construction sector.
28	Investment in the productive sector and human capital – such as direct supports for enterprise development; science, technology and innovation advancement; supports for tourism, agriculture, fisheries and forestry; and capital investment in education infrastructure Over €800 million will also be invested in programmes through the Department of Agriculture, Food and the Marine, bringing major economic and environmental benefits.	Further consideration necessary.
29	In the years to 2016, almost €1.6 billion of Exchequer resources will be committed to Environmental infrastructure – including Ireland's waste and water systems and investment for environmental sustainability.	Further consideration necessary.

30	Critical social investment – such as the health service and social housing programmes. Close to €2 billion will be invested from the Exchequer in the period 2012-2016, augmented by funding from other sources. This funding will support three high priority national projects, as follows: • the National Children's hospital, as noted above • the replacement of the Central Mental Hospital • the National Project for Radiation Oncology	Not relevant.

B.3.2 National Infrastructure Plan 2011, HM Treasury

The National Infrastructure Plan 2011 set out a new approach to meeting the infrastructure needs of the UK economy. Ensuring the UK's infrastructure networks receive the investment they need is essential for the future growth and productivity of the UK economy.

The National Infrastructure Plan has three elements:

1. Effective planning for the medium term across all sectors;
2. Mobilising financing and funding for infrastructure investment; and
3. The Government taking an active role in ensuring the infrastructure in the plan is delivered.

#	Recommendations:	Notes:
31	The Government is taking a fundamentally new approach to coordinating public and private investment in UK infrastructure. The Government prioritised public capital investment in infrastructure at the 2010 Spending Review and will now also use all the tools at its disposal to facilitate the private investment that will finance the majority of the UK's infrastructure.	Further consideration necessary.
32	The Government will take an active role in ensuring the infrastructure in the Plan is delivered efficiently and on time, with priority given to those projects most critical for economic growth. Identified 40 infrastructure projects and programmes that are of national significance and critical for growth and has put in place a robust plan to ensure their delivery. A new Cabinet Committee, chaired by the Chief Secretary to the Treasury, will provide leadership to this work	Further consideration necessary.

B.4 Energy

B.4.1 Strategy for Renewable Energy: 2012 – 2020, Department of Communications, Energy and Natural Resources.

The report lists five Renewable Energy strategic goals for Ireland and recommended actions. Most of these do no relate to potential UK-Irish Collaboration and are not relevant to this project.

#	Recommendations:	Notes:
33	Progressively more renewable electricity from onshore and offshore wind power for the domestic and export markets: Export opportunities to and collaboration with the UK; EU policy of forming a single energy market comprising Ireland	Already exploring collaborative policies in Energy context

	France and the UK; North Seas Offshore Grid Initiative.	
34	A sustainable bioenergy sector supporting renewable heat, transport and power generation: REFIT scheme for the development of a robust and sustainable biomass supply sector in Ireland through providing a stable demand for biomass; The Department of Agriculture runs a number of measures such as the Afforestation Grant Scheme (to encourage new forests) and the Forest Roading Scheme (to encourage early harvesting).	Not relevant –specific measures taken by gov.
35	Green growth through research and development of renewable technologies including the preparation for market of ocean technologies: support and facilitate the development of the sector through the Ocean Energy Development Unit in SEAI, working with the Marine Institute, IDA, Enterprise Ireland, the Marine Energy Research Centre at UCC and the sector itself.	Not relevant –specific measures taken by gov.
36	Increase sustainable energy use in the Transport sector through biofuels and electrification: Installation of electric vehicle charge points; biofuel obligation scheme since 2010 to conform to EU regulation; tax reliefs for electronic vehicles.	Not relevant – specific measures taken by gov.
37	An intelligent, robust and cost efficient energy networks system: Modernisation and expansion of the electricity grid	Already exploring collaborative policies in Energy context

B.4.2 National Renewable Energy Action Plan: Ireland

This plan sets out the Irish Government's strategic approach and concrete measures to deliver on Ireland's 16% renewable energy target for 2020, as required under the Directive 2009/28/EC. The Government has set the following sub-targets:

Electricity: 40% electricity from renewable sources

Transport: 10% electric vehicles

Heat: 12% renewable heat

#	Recommendations:	Notes:
38	**Deliver electricity target through grid connection and grid development strategies** Aims: Appropriate management of the grid Stability of the electricity system during transition Introduction of a robust framework for the development of a vibrant micro-generation sector – building societal acceptance of energy infrastructure and ownership of the national renewable energy targets	
39	**Transform dependency on use of oil in transportation with two pronged strategy** *Significant increases in use of biofuels:* Road transport fuel suppliers to use biofuel in fuel mix, at initial rate of 4% per	

	annum, to be increased Ensure future access to appropriately priced, sustainable and reliable sources of biofuel and encourage domestic production *Use of electric vehicles:* Range of initiatives e.g. Memoranda of Understanding with a number of motor manufacturers, committing to a large scale national roll out of Electric Vehicle Infrastructure and appropriate supports for the customer Ireland an early test bed for technology	
40	**Ensure delivery of target through full range of resources available** Produce roadmap for development of bioenergy sector Initial focus on biomass sector Geothermal resources when suitable	
41	**Enhanced co-ordination and collaboration** between all relevant Government Departments and state bodies, involving all appropriate public sector bodies at national, regional and local level, to ensure fully joined up and integrated approach.	

B.4.3 Maximising Ireland's Energy Efficiency: The National Energy Efficiency Action Plan 2009 – 2020

This action plan identifies policies and measures that have the potential to contribute towards Ireland's national target of 20% reduction in energy demand across the whole of the economy through energy efficiency measures by 2020. The Government has a sub-target of a 33% reduction in public sector energy usage.

The Action Plan builds upon the Energy Efficiency Action Plan that was submitted to the European Commission in September 2007, and is closely linked to The National Climate Change Strategy

2007 – 2012.

The existing measures/actions are projected to make a 15% reduction. The remaining 5% will be through new measures and over-achievement of existing actions.

#	Recommendations:	Notes:
42	**Assist homeowners and vulnerable members of society to substantially reduce their energy bills** From January 2009 all homes offered for sale, rent or lease are required to have a Building Energy Rating (BER). This rating will classify the energy efficiency of the house and provide homeowners with the information required in order to improve the thermal efficiency of their dwelling. €49 million allocated for the Home Energy Saving scheme in 2009.	Further consideration necessary.
43	**Support business to become more competitive through tax allowances for energy-efficient technologies, energy management tools and support programmes** Improve the energy performance requirements of new non-residential	Further consideration necessary.

	buildings, improve existing buildings and encourage more businesses and public bodies to actively address their energy use and to use the most energy-efficient plant, machinery and equipment As part of the Carbon Budget 2008, bring forward legislation to remove inefficient lighting products such as incandescent bulbs from the Irish market.	
44	**Develop proposals for the introduction of an Energy Demand Reduction Target** Bring these forward to 2009	Further consideration necessary.
45	**Drive the public sector towards purchasing only green goods and services** The Government purchasing budget is over €10 billion per annum, giving significant leverage to those in the public sector to move towards the procurement of energy- efficient accommodation, products and services. Publish 'Green Public Procurement Guidelines' that will aim to achieve a level of green public procurement equal to that realised by best performers in the European Union. Use fluorescent lighting wherever practicable and replace incandescent light bulbs in public buildings with modern Compact Fluorescent Lamps (CFLs).	Already exploring collaborative policies in Energy context
46	**Develop an electric vehicle deployment strategy which will result in a minimum of 10% of the passenger car and light commercial vehicle fleet being electrically powered by 2020.** In addition, provide Sustainable Energy Ireland (SEI) with funding to further research and identify demonstration projects over the lifetime of this plan.	Further consideration necessary

B.4.4 Key Skills for Enterprise to Trade Internationally, June 2012, Forfas.

The report makes recommendations on optimising the use of current resources in Ireland to ensure that education and training provision and continuing professional development is aligned to the international trade skills requirements of enterprise.

A part of the report is relevant to the UK-Irish economic collaboration project. This examines various countries, including the UK and Ireland on their range of supports for enterprises when trading internationally, with a particular emphasis on skills and capability building. Specific examples of good practice are highlighted within country profiles that could be applicable and of potential value in Ireland. We are already exploring this area in the R&D context.

B.4.5 Energy: UK Annual Energy Statement 2012, November 2012, DECC

This paper outlines the Government’s vision is for a thriving, globally competitive, low carbon economy as guided by the following objectives: energy security, climate change, affordability, growth and fairness.

Last year’s Annual Energy Statement sets out the progress the Government has made, how the Government is implementing its energy and climate change strategy and how they will develop our approach further through a number of significant documents published this autumn. It explains how we will deliver both our near term priorities and set the UK on a long term path towards secure, affordable low carbon energy by:

I. Re-building the UK’s energy infrastructure

II. Putting householders and businesses in control of their energy bills

III. Driving international action on climate change

IV. Managing our energy legacy

#	Recommendations:	Notes:
47	Accelerate progress towards decarbonising our economy. We should take the opportunity to lock in lower carbon emissions in the power sector, while reaping the benefit from infrastructure investment.	Already exploring collaborative policies
48	To replace the UK's ageing electricity infrastructure, the sector will need to make around £110 billion of capital investment over the next decade. Securing the necessary investment will require reform; the Government is putting in place reforms to the electricity market which will offer long term contracts for low carbon energy.	Further consideration necessary
49	DECC will also support new ways of tapping our indigenous resources, where this proves economic, and subject to ensuring, through robust regulatory controls, that extraction can be carried out safely and with full regard for protection of the environment.	Further consideration necessary
	The Government is taking action to help consumers find and switch to the best tariff and to improve customer choice by supporting smaller energy companies to enter the energy market.	Further consideration needed

B.5 Financial and professional services

B.5.1 Strategy for the International Financial Services Industry in Ireland 2011-2016

The report sets-out the strategy (2011-2016) to "create more than 10,000 net new jobs, protecting existing employment and business, over the next 5 years, built on sustainable and responsible foundations".

The strategy sets-out 7 lines of actions to achieve this goal:

- Transparent and competitive direct and indirect tax framework
- Credible, responsible and proportionate regulatory regime
- Development of new business lines
- Coordinated international engagement and marketing
- Integrated support for investment and growth
- Targeted development of appropriate skills
- Sustained control of business costs

#	Recommendations:	Notes:

50	Coordinated international engagement and marketing "Mutually beneficial initiatives on a North/South basis will be explored, in particular to ensure access to as large a financial services skills pool. This builds on the arrangements in respect of undergraduate training that already exist. Enhancement engagement between industry and educational institutions in Northern Ireland, and common North/South initiatives will be pursued where possible."	Skills sharing and shared skills development capabilities are being explored across sectors. This should be extended beyond the North-South relationship i.e. East-West relationship.

B.5.2 UK International Financial Services: The Future, The Bishoff Report, HM Treasury 2009

The report, which reflects the view of the UK's financial services leaders, states that the UK's financial services sector can continue to be a world leader by working as a genuine partner of British business and emerging economies while embracing the need for global regulatory reform. It proposes a framework that would apply to the UK over the next 10-15 years to maintain and develop its international competitiveness.

#	Recommendations:	Notes:
51	**Establish a clear direction for the UK international financial services industry in partnership with the wider economy and overseas markets** • Ensure that the benefits of the UK's position as an international financial centre continue to accrue broadly across the UK domestic economy. How? Government and Industry should lead an informed public debate on the role of financial services in the economy & public authorities across the country should work with the industry to strengthen involvement in the regional provision of international financial services by the financial and professional sectors. • Maintaining an open economy and cooperation with other financial centres. A suggested route is Government and the industry should collaborate in order to maintain and expand the UK's central role as a finance portal for the rest of Europe and the world.	Already exploring collaborative policies in Financial Services context
52	**Reaffirm the UK's reputation for competence, responsibility and trustworthiness** • Taking a leading role in the formulation and implementation of global and EU regulation. • Generating strong and purposeful engagement between the Government and the industry to ensure that the UK tax system remains stable, sustainable and competitive in the long term. • Supporting flexible labour markets, with enhanced skills and training. • Innovating responsibly with effective oversight to meet the challenges of the next 10 to 15 years.	
53	**Ensure effective delivery of these recommendations**	

	• Building on and enhancing the close and productive dialogue between the Government and the industry. • Effectively promoting the UK's international financial and professional services capabilities.	

The report also includes a case study of financial sector opportunities from a local skills base in Belfast. Northern Ireland offers a base within the UK for the provision of international financial services. Competitive operating costs and a highly educated workforce with a sustainable supply of skilled and qualified staff have attracted a growing list of blue-chip financial services firms that includes Fidessa, NYSE Euronext, AllState, Citi and Liberty Mutual. Invest Northern Ireland (Invest NI) focuses on the financial services, information, communications and technology sectors and supports its sector-focus through a global network of offices offering a one-stop-shop for investment support.

B.5.3 Financial services strategy sets out how we can make a difference to the industry, Technology Strategy Board, September 2010

The Technology Strategy Board Financial Services Strategy addresses how financial services offer the greatest opportunities for them to make a difference in technology-related investment in high value services.

The UK has world class capabilities in financial services, particularly in areas of complex international finance such as banking, capital markets, asset management and insurance/reinsurance. They aim to bring greater focus on technology, know-how and behaviours to address the key challenges of risk, value transparency and system efficiency. By encouraging cross-industry working on these challenges, we aim to support the industry in maintaining its globally competitive position and delivering growth at a level that is sustainable for the longer term.

#	Recommendations:	Notes:
54	**Financial Services Knowledge Transfer Network.** The FS KTN was launched in late 2009 and comprises a dynamic network of organisations, led by FS-Net, with the aim of connecting financial services companies and practitioners across the industry, while engaging with regulators and academics. Its ultimate goal is to improve the performance, sustainability and contribution of the financial services industry to the UK economy and its citizens.	

B.6 R&D/Innovation

B.6.1 Innovation and Research Strategy for Growth, Department of Business, Innovation and Skills Paper, 2011

This paper analyses how the government can play a role in strengthening the UK's current assets in Innovation and research and leverage the innovative potential of the economy. The current strengths identified are 1) a genuinely world-leading science base and information infrastructure, (2) a major financial sector that can be better directed to support firm growth, (3) a strong supply of high-level skills and access to globally mobile skills, and (4) strong business performance in the creation of intangible assets.

Successful innovation policies have to strengthen the coherence of the UK innovation system to improve significantly its overall effectiveness in respect of these functions.

#	Recommendations:	Notes:
55	**There is a need to strengthen the sharing and dissemination of knowledge within the innovation system.** Facilitate collaboration between organisations in the private, public and third sector at every geographical level – from international to local – to generate and apply new knowledge.	Already exploring collaborative policies in R&D/Innovation context
56	**Innovation performance increasingly rests on creating and using a more coherent research and innovation infrastructure.** The need to maintain and develop a full scale knowledge infrastructure – the university science system, research labs and organisations, and information agencies working in design, intellectual property, quality assurance and specialist support	Further consideration needed
57	**Importance of driving business innovation in all sectors of the economy, in high-tech but also in our large service sector, and in low and medium-tech activities.** High tech sectors and companies are important, but they are a relatively small part of the overall economic picture. The growth of the UK economy crucially depends on the innovation performance of the rapidly evolving service sector, and of large medium and low tech industries in manufacturing, construction, energy supply etc.	Further consideration needed.
58	**Government-led innovation** has the potential to make more of an impact on the performance of the innovation system as a whole, but particularly in such very large sectors such as health, transport and urban development. Demand-side policies that foster innovation are an important area to address.	Further consideration needed.

B.6.2 Report of the Research Prioritisation Steering Group, November 2011.

The report identifies a number of priority areas around which future investment in publicly-performed research in Ireland should focus. These priority areas should deliver sustainable economic return through their contribution to enterprise development, employment growth, job retention and tangible improvements in quality of life. The priority areas cannot and should not be pursued within an exclusively national context. In most instances, they already connect to established European and global research agendas.

14 priority research areas were identified in total. The priority areas for Research linked to the sectors targeted by the survey fall under four key sectors:

#	Recommendations:	Notes:
59	ICT: Future networks and communications; Data analytics and security; Digital Platforms, content and applications	Already exploring shorter-term, practical implications of collaborative policies in R&D context and Agri-food context
60	Health and Pharma: Connected Health and Independent Living; Medical Devices; Diagnostics; Therapeutics - Synthesis, Formulation, Processing and Drug Delivery	Requires further consideration
61	Agri-food: Food for Health; Sustainable Food Production and Processing.	Already exploring in context of Agri-food sector. Also exploring wider

		Anglo-Irish collaboration prospect
62	Manufacturing: Manufacturing Competitiveness; Processing Technologies and Novel Materials; Innovation in Services and Business Processes	Requires further consideration

This report also considers required changes to the Science Technology and Innovation (STI). 13 recommendations including:

"There should be an ongoing review of all funding programmes to ensure continued relevance and clarity of purpose, that programmes have sufficient scale and that unnecessary duplication is avoided. The review should ensure that the costs of the programme are commensurate with the benefits achieved. New programmes should be avoided if the objectives can be achieved through the adaptation of existing programmes."

There are a number of overlaps/duplication of effort in the area of applied research between Ireland and Northern Ireland (for instance both Ireland and Northern Ireland are in the process of setting-up technology centres/competence centres in the areas of Connected Health and Sustainable Energy). Stronger impact could be delivered through better cooperation between the two jurisdictions. This aspect is already covered as part of the hypothesis formulated through this study.

B.7 Tourism

B.7.1 Government Tourism Policy, John Penrose MP, Minister for Tourism and Heritage, Department for Culture, Media and Sport

This paper outlines the UK Government's approach to the visitor economy as a whole. This section summarises the visitor economy's importance to the UK, and how the Government plans to help tourism achieve its potential as a central part of Britain's growth strategy.

#	Recommendations:	Notes:
63	**Goals**: • Invest £100m (funded by Government and private sector) to attract visitors to the UK in the years following 2012 to attract 4 million extra visitors to Britain over the next 4 years. That equates to £2bn more spend in our economy, and 50,000 new jobs. • Increase the proportion of UK residents who holiday in the UK to match those who holiday abroad each year. • Improve the sector's productivity to become one of the top 5 most efficient and competitive visitor economies in the world.	Further consideration needed.
64	**To achieve 4 million extra visitors an industry where destinations are not always marketed effectively, and where longer-term planning and investment is made harder by the risk that public funding priorities may change at short notice.** • Repair market failure by modifying the existing, long-established Tourist Boards to become smaller, highly focused, industry-led partnerships between tourism firms and government. They will be funded through long-term partnership marketing campaigns.	Further consideration needed.

	• Broaden our tourism offer by creating alternative destinations which match London, the UK's biggest and most successful single tourism destination to capture the spare tourism capacity and potential of other parts of Britain as well.	
65	**Increasing domestic tourism** • We will consult on whether to move the first bank holiday in May or a new 'UK Day' or 'Trafalgar Day' bank holiday during the October half term instead. • Brown signs have been criticised as not meeting the needs of the Tourism Industry. We will therefore work with the Highways Agency to ensure that Brown Signs can be as informative as possible to road users, whilst helping tourist destinations.	Already exploring collaborative policies in Tourism context
66	**Improving Productivity** • We will give the industry and consumers responsibility for hotel 'star rating' quality schemes • We will help to improve staff and management skills across the entire industry by increasing the number of apprenticeships and other courses teaching these skills.	Further consideration needed.

B.7.2 GB Path to Growth, The Tourism Recovery Task Force, Failte Ireland, ITIC, Northern Ireland Tourist Board, Tourism Ireland, October 2012

GB Path to Growth outlines a new strategy for how Ireland can attract visitors from the GB market. With the total number of British holidaymakers forecast to increase very slowly, we need to grow business faster than our competitors if we are to recover the level of visitor numbers it had in the past from GB.

Following extensive research the report found that some of the issues affecting the island of Ireland's performance in the GB market include: a perception that there is a lack of iconic experiences to motivate British travellers to visit and a lack of familiarity with the geography of the island.

Ireland needs to catch up with, compete with, and beat our competitors in the GB domestic market by making the holidaymakers with most potential aware the island of Ireland can and does offer the experiences they want.

#	Recommendations:	Notes:
67	GB Path to Growth finds that best destinations have an identifiable audience and cleverly focus on well-defined groups of potential visitors. The experiences most attractive to GB consumers are (1) vibe of the city, (2) living historical stories, (3) awakening the senses and (4) getting active in nature.	
68	**The Tourism Recovery Task Force need to need to take a much sharper focus on developing specific and compelling experiences that match the needs, interests and motivations of consumers by**: •Creating and promoting 'hero' or iconic experiences that can only be had on the island of Ireland •Developing a wide range of compelling supporting experiences, which will match the core motivations of our three target segments and be clustered	

	together to make it easy for holidaymakers to access them. •Addressing the market's value perception of Ireland by bundling specific experiences, communicating improved value and addressing the cost of mid-range food and drink	

B.7.3 Tourism opportunity: Driving economic renewal, ITIC, February 2011.

This is a turnaround plan proposing a set of actions that can lead to the growth and economic recovery of the Irish tourism sector. The only recommendation that involves UK-Ireland economic collaboration is summarised below:

#	Recommendations:	Notes:
69	Learning from the UK can help Irish tourism enterprises gain better access to credit: The current banking crisis has seen the withdrawal of credit which is seriously threatening the ability of many Irish tourism enterprises to stay in business. The introduction of a business loan guarantee scheme, similar to that in operation in the UK and elsewhere, can help to tackle this.	Requires further consideration

B.8 Transport

B.8.1 Freight Transport Report for the Island of Ireland, IBEC/CBI & InterTradeIreland, 2012.

The study examines current freight flows throughout the Northern Ireland and Ireland and how freight moves between the both jurisdictions and GB, the rest of EU and the wider global economy. It then develops a set of recommendations for policy, operational and investment measures to improve the performance and efficiency of the freight and logistics services provided for the island of Ireland.

#	Recommendations:	Notes:
70	Increasing port capacity and connectivity: Planning permissions for increasing port capacity; Improve local access routes adjacent to a number of ports / airports.	Not relevant – relates to individual government plans
71	Improving the Irish-British land corridor and reducing congestion: Approximately 1.5million tonnes of imports and a little lower volume for exports) passes overland by lorry through GB, mainly down to the ports of south-east England and the Channel Tunnel. This relies on the quality and usage cost of the infrastructure in ROI and GB. Cooperation with the authorities in England, Wales and Scotland is required to ensure that road improvements are prioritised and demand management / pricing policy on main routes between NI and ROI in congested periods may be needed to discourage excess car traffic volumes.	Requires further consideration
72	Improving traffic/congestion management via new tech: This is an area where there have been major improvements in Britain in recent years, providing free, real-time information to users of England's network of motorways and trunk roads, allowing them to plan routes and to avoid congested areas. GB and ROI could work together to develop similar technology-based solutions on an all-island basis in Ireland.	Requires further consideration

73	Regulating the Freight Industry: Adopt common vehicle height restrictions based on the UK de-facto limit of 4.95 metres instead of the proposed lower limit of 4.65 metres in Ireland; Equalise national speed limits on the island of Ireland; Centralise and improve the efficiency of providing permits for the movement of abnormal loads and adopt a joint approach to the licensing of commercial vehicles and enforcement of Vehicle Standards .	Requires further consideration

B.8.2 An air transport strategy for Northern Ireland: First Report of Session 2012–13, House of Commons Northern Ireland Affairs Committee.

The report is not relevant as it refers to unilateral measures that must be taken by NI (in collaboration with the rest of the UK) to increase NI air travel.

The only point in the report which is relevant to this project is the recommendation that the UK and the Irish Governments should co-operate in order to introduce a joint, shared visit visa to reduce costs and effort for travellers. We are already exploring this point in the Tourism context.

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