

# Joint Agency Inputs on Enterprise Transport Trends and Needs

September 2013



*Approximately three quarters of Ireland's exports of goods and services in 2011 were by development agency client companies in the internationally trading sectors. Agency-assisted companies operating in Ireland provide almost 300,000 direct jobs, a similar number of indirect jobs; 40 per cent of national GVA; €33 billion through payroll, materials and services purchases (which represents about 25 per cent of GNP); and three-quarters of all corporation tax.*



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## Summary of the Key Transport Issues for Enterprise

The availability of competitively priced world class transport infrastructure and related services is essential to support enterprise development. This submission was prepared in the context of the development of the strategic framework for land transport investment by the Department of Transport, Tourism and Sport (DTTAS). The 2013 Action Plan for Jobs requires the department to establish the evidence for future investment to facilitate easy access to markets and the mobility of the workforce.

An efficient and integrated national transport system with adequate capacity and levels of service comparable to other countries with which we compete is vital to move goods and people quickly, effectively and in environmentally sustainable ways. Access to markets for people and goods is one of the main factors for companies in deciding where to locate. While Ireland has made significant investment in infrastructure in recent years, further targeted investment is required to ensure that Ireland's transport infrastructure can support economic recovery and enterprise growth throughout the country.

### Enterprise needs:

There is a strong correlation between economic growth and transport needs. As the economy returns to growth, the demand for transport services and supporting infrastructure is likely to increase, which in turn could lead to a deterioration in the ease of movement of people and goods, particularly in and around the main cities. Targeted investment is required to minimise congestion and associated costs over the period to 2025.

The changing profile of the internationally trading sectors and the areas of future growth opportunities have implications for the transport needs of enterprise over the period of the strategic investment framework, 2014-2025. The main issues that need to be considered are the:

- Increasing importance of services;
- Changing composition of merchandise exports;
- Need to diversify sectoral and market concentration; and
- Growing importance of cities.

### Enterprise priorities:

- National transport policy needs to ensure an integrated approach across all modes (road, rail, sea and air) to deliver an efficient transport system for people and goods. Good international air and sea access, coupled with effective internal land transport connectivity, is essential to enable Irish export companies to compete successfully in international markets.
  - ◆ This paper focuses on the land transport needs of enterprise but Ireland's transport policy also needs to promote efficient and timely infrastructure investment in air and sea transport infrastructure and facilities (e.g. to accommodate global developments in vessel and aircraft size) and incentives to attract new services to ensure excellent international connectivity;

- ◆ The new framework needs to optimise the use of the scarce resources available to deliver transport infrastructure and services that best meet the needs of users. One of the key barriers to delivering an efficient national transport network is the number of national and local bodies with strategic and/or operational responsibility for various aspects of transport infrastructure;
- The most important issue for the enterprise agencies is ensuring that the needs of existing export companies are met. We must also plan for the future needs of emerging sectors. To support future economic growth and job creation, Ireland needs to prioritise investment where it will have greatest impact. In particular, Ireland needs to:
  - ◆ Enhance urban mobility in Dublin and the other city regions:
    - Ensure existing resources are focused on providing public transport services that best meet changing customer needs and provide high quality access to, from and within the main cities;
    - Prioritise the actions in the National Transport Authority's investment plan for the Greater Dublin Area to fully capture the benefits of existing infrastructure (e.g. Luas Cross City and the re-opening of the Phoenix Park Tunnel) and advance the rollout of measures to promote more walking and cycling;
    - Complete the ring roads in Cork and Galway to enhance access in and around these cities and their hinterland;
  - ◆ Ensure quality access between the main urban centres and to/from the main air and sea ports:
    - Invest in ongoing maintenance of the motorway and national road network to ensure future quality access to the main air and sea ports in Dublin and in the south and west and optimise the substantial investment already made while reducing the need for significant and costly remedial work in the future
    - Address a small number of bottlenecks to improve road access between and around the main regional cities in the immediate term and provide high quality access along the Atlantic Corridor (Sligo-Galway-Limerick-Cork-Waterford) in the longer term to facilitate the development of regional agglomerations of international scale and provide access to the main air and sea ports in the south and west; and
  - ◆ Improve connectivity to the north-west:
    - In the short term, address bottlenecks to improve road access from Dublin to the north-west gateways of Sligo and Letterkenny and in the longer term ensure quality road access to these centres to enhance their attractiveness as a location to do business and improve the region's access to the main air and sea ports.
- Accelerate the development of intelligent infrastructure to substitute or complement traditional capital investment and to promote more effective utilisation of existing transport infrastructure and services. Intelligent infrastructure also provides enterprise development opportunities for new goods and services which can create jobs.

# 1. Introduction

The availability of competitively priced world class transport infrastructure and related services is essential to support enterprise development. While Ireland has made significant investment in infrastructure in recent years, further investment is required to ensure that Ireland's transport infrastructure can support economic recovery and enterprise growth.

The enterprise agencies welcome the opportunity to input to the strategic framework for land transport investment being developed by the Department of Transport, Tourism and Sport (DTTAS). The new framework will determine what investment will be required out to 2025 to facilitate easy access to markets and the mobility of the workforce<sup>1</sup>.

The availability of competitively priced, quality transport infrastructure and related services is important for all sectors of the economy, but this paper focuses particularly on the needs of the internationally traded sectors. The priorities identified in this paper will also benefit the locally traded (e.g. retail, wholesale) and tourism sectors of the economy.

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<sup>1</sup> Action 161 of the Action Plan for Jobs 2013.

## 2. Transport needs of enterprise

National and international connectivity is critically important in an increasingly globalised economy. Access to markets is one of the main factors for companies in deciding where to locate. Good international air and sea access, coupled with effective internal land transport connectivity, is an important factor in mitigating the impact of Ireland's peripheral location in the eyes of potential investors and overseas customers. It is therefore important that national transport policy takes an integrated approach across all modes of transport to ensure an efficient transport system for people and goods.

An efficient and integrated national transport system with adequate capacity and levels of service comparable to other countries with which we compete is vital to move goods and people quickly, effectively and in environmentally sustainable ways. In addition, well-developed infrastructure can reduce traffic congestion, increase productivity and reduce costs for existing firms and workers. The attractiveness of Ireland's cities, as places to live and work, has become an increasingly important consideration in attracting globally mobile people to contribute to productivity and growth. Effective transport links also play an important role in supporting regional business development.

### 2.1 Overview of the internationally trading sectors

Sectors and the ways of doing business are constantly evolving and as a result the profile of Irish enterprise is changing. Services exports are becoming increasingly important (Table 1). In 2002, services accounted for a quarter of total exports, in 2012, it was almost half (49 per cent). The ESRI forecasts that by 2025, services could account for over 70 per cent of Irish exports and nearly 80 per cent of GDP.

**Table 1: Changing Profile of Irish Exports 2001-2012**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Merchandise Exports (€m)</b>	92.7	93.7	82.1	84.4	86.7	86.8	89.2	86.4	85.8	89.7	91.2	92.0
<b>Services Exports (€m)</b>	28.6	31.6	37.1	42.4	48.2	57.1	68.0	67.9	67.1	74.3	81.4	90.2
<b>Total exports (€m)</b>	121	125	119	127	135	144	157	154	153	164	173	182
<b>Services as % total exports</b>	24%	25%	31%	33%	36%	40%	43%	44%	44%	45%	47%	49%

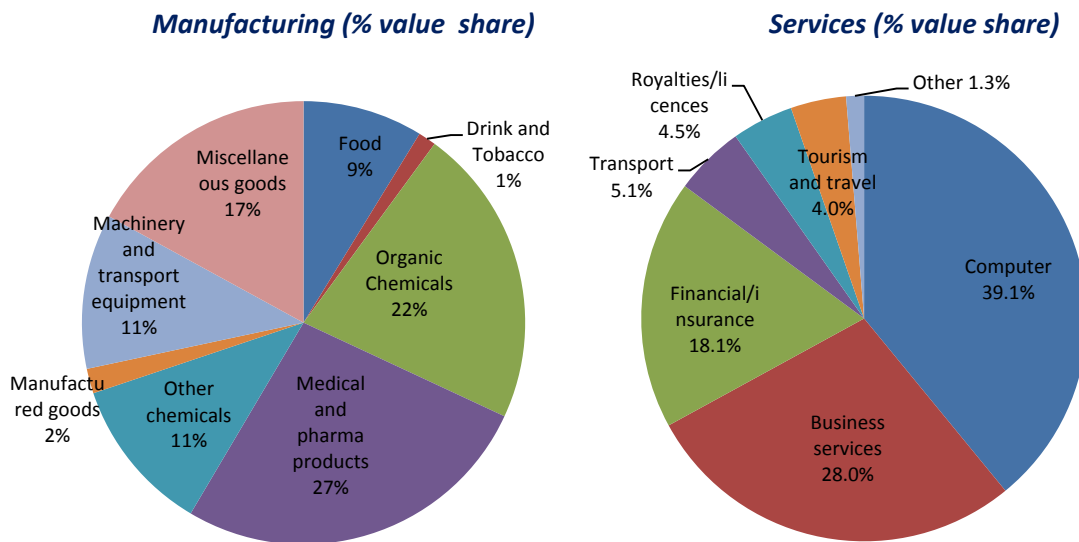
Source: CSO

Although services have increased significantly over the past decade, manufacturing remains critically important. In spite of the substantial decline in manufacturing employment over the past decade, the sector still employs over 200,000 people directly and as many people again

indirectly. Forfás estimates that the manufacturing sector has the potential to create up to an additional 43,000 jobs by 2020 with supportive policy measures and business environment<sup>2</sup>.

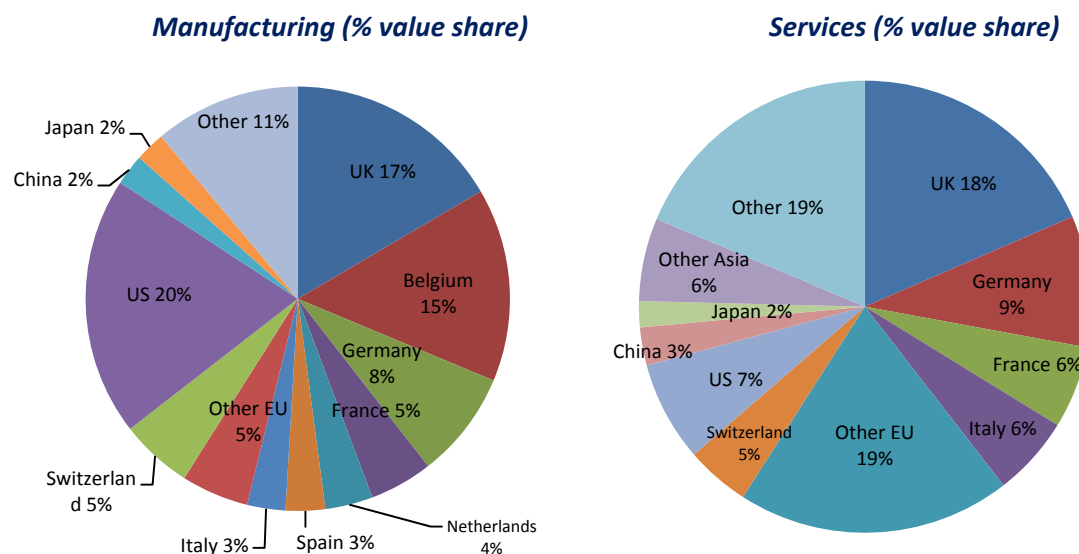
To date, Ireland’s economic success in international markets has been driven primarily by a small number of sectors and strong trade or intra-firm relationships with a limited number of countries (Figures 1 and 2). As 2012 data is not yet available for services exports, 2011 data is used.

**Figure 1: Sectoral Composition of Irish Manufacturing and Services Exports, 2011/2012**



Source: CSO

**Figure 2: Ireland’s Main Export Trading Partners, 2011/2012**



Source: CSO

<sup>2</sup> Forfás, Making it in Ireland - Manufacturing 2020, April 2013.



### Agency supported companies

Every year the Annual Business Survey of Economic Impact (ABSEI), a survey covering the client base of Enterprise Ireland, IDA Ireland, Shannon Development and Údarás na Gaeltachta, is prepared by Forfás and is published<sup>3</sup>. The survey focuses on four business indicators— sales, exports, value added and direct expenditure in the Irish economy. Employment trends are analysed in the Forfás Annual Employment Survey<sup>4</sup>.

Among the main findings of the 2011 ABSEI are:

- Sales and exports in 2011 were higher than in 2010 by seven and eight per cent respectively. Value added was also higher in 2011 by seven per cent; and
- Direct expenditure on wages, materials and services in the Irish economy remained reasonably stable over the 2000 - 2011 period. Direct expenditure in 2011 was six per cent higher than in 2010.

Agency supported companies contribute to the economy in a range of ways, including to foreign earnings, to the Exchequer through corporation and other taxes, through the transfer of technologies, skills and experience and through direct expenditure in the Irish economy in the form of wages and salaries, and purchases of goods and services:

- Foreign subsidiaries spent €21.5 billion in the Irish economy in 2011, an increase of nine per cent on 2010. This was composed of €2.6 billion on materials, €10.6 billion on Irish services and €8.3 billion in wages. All increased on 2010 levels; and
- Indigenous firms' expenditure was €16.8 billion, up three per cent on 2010. This comprised €8.1 billion on Irish materials, €3.4 billion on Irish services and €5.3 billion on wages and salaries.

## 2.2 Future growth opportunities

The overarching objective of enterprise policy is to achieve the optimum potential from all sectors to deliver on growth and jobs. Sectors contribute differently to the economy, with some being more export oriented and others more employment intense. It is possible to identify certain cohorts of sectors which, based on their overall stage of development in Ireland, share similar characteristics and business needs (Figure 3).

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<sup>3</sup> Forfás, Annual Business Survey of Economic Impact, July 2013.

<sup>4</sup> Forfás, Annual Employment Survey 2012, July 2012.

**Figure 3: Overview of Future Sectoral Growth Opportunities**



Source: Forfás

Building a strong enterprise mix can ensure that Ireland is not overly reliant on a small number of sectors for future growth and/or employment, is better protected from external shocks and further underpins a sustainable model for economic growth<sup>5</sup>.

The main growth sectors identified by the enterprise agencies are:

- Manufacturing:
  - ♦ life sciences;
  - ♦ ICT;
  - ♦ food;
  - ♦ engineering;
  - ♦ cleantech;
- Services:
  - ♦ financial;
  - ♦ digital/media; and
  - ♦ global business services.

<sup>5</sup> Forfás, Making it Happen – Growing Enterprise for Ireland, October 2010.

More detail on opportunities within these sectors is included in Appendix A.

## 2.3 Future transport needs

The changing profile of the internationally trading sectors and the areas of future growth opportunities have implications for the transport needs of enterprise over the period of the strategic investment framework.

The main issues that need to be considered to ensure that the future needs of enterprise are met are:

- Increasing importance and internationalisation of services: The efficient movement of people internally and externally is critical as internationally trading services activity increases. From a land transport perspective, this means high quality access between the main urban centres and the main airports, particularly Dublin which handled 79 per cent of all passengers in 2011;
- Changing composition of merchandise exports: Air freight is becoming more important for both importers and exporters with the move to high value, low volume goods so ease of access from the main urban centres to the airports, particularly Dublin Airport (it handled 85 per cent of air freight in 2011) is required. However, this trend will have little impact on the overall demand for sea freight services which is driven by volume. Ease of access to the main ports remains important;
- Diversifying sectoral and market concentration: With the exception of the food sector, agency supported companies tend to be concentrated in the main urban centres. High quality access is required from the main centres to the air and sea ports, particularly those providing access to long haul destinations (e.g. China) and those equipped to accommodate future developments in shipping vessels (e.g. larger ships requiring deep water facilities) and aircraft (e.g. the double decker A380); and
- Growing importance of cities: Internationally, cities are increasingly seen as the drivers of national competitiveness and economic and social development<sup>6</sup>. Large population centres are also increasingly the preferred locations for FDI activity, which poses challenges for attracting investment to many of Ireland's regional urban centres. Dublin is Ireland's only city of international scale (i.e. with a population over one million). In the first instance, Ireland needs to ensure the efficient movement of people and goods within, to and from the main cities, particularly Dublin. Good international access (air and sea) is also vital. Supporting the development of regional agglomerations, particularly the Atlantic Corridor, is important for regional growth and job creation. Effective public transport services within, to and from the main cities is also important for their attractiveness to internationally mobile employees.

What these trends mean in terms of transport needs and priorities is discussed in more detail below.

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<sup>6</sup> Our Cities: Drivers of National Competitiveness, National Competitiveness Council, 2009.

## **Movement of goods**

In terms of the movement of goods, the priority for the agency enterprise base is getting finished product to market as efficiently as possible. Ensuring ease of movement of raw materials and other inputs, either those sourced within Ireland or internationally, is also increasingly important. The efficient movement of goods requires adequate capacity, cost competitive, high quality land transport access and certainty around journey times. For rail freight, the frequency of the services is also important.

While the profile of Irish exports has changed significantly and services exports are becoming increasingly important, manufacturing remains very important from an enterprise perspective<sup>7</sup>. The composition of Irish merchandise exports has changed, particularly in key growth sectors like pharmaceuticals, medical technologies and ICT, where there has been a move from high volume, low value goods to low volume, high value goods. This has resulted in a change in the type of freight services demanded by these sectors, with an increasing demand for air freight services.

However, exports from these high value sectors are small as a proportion of the overall volume of traffic into and out of Ireland. Air freight represents about 16 per cent of the State's international merchandise trade in volume terms (38 per cent in value terms). As a result, changes in the requirements of the high value export sectors will have little impact on the overall demand for sea freight services, which is driven by volume. One of the key growth sectors is the food sector which is likely to lead to an increase in sea freight volumes over the period to 2020<sup>8</sup>.

In addition to changes to the composition of Irish exports, Ireland's future export success is dependent on developing strong links with new trading partners as well as growing trade to existing export destinations. Ireland has an extensive air transport network with direct connectivity to a wide range of destinations in Great Britain, continental Europe and the US. In 2010, there were 75 routes connecting major airports in Ireland to urban agglomerations around the world<sup>9</sup>.

The Government's trade and investment strategy identifies 27 countries and a further seven countries are included in the 2012 high growth markets study<sup>10</sup>. To realise the opportunities in those countries, Ireland has adopted a broad economic partnership approach, whereby the full range of economic relationships between Ireland and the other country are considered.

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7 The Action Plan for Jobs 2012 required Forfás to develop a long term vision for the manufacturing sector and put in place a strategic plan that will help to realise this vision. See: Forfás, Making it in Ireland - Manufacturing 2020, April 2013.

8 The 2020 targets set out in Food Harvest 2020, the strategy for the agri-food sector, include a 42 per cent increase in the value of food exports overall, 20 per cent growth in the output value of the beef and sheep sectors, a 50 per cent increase in milk production and a 78 per cent increase in aquaculture volume production. Source: Department of Agriculture, fisheries and Food, Food Harvest 2020, July 2010.

9 Oxford Economics, Economic Benefits from Air Transport in Ireland, 2011.

10 The Export Trade Council is responsible for driving implementation of the Government's trade and investment strategy. The Action Plan for Jobs 2012 (action 3.16) required DJEI and Forfás to revise the strategy for high growth markets.

Facilitating international connectivity (air and/or sea) to the identified countries will be important to deliver on the long term trade and investment targets and goals.

In particular, good access to key European hubs such as London (specifically Heathrow), Amsterdam, Paris and Frankfurt is very important for businesses in Ireland to connect with other parts of the globe, especially high growth markets in Asia and South America. Access to the Middle East has been greatly enhanced by the services introduced in recent years by Emirates, Etihad and Turkish Airlines. It also provides alternative and cost competitive options for connecting to a wide range of global destinations, particularly in the Far East.

Ease of access to the main air and sea ports from all the main urban centres is also critical. For exporters and importers, the entire chain from their premises to the customer is important for the effective movement of goods in and out of the country. Ireland needs to ensure that quality road and/or rail infrastructure is available to link air and sea ports to the national road and rail network now and in the future.

In 2011, 85 per cent of all air freight was handled by Dublin Airport and 43.2 per cent of total sea freight (imports and exports) went through Dublin Port<sup>11</sup>. The other important ports are Shannon Foynes and Cork (see section 3 for more details on Irish air and sea port traffic).

The new investment framework also needs to consider international developments in sea and air freight:

- **Sea freight:** The international trend towards larger shipping vessels will reduce the ability of Irish ports to continue to offer the current range and frequency of services unless adequate deeper water facilities are provided. It will also lead to increases in costs because of reduced capacity. A number of ports, including Dublin and Shannon Foynes, have the potential to provide deeper water services; and
- **Air:** Irish airports need to be able to accommodate global developments in aircraft size and landing requirements to ensure that Ireland has the international air access required to continue to trade successfully in existing international markets and to develop new ones. Although Dublin Airport's Terminal 2 was only completed in 2010, it cannot accommodate the new A380s as there are no double decker facilities and runway capacity is also a challenge.

Investing in deep water facilities and air infrastructure/facilities is a decision for the commercial air and sea port companies but policy and regulatory certainty is very important to promote efficient and timely private sector infrastructure investment in air and sea transport infrastructure and facilities. It is critical that DTTAS prioritises land transport connections to the air and sea ports accommodating larger vessels/aircraft, so that Ireland can continue to support the internationally trading sectors in the longer term.

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<sup>11</sup> CSO, Transport Omnibus 2011, November 2012.

DTTAS also needs to ensure that land transport capacity on the hinterland connections to the main sea and air ports is sufficient to facilitate the efficient movement of goods in the longer term. It is important that lessons are learned from the congestion problems in the Dublin area before the Port Tunnel and M50 upgrade were completed.

Given the importance of the Great Britain land bridge for the movement of goods into and out of Ireland by both air and sea, consideration will need to be given to UK transport infrastructure priorities and plans when identifying land transport priorities to enhance international access.

### **Movement of people**

The efficient movement of people requires adequate capacity, cost competitive, high quality land transport access and certainty around the length of journey times. For public transport (bus and rail), the important factors are the frequency of the services, the journey time, reliability, quality and cost.

Services exports are becoming increasingly important and in 2012 accounted for 49 per cent of total Irish exports in value terms. The type of business activity that IDA and Enterprise Ireland client companies are engaged in is also changing – for example with more European headquarter and marketing functions locating in Ireland, executives need easy access to other office locations within the company and also to overseas clients; Irish companies are also setting up overseas offices to grow their business and are dealing with internationally based suppliers, clients and others (e.g. venture capitalists). Clients, colleagues, suppliers etc. of agency supported companies also require easy access to Ireland for meetings.

This means that there is greater demand for air passenger services to a diverse range of destinations for meetings with client and overseas based colleagues. This in turn requires ease of access to the main Irish airports, particularly Dublin, Cork and Shannon. In 2011, Dublin Airport handled 79 per cent of all passengers through Irish airports while Cork and Shannon handled 16 per cent. The points raised in the previous sub-section around access to the main airports in terms of air freight service needs also apply to the movement of people.

An efficient transport network is also important for labour mobility and the effective functioning of the labour market, including Ireland's attractiveness to internationally mobile high skilled workers. According to the 2011 Census, almost two thirds of commuters travelled to work by car. Promoting alternative travel modes to the private car (public transport, walking and cycling), particularly in the main cities, will have benefits for all road users in terms of reduced congestion, cost savings and environmental benefits.

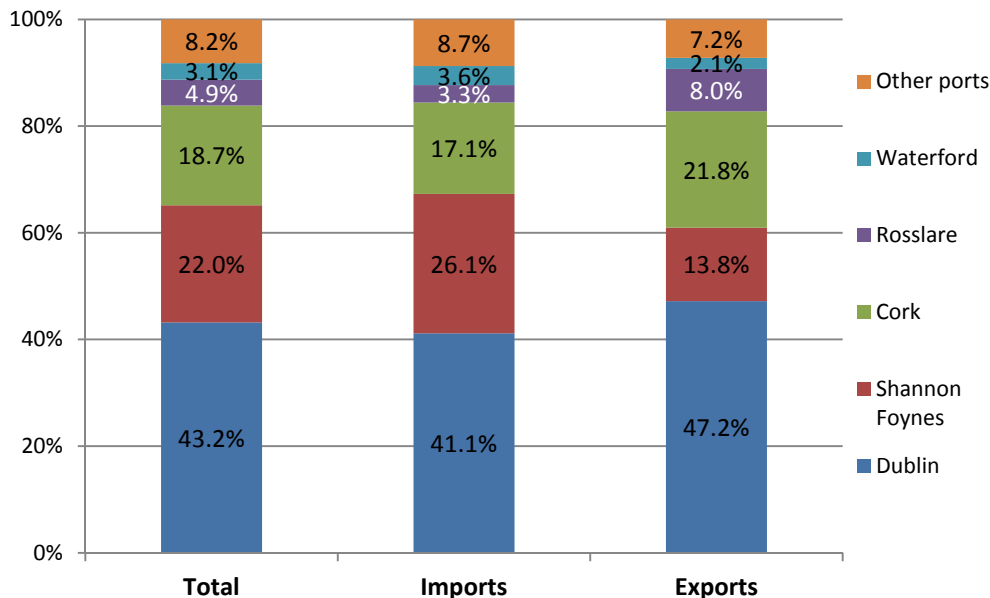
### 3. Recent trends in transport

Every year, the CSO publishes a transport omnibus which provides details on the use of different transport modes – road, public transport, maritime and aviation<sup>12</sup>. Road is the primary mode of travel for internal journeys and also for accessing the air and sea ports for both the movement of people and freight. Road traffic volumes peaked in 2008 and declined by 3.3 per cent between 2008 and 2011, reflecting the impact of the recession.

Freight volumes fell by 63 per cent between 2007 and 2011 while the number of licensed road hauliers declined by almost 20 per cent between 2008 and 2011. In 2011, 0.6 per cent of freight in volume terms was moved by rail in Ireland. The volume of rail freight declined by 44 per cent between 2006 and 2011 – in 2006, cement, sugar beet and drink made up 38 per cent of total rail freight but these sectors were no longer using rail freight by 2011. In 2006, general freight made up just 3.3 per cent of total rail freight volumes but that had increased to 27.7 per cent in 2011. While total tonnage was significantly lower in 2011, general freight grew almost six fold over the period, albeit from a very low base.

Dublin is Ireland’s most important port for both imports and exports (Figure 4). In 2011, 43.2 per cent of all merchandise moved by sea was handled by Dublin, 22 per cent by Shannon Foynes and 18.7 per cent by Cork. Shannon Foynes handles a significantly greater share of imports than exports. It is the third largest port in terms of exports, after Dublin and Cork. Rosslare has a greater share of exports than imports.

**Figure 4: Share of Total Trade, Imports and Exports by Port, 2011**

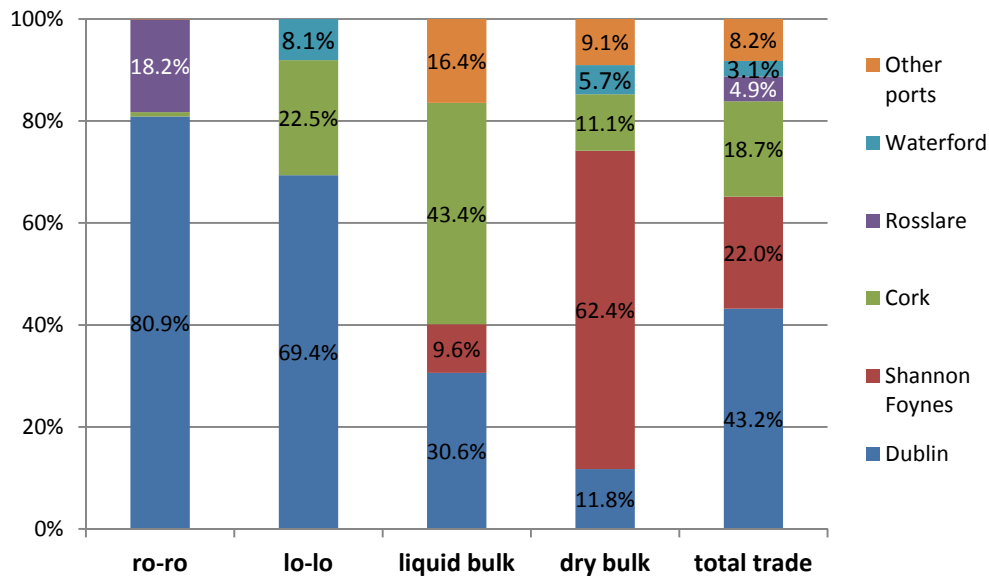


Source: CSO

<sup>12</sup> CSO, Transport Omnibus 2011, November 2012.

Different ports dominate different categories of freight (Figure 5). Dublin handles 80.9 per cent of all ro-ro traffic, with most of remainder handled by Rosslare. Dublin and Cork dominate the lo-lo category while Shannon Foynes handles almost two thirds of all dry bulk. Cork handles the largest share of liquid bulk.

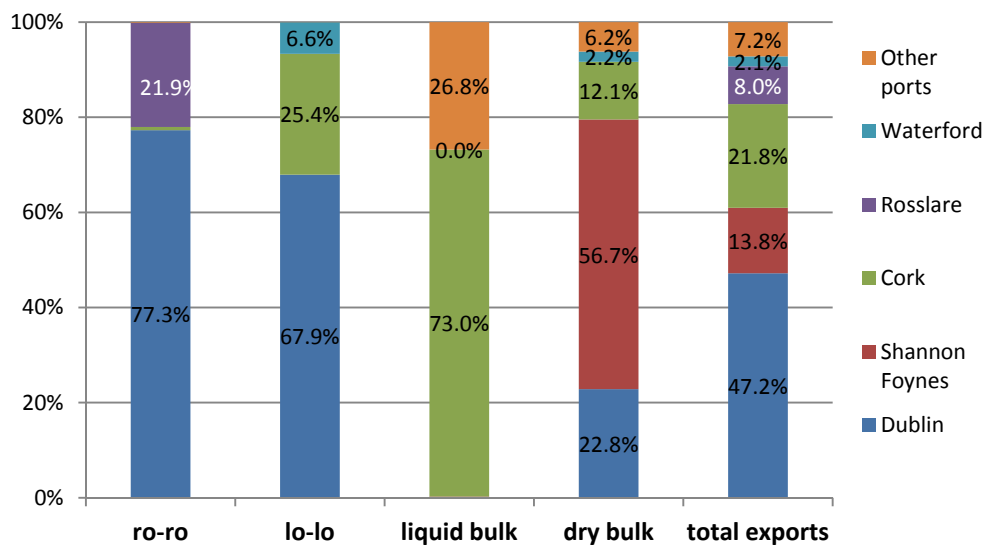
**Figure 5: Port Shares of Total Trade (Imports and Exports) by Freight Category, 2011**



Source: CSO

The ports' shares of the ro-ro and lo-lo categories are similar for exports as for total trade but differ significantly for liquid and dry bulk (Figure 6).

**Figure 6: Port Shares of Total Exports by Freight Category, 2011**



Source: CSO



In terms of sea freight trends, the total volume of goods (imports and exports) handled by Irish ports declined by 11.8 per cent between 2008 and 2011. The rate of decline was lower in Dublin (down 7.9 per cent) and Shannon Foynes (down 8.5 per cent) ports. Waterford port experienced the biggest decline (down 33.6 per cent), while Rosslare fell by 19.5 per cent and Cork by 12.4 per cent. In terms of export volumes, Dublin increased its freight volumes by 10.4 per cent, Shannon Foynes was up 0.1 per cent and Cork was down 1.7 per cent. Export volumes handled by Waterford port fell by 40 per cent and Rosslare declined by 15 per cent.

In Dublin, ro-ro volumes (exports and imports) increased by 5.8 per cent between 2008 and 2011 while lo-lo (down 16 per cent), liquid bulk (11.3 per cent) and dry bulk (31.3 per cent) declined. Industry consultations attribute Dublin's performance during the recession to the completion of the motorway network and the Port Tunnel, which have made Dublin Port more attractive to exporters.

There have been significant changes in the numbers of passengers handled at the Irish airports since traffic peaked in 2007/2008 (Table 2). With the notable exception of Knock Airport, all Irish airports have seen substantial decreases in passenger traffic between 2007 and 2011.

**Table 2: Passenger numbers by airport, 2008 – 2011<sup>13</sup>**

Airport	2007	2008	2009	2010	2011	% change 2007 v 2011
Dublin	23,307,333	23,507,205	20,507,456	18,426,823	18,758,105	-19.5%
Cork	3,183,146	3,259,109	2,767,776	2,422,872	2,358,904	-25.9%
Shannon	3,524,450	2,956,951	2,579,676	1,531,309	1,364,955	-61.3%
Knock	544,042	630,806	606,464	586,393	653,637	+20.1%
Kerry	391,138	426,115	356,737	383,866	310,937	-20.5%
Waterford	116,392	144,253	110,826	103,986	81,575	-29.9%
Galway*	309,320	266,473	195,804	154,814	67,134	-78.3%
Donegal	61,410	65,539	50,761	46,825	38,309	-37.6%
Sligo*	44,533	42,493	26,706	21,077	7,111	-84.0%
<b>Total</b>	<b>31,504,102</b>	<b>31,318,386</b>	<b>27,221,075</b>	<b>23,697,577</b>	<b>23,658,633</b>	<b>-24.9%</b>

Source: CSO

<sup>13</sup> The asterix (\*) denotes that Galway and Sligo ceased commercial services during 2011.

Overall the number of passengers handled by the airports fell by a quarter over the period. The most significant declines were recorded in Galway and Sligo but it is important to note that commercial air services to and from these airports ceased in late 2011. Passenger numbers at Shannon Airport declined by over 60 per cent since 2007 – a contributing factor was the ending of the Shannon stopover in 2008. Passenger numbers decreased by 19.5 per cent in Dublin and by 25.9 per cent in Cork.

From an enterprise perspective, Dublin Airport plays a critical role in providing businesses across the country with good international access, both in terms of passengers and freight – in 2011, it handled 79 per cent of all passengers into and out of Ireland and 85 per cent of air freight.

Public transport usage has declined significantly. Nationally public bus transport passenger numbers were down 17.7 per cent in 2011 from the 2008 peak, while the rate of decline was slightly higher in Dublin at 18.5 per cent. Total rail passenger numbers fell by 18 per cent between the 2007 peak and 2011 with DART (down 21 per cent) and Dublin suburban services (down 29 per cent) recording even greater declines. Passenger numbers on mainline rail services increased slightly (up 1.1 per cent). Luas passenger numbers increased by 2.2 per cent between 2007 and 2011, but there were a number of extensions to Luas services over that period<sup>14</sup>.

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<sup>14</sup> Services on the Red Line extension to the Docklands began in December 2009 and on the spur to Citywest/Saggart in July 2011. The Green Line extension to Cherrywood/Bride's Glen came into operation in October 2010.

Census data provides information on the modes of transport used by commuters (Table 3). Almost two thirds of commuters nationwide travelled by private car (driver or passenger) in 2011, which is a small increase on 2002 and 2006. The percentage of commuters walking has declined from 11.4 per cent in 2002 to 9.6 per cent in 2011. The modal share of public transport (bus and rail) has also fallen from 8.8 per cent in 2002 to 8.2 per cent in 2011. Not surprisingly, commuter travel patterns in the Greater Dublin Area (GDA) differ from national trends – car (52.4 per cent), public transport (19.8 per cent), walking (12.7 per cent) and cycling (5.0 per cent) have higher modal shares. The car has a modal share of 68-70 per cent in all regions outside of Dublin.

**Table 3: Means of Travel of Commuters in Ireland, Census 2002, 2006 and 2011<sup>15</sup>**

	2002	2006	2011
On foot	11.4%	10.9%	9.6%
Bicycle	2.1%	1.9%	2.2%
Bus, minibus or coach	6.7%	6.1%	5.2%
Train, DART or LUAS	2.1%	2.9%	3.0%
<i>Total bus and rail</i>	<i>8.8%</i>	<i>9.0%</i>	<i>8.2%</i>
Motorcycle or scooter	1.1%	0.7%	0.5%
Motor car: Driver	55.1%	57.1%	60.0%
Motor car: Passenger	6.7%	5.5%	3.9%
<i>Total motor car</i>	<i>61.8%</i>	<i>62.6%</i>	<i>63.9%</i>
Other means (incl. lorry or van)	7.1%	7.8%	7.4%
Work mainly at or from home	6.1%	5.6%	4.7%
Not stated	1.7%	1.6%	3.6%

Source: CSO Census 2002-2011

<sup>15</sup> Includes population aged 15 years and over at work and Includes not at work, college or school for 2011.

There are significant variations in travel to work times between Dublin and the other main cities (Table 4). While over 70 per cent of commuters in Cork, Limerick, Galway and their suburbs get to work in less than half an hour, only half of all commuters in the Dublin area do.

**Table 4: Total Time Travelling to Work, Census 2011<sup>16</sup>**

	State	Dublin City and suburbs	Cork City and suburbs	Limerick City and suburbs	Galway City and suburbs
< ¼ hour	25.3%	15.8%	25.2%	31.5%	33.2%
¼ hour - < ½ hour	30.7%	33.5%	45.1%	41.0%	39.2%
< ½ hour	56.0%	49.3%	70.3%	72.5%	72.5%
½ hour - < ¾ hour	20.8%	27.2%	17.9%	14.7%	14.6%
¾ hour - < 1 hour	7.3%	9.3%	2.9%	2.4%	2.7%
< 1 hour	84.0%	85.7%	91.1%	89.6%	89.9%
1 hour - < 1½ hours	6.6%	6.5%	2.0%	2.2%	2.6%
1½ hours and over	2.3%	1.2%	0.9%	1.5%	1.1%
Not stated	7.0%	6.6%	6.0%	6.7%	6.4%

Source: CSO Census 2002-2011

### Implications for enterprise and future investment priorities

This sub-section looks at the main implications of recent transport trends for enterprise development and future investment priorities:

- As a result of recent investments and the recession which has significantly reduced demand, Ireland has excess physical capacity on a range of important transport infrastructures (e.g. airports and motorways). The availability of excess capacity (while expensive) supports business competitiveness and will enable future growth. Nevertheless, a range of bottlenecks remain (Section 5.2);
- Ireland is dependent on a small number of air and sea ports for most of its international access needs. While access to Dublin (the main air and sea port) has improved significantly for cities and towns on or near the motorway network, further investment is required to enhance connectivity from the north-west gateways of Sligo and Letterkenny to Dublin's air and sea ports and between all regional centres and the other main air and sea ports in the south and west;

<sup>16</sup> Excludes those who mainly work at or from home.

- The recession has also reduced demand for transport services with some negative consequences for competitiveness as the range of locations served and the frequency of the services has fallen (e.g. air services). Reduced capacity may also lead to higher costs for businesses and commuters; and
- There is a strong correlation between economic growth and transport needs. As the economy returns to growth, we can expect to see an increase in the demand for transport services and the infrastructure required to support it. According to the National Transport Authority (NTA) in its implementation plan for the GDA, congestion is likely to increase dramatically in the GDA in the coming decades without additional investment in transport infrastructure and services.

## 4. Ireland's transport competitiveness

There have been significant improvements in transport capacity and connections nationally, notably the completion in 2010 of the motorway network from Dublin to the five main cities on the island. The improvements in our transport infrastructure are reflected in data from the IMD on the perception of distribution infrastructure, which shows a significant improvement in Ireland's performance between 2005 and 2012 (Table 5). However, Ireland continues to lag competitor countries – in 2012 Ireland ranked 20<sup>th</sup> of the 59 countries benchmarked.

**Table 5: Perception and Ranking of Ireland's Distribution Infrastructure 2005-2012**

	2005	2006	2007	2008	2009	2010	2011	2012
Score (0-10)	4.48	4.93	4.90	5.96	6.75	7.24	7.96	8.19
Ranking	42 <sup>nd</sup>	48 <sup>th</sup>	N/A	38 <sup>th</sup>	34 <sup>th</sup>	31 <sup>st</sup>	26 <sup>th</sup>	20 <sup>th</sup>

Source: IMD World Competitiveness Yearbooks, 2005 to 2012.

According to Cushman & Wakefield's European Cities Monitor 2011, access to markets is the most important factor for companies in deciding where to locate<sup>17</sup>. The survey provides an overview of the perceptions that companies have about cities across Europe and their relative attractiveness, and how perceptions have changed over time. The survey asks companies to think about the factors they consider when deciding where to locate their business and the relative importance of these factors. "Easy access to markets, customers or clients" is still perceived to be the most important factor, with 60 per cent of respondents stating it was absolutely essential. Other factors in the top three are the availability of quality staff and the quality of telecommunications. "Transport links with other cities and internationally" was ranked the fourth most important factor.

Dublin is the only Irish city included in the survey. Dublin ranks 20<sup>th</sup> of the 36 cities surveyed in terms of the best cities to locate a business in today – transport is one of the areas where

<sup>17</sup> Since 1990, Cushman & Wakefield has been undertaking surveys of Europe's major business cities. The 2011 survey is available at: [http://www.berlin-partner.de/fileadmin/chefredaktion/pdf/studien-rankings/2011\\_en\\_European-Cities-Monitor.pdf](http://www.berlin-partner.de/fileadmin/chefredaktion/pdf/studien-rankings/2011_en_European-Cities-Monitor.pdf)

performance is weak. On the important access to market indicator, Dublin was ranked 28<sup>th</sup> of 36 European cities in 2011 (an improvement on 2010 when it ranked joint 31<sup>st</sup>). We acknowledge that the perception of Dublin’s accessibility is both a reflection of economic geography and transport infrastructure and services. The top five cities were London, Paris, Frankfurt, Brussels and Madrid. In addition, a number of regional UK cities were also ranked higher than Dublin – namely Birmingham (12<sup>th</sup>), Leeds (14<sup>th</sup>), Manchester (16<sup>th</sup>) and Glasgow (25<sup>th</sup>).

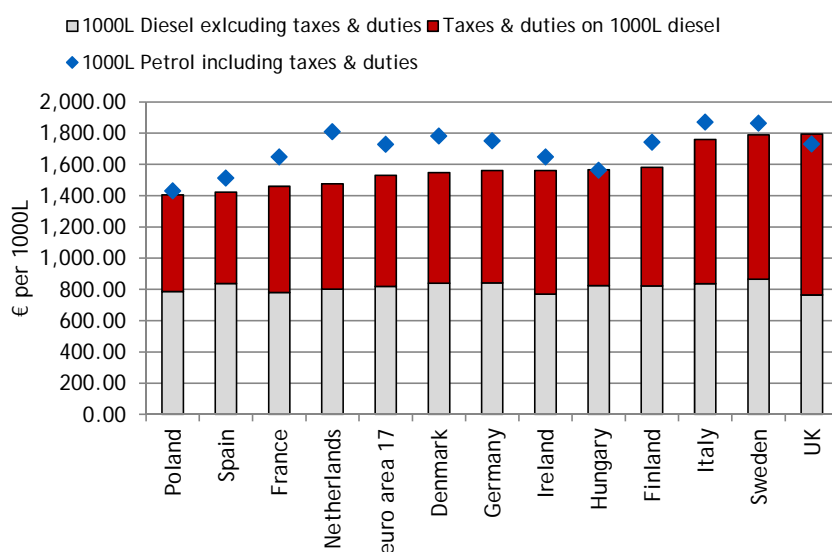
Dublin’s performance is also poor on a number of other transport indicators in the survey:

- Companies were asked which are the top three cities in terms of transport links with other cities and internationally. Dublin ranked joint 25<sup>th</sup> in 2011, an improvement on 2010 when it was ranked joint 29<sup>th</sup>.
- Companies were asked which are the top three cities in terms of ease of travelling around within the city. Dublin ranked joint 26<sup>th</sup> in 2011 compared to joint 24<sup>th</sup> in 2010.

## 4.1 Cost competitiveness

Transport costs are a greater issue for the manufacturing sectors than service based sectors (Figure B1 in Appendix B)<sup>18</sup>. Of the main existing exporting sectors, transport costs contribute 17 per cent of location sensitive costs in agri- food, 16 per cent in metal components, 13 per cent in pharmaceuticals and 11 per cent in electronics and medical devices. Transport costs account for 20 per cent of location sensitive costs in the emerging green energy sector (Figure B2). Fuel costs are a particularly vital input cost for the haulage sector and for firms that rely on them. The cost of 1,000 litres of diesel in Ireland was just above the average euro area-17 price in August 2012 (Figure 7). Ireland was the fourth most expensive country of the euro area countries for diesel and the ninth most expensive for petrol.

**Figure 7: Average Diesel and Petrol Costs per Litre, August 2012**

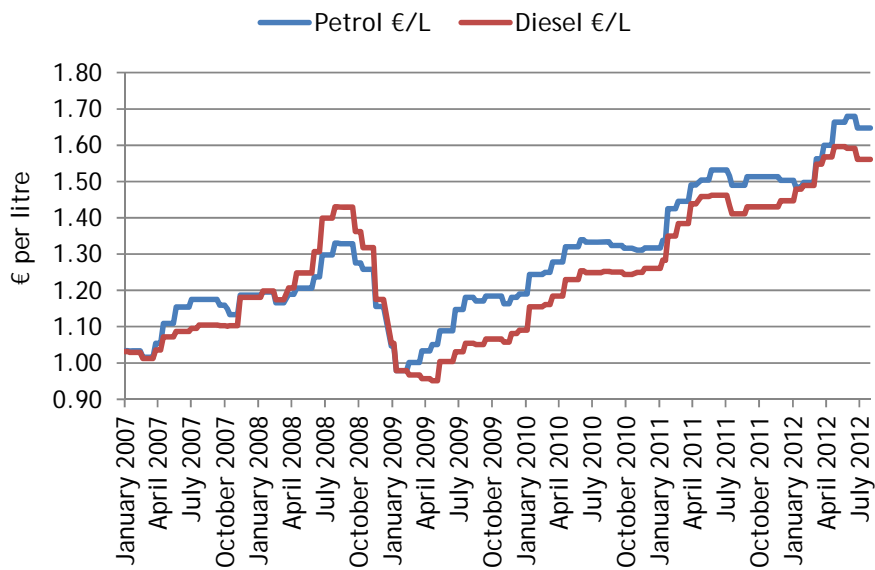


<sup>18</sup> Forfás, Costs of Doing Business in Ireland 2012, April 2013.

Source: European Commission, Energy Statistics & Market Observatory

Figure 8 illustrates historic trends for both diesel and unleaded petrol prices in Ireland (including taxes). European Commission data shows that in August 2012 Government taxes and duties accounted for 56 per cent of final consumer petrol prices and 51 per cent of diesel prices compared with EU averages of 55 per cent and 48 per cent respectively.

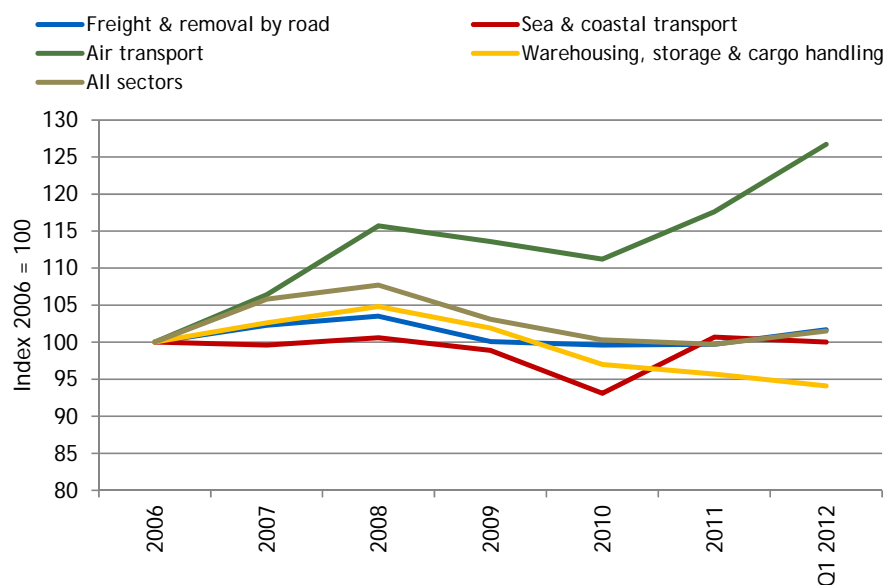
**Figure 8: Average Diesel and Petrol Costs per Litre, Ireland, 2007-2012**



Source: European Commission, Energy Statistics & Market Observatory

The CSO's experimental services producer price index tracks the evolution in prices for a range of services (Figure 9)<sup>19</sup>. Since 2006, prices for most transport services (e.g. road freight, sea transport, warehousing) have remained stable or have fallen. The cost of air transport is the exception, with significant increases recorded, notably since 2010.

**Figure 9: Trends in Transport Related Prices in Ireland, 2006-Q1 2012<sup>20</sup>**



Source: CSO, Services Producer Price Index

There is a dearth of publicly available comparable international data on freight transport costs but some qualitative analysis was undertaken in 2012 on the costs of exporting as part of the Action Plan for Jobs<sup>21</sup>. A case study approach, involving detailed interviews with exporting companies, was used to understand the exporting cost elements<sup>22</sup>. However, given the limitations of the case study approach, the findings should be treated as indicative rather than representative. Among the key findings of the study were:

- Transport costs are the most significant exporting cost for firms in the food, manufacturing and engineering sectors;

19 The Services Producer Price Index (SPPI) measures changes in the average prices charged by domestic service producers to other businesses for a selected range of services. In most cases these services are provided to business customers only and so individual price indices should not be considered indicative of more general price trends in the economy. The index covers transaction costs from business to business and excludes consumers who are covered in the Consumer Price Index (CPI).

20 Air transport data is based on data compiled from the CSO's Consumer Price Index.

21 Forfás and the Department of Jobs, Enterprise and Innovation were required to analyse the costs associated with exporting and set out an action plan to reduce these costs.

22 The case study approach focused largely on indigenous firms as multinational firms operating in Ireland are more likely to be able to reduce their costs through established global supply chains, often agreed at headquarter level. This work was supplemented by a consultation process with key industry representative bodies such as the Irish Exporters Association, Chambers Ireland and IBEC.



- Ireland operates at a cost disadvantage in relation to all freight transport modes compared to firms located in the UK or continental Europe;
- In terms of road freight costs, a typical journey to the continent is about 50 per cent cheaper for a UK exporter and 80 per cent cheaper for a continental exporter than an Irish exporter;
- The contributing factors to the relatively higher road freight costs in Ireland include:
  - ♦ Ireland is further from key export markets than firms located in UK and continental Europe. The distance between two countries has consistently been found to exert a strong, negative effect on trade between them<sup>23</sup>;
  - ♦ Diesel costs are higher in Ireland than in some parts of continental Europe e.g. Spain, and Germany. Prices are higher in the UK<sup>24</sup>;
  - ♦ Given the size of the domestic market, the opportunity for backloads to Ireland is more limited than backloads to the UK or within Continental Europe; and
  - ♦ Smaller companies are more likely to find transport costs more difficult to bear than larger companies<sup>25</sup>.

Recent consultations with a selection of agency client companies also raised concerns about the higher costs of exporting in Ireland compared to other EU countries and the lack of transparency in freight transport pricing in Ireland.

The cost of transport services to consumers is also important in the context of the mobility of the workforce. In December 2012, transport accounted for 15.1 per cent of the consumer basket. Inflation in transport was significantly greater than national inflation (CPI) between 2007 and 2012 (Table 6). CPI increased by 2.6 per cent between 2007 and 2012, while transport prices increased by 11.3 per cent. One of the main drivers were fuel and lubricants (petrol, diesel etc.) which increased by a third over the period. Within transport passenger services, the largest increases were in rail and road passenger services (bus and taxi).

**Table 6: Percentage Change in the Price of Transport and its Components, 2007-2012**

CPI	Transport	Fuels and lubricants	Transport services <sup>26</sup>	Rail services	Road services	Air services	Sea services
2.6%	11.3%	33.1%	19.7%	15.8%	19.7%	3.0%	10.4%

Source: CSO

23 See for example, Lawless M., Marginal Distance: Does Export Experience Reduce Firm Trade Costs?, Research Technical Paper, 02/RT/11, Central Bank of Ireland.

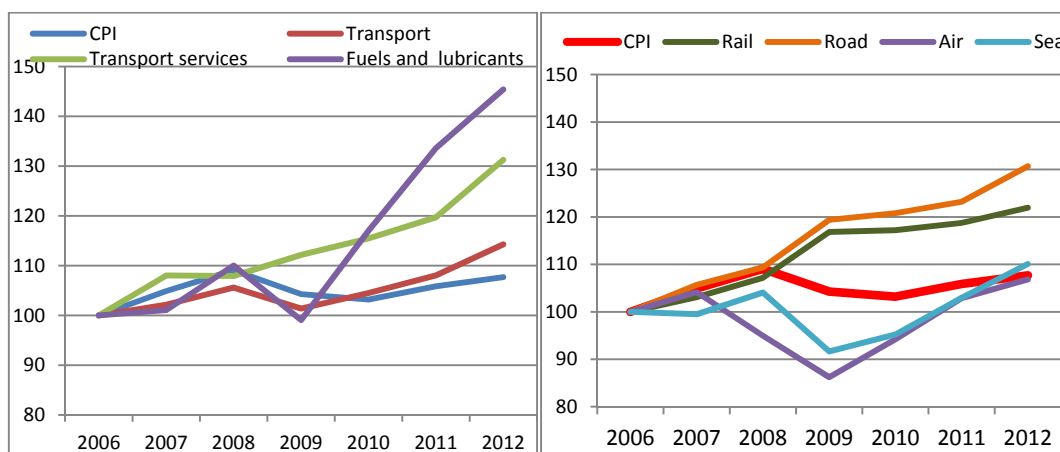
24 Based on the case study companies, increases in fuel prices were found to not commensurately increase the total journey costs due to other costs such as ferry prices and running costs. A ten per cent increase in fuel was found to increase total road transport journey costs by 2.3 per cent.

25 Recent initiatives such as the Irish Export Co-Operative where SMEs come together to reduce international transport costs are proving important in reducing exporting costs for SMEs.

26 Transport services includes passenger transport by road (bus and taxi), rail, sea, inland waterway and air.

There have been significant increases in fuel and lubricant prices since 2009 (Figure 10). Road and rail passenger service prices have also risen significantly since 2007.

**Figure 10: Trends in Transport Related Prices in Ireland 2006-2012 (Base year: 2006 = 100)**<sup>27</sup>



Source: CSO

## 4.2 Performance of the transport services sector

In 2012, Forfás examined Ireland's productivity performance across a range of internationally trading and non-trading sectors<sup>28</sup>. One of the sectors included was transport. The statistics on productivity in non-tradable market services (including transport) should be treated with caution, and seen as indicative rather than definitive. This is because the measurement of productivity in non-tradable market services is difficult, as there is no physical output to measure (as there is with merchandise), nor is there any pressure for prices to converge across countries, as the service is not internationally traded.

The transport services sector has increased in importance. Transport services accounted for 4.4 per cent of total hours worked in the Irish economy in 2007, which was an increase over 1990, when the industry comprised just 3.2 per cent of all hours worked. Productivity in the transport services sector has been volatile in Ireland. It rose between 1980 and 1990, reaching €45, before falling to €27 in 2001. By 2007, it had recovered to €35 an hour. From 2007 – 2010, productivity in the broader distribution, transport and communication sector declined by almost four per cent per annum in contrast to productivity growth in most other sectors. The volatility is a cause for concern. An earlier Forfás study produced estimates of productivity in the Irish road freight industry. They concluded that the productivity gains which occurred within the Irish transport sector between the mid 1990s and 2003 arose as a result of (i)

<sup>27</sup> Transport is one of the main CPI categories. It includes purchase of vehicles, operation of personal transport equipment and passenger transport services (road, rail, air, inland waterway and sea).

<sup>28</sup> Forfás, Ireland's Productivity Performance 1980 to 2011, April 2012.

increases in 'carrying capacity' - the average size and capacity of goods vehicles, and (ii) improvements in 'capital efficiency' – the intensity with which vehicles are used<sup>29</sup>.

### Road freight

Ireland's haulage sector has a poor record in terms of compliance with various regulations and standards. Industry sources indicate that up to 80 per cent of freight vehicles in Ireland do not require an operator's licence<sup>30</sup>.

The UK Vehicle and Operator Service Agency (VOSA) publishes the results of its roadworthiness inspections of non-UK heavy goods vehicles (HGVs)<sup>31</sup>. Irish vehicles are the second most inspected in terms of the number of foreign vehicles checked (Table 7)<sup>32</sup>. In 2010, 35.9 per cent of Irish HGVs received a prohibition, placing it third behind Romania and Bulgaria.

**Table 7: HGV Inspections by Country of Origin in Great Britain, 2010**

Country	Number of checks	Prohibitions	Prohibition rate
Romania	2,914	1,159	39.8%
Bulgaria	1,994	793	39.8%
Ireland	4,095	1,469	35.9%
Poland	8,346	2,687	32.2%
Lithuania	2,122	647	30.5%
Czech Republic	2,362	688	29.1%
Hungary	2,487	701	28.2%
Spain	4,187	1,097	26.2%
Netherlands	3,106	672	21.6%
Germany	2,897	598	20.6%

Source: UK Vehicle and Operator Service Agency

29 Aylward and O'Toole calculated that productivity in the industry, measured as tonne-kilometres per employee, increased by 22 per cent between 1995 and 2003, or an average of 2.5 per cent per year. Increases in the average size and capacity of goods vehicles accounted for 14 per cent of that increase, with improvements in capital efficiency accounting for the remaining eight per cent. See Aylward, C., and O'Toole, R., Chapter 8 Productivity in the Irish Road Freight Industry, from Forfás, Perspectives on Irish Productivity, 2007.

30 According to the Road Safety Authority website, a Road Haulage Operator's Licence is required if carrying goods for hire or reward in a vehicle or combination of vehicles the maximum authorised weight of which is in excess of 3.5 (metric) tonnes. "Hire or reward" haulage arises when a haulier is paid for carrying someone else's goods. If they do only own account work, i.e. carriage of their own goods in their own vehicles driven by themselves or their employees, or in the delivery of goods to a customer who has bought those goods from them, then they do not need a Road Haulage Operator's Licence.

31 The VOSA's enforcement strategy focuses on the highest risk operators. It conducts checks on vehicles at the roadside to examine their roadworthiness, drivers' hours compliance and aspects of licensing.

32 There are different types of prohibitions - depending on how serious the issue is, the prohibition can be immediate (the vehicle is immobilised) or delayed (operator has ten days to fix the issue). For more details of UK prohibitions, see: <https://www.gov.uk/roadside-vehicle-checks-for-commercial-drivers/roadside-prohibitions>

Ireland also performed poorly in terms of compliance with drivers' hours regulations (Table 8). Ireland had the highest prohibition rate – almost a quarter of all vehicles inspected in 2010 received a prohibition for non-compliance.

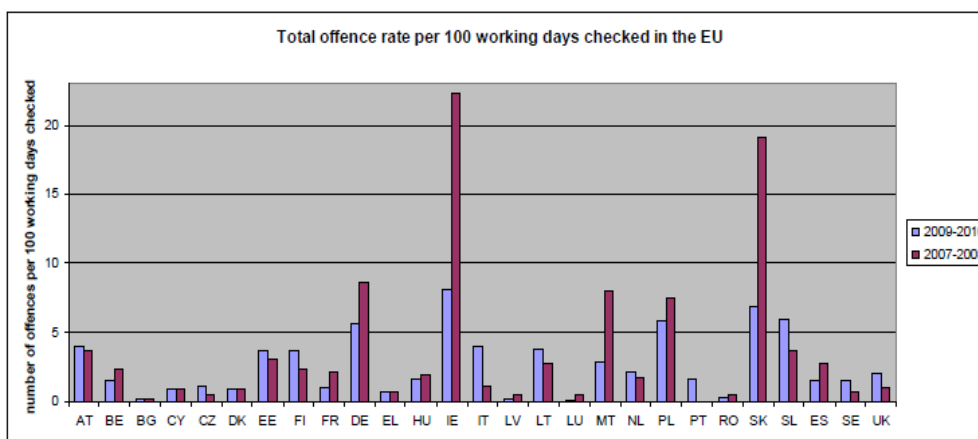
**Table 8: Drivers' Hours Inspections by Country of Origin in Great Britain, 2010**

Country	Number of checks	Prohibitions	Prohibition rate
Ireland	6,915	1,718	24.8%
Germany	5,117	994	19.4%
Italy	2,822	513	18.2%
Netherlands	5,200	928	17.8%
Romania	3,924	615	15.7%
Lithuania	3,060	412	13.5%
Spain	5,449	638	11.7%
Hungary	3,570	386	10.8%
Poland	11,502	1,112	9.7%
Czech Republic	3,433	327	9.5%

Source: UK Vehicle and Operator Service Agency

The European Commission monitors compliance with social rules legislation for the transport sector (includes driving time and rest periods)<sup>33</sup>. Ireland's performance improved significantly from 22 offences per 100 working days checked in 2007/2008 to eight offences in 2009/2010 (Figure 11). However, in spite of this Ireland still has the highest non-compliance rate in the EU and is significantly out of line with the EU average, which decreased from an average of 3.8 offences per 100 working days checked to 3.1 offences over the period<sup>34</sup>.

**Figure 11: Transport Non-Compliance – Offences per 100 Working Days Checked, 2009/2010**



Source: European Commission

33 For further details on EU social rules for transport see: [http://ec.europa.eu/transport/modes/road/social\\_provisions/](http://ec.europa.eu/transport/modes/road/social_provisions/)

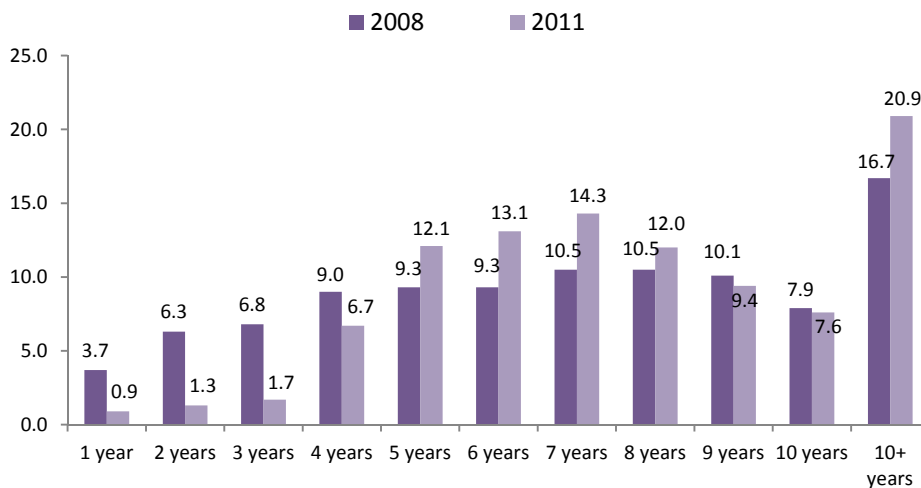
34 European Commission, 26th report from the Commission on the implementation of the social legislation relating to road transport, September 2012.

The split between digital and analogue tachographs gives an indication of how modern the fleet is across Member States. In 2009/2010, only 35 per cent of Irish vehicles had a digital tachograph compared to an EU-27 average of 56 per cent.

**Taxi**

An independent analysis by Indecon to inform the review of taxi regulation in 2011 found that the significant fall in demand evident in the previous three to four years was not matched by a corresponding level of exit from the sector. It estimated the level of oversupply in the national taxi market to be in the range of 13-22 per cent of the current fleet. It described the quality of service as “fairly good”. Only 3.7 per cent of taxis were three years old or less and the share of the fleet over 10 years old had also increased from 16.7 per cent in 2008 to 20.9 per cent in 2011 (Figure 12). Indecon highlighted that the aging taxi fleet would have environmental as well as potential safety and comfort implications.)

**Figure 12: Age Distribution of Taxi Fleet, 2008 and 2011**



Source: Indecon for the Taxi Regulation Review Group

There are a number of measures being rolled out by NTA to reduce the age of the fleet over time. As recommended by the Taxi Review Group, the vehicle age limit for all new vehicles entering the fleet taxi since 1st January 2009 is nine years. For older vehicles (i.e. pre January 2009) vehicles older than 15 years will not have their licence renewed from 2014, and those up to 15 years of age will only be allowed to operate subject to passing a roadworthiness (NCT) test and an NTA Licence Renewal Assessment every six months<sup>35</sup>. It envisaged that over a period of time, vehicles over nine years will gradually transition out of the fleet. In addition to the compliance assessments at licence renewal, the NTA carried out 15,000 spot checks of vehicles’ compliance with licence requirements, including quality/cleanliness, last year.

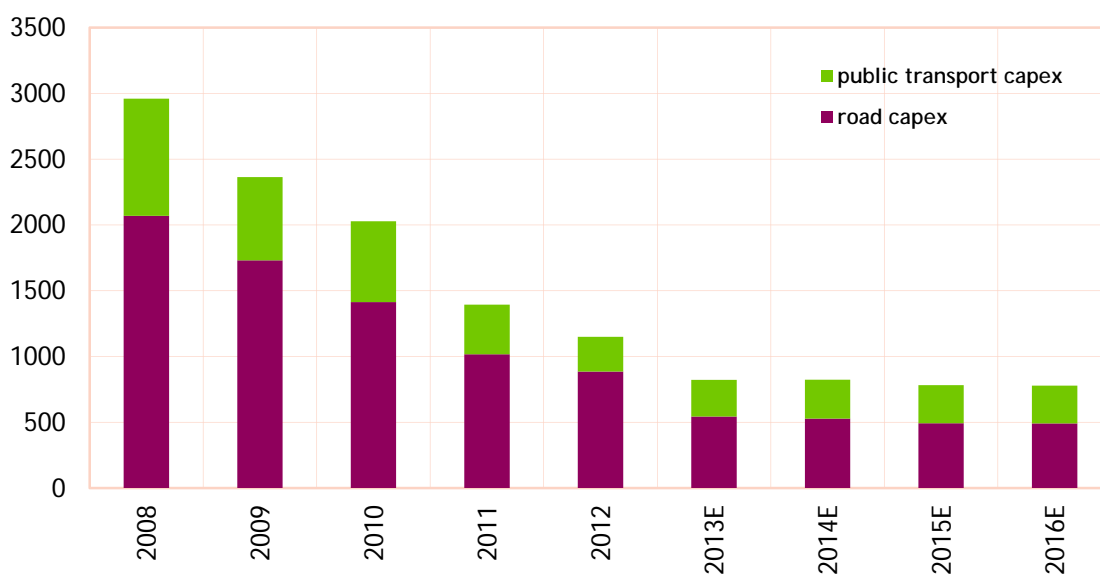
<sup>35</sup> Wheelchair accessible vehicles are currently exempt because of the significant decline in the number of such vehicles in operation in recent years.

## 5. Investment priorities for enterprise

Public sector investment enhances economic performance through developing the long-term enablers of growth such as transport networks. Well-targeted public investment can influence economic growth performance through boosting long run potential output; and improving productivity and competitiveness, through efficiency gains and reduced average production costs. While the short term stimulus effect of capital spending is very welcome, it is critical that Ireland prioritises investment based on long term economic and employment gains.

Public capital expenditure has declined significantly since 2008; almost €9 billion was invested in infrastructure in 2008, however projected Exchequer capital expenditure for 2013 is €3.6 billion. Public capital expenditure on transport has also declined significantly over the period (Figure 13). Planned capital expenditure in roads in 2013 is just over a quarter of the investment made in 2008 while investment in public transport in 2013 will be approximately 30 per cent of the 2008 expenditure.

**Figure 13: Exchequer Capital Expenditure on Land Transport, 2008 - 2016**



Sources: DPER Revised Public Estimates 2009 to 2013; DPER Infrastructure and Capital Investment: Medium Term Exchequer Framework

### 5.1 Key criteria to identify enterprise priorities

To inform the identification of agency transport priorities to support enterprise growth and job creation, four main criteria were considered:

- *Needs of the main exporting sectors:* We need to ensure that transport connectivity is not a barrier to building on Ireland's strengths in the main existing sectors or exploiting opportunities in new emerging sectors (for details see Appendix A). The most important issue is ensuring that the needs of existing export companies are met. The main sectors include chemicals, medical technologies, ICT, engineering, food and drink, financial

services, business services and ICT services. Ensuring the transport needs of the food sector are met is particularly challenging given how regionally dispersed the sector is compared to other sectors which tend to be concentrated in the main urban centres;

- *Prioritising the main urban centres:* Transport investment prioritisation should be consistent with national spatial policy objectives. New regional structures are being put in place (see map in Appendix E) and a new spatial policy is to be developed in 2014<sup>36</sup>. Internationally, cities are increasingly seen as the drivers of national competitiveness and economic and social development<sup>37</sup>. Between 2001 and 2011, Dublin, Cork, Limerick and Galway accounted for 64 per cent of employment in new agency supported companies and 80 per cent of employment in new foreign firms<sup>38</sup>. Ireland needs to prioritise investment in the main urban centres where it will have greatest impact. Piecemeal improvements scattered across the country will lead to suboptimal returns on very scarce resources. Ireland will only be successful if it builds up large urban centres with the critical mass to compete internationally;
- *Effective air and sea port hinterland connections:* Reliable and sustainable hinterland connections are critically important to ensure that Ireland has an efficient, integrated transport system. The new ports policy recognises the importance of efficient hinterland connections and the need to improve a number of port hinterland connections<sup>39</sup>. It requires the National Roads Authority to consult on a regular basis with DTTAS' Maritime Transport Division and the Tier 1 and Tier 2 ports on future network developments. The enterprise agencies recommend a similar approach in our submission to DTTAS on the new aviation policy to ensure efficient access to the main airports. The important short and longer term hinterland connections for air and sea ports need to be prioritised to enable the exporting base to continue to trade successfully in existing international markets and to develop new ones; and
- *Leveraging previous investment:* There has been significant investment in transport infrastructure over the past 15 years – for example, Ireland invested €8 billion to develop a world class motorway network that links the main cities to Dublin. However, gaps remain – we need to priorities such gaps and allow us to capture the full benefits of the significant investments already made. Ireland also needs to ensure the motorway and national road network is adequately maintained to maximise the investment already made and reduce the needs for significant and costly remedial work in the future<sup>40</sup>.

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36 Legislation to give effect to the new regional structures is currently being drafted. Ireland will be divided into three regions as set out in the action plan for local government reform, Putting People First. A map of the new regions is included in Appendix E.

37 NCC, Our Cities: Drivers of National Competitiveness, April 2009.

38 Analysis by the National Institute for Regional and Spatial Analysis (NIRSA), NUI Maynooth of the spatial patterns of employment change in agency supported companies in Ireland 2001-2011.

39 Department of Transport, Tourism and Sport, 2013 National Ports Policy, March 2013.

40 In its 2013 review of Ireland's infrastructure Engineers Ireland highlighted its concerns about the variability in the condition of the non-motorway road network and the substantial cuts to the road maintenance programme. Source: Engineers Ireland, The State of Ireland 2013: A Review of Infrastructure in Ireland, February 2013.

## 5.2 Enterprise investment priorities

The enterprise agencies strongly recommend that the new land transport investment framework focuses on projects that will have greatest impact in supporting existing and emerging export companies to trade successfully in global markets. Connectivity between Dublin and the main cities has improved significantly with the completion of the motorway network. This has improved access to the main air and sea ports, not just for companies located in the main cities but also for those in urban centres located on or close to the motorway network.

However gaps remain. In particular, high quality road access is required from Dublin to the north-west gateways of Sligo and Letterkenny and between the main urban centres on the Atlantic Corridor (Sligo-Galway-Limerick-Cork-Waterford). Ireland also needs to invest in ongoing maintenance of the motorway and national road network to preserve the existing standards of connectivity and reduce the need for significant and costly remedial work in the future. Maintaining key regional routes will also be important to support growth in the food sector and ensure an effective supply chain from the farm gate to the factory to the retailer.

Cities are increasingly seen as the drivers of national economic growth and competitiveness, particularly in modern knowledge-based economies. The majority of the population, businesses, jobs, innovation systems and higher education institutions are concentrated within our cities and their hinterlands. They are hubs of international trade, transport and communications and have emerged as magnets for talent and investment. Dublin is Ireland's only city of international scale, with over one million residents and a significant number of international linkages<sup>41</sup>. Although Dublin accounts for almost half of national GDP, Ireland should not be complacent about its position as an internationally competitive location. While it is by far, Ireland's largest and most densely populated urban area, at an international level Dublin is a small city on the margins of northwest Europe. Its continued success is critical for the performance of the entire economy.

Improving the competitiveness of the main cities will also benefit their wider hinterlands. A wide variety of factors have an impact on the comparative performance of cities. According to the National Competitiveness Council (NCC), connectivity is one of the four cornerstones, which underpin city competitiveness<sup>42</sup>.

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41 One of the global leading corporate location advisors, IBM-Plant Location International, is developing a ranking of cities around the world based on their competitiveness for attracting international Greenfield investment projects from different industries. Dublin is the only Irish city included as the basic eligibility criteria for inclusion are a minimum population of one million inhabitants in the local labour catchment area and a minimum of 25 foreign investment projects attracted in 2008-2011. The report, *The World's Most Competitive Cities: A Global Investor's Perspective on True City Competitiveness*, will be launched at the World FDI Forum in November 2013.

42 NCC, *Our Cities: Drivers of National Competitiveness*, April 2009.



## Investment Priorities for Enterprise

- National transport policy needs to ensure an integrated approach across all modes (road, rail, sea and air) to deliver an efficient, competitively priced transport system for people and goods. Good international air and sea access, coupled with effective internal land transport connectivity, is essential to enable Irish export companies to compete successfully in international markets.
- The new framework needs to optimise the use of the scarce resources available to deliver transport infrastructure and services that best meet the needs of users. One of the key barriers to delivering an efficient national transport network is the number of national and local bodies with strategic and/or operational responsibility for various aspects of transport infrastructure;
- The most important issue for the enterprise agencies is ensuring that the needs of existing export companies are met. We must also plan for the future needs of emerging sectors. To support future economic growth and job creation, Ireland needs to prioritise investment where it will have greatest impact. In particular, Ireland needs to:
  - ◆ Enhance urban mobility in Dublin and the other city regions:
    - Ensure existing resources are focused on providing public transport services that best meet changing customer needs and provide high quality access to, from and within the main cities;
    - Prioritise the actions in the National Transport Authority's investment plan for the Greater Dublin Area to fully capture the benefits of existing infrastructure (e.g. Luas Cross City and the re-opening of the Phoenix Park Tunnel) and advance the rollout of measures to promote more walking and cycling;
    - Complete the ring roads in Cork and Galway to enhance access in and around these cities and their hinterland;
  - ◆ Ensure quality access between the main urban centres and to/from the main air and sea ports:
    - Invest in ongoing maintenance of the motorway and national road network to ensure future quality access to the main air and sea ports in Dublin and in the south and west and optimise the substantial investment already made while reducing the need for significant and costly remedial work in the future
    - Address a small number of bottlenecks to improve road access between and around the main regional cities in the immediate term and provide high quality access along the Atlantic Corridor (Sligo-Galway-Limerick-Cork-Waterford) in the longer term to facilitate the development of regional agglomerations of international scale and provide access to the main air and sea ports in the south and west; and
  - ◆ Improve connectivity to the north-west:
    - In the short term, address bottlenecks to improve road access from Dublin to the north-west gateways of Sligo and Letterkenny and in the longer term ensure quality road access to these centres to enhance their attractiveness as a location to do business and improve the region's access to the main air and sea ports.
- Accelerate the development of intelligent infrastructure to substitute or complement traditional capital investment and to promote more effective utilisation of existing transport infrastructure and services. Intelligent infrastructure also provides enterprise development opportunities for new goods and services which can create jobs.

## 5.3 Enterprise policy priorities

Policy and regulatory actions can also significantly improve transport infrastructure and services without any cost to the Exchequer. These include:

- *Greater coherence in transport policy and delivery:* One of the key barriers to delivering an efficient national transport network is the number of national and local bodies with strategic and/or operational responsibility for various aspects of transport infrastructure /services. The establishment of the NTA is an important development to enhance transport planning and provision, particularly in the GDA. The new framework needs to continue to build on this and optimise the use of the scarce resources available to deliver transport infrastructure and services that best meet the needs of users;
- *Competition and regulatory reform:* Effective regulation can play an important role in providing more effective transport services:
  - ♦ *Improve the quality of transport services:* Supporting the development of the transport services sector should be a key goal of the new framework. In addition to being an important sector in its own right, improved efficiency and productivity in the sector has benefits for the entire economy (e.g. exporters, importers, retail and tourism). Initiatives could include skills development and technology adoption. Measures to improve the quality of transport services are also required, particularly in the haulage and taxi sectors:
    - Ireland's haulage sector has a poor record in terms of compliance with various quality standards (Section 4). This poor performance leads to increased inspection checks for all Irish hauliers, which can result in delays and increased costs for Irish exporters and importers. Unlike in other EU countries, all Irish goods vehicles do not require a road haulage operator's licence. Given the cost and efficiency implications of Ireland's poor compliance record for all hauliers and their customers (Irish exporters and importers), the road haulage licensing framework should be extended to all Irish registered goods vehicles. The minimum standards required should be informed by best practice in other Member States;
    - An independent analysis to inform the review of taxi regulation in 2011 estimated the level of oversupply in the national taxi market at 13-22 per cent of the current fleet and described the quality of service as "fairly good"<sup>43</sup>. While actions are being taken to reduce the age of the taxi fleet and improve the quality of services (15,000 spot checks last year), further measures are required to provide greater consistency in the quality of taxis in Irish cities and towns in the immediate term. It would also incentivise exit from an oversupplied market;
  - ♦ *Increase competition in bus services:* The regulatory framework for bus services needs to be reformed to promote competition and improve the quality and choice of services. According to the Competition Authority, competitive tendering of bus services in other markets has led to significant benefits for consumers – including lower fares and/or reduced subvention requirements, more reliable, punctual services, improvements in the bus network to better match consumers' needs and better incentives for public bus services to integrate into the wider public transport

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43 DTTAS, Taxi Regulation Review - Report of the Review Group, December 2011. Indecon's economic analysis of the taxi market is included in the appendix.

system<sup>44</sup>. The agencies welcome the recent publication of the NTA consultation on the opening of ten per cent of Dublin Bus and Bus Eireann services from late 2016<sup>45</sup>. As highlighted by the Competition Authority, a well-designed competitive tendering process is critical to obtain the desired benefits;

- *Climate change:* One of the key issues facing Ireland over the lifetime of the investment framework will be tackling the challenge of climate change. There are two issues in particular that will need to be considered:
  - ♦ *Develop a more sustainable transport system:* Ireland's spatial patterns militate against the development of an efficient and effective public transport system and increase our dependence on road transport and the private car. The implementation of the smarter travel policy is critical to reduce our dependence on the private car and oil imports<sup>46</sup>. Initiatives to reduce the use of oil in transportation, for example, the replacement over time of the existing stock of vehicles with more fuel-efficient vehicles, the use of bio fuels, and the provision of alternative modes of transport, particularly public transport, that run on electricity rather than petroleum related fuels;
  - ♦ *Encourage adaptation to global warming:* Climate change could increase vulnerability of supply chains and have impacts on production processes and service delivery. Early consideration of the need to adapt to climate change within the policy system – particularly through planning measures and spatial policies - can ensure that risks are minimised at least cost or that measures are cost-effective over the lifetime of the decision/policy<sup>47</sup>. In particular, owners/public authorities that manage critical infrastructures will need to plan to ensure that they are climate resilient. As a first step, owners of critical pieces of transport infrastructure for business should be required to undertake an asset risk assessment of potential risks;
- *Intelligent infrastructure:* Intelligent infrastructure is the application of technology to deliver a more effective and efficient infrastructure service<sup>48</sup>. It can play a substantial role in reducing the burden on the Exchequer and in freeing up scarce capital resources. A number of intelligent transport system (ITS) initiatives have been established in Ireland such as barrier-free tolling on the M50 and the use of sensors to monitor traffic and sequence traffic lights accordingly in some urban areas. The new investment framework should accelerate the deployment of intelligent infrastructure solutions to substitute or complement traditional capital investment; and
- *Enterprise opportunities:* Intelligent infrastructure also provides enterprise development opportunities for new goods and services which can create jobs. The global market for the goods and services that are needed to provide intelligent infrastructure is growing

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44 The Competition Authority, Submission to the NTA Public Consultation on 2014 Public Bus Service Contracts, July 2012.

45 NTA, Proposals to Directly Award a Public Bus Services Contract to Dublin Bus and Bus Eireann in 2014, September 2013. The closing date for submissions is the 11<sup>th</sup> October.

46 The smarter travel policy statement sets out the actions to deliver a to achieve a sustainable travel and transport system by 2020. Source: Department of Transport, SmarterTravel, A Sustainable Transport Future, 2009.

47 Detailed recommendations for water supply and quality, flood protection, energy infrastructure, transport and communications and waste management can be found in the Forfás report 'Adaptation to Climate Change: Issues for Business'.

48 Forfás, Intelligent Infrastructure: Delivering the Competitiveness Benefits and Enterprise Opportunities, November 2012.

rapidly. Ireland has a number of strengths which can be leveraged to realise some of these international opportunities such as a strong ICT base, a growing number of Irish SMEs translating into internationally renowned companies, a good research base in relevant areas (such as sensing technologies), a market size which is useful to test technologies and a number of existing advanced sites which can test-bed new intelligent technologies. Irish companies are particularly successful internationally in areas such as transport signage, on-street parking, train optimisation and tolling consultation.

## APPENDIX A: High Growth Sectors

Building a strong enterprise mix can ensure that Ireland is not overly reliant on limited avenues for future growth and/or employment, is better protected from external shocks, and further underpins a sustainable model for economic growth. All sectors are evolving, and it is important to embrace innovation, enhance productivity and improve cost efficiency - although the extent to which enterprises engage, and how existing agency interventions are applied will be different, depending on the maturity and development of the sector and the capabilities and objectives of the firm.

A stronger enterprise mix can be realised by:

- Building on Ireland’s strengths in sectors to realise emerging opportunities, and to achieve the dual objective of delivering growth and jobs;
- Developing existing markets and expanding into new markets for exports, foreign direct investment (FDI) and outward direct investment (ODI); and
- Accelerating and realising the potential of the indigenous base, building on its evolving capabilities and changing dynamic to realise a step-change in its contribution to growth and exports.

The overarching objective is to achieve the optimum potential from all sectors to deliver on growth and jobs. Sectors contribute differently to the economy, with some being more export oriented and others more employment intense.

Forfás identified four broad categories of high growth sectors in *Making it Happen – Growing Enterprise for Ireland*:

### A. Building on strengths and convergence

**Information and Communications  
Technology (ICT)**  
**Health LifeSciences**  
**International Financial Services**  
**Agri-Food**  
**Internationally Traded Services**

These sectors contribute the greatest proportion to Ireland’s total exports, which at approximately €130 billion in 2009 represented almost 85 per cent of the total<sup>49</sup>. The highest percentage export growth over the past decade was in business and market services (primarily in supply chain management) and offers significant future potential.

Ireland has developed international recognition in these sectors, based on strong brands and a track record in regulatory compliance. Both foreign and Irish owned companies operate in these sectors. In general, however, the Irish entities are challenged in terms of reaching scale, although this points to potential, rather than a criticism of performance to date.

<sup>49</sup> Forfás calculations based on *External Trade and Balance of International Payments*, CSO, March 2010; and *ABSEI 2008* (export data for medical device sector), Forfás, 2010

Given its strengths in a number of the sectors that demonstrate more immediate potential in convergence, Ireland is well placed to take a lead position. Ireland's small scale can be a distinct advantage given that convergence requires effective connections across formerly discrete activities and sectors. Convergence is a broad concept. It is primarily driven and enabled by advances in technologies, and results in huge potential in new products and services and the emergence of 'new' sectors. Convergence presents opportunities, not only for high technology sectors but also for many of Ireland's traditional sectors and competencies in, for example, engineering and software development. The opportunities are boundless and will continue to primarily stem from the firm.

The enterprise agencies have identified specific areas of focus, including personalised healthcare, combination medical products, clean technology, digital media convergence, nutraceuticals and functional foods, and financial mathematics/informatics. Within these broader areas, emerging initiatives such as the Assistive and Remote Technology Services for Independent Living and proposals to establish Ireland as a Digital Trade Facilitation Hub are directly relevant.

## **B. Emerging opportunities and untapped potential**

**Clean/Green Technologies**  
**Marine and Maritime**  
**Creative Industries**  
**Healthcare (eHealth) Services**  
**Education Services**

None of these sectors are fundamentally new to Ireland's economy – each offers further growth potential and new enterprise opportunities as they are impacted by structural change, advances in technology, consumer demands or regulatory change. The lack of disaggregated data, and/or specific categorisations makes it difficult to

accurately assess the contribution of the sectors in this category to Ireland's economic growth over the past number of years. Many studies have been undertaken in the past to identify opportunities and the actions required to stimulate growth – but with relatively little apparent impact.

Global trends indicate high growth in demand for products and services delivered by these sectors, and there are new market opportunities in emerging and developing economies. Ireland has the capabilities to realise significant growth – both in terms of exports and employment, and for indigenous and foreign firms. It is opportune to revisit the potential and to make concerted efforts to identify and to overcome barriers where they exist. Green technologies, creative industries and marine are each broad sectors, encompassing a range of very different sub-sectors, with very different needs. This complexity itself presents a challenge. At the same time, they have an influence across the economy, such that each sector's own development will have a positive 'knock on' impact across a wide range of other sectors. For example:

- Environmental concerns will impact on all sectors: in how they reduce waste through new materials and production processes; in where they source energy and optimise usage; in the development of environmentally friendly products; and in how they gain market share through 'greening' etc.

- The marine sector relies on Ireland's seas and deals with many competing demands involving shipping lanes, fishing rights, harbour development, tourism and leisure needs.
- The creative industries encompass a diverse range of activities, including: the digital world (games, animation); design and branding; publications and media; and cultural activities (film, theatre). They also influence the potential of a much broader range of sectors, including food (e.g. branding), medical technologies (e.g. design), and tourism (e.g. cultural products).
- In the case of education and healthcare services, Ireland has already developed core skills that are transferable between the public and private sector and/or can be further enhanced – e.g. provision of in-community 'e' healthcare services. A structured programme of re-skilling is important in this context.

For each of these sectors there exists a basis for genuine dynamic clusters to emerge. The definition of what precisely constitutes a cluster can vary - in broad terms, a cluster involves geographic concentrations of interconnected companies, specialised suppliers, service providers, firms in related industries and associated institutions in particular fields that compete but also cooperate. Although industry clusters are primarily a market driven phenomenon, public policy plays an important role in accelerating their emergence and growth.

### **C. Renewed focus on mature sectors**

Often the desire to seek out 'new' and 'smart' sectors can mean that the role of more traditional and longer established sectors is considered to be of less importance. However, they provide a substantial contribution to employment in Ireland, employing over 600,000 people with a high degree of employment churn – presenting employment opportunities on an on-going basis.

The sectors in this category are largely comprised of Irish owned companies – a substantial proportion of which includes small and micro firms, with many being family owned. They trade primarily on domestic markets, while tourism contributes toward exports through foreign earnings generated from overseas visitors.

Each of the sectors includes firms that trade internationally as well as those primarily trading in domestic markets. Technology advances, together with the reduction in trade barriers for services, enhance the potential to increase exports and internationalisation prospects for firms operating within this cohort.

In fact, advances in technology are having a transformative impact in that they present 'new' niche high growth opportunities within each of these sectors, including for example 'smart' construction materials and 'e'-tailing. At a minimum, the use of ICT across all aspects of the business can increase productivity and, because of their high employment intensity, the overall contribution of these sectors to GDP growth.

#### **D. Locally traded activities**

Although the opportunity to export presents itself for all sectors, many firms will continue to focus exclusively on the domestic market. Many will remain small scale by choice. They include (but are not limited to) professional and business services (legal, accounting, IT), medical and personal services (automotive, leisure, beauty).

These small firms make an important contribution to employment and to Ireland's overall competitiveness. Locally available, competitive and efficiently produced goods and services can stimulate increased expenditure in Ireland by exporting firms, and direct economic benefits accrue through lower prices, enhanced consumer welfare, etc.

*For the more in-depth assessment of future opportunities by sector, see Chapter 7 (pages 63-73 and Section B (pages 93-129) of the 2010 Forfás report, Making it Happen<sup>50</sup>.*

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<sup>50</sup> The report is available at: <http://www.forfas.ie/publication/search.jsp?ft=/publications/2010/Title,6807,en.php>

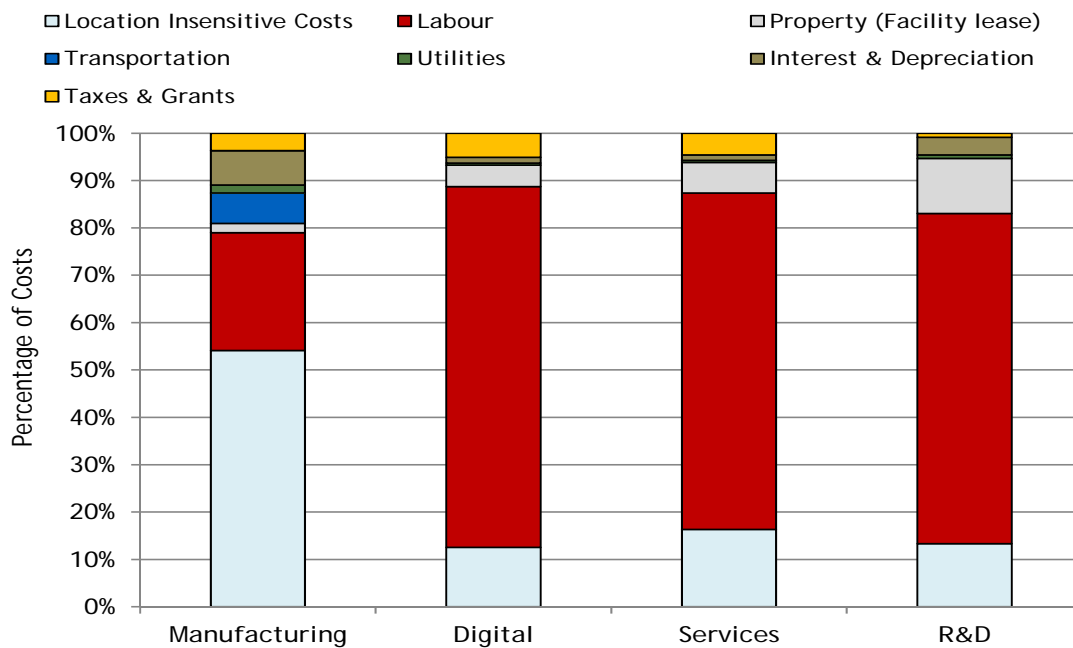


## APPENDIX B: Cost Profiles

The relative importance of key business inputs across the main exporting sectors are assessed below.

The summary cost profiles present a breakdown of the cost components for four sectors - manufacturing, digital services, broader business services, and research and development (R&D) services (Figure B1)<sup>51</sup>. They illustrate the relative importance of location sensitive and location insensitive costs (i.e. goods and services produced on international markets where the price is determined by global supply and demand conditions). A striking, though not unexpected, feature of the comparison is that relative to manufacturing, location insensitive costs form a smaller component of total costs for digital (12.5 per cent), services (16.3 per cent) and R&D (13.3 per cent) operations. Over half of the total costs in manufacturing (54.1 per cent) comprise location insensitive costs. There are, however, significant differences within manufacturing; 37.1 per cent of total costs in the medical devices sector are location insensitive compared to 66.6 per cent in the chemicals sector. Apart from manufacturing, transport costs are not a significant input cost for the other sectors.

**Figure B1 Summary Cost Profiles for Manufacturing, Digital, Services and R&D Operations**



Source: KPMG, Competitive Alternatives 2012, Forfás Calculations

<sup>51</sup> The cost profiles discussed below have been developed using KPMG’s Competitive Alternatives 2012 report, which uses case study business operations for 19 different sectors and benchmarks the cost of doing business for these model firms in a range of countries. Ireland is not included in the study. The benchmarked countries used to calculate the cost profiles are Australia, Canada, France, Germany, Italy, Japan, Netherlands, the UK and the US. As the profiles are based on a single case study firm in each sector, the profiles should be regarded as indicative rather than representative of the cost structure across sectors.

While not discounting the importance of location insensitive costs, it is nonetheless notable that Irish-owned companies are generally much more integrated into the domestic economy and therefore are more sensitive to locally influenced, location sensitive costs. Differences in sectoral specialisation will also influence spend in the local economy. Forfás data on development agency assisted exporters shows that<sup>52</sup>:

- In overall terms, foreign-owned industry spent €20.7 billion on raw materials in 2010, of which €2.2 billion or 10.6 per cent relates to materials sourced in Ireland (by either indigenous suppliers or other foreign-owned multinationals in the country). In contrast, Irish-owned firms spent €11.3 billion on raw materials. In this case, however, 68.4 per cent of these materials were sourced locally.
- A similar story emerges in terms of services inputs – in 2010 foreign owned firms purchased over €45.4 billion worth of services. 18 per cent of this was sourced in Ireland. While the value of services purchased by Irish-owned firms is much lower (€4.75 billion), almost 83 per cent of these services were sourced in Ireland.
- In 2010, the total payroll bill of foreign-owned firms amounted to almost €7.58 billion with manufacturing accounting for €4.74 billion (63 per cent) and services contributing the remaining balance (37 per cent). Irish-owned companies spent €5.38 billion in 2010 on payroll costs - €3.48 billion (65 per cent) of which was accounted for by manufacturing firms.

As location insensitive costs do not influence decisions on where to invest, these cost elements have been excluded from the detailed sectoral cost profiles discussed below<sup>53</sup>.

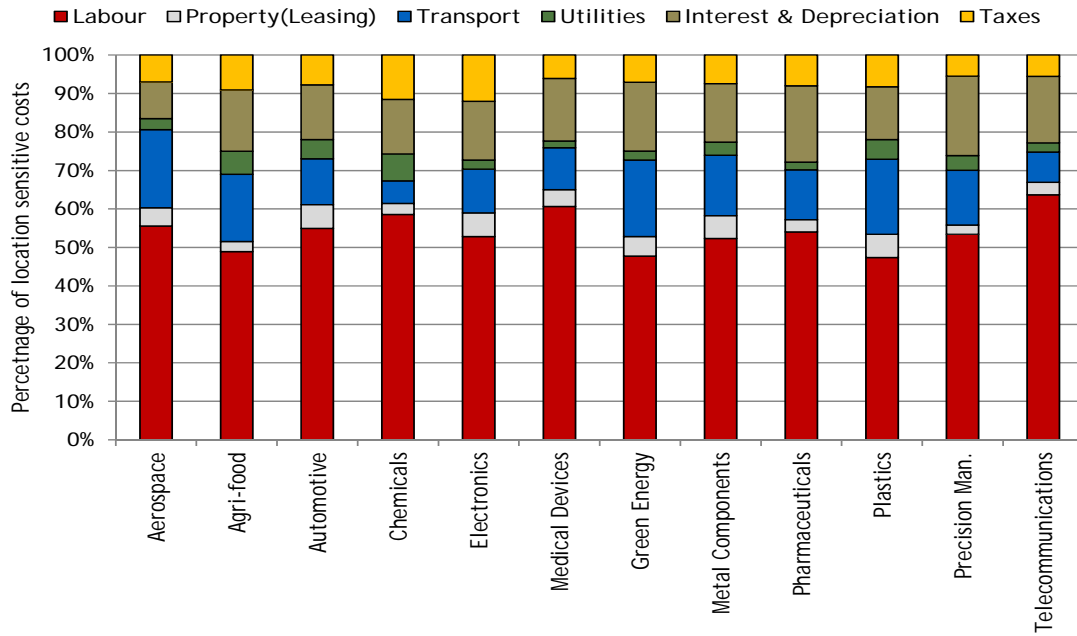
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52 Forfás, Annual Business Survey of Economic Impact 2010, June 2012.

53 It should be noted that the assumption that location insensitive costs do not influence decisions on where to invest may not hold in all cases. For example, peripheral locations may face additional transportation costs on commodity products. Domestic policies such as taxes and tariffs may also impose additional costs on 'location insensitive costs'.

Transport costs are a major component of locally determined costs in the aerospace (20 per cent), plastics (19 per cent) and agri-food operations (17 per cent) case studies (Figure B2).

**Figure B2 Manufacturing Sectors' Cost Profiles (Location sensitive costs only)**



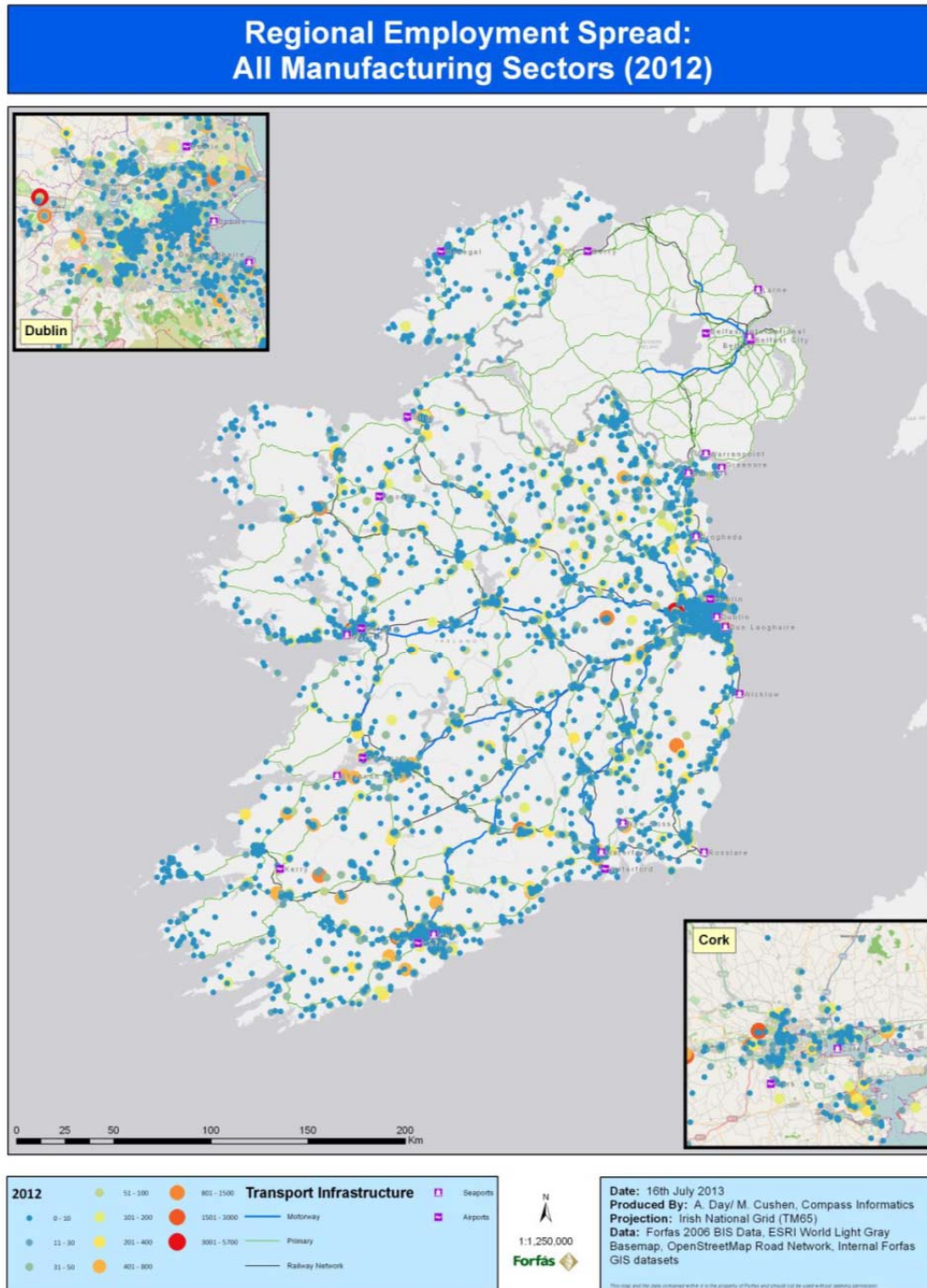
Source: KPMG, Competitive Alternatives 2012, Forfás Calculations

## APPENDIX C: Permanent Full-time Employment in All Agency Supported Companies

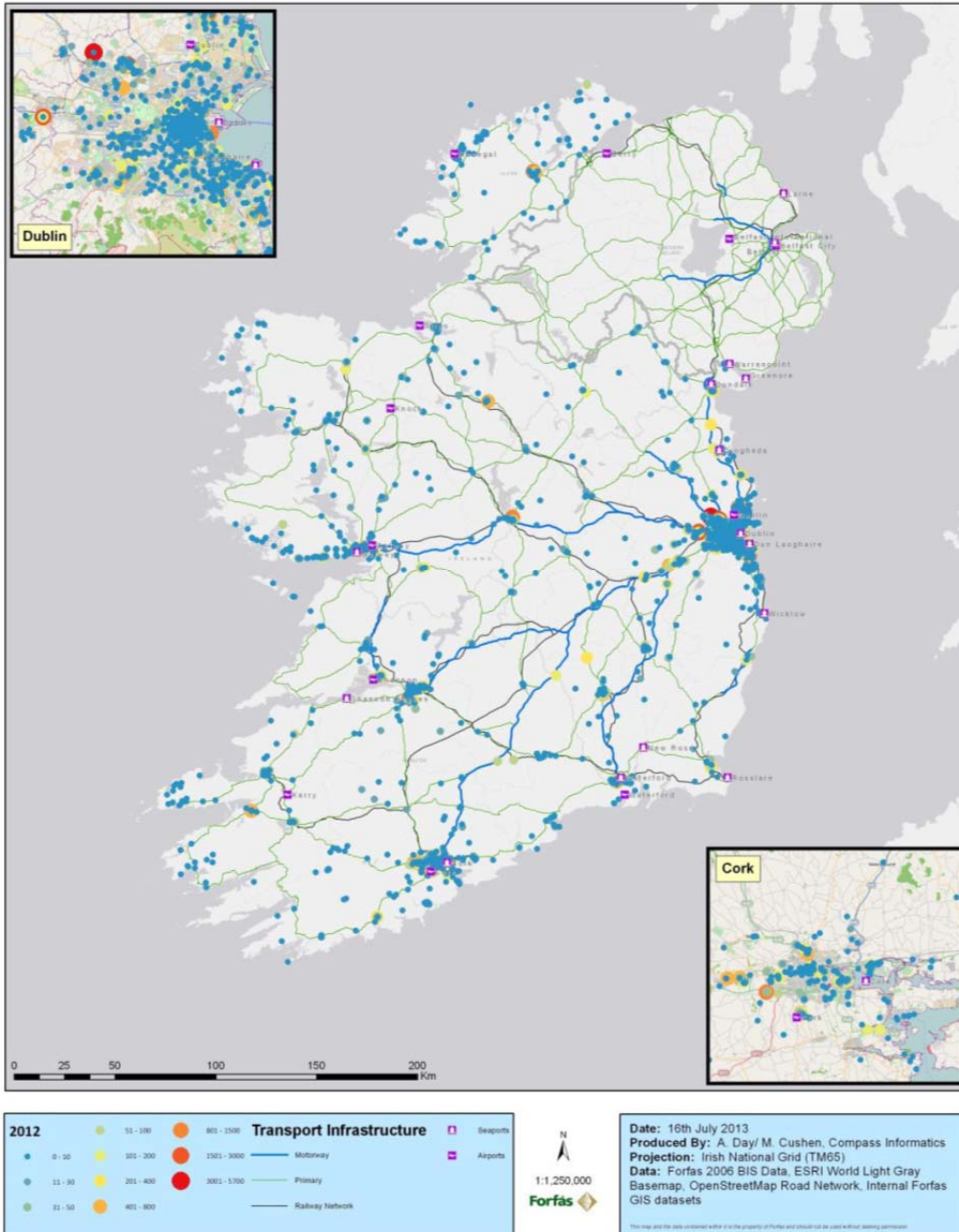
Total Employment	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	% Change 2011-2012	% Change 2003-2012
<b>Manufacturing &amp; Other Industry</b>	<b>230,827</b>	<b>227,489</b>	<b>231,366</b>	<b>233,570</b>	<b>231,023</b>	<b>218,803</b>	<b>194,294</b>	<b>189,507</b>	<b>191,906</b>	<b>194,215</b>	<b>1.2%</b>	<b>-15.9%</b>
Basic and Fabricated Metal Products	15,512	15,618	15,912	16,193	15,972	14,592	11,546	10,929	11,078	10,765	-2.8%	-30.6%
Chemicals	26,104	26,862	28,289	27,475	27,219	26,794	25,210	24,955	24,858	25,192	1.3%	-3.5%
Clothing, Footwear and Leather	4,576	3,545	3,036	2,582	2,100	1,860	1,774	1,687	1,645	1,579	-4.0%	-65.5%
Computer, Electronic and Optical Equipment	24,819	24,498	24,376	25,052	24,283	23,029	20,361	20,594	20,899	21,342	2.1%	-14.0%
Construction, Energy, Water and Waste	5,962	6,336	9,770	10,715	11,528	11,426	9,339	8,451	8,472	8,254	-2.6%	38.4%
Drink and Tobacco	6,763	6,408	6,024	6,817	6,676	6,743	6,763	6,228	5,926	5,665	-4.4%	-16.2%
Electrical Equipment	7,781	7,305	7,319	7,469	7,056	6,422	5,315	4,912	4,795	4,920	2.6%	-36.8%
Food	47,480	46,834	45,834	45,820	44,439	42,661	40,370	41,066	42,368	43,808	3.4%	-7.7%
Machinery and Equipment	14,049	13,609	13,301	13,260	12,869	12,072	10,269	10,199	10,515	10,697	1.7%	-23.9%
Medical and dental instruments and supplies	19,210	20,677	22,665	22,623	23,835	23,264	23,457	23,148	24,405	25,475	4.4%	32.6%
Miscellaneous Manufacturing	10,884	10,141	9,766	10,151	9,845	8,993	7,770	7,170	6,900	6,868	-0.5%	-36.9%
Non-Metallic Minerals	12,794	12,616	11,873	11,937	12,456	11,045	7,459	6,716	6,864	6,318	-8.0%	-50.6%
Paper and Printing	9,330	8,388	8,280	7,923	7,723	7,248	6,842	6,244	6,016	6,126	1.8%	-34.3%
Rubber and Plastics	8,834	8,544	8,533	8,737	8,664	8,244	7,090	6,863	6,913	6,996	1.2%	-20.8%
Textiles	2,903	2,583	2,606	2,515	2,556	2,346	1,723	1,677	1,556	1,503	-3.4%	-48.2%
Transport Equipment	6,819	6,412	6,323	6,462	6,333	6,129	4,189	4,023	4,269	4,376	2.5%	-35.8%
Wood and Wood Products	7,007	7,113	7,459	7,839	7,469	5,935	4,817	4,645	4,427	4,331	-2.2%	-38.2%
<b>Primary Production</b>	<b>4,303</b>	<b>4,079</b>	<b>4,208</b>	<b>4,162</b>	<b>3,998</b>	<b>3,249</b>	<b>2,673</b>	<b>2,595</b>	<b>2,844</b>	<b>2,895</b>	<b>1.8%</b>	<b>-32.7%</b>
Agriculture, Fishing and Forestry	3,157	2,933	2,977	2,887	2,728	2,051	1,672	1,595	1,671	1,792	7.2%	-43.2%
Mining and Quarrying	1,146	1,146	1,231	1,275	1,270	1,198	1,001	1,000	1,173	1,103	-6.0%	-3.8%
<b>Services</b>	<b>100,455</b>	<b>104,413</b>	<b>109,741</b>	<b>120,257</b>	<b>125,874</b>	<b>127,676</b>	<b>118,825</b>	<b>122,580</b>	<b>132,252</b>	<b>139,508</b>	<b>5.5%</b>	<b>38.9%</b>
Business Services	11,225	12,555	15,896	18,185	19,692	21,013	19,492	19,658	22,415	23,347	4.2%	108.0%
Computer consultancy activities	29,363	29,865	29,445	31,749	32,336	31,389	26,991	27,889	29,862	31,056	4.0%	5.8%
Computer facilities management activities	7,985	8,691	9,172	9,721	8,564	8,178	7,735	7,964	8,519	9,484	11.3%	18.8%
Computer programming activities	21,905	21,536	21,576	22,319	21,446	22,275	21,111	21,364	22,903	25,329	10.6%	15.6%
Financial Services	12,285	13,908	15,693	18,073	21,020	22,183	21,225	21,389	22,685	23,257	2.5%	89.3%
Other Information and Communication	5,815	5,605	5,401	5,803	6,292	6,463	6,466	6,895	7,471	7,863	5.2%	35.2%
Other information technology and computer service activities	2,706	2,770	2,753	3,275	4,750	5,236	5,228	6,416	7,093	7,361	3.8%	172.0%
Other Services	9,171	9,483	9,805	11,132	11,774	10,939	10,577	11,005	11,304	11,811	4.5%	28.8%
<b>Total - All Sectors</b>	<b>335,585</b>	<b>335,981</b>	<b>345,315</b>	<b>357,989</b>	<b>360,895</b>	<b>349,728</b>	<b>315,792</b>	<b>314,682</b>	<b>327,002</b>	<b>336,618</b>	<b>2.9%</b>	<b>0.3%</b>

Source: Forfás

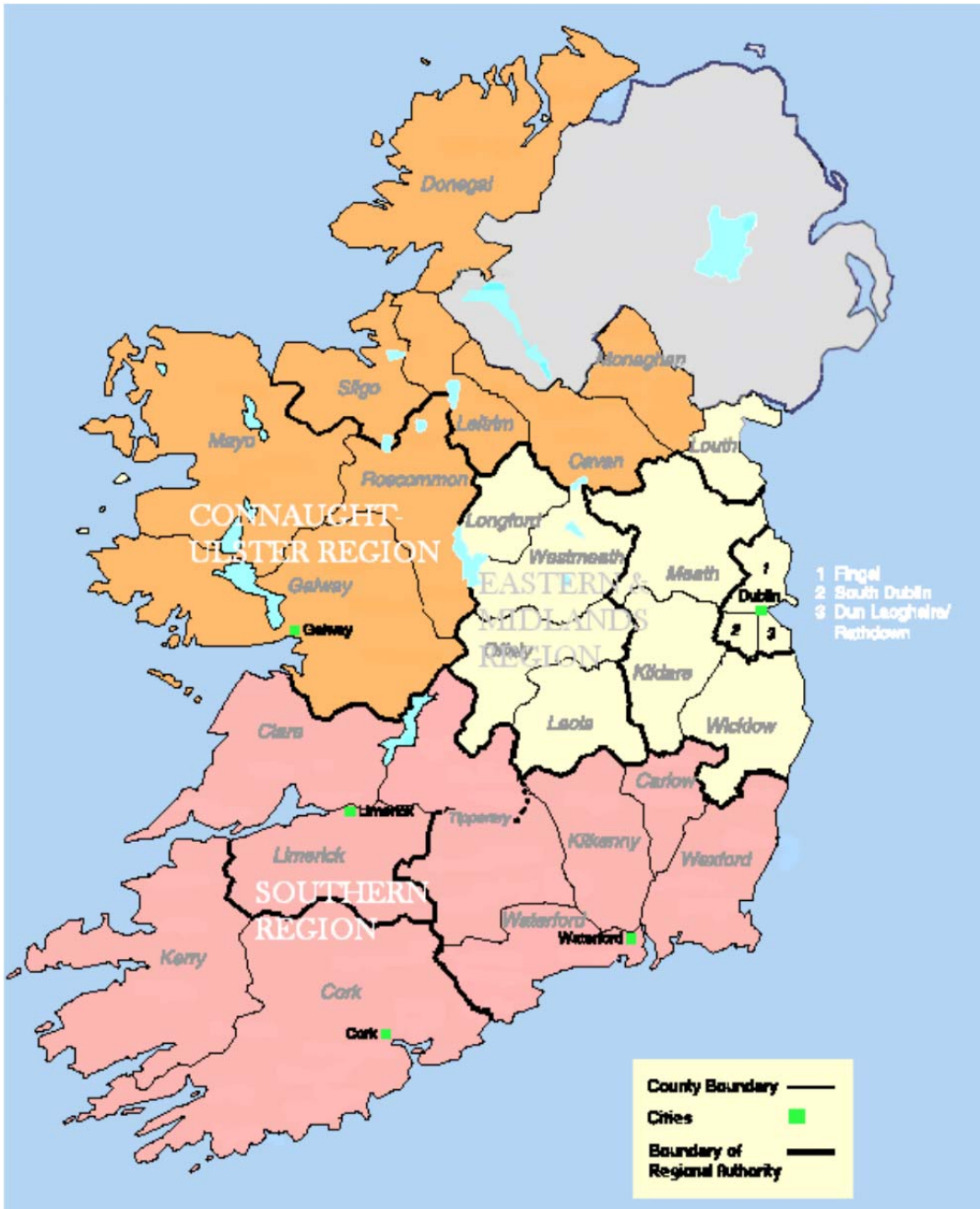
## APPENDIX D: Maps of Employment Distribution in Agency Supported Companies



## Regional Employment Spread: All Service Sectors (2012)



## APPENDIX E: Map of New Regional Structures



Source: Department of the Environment, Pitting People First - Action Programme for Effective Local Government Department of, October 2012

The three regions are the:

- Southern Region – Munster counties of Clare, Cork, Kerry, Limerick, Tipperary and Waterford; and the Leinster counties of Carlow, Kilkenny and Wexford;
- Eastern and Midlands Region – Dublin, Kildare, Laois, Longford, Louth, Meath, Offaly, Westmeath and Wicklow; and
- Connaught-Ulster Region – Connaught counties of Galway, Leitrim, Mayo, Roscommon and Sligo; and the Ulster counties of Cavan, Donegal and Monaghan.