

TRENDS IN FOREIGN DIRECT INVESTMENT FROM THE UNITED STATES, 2003-2015

FULBRIGHT SCHOLARSHIP REPORT 1

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Author

Thomas Byrne, DfE Analytical Services



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1 Introduction

This research is the first report carried out under a Fulbright Scholarship exploring how Northern Ireland can attract Foreign Direct Investment from the United States. This report focuses on analysing key investment trends to identify future opportunities and competitors.

1.1 Context

Attracting Foreign Direct Investment (FDI) is central to successfully growing the economy in Northern Ireland (NI). The Economic Strategy, published in 2012, included a key theme aimed at “competing in the global economy”, with FDI attraction a key part of this. More recently, Economy 2030: A consultation on a draft Industrial Strategy for Northern Ireland includes “succeeding in global markets” as one of its five themes.¹ Specific priorities identified within this theme include “a strong global presence as the location of choice to invest” and “competing globally for investment by promoting across the world as the top United Kingdom region from which to do business.”²

Invest NI is the economic development agency responsible for attracting inward investment to the region, with the Department for International Trade (DIT) promoting the United Kingdom (UK) as a whole. The UK has become a hugely successful location for attracting FDI, particularly in recent years. Over the period 2011-16, the UK has reported a 57% increase in both projects and jobs from abroad.³ In 2015, the UK reported record FDI performance, accounting for 21% of all FDI into the European market and reinforcing its position as Europe’s clear FDI leader.⁴

NI has contributed strongly to the UK’s success. Invest NI has supported almost £4.3 billion of inward investment between 2003-04 and 2015-16, promoting over 37,500 new jobs⁵. The importance of the US market for these figures is clear in Figure 1. Over one-third (35%) of investment attracted by Invest NI was from the US, worth a cumulative £1.48 billion from 2003-04 to 2015-16 and promoting 13,875 jobs, equivalent to 37% of the total jobs. On average each year, this is equivalent to over £100 million of investment and more than 1,000 jobs from the US.

Figure 2 presents trends of US investment to NI since 2003-04. This can be broken down into three broad periods: from 2003-04 to 2005-06 when US FDI to NI was strong; from 2006-07 to 2011-12 when US FDI levels fell; and finally from 2012-13 to 2014-15 when US FDI to NI picked up and significantly outperformed any earlier years. The latest year, however, has seen a decline back to levels from the late 2000s.

¹ https://www.northernireland.gov.uk/sites/default/files/publications/nigov/ni-economic-strategy-revised-130312_0.pdf

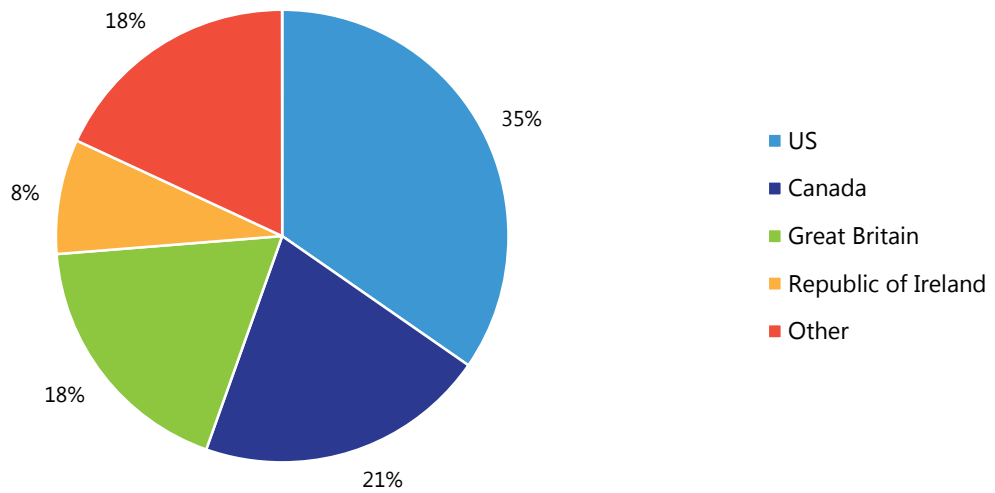
² <https://www.economy-ni.gov.uk/sites/default/files/consultations/economy/industrial-strategy-ni-consultation-document.pdf>

³ <https://www.gov.uk/government/publications/dit-inward-investment-results-for-the-tax-year-2015-to-2016/departments-for-international-trade-inward-investment-results-2015-to-2016>

⁴ <http://www.ey.com/uk/en/issues/business-environment/ey-attractiveness-survey-2016-uk>

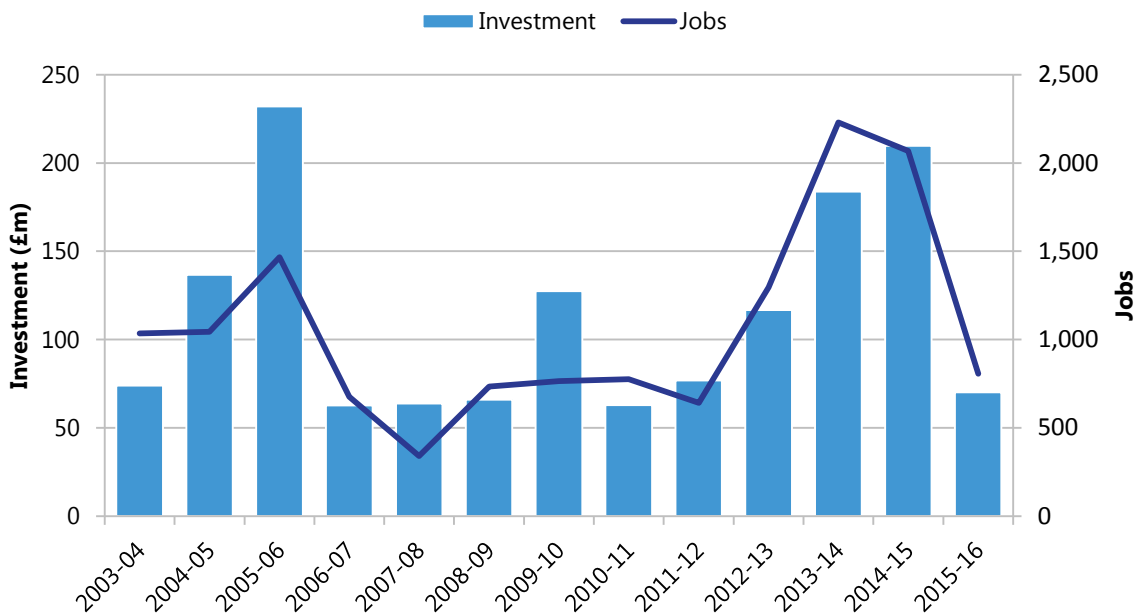
⁵ Jobs promoted represent the jobs that were intended to be created at the project outset. A recent evaluation of Selective Financial Assistance (used to support investment projects) suggested that 69% of jobs promoted were eventually created.

Figure 1: Invest NI Investment by Externally-Owned Companies by Source, 2003/04 to 2015/16



Source: Invest NI

Figure 2: Invest NI Investment from US Companies



Source: Invest NI

1.2 Aims and Objectives

This is the first projects produced as part of a Fulbright Scholarship undertaken in the US during September to December 2015. The aim of this report is to provide an assessment of FDI trends from the US since 2003. It gives a strong evidence base for any future work focused on explaining these trends. The specific objectives of this project are to:

- Review the global FDI landscape, identifying how important the US is as a source of FDI and the outlook for FDI going forward;
- Profile the scale and nature of US outward FDI, identifying key growth sectors; and
- Analyse trends in mobile investment by US companies to other US states, identifying the type of financial and tax incentives that these states can offer.
- Outline the scale and nature of US FDI to key European locations, identifying those which are most successful relative to their size;
- Assess the profile of US FDI to the UK and Ireland, identifying which areas have been most successful at attracting certain sectors and activities; and

1.3 Methodology

This first report is mainly based on a review of available literature and analysis of data using fDi Markets.⁶ This provides a cross-border measure of all globally announced Greenfield FDI projects with a wide range of breakdowns available and the ability to look in detail at company level announcements. It therefore provides a much more versatile dataset for the purposes of this report than other sources such as OECD⁷ and US Bureau of Economic Analysis.⁸ Its main drawback is that some variables are estimated where actual information is provided in public announcements. The period used for the FDI analysis relates from 2003 to 2015, with the data downloaded in November and December 2015 on different days which will explain any slight variations in figures when comparing across tables. Retail projects have been excluded from all FDI data.

1.4 Acknowledgements

This research could not have happened without the scholarship awarded by the UK-US Fulbright Commission; this has enabled me to spend three months in Boston from September to December 2015 focusing on this topic, and my thanks are extended to all the staff in the commission, particularly Rebecca Cobby, who helped to facilitate this. I am also very grateful to the Sawyer Business School in Suffolk University and my Fulbright host, Professor Richard Torrisi, for accommodating me during my time in Boston. Finally, my thanks are also extended to all those who took part in consultations and provided advice and assistance along the way.

⁶ <http://www.fdimarkets.com/>

⁷ <http://www.oecd.org/corporate/mne/statistics.htm>

⁸ <http://www.bea.gov/international/index.htm>

2 US Investment Trends

There are now fewer US FDI opportunities available since the economic downturn, although the outlook for global FDI is positive. The UK has become a key location for US overseas investors in recent years, with the success of the ROI at attracting US investment is also highly evident.

2.1 Global Investment Landscape

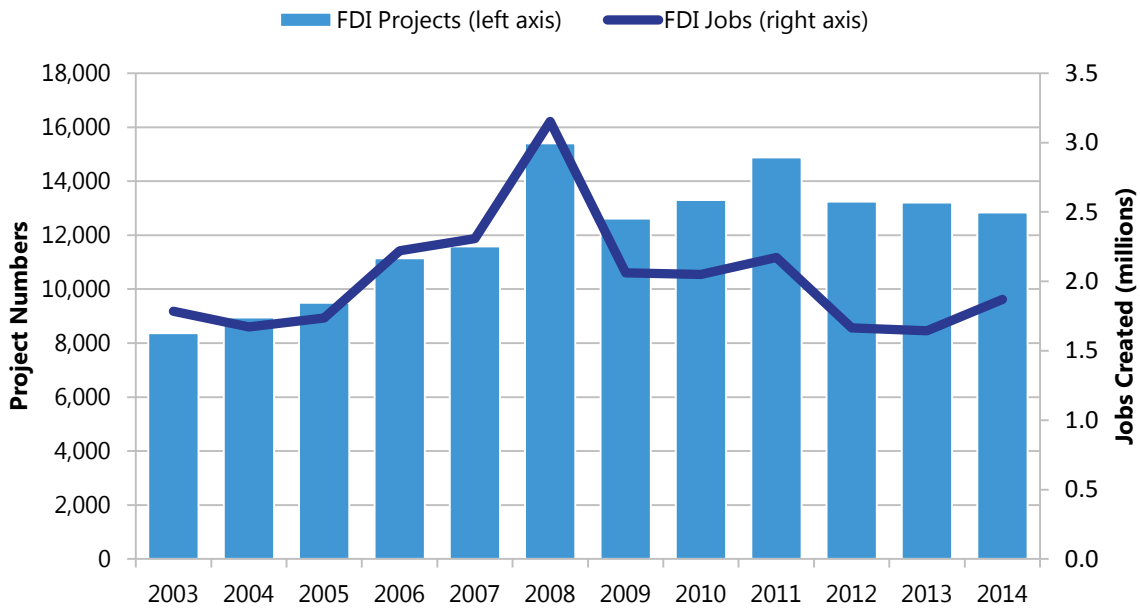
US outward FDI needs to be set in the context of the global FDI landscape. UNCTAD (2016) reports that global FDI flows grew in 2015 by almost 40% to \$1.8 trillion, driven by a rebalancing of FDI towards developed economies, particularly Europe. However, fDi Intelligence (2016) highlights that these data include all types of FDI, such as Mergers & Acquisitions (M&A), which do not create new economic activity. Focusing just on greenfield FDI brings down the growth in capital investment to 9%, with jobs increasing by just 1% and projects down by 7%.

An overview of global FDI is shown below in Figure 3, showing that global greenfield FDI reached a peak in 2008 to which it has not yet recovered. Project numbers in 2014 were 17% below the 2008 high, with jobs created down 41%. Therefore whilst FDI projects have largely continued to go ahead during the economic downturn, these have become significantly smaller, with an average size of 146 jobs in 2014 compared with 205 in 2008. Over the last few years, the number of projects has been falling year-on-year since 2011 despite a small upturn in job creation in 2014.

Some key trends evidence below these headline figures are as follows:

- The US remains the single largest source country for global Greenfield FDI, contributing 23% of projects and 20% of jobs since 2003, with other developed economies (Japan, UK, Germany and France) making up the rest of the top five. However, despite their importance, the number of FDI jobs created has fallen significantly all five of these countries since 2008;
- Developing and newly-developed economies are now much more important as a source of FDI; South Korea, China and Taiwan rank as the sixth, seventh and eighth largest sources of global FDI jobs since 2003, with Singapore, UAE and Hong Kong also in the top 20. Since 2008, there has been growth in FDI jobs from China, Taiwan and Hong Kong against the global backdrop of significant falls; and
- Asia-Pacific is now the largest FDI destination region globally, with 33% of projects and 43% of jobs since 2003. Whilst Western Europe is the second largest destination in terms of project numbers, it is the fourth largest in jobs as the average size of FDI projects since 2003. This is down to the small size of FDI projects into Western Europe, on average 66 jobs, which is well below the Rest of Europe (234), Latin America & Caribbean (233) and Asia-Pacific (222).

Figure 3: Global FDI Trends



Source: fDi Markets

Note: 2015 is not included as a full years data was not available at the time of writing

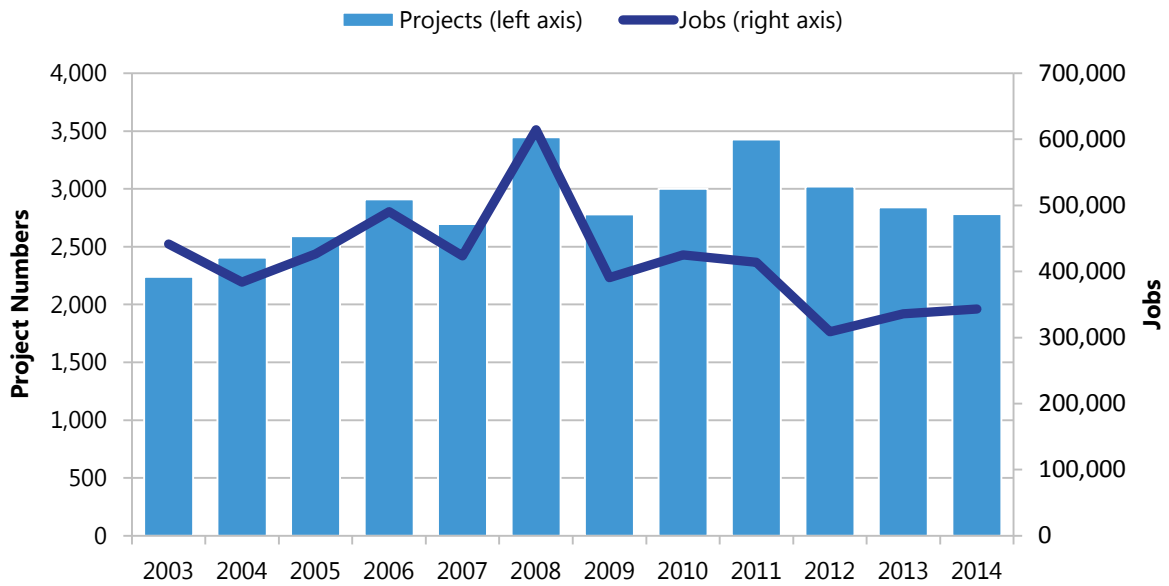
The UNCTAD outlook for 2016 is for a 10-15% decline due to weak global economic growth and demand although, over the medium term, global FDI flows are projected to resume growth in 2017 and surpass \$1.8 trillion in 2018. fDi Intelligence’s outlook for the 2017-20 period is for greenfield FDI to slowly recover with annual growth of 3% to 5% per annum over this period. Whilst the headlines therefore suggest a strong recovery in global FDI, looking under the figures demonstrates mixed performance and the outlook is for steady rather than spectacular growth.

2.2 US Outward FDI

US FDI has followed a broadly similar pattern to global GDI since 2003. Figure 4 highlights that US FDI peaked in 2008 at nearly 3,500 projects and almost 615,000 jobs. The global downturn clearly led to a significant fall in US FDI from which it has not fully recovered; there were 19% fewer projects and 44% less jobs from US companies in 2014 than during the peak. During this time, we have seen the average size of US FDI projects fall from 178 jobs to 123 jobs. More recently, there has been an upturn in the number of US FDI jobs since 2012 but a fall in the number of projects.

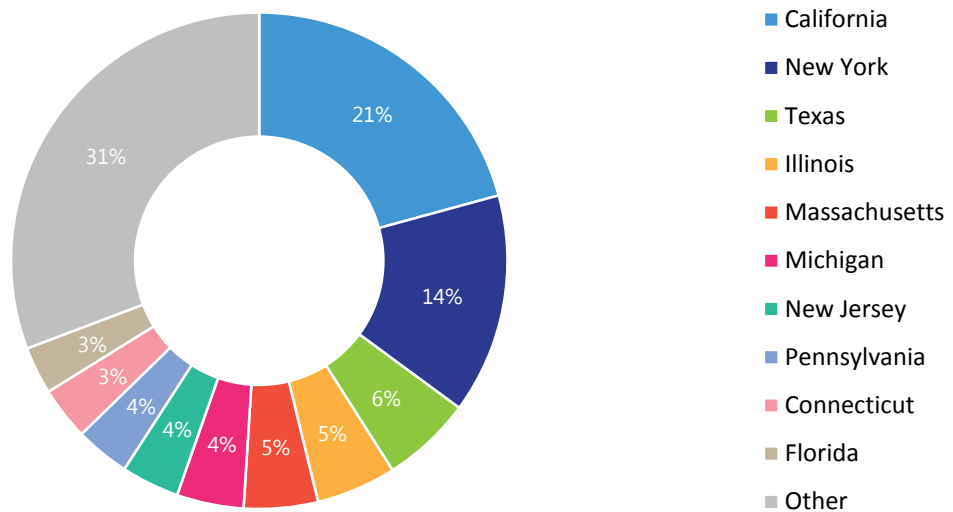
A breakdown of the main source states of US FDI is presented in Figure 5, with California and New York emerging as a clear first and second. The top five states account for over half (51%) of total US FDI, meaning that IPAs can cover a large proportion of potential US FDI by having a small number of offices based in and around these states. Geographically, five of the top 10 source states for outward FDI are in the US Northeast.

Figure 4: US FDI Trends



Source: fDi Markets

Figure 5: US FDI Projects by State, 2003-15



Source: fDi Markets

As well as being the largest source state for FDI, California is one of very few that has continued to grow in terms of project numbers since the downturn. Table 1 highlights that all of the other top five source states contracted from 2008, although both Texas and Illinois have shown growth over the most recent three years. FDI projects from New York and Massachusetts, by contrast, have decreased over both periods from 2008 and 2012. If we look at FDI jobs rather than projects, every one of these top states has shown decreases since 2008, although an upturn in jobs has been observed since 2012 in California, Texas and Massachusetts.

Table 1: Growth Trends for the Top Five Source States of FDI Projects

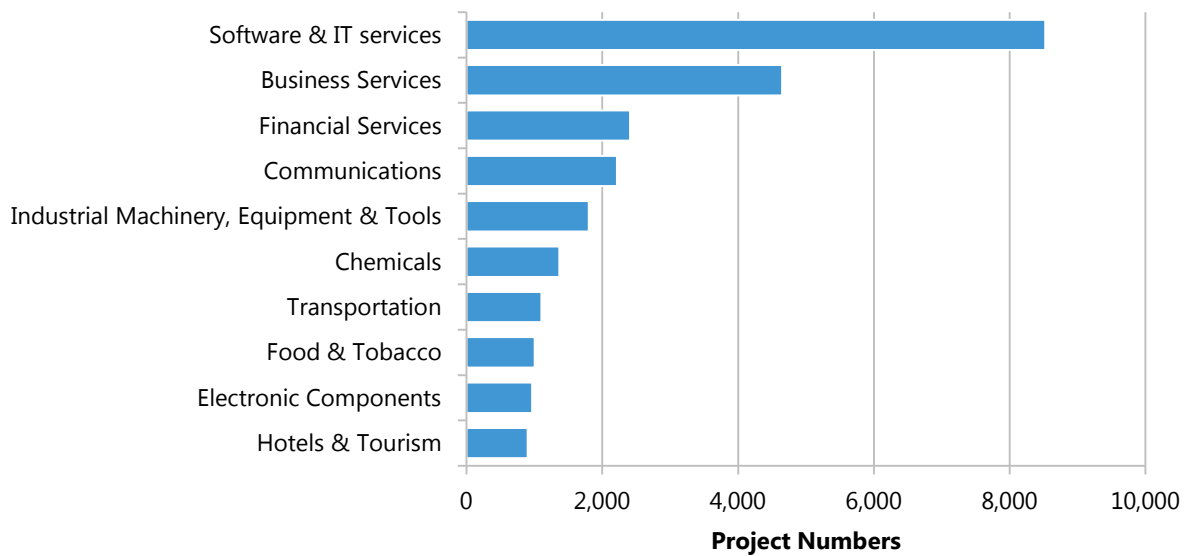
State	Project Numbers		FDI Jobs	
	2008-14	2012-14	2008-14	2012-14
California	3%	16%	-48%	26%
New York	-29%	-22%	-67%	-27%
Texas	-32%	28%	-65%	17%
Illinois	-21%	9%	-41%	-21%
Massachusetts	-35%	-31%	-36%	15%
United States	-19%	-8%	-44%	11%

Source: fDi Markets

FDI Sectors

The fDi Markets dataset provides a breakdown of FDI into 39 different sectors, with a comparison of the top 10 sectors (in project numbers) shown in Figure 6. The top three sectors for US FDI have been software & IT services, business services and financial services, which have contributed 43% of total projects and 27% of total jobs between them. Broadening this out to the top 10 sectors brings in the manufacturing sectors of industrial machinery, chemicals, food & tobacco and electronic components, as well as the services sectors of communications, transportation and hotels & tourism.

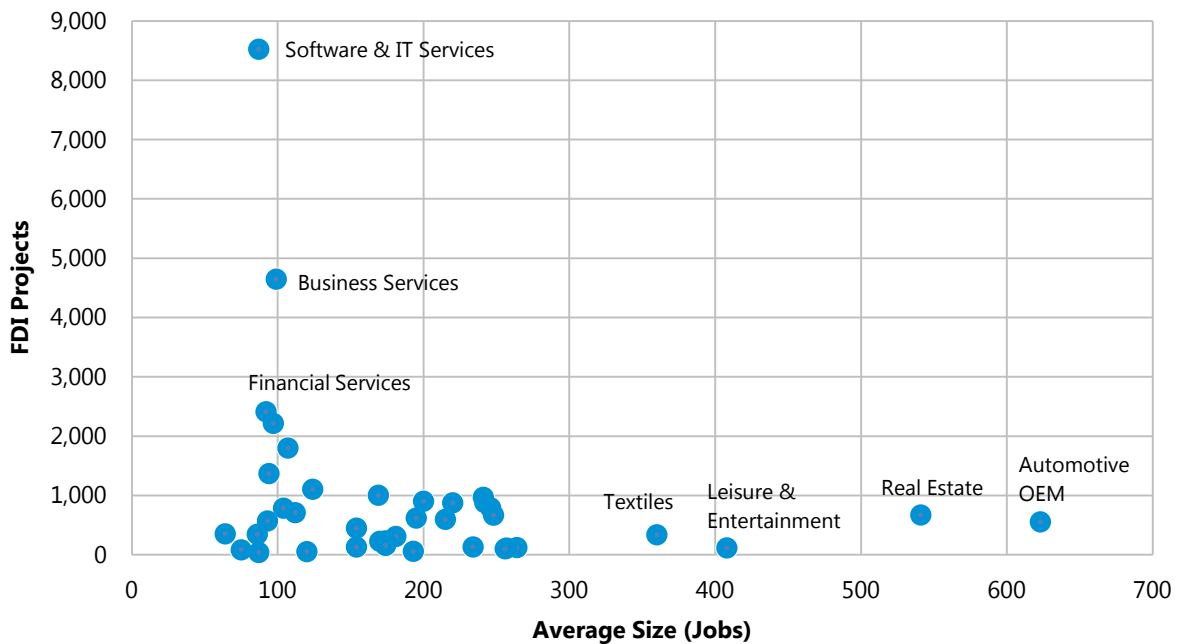
Figure 6: Top Sectors for US FDI Projects, 2003-15



Source: fDi Markets

Clearly the software & IT, business services and financial services sectors present a significant amount of investment opportunities from the US, although these do tend to be smaller in terms of jobs than other sectors with an average of 87, 99 and 92 jobs respectively (see Figure 7). By comparison, sectors such as automotive OEM (623), real estate (541), leisure & entertainment (408) and textiles (360) tend to be much bigger although there are significantly fewer projects.

Figure 7: Average Jobs Size of US FDI Projects by Sector, 2003-15



Source: fDi Markets

Looking at the growth trends in Table 2, the slump in projects and jobs since the downturn is evidence across most of these main FDI sectors since the downturn in 2008. Only software & IT services and industrial machinery have seen increases in project numbers over this period, with job numbers down across all five sectors since 2008. Looking at the more recent period since 2012 shows growth in both projects and jobs in software & IT services but less FDI in the other main US FDI sectors (despite a slight increase in jobs in industrial machinery and communications). Business services has shown the largest falls during this time.

Table 2: Growth Trends for the Top Five US FDI Sectors

Sector	Project Numbers		FDI Jobs	
	2008-14	2012-14	2008-14	2012-14
Software & IT Services	8%	1%	-38%	8%
Business Services	-21%	-31%	-31%	-30%
Financial Services	-31%	-12%	-30%	-4%
Communications	-10%	-1%	-20%	2%
Industrial Machinery	3%	-10%	-35%	2%
All Sectors	-19%	-8%	-44%	11%

Source: fDi Markets

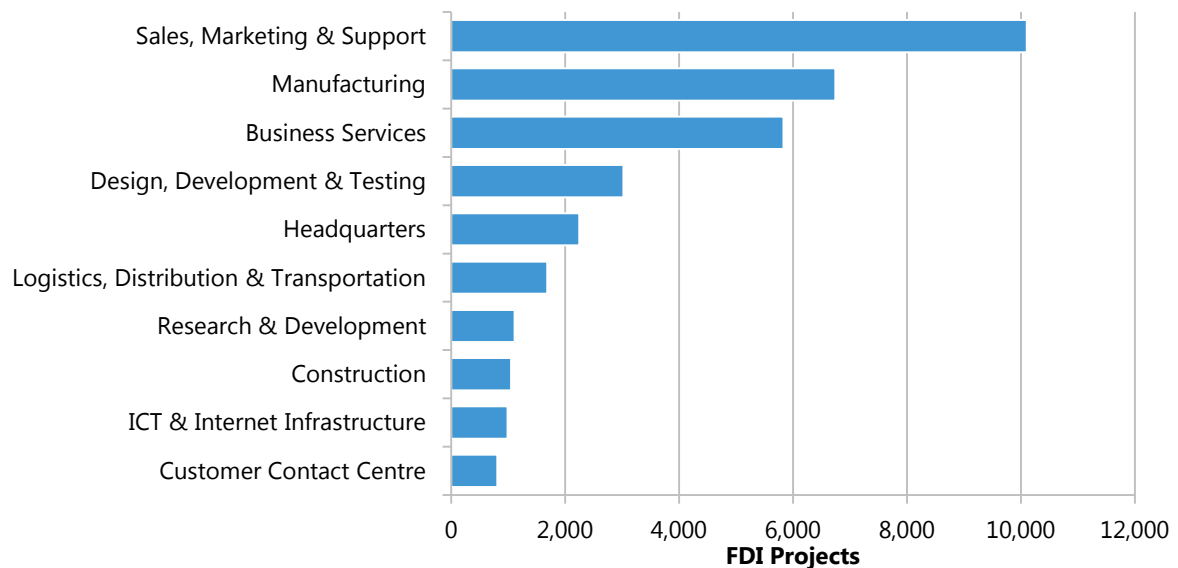
FDI Business Activities

Regardless of what sector a company is in, it carries out a wide range of business activities which are common across many sectors. A manufacturing company, for example, needs a finance department, customer services and sales offices the same as a tradable services company even though their

product is different. The types of business activity are therefore less diverse than the sectors they operate in, with the fDi Markets data providing a breakdown of US FDI into 17 different activities.

Figure 8 presents the top 10 business activities for US FDI projects since 2003. The top three activities of sales & marketing, manufacturing and business services accounted for 63% of total US FDI projects and 51% of FDI jobs during this period. Of the remaining activities, only design, development & testing and headquarters have had over 2,000 projects since 2003, with relatively fewer projects for the other business activities.

Figure 8: Top 10 Business Activities of US FDI Projects

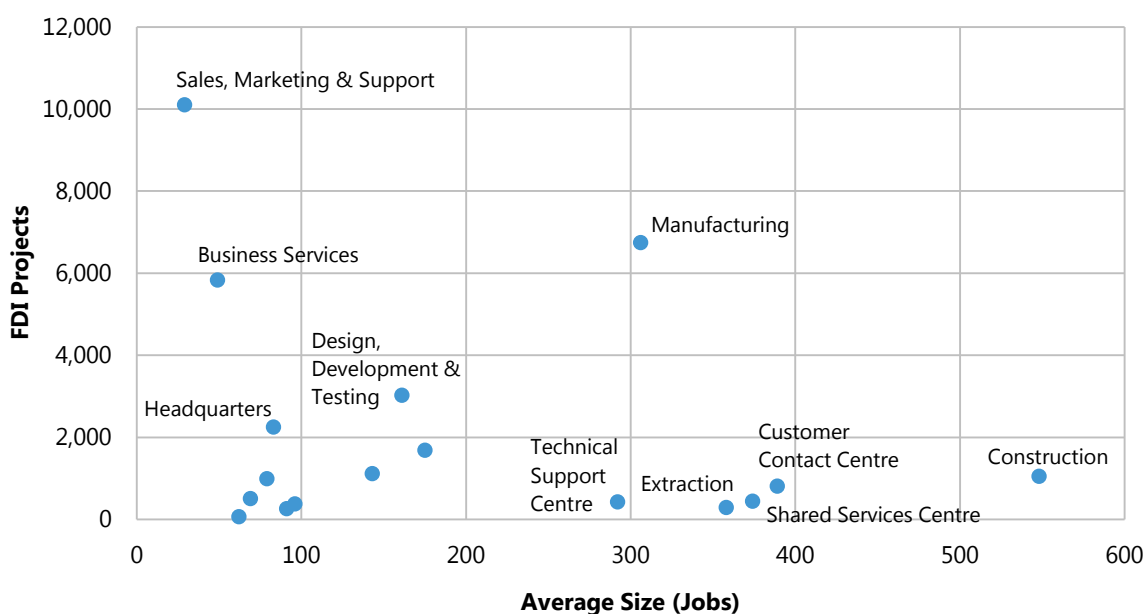


Source: fDi Markets

Figure 9 presents an overview of the average size of US FDI projects by sector. Whilst there are significantly more sales, marketing & support projects than for any other activity, these tend to be small at just 29 jobs each on average. Business services and headquarters projects – which also feature in the top five in project numbers – are also relatively small at 49 and 83 jobs each. However, activities such as construction (548 jobs), customer contact centres (389) and shared services centres (374) are much larger on average, although there are relatively few of these projects to compete for. Manufacturing is the one activity which has both a lot of projects and a lot of jobs (306).

An assessment of US FDI by business activity over time is shown in Table 3. Since the downturn in 2008, US FDI has fallen across all these five activities in jobs terms and in four of the five activities in project numbers. There are more signs of growth since 2012, with FDI increasing in manufacturing and design, development & testing activities in both project numbers and jobs (and a very slight increase in FDI jobs from sales, marketing & support projects).

Figure 9: Average Jobs Size of US FDI Projects by Activity, 2003-15



Source: fDi Markets

Table 3: Growth Trends for the Top Five US FDI Business Activities

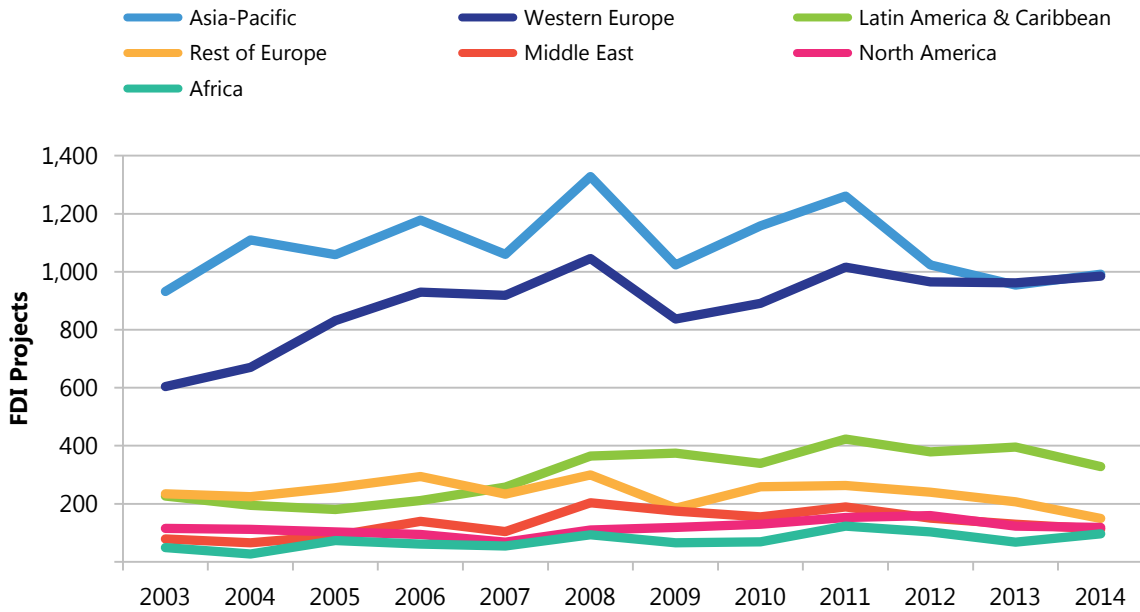
Sector	Project Numbers		FDI Jobs	
	2008-14	2012-14	2008-14	2012-14
Sales, Marketing & Support	-11%	-16%	-15%	1%
Manufacturing	-28%	3%	-32%	23%
Business Services	-19%	-20%	-27%	-22%
Design, Development & Testing	6%	13%	-31%	21%
Headquarters	-6%	-12%	-9%	-12%
All Activities	-19%	-8%	-44%	11%

Source: fDi Markets

FDI Destinations

Two world regions – Asia Pacific and Western Europe – have accounted for 70% of US FDI projects since 2003. A full breakdown of US FDI projects by region since 2003 is provided in Figure 10. This shows that US FDI projects into Western Europe have mostly recovered since the downturn in 2008, with just 6% fewer projects in 2014 and an increase of 2% in projects since 2012. Asia Pacific, however, remains significantly below the 2008 peak with 25% fewer projects in 2014. Of the other destination for US FDI, Latin America & Caribbean is by far the most popular in project numbers, with a broad long term trend of growth since 2005 (albeit with a sharp fall in 2014). The remaining four regions have accounted for just one-fifth (20%) of US FDI, although North American and Africa has seen growth since 2008.

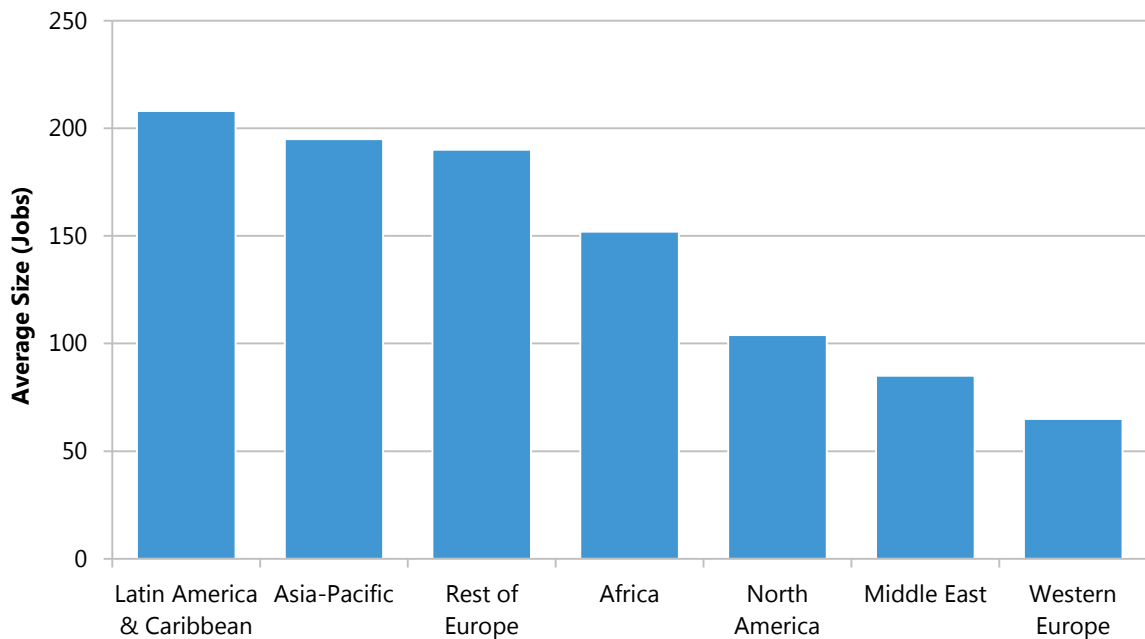
Figure 10: US FDI by World Region



Source: fDi Markets

The make up of US FDI projects into these regions is clearly very different, as shown by the vast difference in the average size of projects shown in Figure 11. Projects into Western Europe are the smallest of any region at 65 jobs, which is around one-third the size of projects into the Rest of Europe (190), Asia Pacific (195) and Latin America & Caribbean (208). Western Europe is therefore clearly attracting significantly less labour intensive projects than these other regions.

Figure 11: Average Size of US FDI Projects by World Region, 2003-15

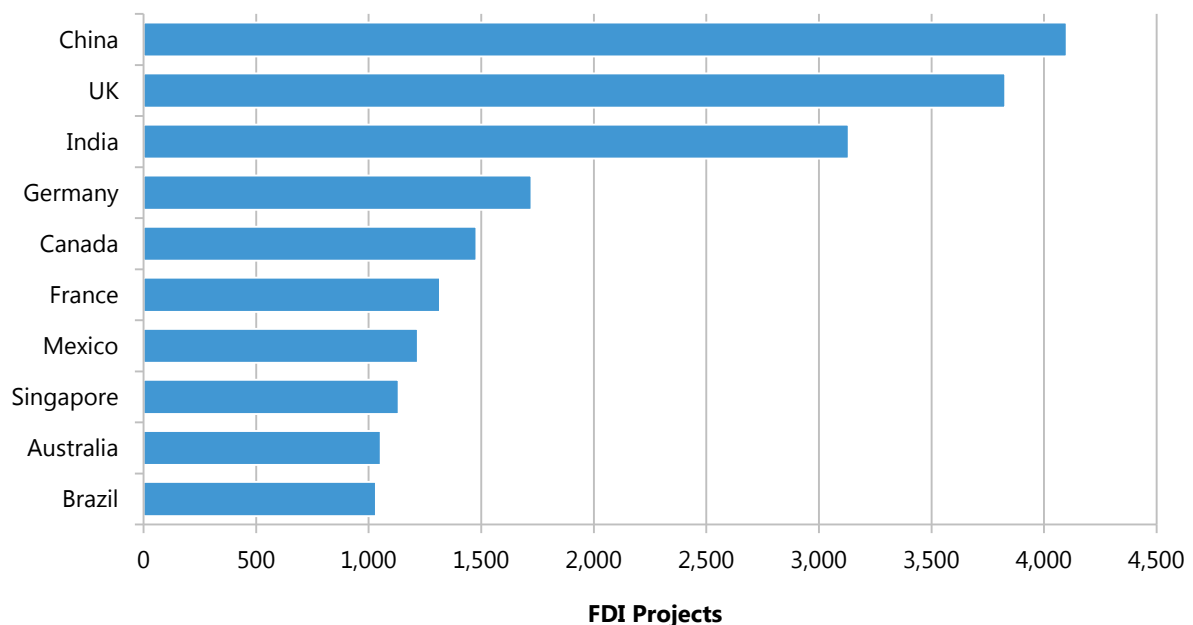


Source: fDi Markets

If we focus on specific countries, it is evident from Figure 12 that China, UK and India are clearly the three most popular locations for US FDI projects. The remaining countries in the top 10 are a mix of developed (Germany, Canada, France, Singapore, Australia) and emerging (Mexico, Brazil) economies. The ROI ranks just outside this list at 11th.

Again, the size of projects into these countries is very different. The average size of a US FDI project into the UK since 2003 has been 69 jobs, much smaller than the averages for China and India of 205 and 270 respectively. This difference in average project size by developed and emerging economies is evident throughout; for example, US FDI projects into Germany have brought 50 jobs on average since 2003 compared with 287 for Mexico.

Figure 12: Destination of US FDI Projects by Country, 2003-15

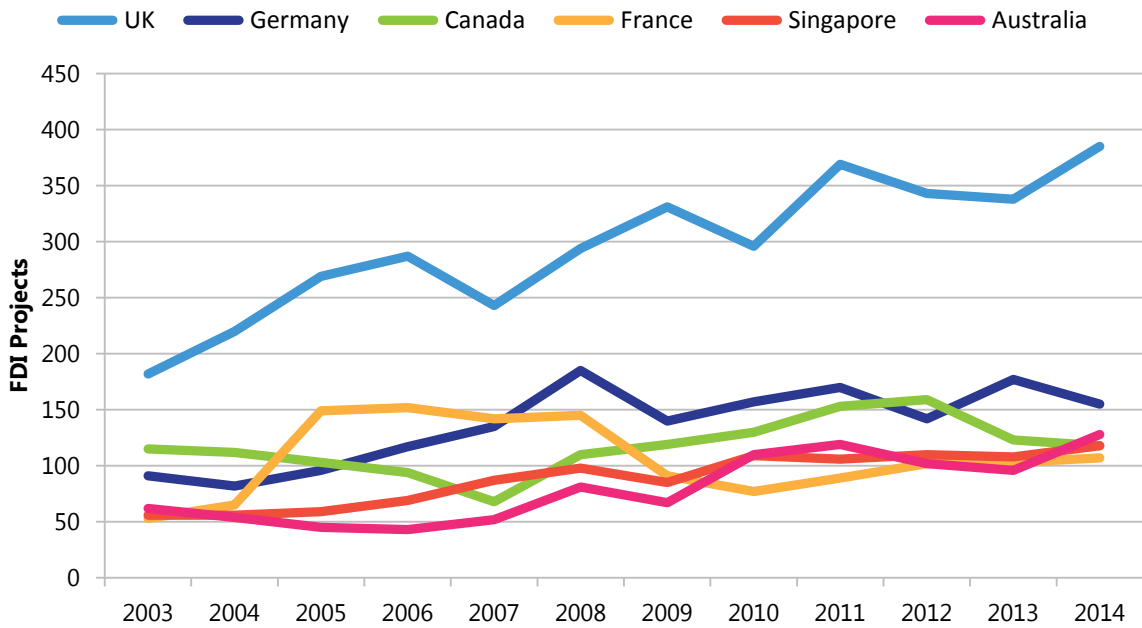


Source: fDi Markets

An overview of US FDI projects to the six developed economies in the top 10 destinations since 2003 is presented in Figure 13. The very strong performance of the UK is clearly evident here, with Singapore and Australia also continuing to improve since the 2008 downturn. Whilst US FDI to Canada had been strong, 2013 and 2014 have seen this tail off substantially. The two Eurozone locations of Germany and France have not seen their pre-downturn success replicated in recent years.

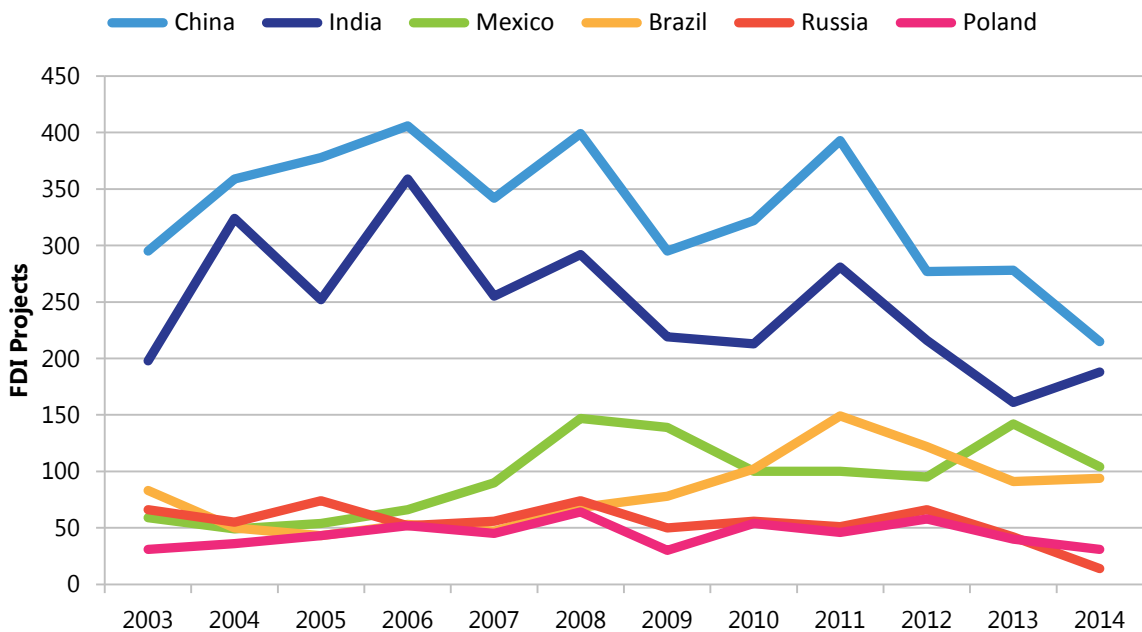
As shown in Figure 14, the picture for the four developing economies in the top 10 US FDI destinations (along with Russia and Poland who rank in the broader top 20) has largely been negative in recent years. China and India have both seen large decreases in the number of FDI projects from the US, as have Russia and Poland from a much smaller base. Mexico is also below its 2008 high, whilst FDI to Brazil is significantly down from its peak in 2011.

Figure 13: Destination of US FDI Projects to Developed Economies



Source: fDi Markets

Figure 14: Destination of US FDI Projects for Developing Economies



Source: fDi Markets

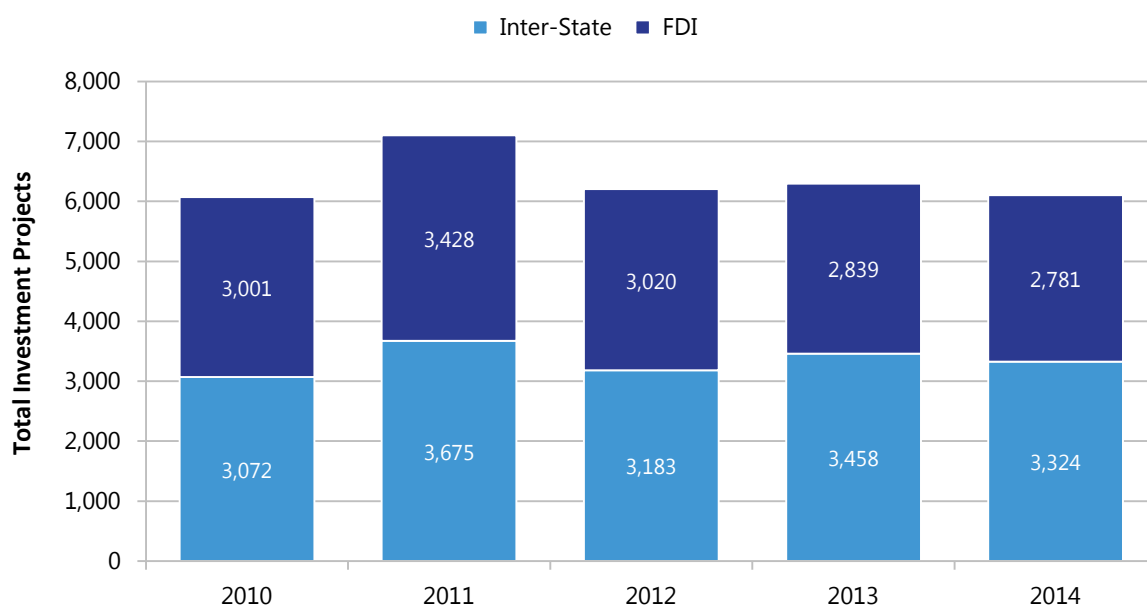
2.3 Inter-State Investment

US FDI is not the only mobile investment that comes from US businesses. Given the size of the US and the largely different characteristics of each state, US businesses invest a significant amount into other states and each has its own value proposition and incentives aimed at retaining and attracting

mobile investment within the US. In this respect, US states can, in some cases, effectively present another layer of competitors for IPAs.

US businesses have taken forward a total of 35,572 investment projects into other states since 2010, creating over 3.6 million jobs. Over this period, 53% of projects and 42% of jobs have gone to other US states, with the average size of an inter-state investment projects (81 jobs) being smaller than the average FDI project (123). As shown in Figure 15, a greater number of mobile US investment projects are now being retained within the US. Since 2010, project numbers and jobs from US domestic investment into other state has increased by 8% and 4% respectively, compared with falls of 7% and 19% for outward US FDI projects and jobs.

Figure 15: Breakdown of Mobile US Investment Projects



Source: fDi Markets

Note: The data series begins in 2008 but values appear to be low for this first year so 2010 has been chosen as starting point to ensure the data has full coverage when comparing against FDI where the data has been in place for much longer

This trend has happened alongside a broader “Made in America” movement to retain more jobs in the US, particularly within manufacturing.⁹ Indeed, this was the title of former President Obama’s Trade Policy Agenda, which made multiple references to supporting American jobs and suggested that manufacturing jobs are starting to return from overseas.¹⁰ Current President Donald Trump has also been strongly vocal about bringing millions of jobs back to America.¹¹

This is in contrast to a school of thought which believes the US is best served by serving the interests of MNCs and encouraging outward investment. Hufbauer and Moran (2010) highlight that outward investors create more export-related jobs in the US and thus any policy to hinder US FDI will damage exports. Desai et al (2005) conclude that greater foreign investment by US MNCs is associated with more domestic investment. Slaughter (2009) finds that foreign-affiliate activity tends to complement,

⁹ <http://www.themadeinamericamovement.com/>

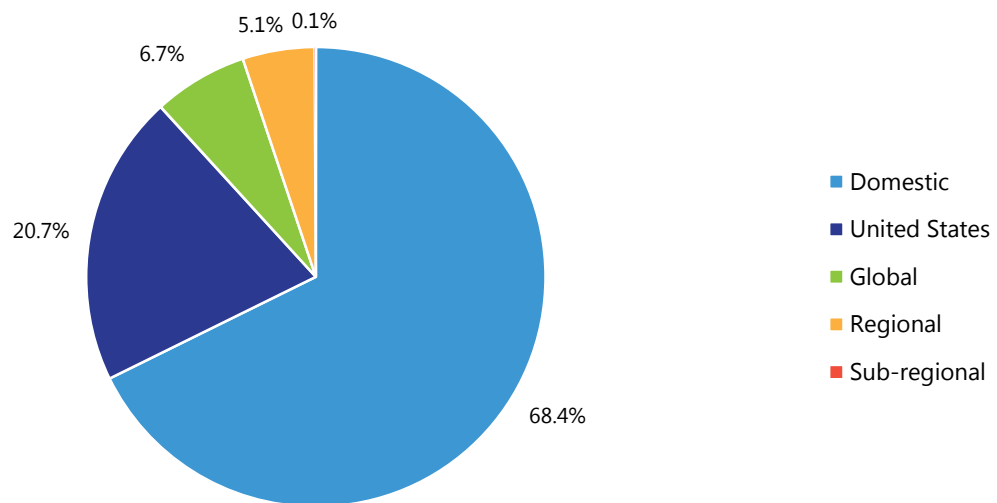
¹⁰ https://ustr.gov/sites/default/files/2015-Presidents-Trade-Agenda_2.pdf

¹¹ <http://fortune.com/2017/02/23/donald-trump-jobs-america-ceos/>

not substitute for, key parent activities in the United States such as employment, wages and capital investment.

If we look at the market being served by US inter-state investment projects (Figure 16), this highlights that the majority (89%) of projects were focused on the domestic or US market. Certainly the 11% of projects serving external markets could easily be identified as having “won” over the choice to invest overseas. But what about the remainder? Market seeking FDI would be captured by this 11%, so would not be relevant for projects serving domestic markets. However, resource or asset seeking FDI could feasibly have been a strong alternative to some of these projects to take advantage of lower labour costs, available talent, tax or other incentives overseas.

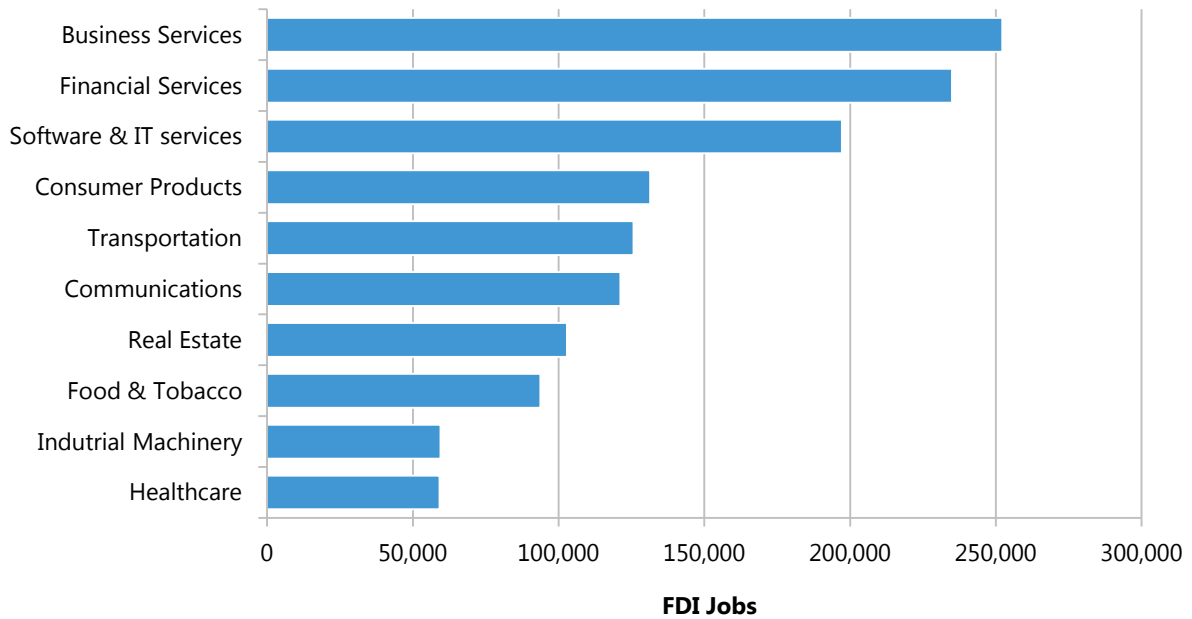
Figure 16: Markets Served by US Inter-State Investment



Source: fDi Markets

A breakdown of domestic US investment by industry sector is shown in Figure 17. The top three sectors of business services, financial services and software & IT services accounted for 47% of total domestic investment projects and 33% of jobs since 2008. A large proportion of US domestic investment is therefore in services sectors that would typically be seen as highly mobile, and is consistent with the main sectors where NI attracts US FDI. Other sectors, such as real estate, healthcare and food & tobacco, may be much less attractive as an FDI proposition to Western Europe.

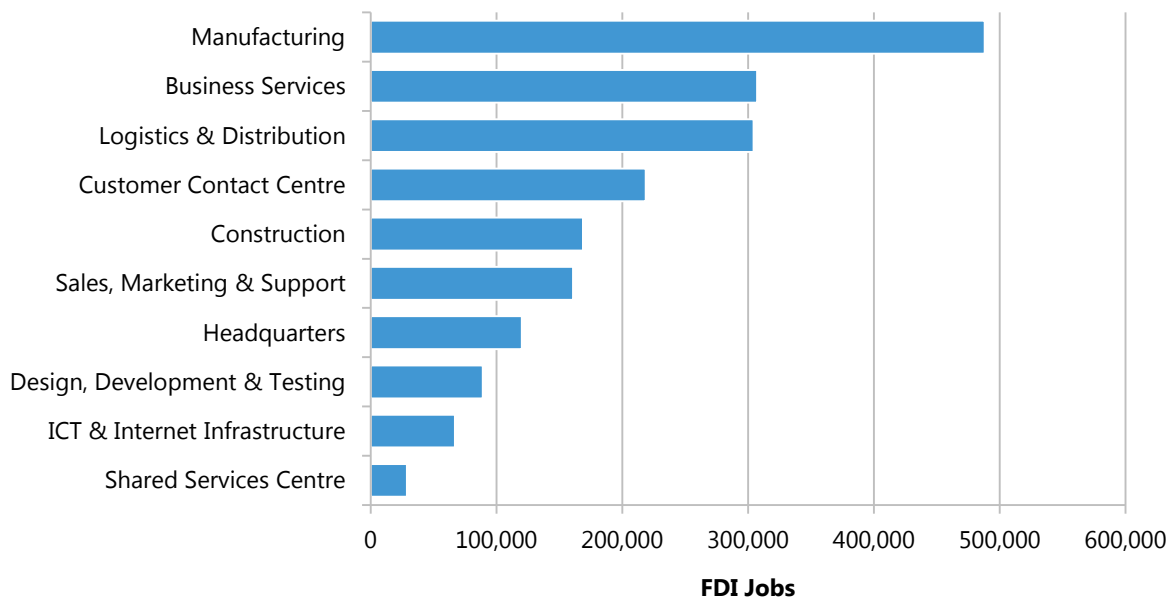
Figure 17: Sector Breakdown of Inter-State Investment Jobs, 2008-15



Source: fDi Markets

Turning to business activities, which refer to the actual type of projects and jobs remaining within the US, a breakdown of top activities are shown in Figure 18. Manufacturing is the single largest business activity driving inter-state US investment, possibly relating to the greater drive by the US government to retain domestic American manufacturing jobs. However, a number of other activities, such as business services, customer contact centres, development & design and shared services centres, correspond with mobile activities where NI has attracted investment from the US.

Figure 18: Activity Breakdown of Inter-State Investment Jobs, 2008-15



Source: fDi Markets

Investment by State

There have been more than 24,300 domestic investment projects going to other US states since 2008, creating 2.07 million jobs with an average project size of 85 jobs. All 50 US states, along with the District of Columbia, have been both a source and destination for domestic investment during this time, although some have been much busier than others. Table 4 presents the top ten largest source states for US investment projects, along with the main sector and activity by job numbers.

The largest three source states for US inter-state investment have been California, New York and Texas. California and Massachusetts emerge as key sources of software & IT inter-state investment, with financial services projects coming from New York, Texas, Illinois and Missouri. Key source states for business services US investment are Ohio, Pennsylvania and Florida. The mix of different sectors and, particularly, activities illustrates how diverse each state is. The importance of manufacturing projects are seen in California, Illinois and Pennsylvania, although significant business services activities have also come from New York, Missouri and Massachusetts.

Table 4: Top 10 Sources for US Inter-State Investment, 2008-15

State	Projects	Jobs	Top Sector	Top Activity
California	3,027	280,606	Software & IT services	Manufacturing
New York	2,524	181,713	Financial services	Business services
Texas	1,543	147,523	Financial services	Logistics & distribution
Illinois	1,334	120,262	Financial services	Manufacturing
Ohio	1,116	96,226	Business services	Customer contact centre
Pennsylvania	983	79,712	Business services	Manufacturing
Missouri	846	39,789	Financial services	Business services
Georgia	842	60,504	Transportation	Logistics & distribution
Massachusetts	822	61,687	Software & IT services	Business services
Florida	822	75,858	Business services	Customer contact centre
United States	24,305	302,500	Business services	Manufacturing

Source: fDi Markets

Note: The top sector and top activity are not necessarily correlated as activities cover multiple sectors and vice versa

Table 5 presents the same information for US investment destinations, highlighting that the three largest destinations for US inter-state investment have been Texas, California and Florida. Again, software & IT services and financial services repeatedly appear as the top sector into these states. The business activity for the top destinations is much less diverse than for sources, tending to be either business services or manufacturing. Key business services destinations are Texas, California, Florida and Illinois. Whilst the top activity in New York is manufacturing, this was only very slightly larger than for business services which is also very important here.

Table 5: Top 10 Destinations for US Inter-State Investment, 2008-15

State	Projects	Jobs	Top Sector	Top Activity
Texas	2,139	177,996	Financial services	Business services
California	2,005	125,066	Software & IT services	Business services
Florida	1,446	116,280	Financial services	Business services
New York	1,216	76,962	Software & IT services	Manufacturing
North Carolina	1,009	103,071	Business services	Manufacturing
Ohio	943	87,730	Financial services	Manufacturing
Illinois	904	56,312	Financial services	Business services
Georgia	880	85,766	Software & IT services	Manufacturing
Indiana	874	93,584	Consumer products	Manufacturing
Pennsylvania	723	58,251	Consumer products	Logistics & distribution
United States	24,305	302,500	Business services	Manufacturing

Source: fDi Markets

Note: The top sector and top activity are not necessarily correlated as activities cover multiple sectors and vice versa

The types of inter-state investment that is both coming from and going to US states will, in part, reflect the characteristics and local strengths in each area. Harvard Business School provide a comprehensive assessment on cluster strengths (with breakdowns by sub-cluster) across the US for a range of both traded and local sectors.¹² Table 6 presents a list of the main economic areas with US traded clusters in key services sectors. California hosts both the first and fourth largest software clusters in the US, which corresponds with software & IT services being the largest Californian sector as both a source and destination for inter-state investment. New York emerges as having both the largest business and financial services clusters, whilst Boston is also prominent in both software and financial services clusters. The top sector for both Texas as both a source and destination for investment is financial services, and Dallas emerges as the fourth largest financial services cluster.

Table 6: Largest US Clusters by Employment Size, Services Sectors

Rank	Software Publishers	Business Services	Financial Services
1	San Jose, CA	New York, NY	New York, NY
2	Seattle, WA	Washington, DC	Los Angeles, CA
3	Boston, MA	Los Angeles, CA	Boston, MA
4	Los Angeles, CA	San Jose, CA	Dallas, TX
5	New York, NY	Chicago, IL	Chicago, IL

Source: Harvard Business School, Cluster Mapping

An overview of the key clusters in selected manufacturing sectors is shown in Table 7. California emerges as a key cluster not just for the software side of ICT, but also in hardware (which would explain why manufacturing is the top activity investing outside of the state). Minneapolis appears in the top five of all three sectors, with the largest industrial machinery cluster, suggesting it is a key manufacturing hub. New York also appears in the top five of all three, reinforcing why manufacturing was the top activity into the state from elsewhere in the US.

¹² <http://www.clustermapping.us/cluster>

Table 7: Largest US Clusters by Employment Size, Manufacturing Sectors

Rank	Electrical Components	Industrial Machinery	Medical Devices
1	Los Angeles, CA	Minneapolis, MN	Los Angeles, CA
2	San Jose, CA	Chicago, IL	New York, NY
3	Boston, MA	Boston, MA	Boston, MA
4	New York, NY	New York, NY	Minneapolis, MN
5	Minneapolis, MN	Detroit, MI	San Jose, CA

Source: Harvard Business School, Cluster Mapping

Competition for US Investment

US states were described in our consultations as being like “mini countries” given the autonomy that each have and differences in approach to economic development and investment attraction. There are a number of different competitiveness reports which rank each on fundamental measures such as workforce, education, costs, economy and infrastructure.

Three different state competitiveness reports have been reviewed for this study and an average of the rankings taken to present an overall picture of the most competitive US states (see Table 8). The most economically competitive US states are found to be North Dakota, Colorado, Minnesota and Texas. The Midwest states place best in the competitiveness rankings, whereas those in the North East come out as being much less competitive. Even Massachusetts, with its reputation for strong universities and workforce, is shown to be less competitive overall than many states in other regions.

Table 8: Most Competitive US States by Region, Average of Rankings

Region	First	Second	Third	Fourth
North East	Massachusetts (11)	N Hampshire (24)	New York (25)	Pennsylvania (35)
Midwest	N Dakota (3)	Minnesota (5)	Nebraska (7)	Iowa (8)
South	Texas (6)	N Carolina (8)	Virginia (9)	Georgia (15)
West	Colorado (4)	Utah (7)	Washington (9)	Idaho (19)
Overall	N Dakota (3)	Colorado (4)	Minnesota (5)	Texas (6)

Sources: Beacon Hill, Annual State Competitiveness Report 2014; NBC, America’s Top States for Business 2015; Forbes, Best States for Business 2015

Note: Figure in brackets represents overall average of 50 states across the three competitiveness measures; these will not match their positioning as, for example, the top state could only have an average of 1 if it placed first across all three reports

US states do not, however, just rely on strong economic fundamentals and growing markets to attract investment from other states. Our consultations have reinforced that some states are very active in seeking to persuade US companies to establish or expand, in much the same way as international IPAs. Two obvious methods of doing this are through setting competitive tax environments and by offering both tax and financial incentives. Looking firstly at taxes, an overview of the states with most and least competitive business tax climates is shown in Figure 19.

Figure 19: State Business Tax Climate, 2015



Source: Tax Foundation, State Business Tax Climate 2015

This report by Tax Foundation (2014) covers corporate, income, sales, unemployment insurance and property taxes for business and highlights a clear difference in the approach of states. California and New York – which ranked second and fourth in attracting inter-state investment – have some of the least competitive business tax environments in the US and can rely on large markets and strong clusters meaning other businesses want to locate there. In contrast, Texas and Florida – which ranked first and third as destinations for US investment – have some of the most competitive business tax environments across the country. These states also have large markets but do not have the same strength of local clusters, and the pro-business tax environment may therefore be helping to encourage companies here rather than to other states with stronger clusters.

In order to attract investment, US states will offer tax incentives to newly established operations which significantly reduce the effective tax burden that companies pay. Tax Foundation (2015) calculates an effective tax rate covering the total tax burden that both new and mature firms face across every US state; separate analysis is carried out across seven different types of mobile activities based on the typical type of operation each will have. This demonstrates significant differences in effective tax burdens of new firms compared with mature firms in some states due to the incentives on offer.

Table 9 presents the states with the highest effective tax burdens for mature firms for three types of operations. This, in effect, shows which states are doing the least to retain US businesses through maintaining a competitive tax environment. A number of the least tax competitive states for existing firms are those with larger markets and leading clusters, for example New York (highest rate for corporate HQs and R&D facilities), DC (second least competitive for an R&D facility), Massachusetts (third least competitive for call centres) and Illinois (fourth least competitive for call centres). All five locations with the highest tax rates for call centres are in the Northeast. New Jersey ranks as the least

competitive tax environment for mature call centres and is also extremely uncompetitive for corporate headquarters and R&D facilities (ranking 45th for both).

Table 9: Highest Effective Tax Burden for Mature Firms by State

Rank	Corporate Headquarters	R&D Facility	Call Centre
50	New York (25.3%)	New York (24.8%)	New Jersey (35.4%)
49	Pennsylvania (23.15)	DC (17.9%)	Rhode Island (30.7%)
48	Minnesota (21.5%)	Missouri (17.9%)	Massachusetts (28.0%)
47	Iowa (20.4%)	West Virginia (17.3%)	Illinois (26.9%)
46	Washington (19.4%)	Kansas (16.9%)	Connecticut (26.9%)

Source: Tax Foundation, Location Matters: State Tax Costs of Doing Business 2015

Note: Figure in brackets represents effective tax rate for new firms

Table 10 presents those states with the lowest effective tax rates for newly established companies across three types of mobile operations, showing which states try to attract mobile US investment through setting a competitive tax environment. One point to note is that the effective tax rate in some states can actually be negative (suggesting that companies are getting credits which more than offset their tax bill), particularly for R&D. Nebraska comes out as one of the most tax competitive states for new investments, ranking first, second and third across each of the three operations. New Jersey, which was consistently very uncompetitive for mature firms, is also one of the most tax competitive states for new establishments. This is an unusual scenario whereby New Jersey may lose existing companies to other states because of high tax rates, but yet clearly puts a lot focus on attracting new businesses through tax competition.

Table 10: Lowest Effective Tax Burden for New Firms by State

Rank	Corporate Headquarters	R&D Facility	Call Centre
1	Nebraska (-0.8%)	Louisiana (-10.3%)	New Jersey (-53.5%)
2	New Jersey (3.6%)	Nebraska (-7.4%)	Georgia (-15.8%)
3	Kansas (5.0%)	New Jersey (-1.1%)	Nebraska (2.3%)
4	Louisiana (5.2%)	Hawaii (-0.6%)	Wisconsin (3.0%)
5	Oklahoma (6.4%)	New Mexico (-0.2%)	Kentucky (3.2%)

Source: Tax Foundation, Location Matters: State Tax Costs of Doing Business 2015

Note: Figure in brackets represents effective tax rate for new firms

In addition to reducing a company's tax bill, US states also offer a range of other financial incentives to offset the cost of investments and attract jobs. Tax Foundation (2015b) highlights that some of the types of incentives are as follows:

- **Investment:** 25 of the 50 US states (plus DC) offer some sort of investment grant to companies, often as a proportion of the total investment being made, although many states only offer this for certain types of establishments. A number of states – Arkansas, Indiana, Iowa, Kansas, Maine and Rhode Island – offer incentives equivalent to 10% of capital costs, with Nebraska ranging between 10-15% and Massachusetts between 3-40%;

- **Jobs:** 27 of the 50 US states (plus DC) offer a financial incentive for job creation, generally in the form of a dollar amount per job or as a percentage of payroll. Wisconsin has the most generous amount per job (\$6k), followed by New Jersey (\$5k), Tennessee (\$4.5k) and Florida and Georgia (both up to \$4k). For those offering a percentage of payroll, Missouri (3-7%) and Nebraska (3-6%) are highest followed by New York (5%); and
- **R&D:** 37 of the 50 US states (plus DC) offer R&D incentives, mostly as a percentage of in-state R&D expenses. Arizona (24%), Rhode Island (16.9-22.5%), Arkansas (20%), Connecticut (20%), Hawaii (20%) and Louisiana (20%) have the highest incentives under this measure. Other approaches used include a tax exemption for a new R&D facility (Montana), a dollar amount per job requiring R&D skills (Mississippi) and as a percentage of capital costs on new research facilities (Kentucky).

Whilst states differ in terms of the scope and extent of incentives they offer companies, every single state has provided financial incentives to businesses, either to retain companies, support their investment or attract new companies. Good Jobs First has developed a Subsidy Tracker which allows for a quantitative comparison as to the extent of financial incentives given to businesses since 2010.¹³ Subsidy Tracker brings together subsidy recipient data from more than 600 state, local and federal economic development programs and other forms of financial assistance to business. It is unlikely that this data is fully comprehensive across all states over the period, but still can provide a useful benchmark as to the extent of financial incentives offered by US states.

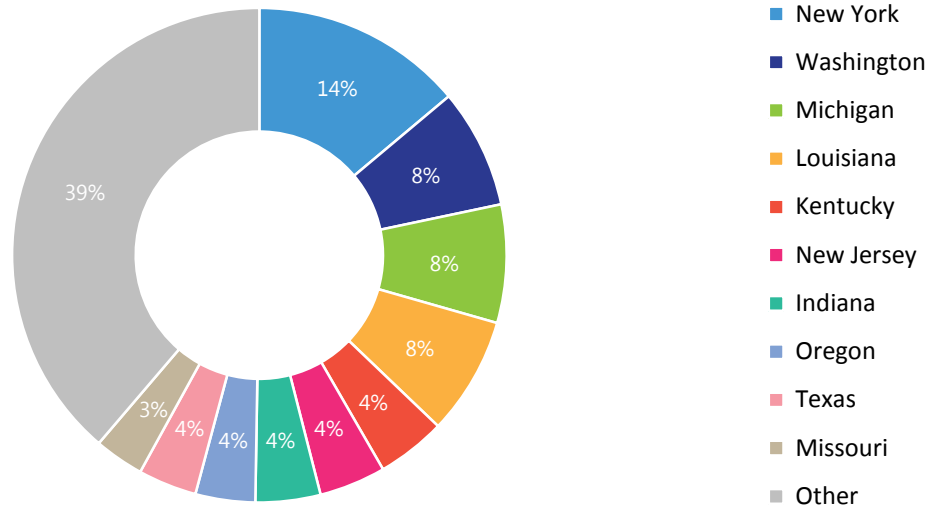
A total of \$169.6bn has been given through 288,567 subsidies by US states since 2010, with the average size being \$588k. Presented in Figure 20 is an overview as to the total amount of financial support for the top 10 states. This will cover both foreign and domestic businesses so is not strictly relevant for inter-state investment, but it will identify those states that are most proactive in offering financial incentives to businesses. New York has clearly offered the largest amount to businesses at \$23.6bn, followed by Washington (\$13.2bn) and Michigan (\$13.1bn). New Jersey, which was shown to be extremely tax competitive for new businesses, is the sixth most generous at \$7.4bn.

Looking simply at the overall amount given by state can be misleading. Firstly, larger states or those with more and/or bigger businesses may naturally have offered larger amounts to businesses. Secondly, if the dataset does not provide full coverage across all states over the same time period this could be simply down to lack of comparability rather than actual differences in incentives. To partly overcome this, we consider the average size of incentive given by state in Figure 21. Having partial coverage of deals or different time periods for some states will therefore not matter as much, unless many particularly large or small deals are being missed which would skew the average size.

The state ranking looks very different when the average size of financial offer is reviewed, with Alaska shown to have the largest average subsidy size at \$4.3m, followed by New Mexico (\$3.5m) and South Carolina (\$2.9m). Five of the top 10 states offering the largest average subsidies are in the South, whilst none are from the Northwest, suggesting a geographical difference in approach to attracting companies via grants.

¹³ <http://www.goodjobsfirst.org/subsidy-tracker>

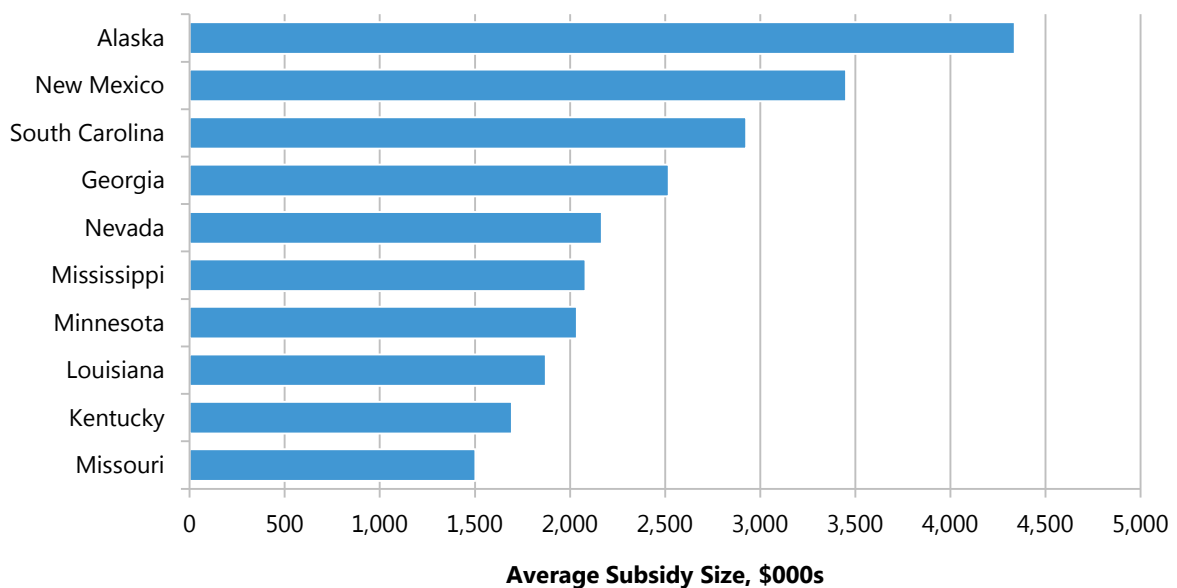
Figure 20: Proportion of Total US Business Subsidies by State, 2010-15



Source: Good Jobs First, Subsidy Tracker

One common trend linking nine of the top 10 states (with the exception of Minnesota) is that they all rank fairly low down in our measure of state economic competitiveness presented earlier. Alaska, for example, was 41st, whilst New Mexico and South Carolina ranked 45th and 30th respectively. The least competitive state – Mississippi – appears in this list with the sixth large average subsidy size. These states are therefore aiming to offset weaknesses in their economic competitiveness through offering generous subsidies to businesses. Minnesota is a unique state which is not only very strong in economic competitiveness (ranking third best) but also offers large subsidies to businesses.

Figure 21: Average Subsidy Size by US State, 2010-15



Source: Good Jobs First, Subsidy Tracker

2.4 Summary

The total scale of US mobile investment is evenly split between projects going to other US states and heading overseas. The majority of intra-state US investment is domestically-focused, but some of this could potentially have headed overseas, and many states have particularly aggressive financial and tax incentives to retain US companies and attract business from elsewhere in the US.

The broader FDI landscape remains challenging, with both the global number of FDI projects and jobs still below their 2007 peak. There is, however, positivity about global FDI prospects over the coming years. The US is the single largest source of this global FDI but has also yet to recover from the economic downturn and there are fewer projects globally than before to compete for. The profile of US outward FDI has also changed in recent years. Projects to Asia-Pacific, which had typically been the largest destination for US FDI, have declined whereas Western Europe has held strong. These two regions now both account for an equal share of US FDI, around 35% of the total each, meaning that Western Europe has become relatively more important as a destination for US FDI since the downturn.

In terms of the FDI opportunities from US projects:

- Half of projects emerge from just five states – California, New York, Texas, Illinois and Massachusetts. This means that IPAs are able to cover a large amount of potential FDI by establishing relatively few offices in these locations;
- The software and IT services sector presents the most US FDI opportunities, followed by business services and financial services. The broader FDI trend of falling projects and jobs since the start of the downturn has been evident in both business and financial services, but not in software & IT which has continued to grow in project numbers (although not jobs); and
- The top five US FDI activities are sales & marketing, manufacturing, business services, design, development & testing and headquarters. Of these, only manufacturing projects tend to bring significant numbers of jobs, with other activities tending to be relatively small. Support services activities such as customer contact centres, shared services centres and technical support centres bring many more jobs on average, but there are fewer of these around.

The UK is the location of choice amongst US firms for overseas investment. It attracts more than double the number of FDI projects of the next largest developed location – Germany – and has seen a rise of more than 50% since 2007 against a backdrop of declining FDI more generally. The main FDI activity going to the UK is sales, marketing & support, followed by business services and headquarters.

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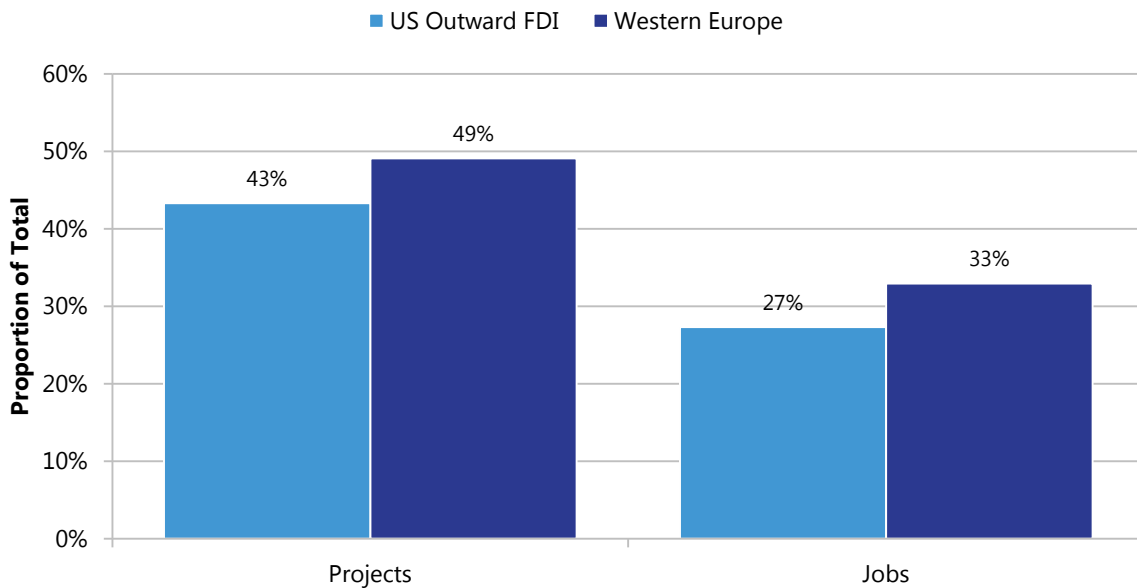
US Tradable Services FDI

The UK is a key destination for US tradable services FDI, with the ROI as the most successful when size is accounted for. NI attracts more of this type of FDI from the US than any other UK region except for London, whilst both Belfast and Derry~Londonderry are in the top 10 UK cities.

3.1 Key Tradable Services Sectors

The previous chapter in this report has shown that three tradable services sectors – software & IT services, business services and financial services – are the main sectors for US outward FDI projects, accounting for 43% of projects and 27% of jobs since 2003. Figure 22 highlights that these are even more important for Western European locations, contributing 49% of projects and 33% of jobs. This chapter will focus exclusively on these three tradable services sectors to better understand where these types of projects have been going and how attractive NI is to them in a UK and Ireland context.

Figure 22: Importance of Tradable Services for US Outward FDI, 2003-15

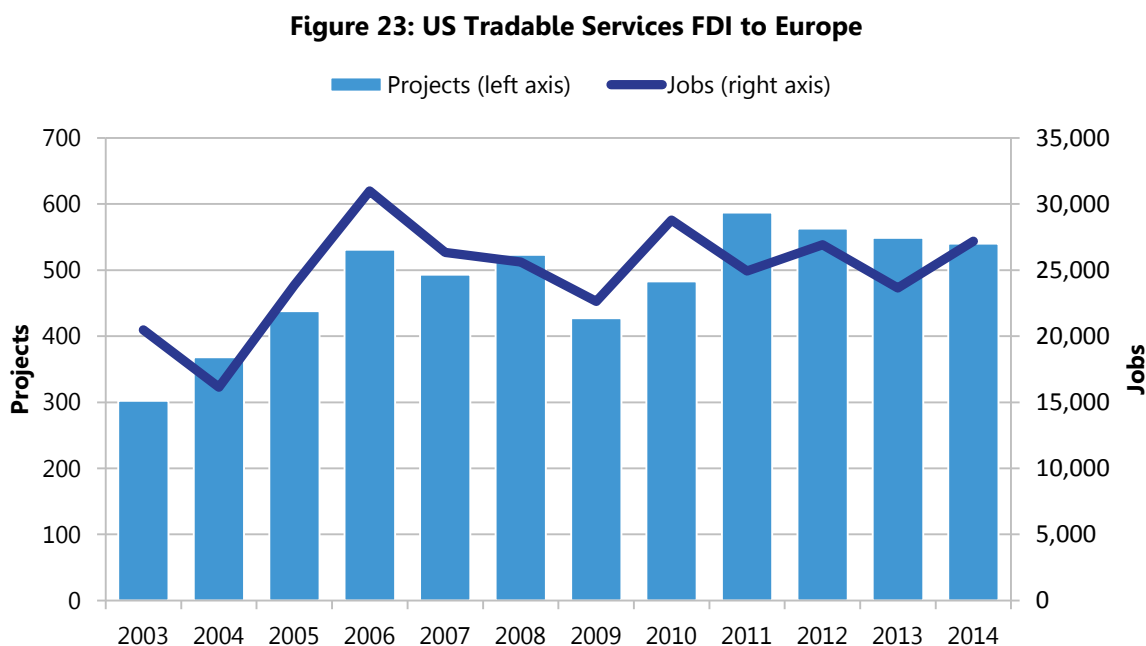


Source: fDi Markets

In order to make this chapter as relevant as possible, we will focus on US tradable services FDI going to Western Europe (which covers 15 Western EU locations plus Switzerland, Iceland and Norway) and the 13 members of the EU in Central and Eastern Europe (Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia). References to Europe as a destination for US FDI throughout this chapter will relate to these counties only.

3.2 Tradable Services FDI to Europe

An overview of US tradable services FDI trends since 2003 to these European locations is presented in Figure 23. Since 2003, there has been a total of 6,179 tradable services projects to Europe creating almost 315,000 jobs; this is equivalent to 484 projects on average each year and nearly 24,800 jobs. Looking at the trend over time, tradable services FDI has more than recovered since 2008, with projects up 3% and jobs up 6%. However, there has been year on year decreases in project numbers since 2011, albeit with the number of jobs from these having increased by 9% over this period.

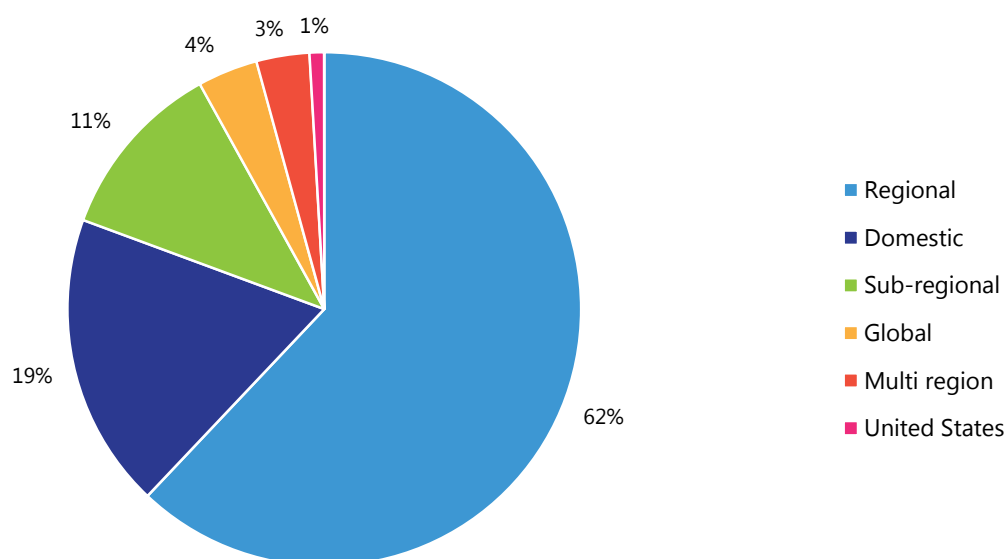


Source: fDi Markets

Figure 24 highlights that this tradable services FDI is mainly export-based serving the regional market which, given the countries selected, is interpreted as being the EU. Over 60% of the tradable services projects from the US could therefore serve this EU market from any location, with another 8% of projects serving global, multiple regional or US markets and therefore also unlikely to need to be tied to any specific location (although from a logistics perspective some may be more attractive than others). On the other hand, around one in five projects are focused on the domestic market and therefore would be more likely to be attracted to those individual countries, particularly those which are larger and/or fast growing.

As shown in Table 11, the large majority of tradable services projects into Europe are new projects, rather than expansions. These new FDI projects tend to be significantly smaller than expansions of existing operations. It should be noted that the definition of a new project relates to a new function rather than a new location, and these may happen in existing locations alongside expansions of existing plants. Nonetheless, these new projects should be seen as the most mobile in terms of competing for US FDI as they are not tied to any current activity in a location.

Figure 24: Market Served by US Tradable Services FDI to Europe



Source: fDi Markets

Table 11: US Tradable Services FDI to Europe by Project Type, 2003-15

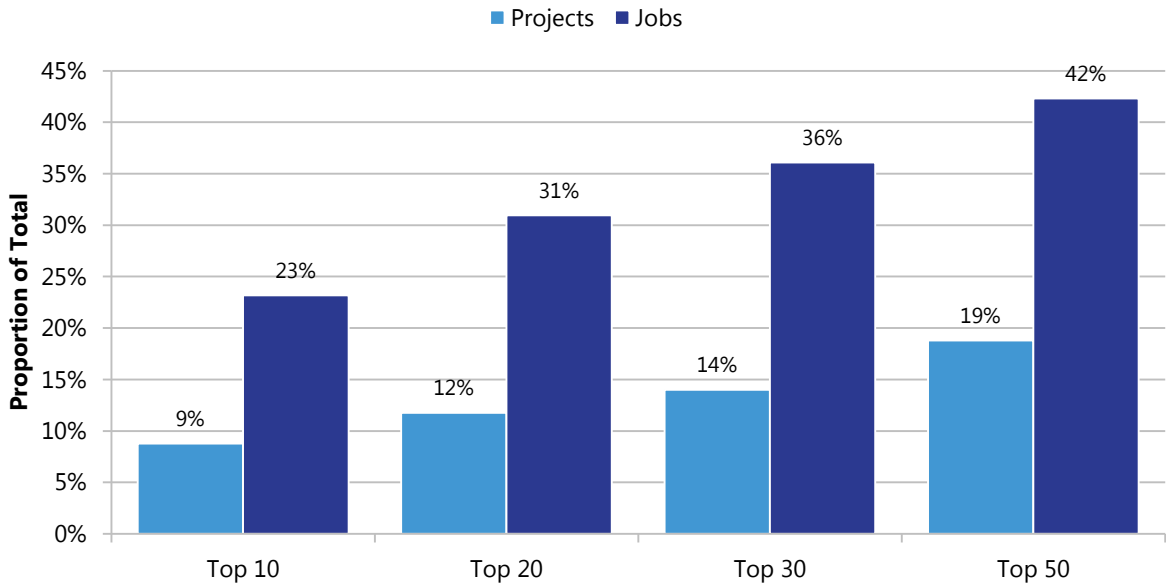
Type	Projects (% of total)	Jobs (% of total)	Average Size
New	86%	71%	42
Expansion	14%	28%	104
Co-location	1%	1%	80
Total	6,179	314,782	50

Source: fDi Markets

fDi Markets has recorded 3,436 US tradable services companies investing into Europe since 2003. However, a relatively small number of these companies account for a large proportion of total FDI jobs. Figure 25 highlights that the top 10 US investors have contributed almost 73,000 jobs in Europe, equivalent to almost one-quarter (23%) of the total; widening the list to the top 50 investors covers 42% of the total US jobs into Europe. This group of companies includes names such as IBM, Google, Microsoft, Hewlett Packard, Deloitte Touche, Citigroup, PricewaterhouseCoopers (PwC) and eBay. Attracting one of these global giants to invest in a country can therefore give locations a strong position to compete and win future projects from the US parent company; these kind of companies were referred to as “strategic investors” in some of our consultations, which shows just how important they can be.

The US location of tradable services companies investing into Europe are heavily clustered in just two states – California and New York – which account for almost half (47%) of US tradable services projects and over half (51%) of jobs. Widening this out to include Massachusetts, the third largest source, covers almost six in 10 tradable services jobs (58%). A full breakdown of the top 10 states for tradable services FDI projects into Europe is shown in Figure 26.

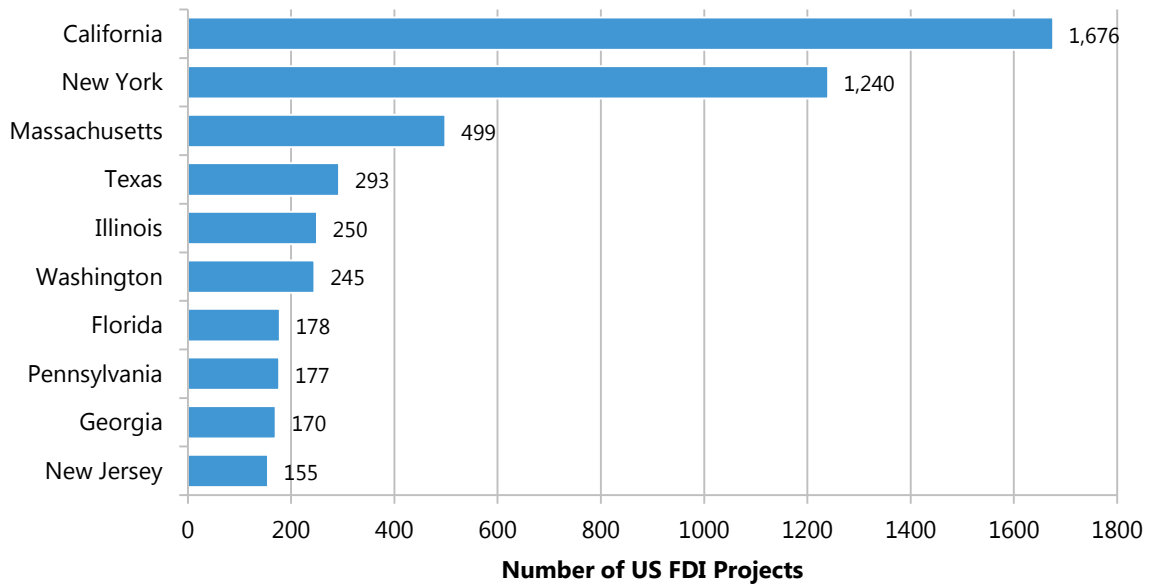
Figure 25: Importance of Top Companies for US Tradable Services FDI to Europe, 2003-15



Source: fDi Markets

Note: Based on the parent company which may cover multiple subsidiaries

Figure 26: Largest Source States for US Tradable Services FDI to Europe, 2003-15



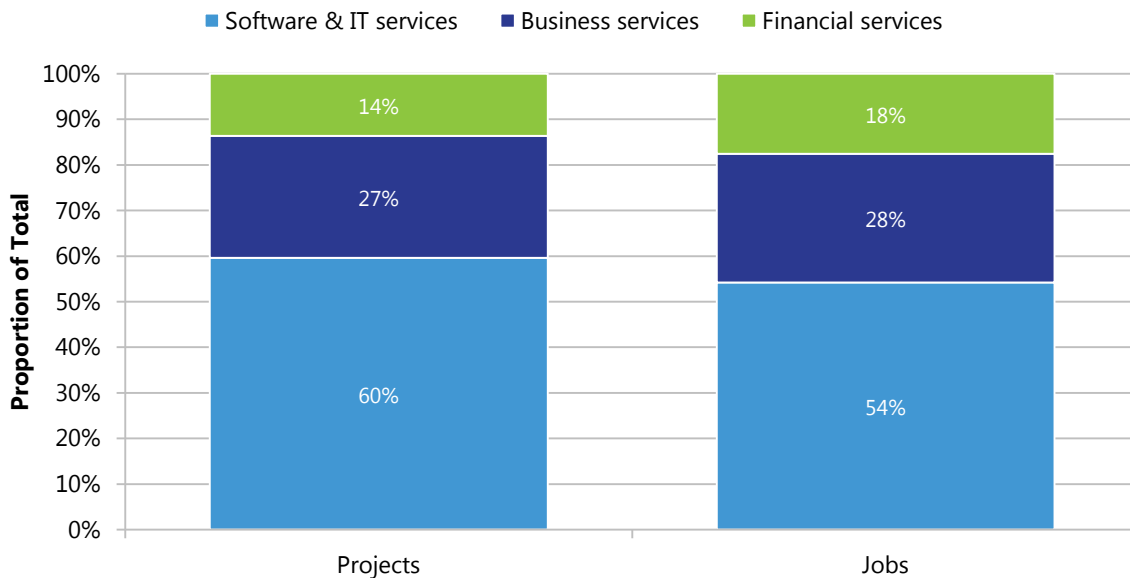
Source: fDi Markets

Sectors and Business Activities

Of the three tradable services covered in this chapter, Figure 27 highlights that software and IT services is by far the largest source of FDI into Europe, contributing 60% of jobs and 54% of projects. At an average of 46 jobs, projects in this sector are generally slightly smaller than those in business

services (53) and financial services (65), which explains the lower share of total jobs. Business services is the second largest tradable services sector with 28% of jobs, whilst financial services is the smallest at 18% of jobs (although this is still over 55,000 jobs in total over the period). All three of these sectors therefore present significant opportunities for FDI into Europe.

Figure 27: Sector Split of US Tradable Services FDI to Europe, 2003-15



Source: fDi Markets

The top source states for US FDI to Europe in each of the respective tradable services sector is shown in Table 12. This highlights the different specialities of each state, with California the leading state at software and IT services whereas New York accounts for most projects in business services and financial services. Massachusetts rounds off the top three in software & IT and business services, but not for financial services where Illinois is found to be a key source.

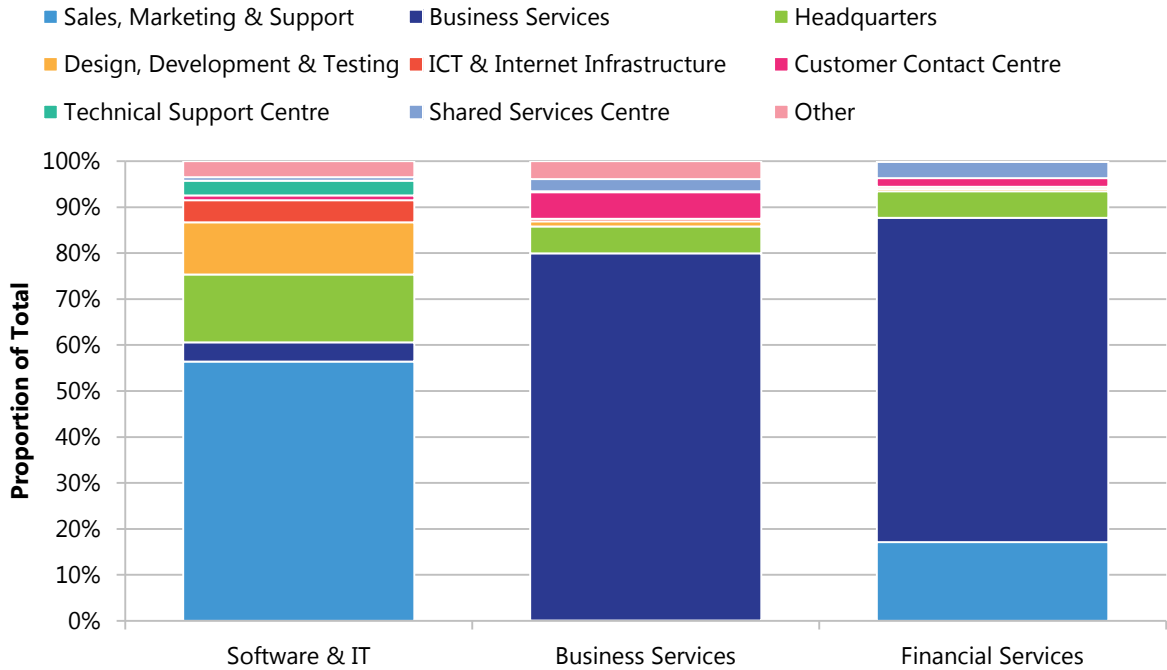
Table 12: Top Source States for US Tradable Services Projects to Europe by Sector, 2003-15

Sector	First	Second	Third
Software & IT services	California	New York	Massachusetts
Business services	New York	California	Massachusetts
Financial services	New York	Illinois	California

Source: fDi Markets

There is a significant amount of variation in the business activity being carried out in Europe within each of these FDI sectors. Figure 28 highlights that over half the projects (56%) in software & IT services are sales, marketing and support activities, whereas business services activities dominate in the business services (80%) and financial services sectors (71%). US headquarters activities in Europe is evident in all three sectors, particularly software & IT services. Support activities such as customer contact centres and shared services are also prevalent in business services and financial services, whereas the more technical nature of software & IT FDI projects throws up a relatively high proportion of design, development & testing and technical support centre activities.

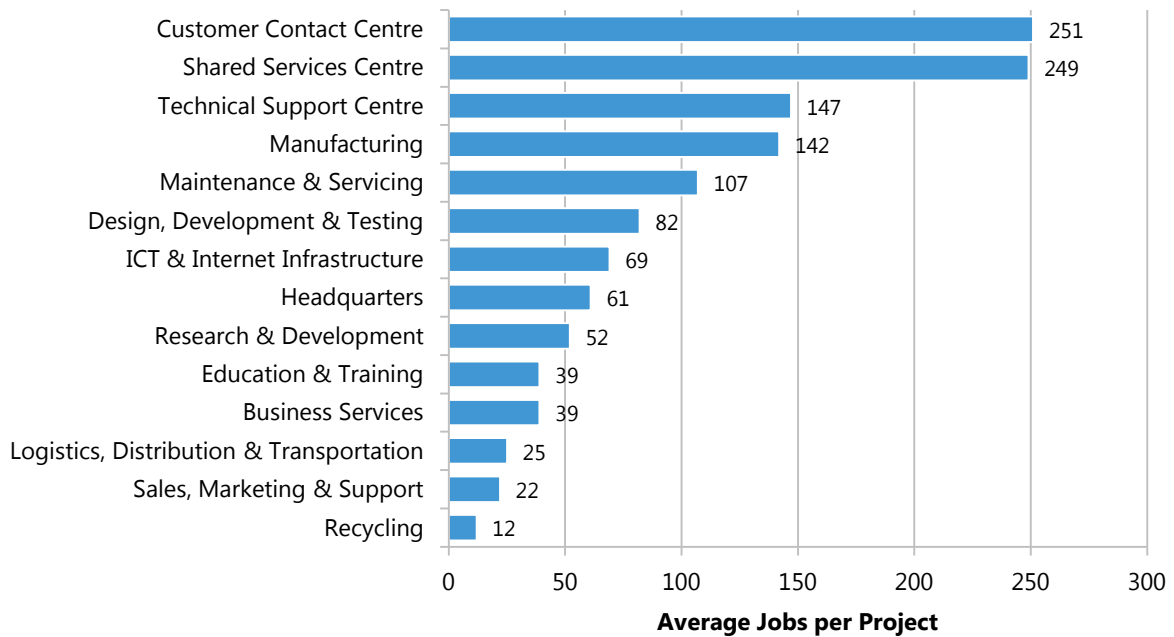
Figure 28: US Tradable Services FDI to Europe by Business Activity, 2003-15



Source: fDi Markets

Whilst there are therefore significant more US FDI projects to Europe in sales, marketing & support and business services, Figure 29 highlights that these tend to be much smaller in terms of jobs than tradable services projects that are customer contact centres or shared services centres.

Figure 29: Average Size of US Tradable Services FDI Projects to Europe , 2003-15

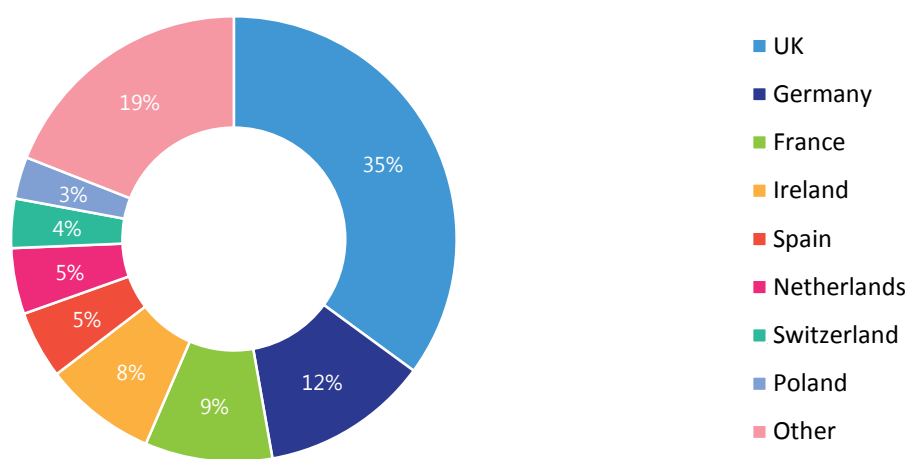


Source: fDi Markets

Destinations

As shown in Figure 30, the single largest destination for US tradable services projects in Europe is the UK, which attracted over one-third of the total FDI into the region. Germany and France, two of the largest markets in the EU, rank second and third respectively. Smaller economies, such as Ireland and Switzerland, also appear amongst the top locations for US tradable services FDI to Europe. US FDI is clearly still heavily attracted to Western Europe, which is the location of all the top destinations with the exception of Poland.

Figure 30: Top European Locations for US Tradable Services FDI Projects, 2003-15



Source: fDi Markets

Focusing on the top five European destinations, Table 13 highlights that there is a wide discrepancy in the performance of these countries at attracting US tradable service FDI in recent years. The UK is the only location to have reported growth in both FDI projects and jobs since 2008 and 2012. The ROI's performance on both projects and jobs has been strong since 2008, although has declined slightly over recent years. Germany has seen strong performance more recently to offset the FDI falls since 2008, whilst FDI to France has held up strongly in terms of projects but not jobs. Spain is the only country in the five largest destinations to have reported declines across the board.

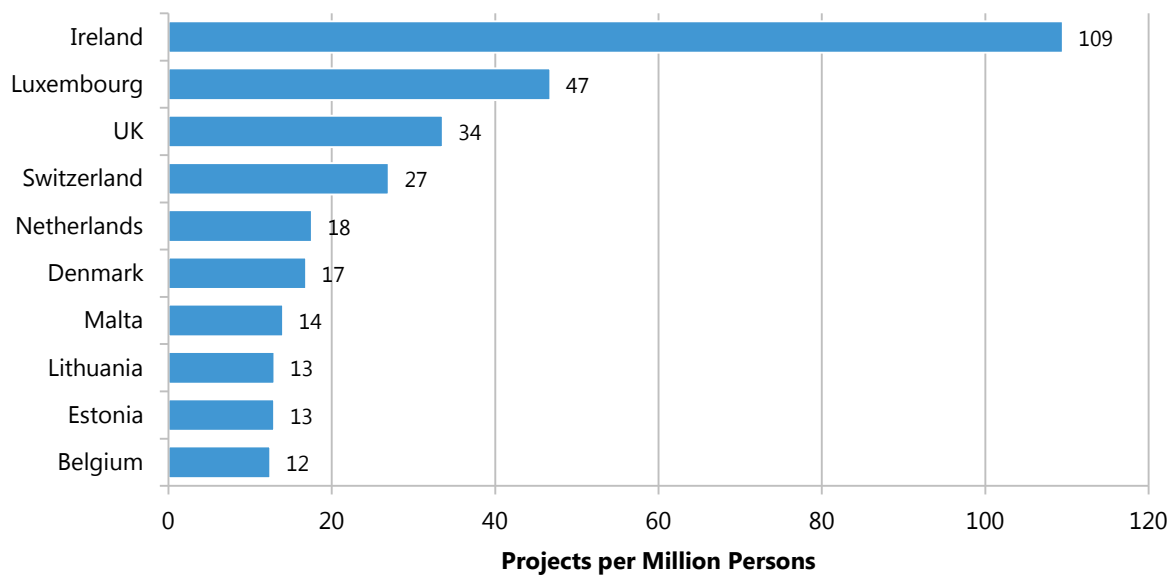
Table 13: Growth Trends for the Top Five Destination Countries

Country	Project Numbers		FDI Jobs	
	2008-14	2012-14	2008-14	2012-14
UK	33%	5%	143%	42%
Germany	-16%	21%	-64%	77%
France	15%	23%	-36%	-45%
Republic of Ireland	36%	-2%	84%	-4%
Spain	-42%	-51%	-54%	-53%
Total Europe	3%	-4%	6%	1%

Source: fDi Markets

Looking at FDI projects in absolute terms tells us where the largest destinations are, but we need to take into account the size of each location to understand which countries have been most successful at attracting US tradable services FDI since 2003. Figure 31 presents the European locations that have attracted the most projects on a per capita basis. The ROI is clearly the most successful country, attracting more than double the number of US tradable services projects of Luxembourg in second. The UK is the only very large economy that remains in the top performing countries (at third) when size is taken into account, with Germany and France having fallen out. Switzerland and Netherlands round off the five most successful European locations at attracting US tradable services FDI projects taking into account relative size.

Figure 31: Most Successful European Locations for US Tradable Services FDI Projects, 2003-15



Sources: fDi Markets; World Bank Databank

This analysis considers overall tradable services performance but we can split this down into the three respective sectors to assess which location has been most successful at each in turn. Table 14 provides a breakdown of US FDI projects taking into account population size, and highlights that the overall tradable services ranking is replicated for both software & IT services and financial services with the ROI first, Luxembourg second and the UK third. Only business services breaks this hierarchy, with Switzerland having strengths at attracting US FDI in this sector in particular.

Table 14: Sector Split of Most Successful European Locations for US FDI Projects, 2003-15

Sector	First	Second	Third
Software & IT services	Republic of Ireland	Luxembourg	United Kingdom
Business services	Republic of Ireland	Switzerland	United Kingdom
Financial services	Republic of Ireland	Luxembourg	United Kingdom

Sources: fDi Markets; World Bank Databank

Note: Success as measured by FDI projects per million persons

The jobs that come from US FDI projects will very much depend on the activity being located in each country; we have already shown that the average size of projects can vary significantly by activity so countries attracting large numbers of projects that don't create as many jobs may ultimately not see as much of a jobs impact as locations which have fewer, but larger, projects.

To assess which activities are most attracted to certain European countries, we consider the relative share of FDI activities going into each location against its overall share of FDI projects into Europe. For example, the UK attracts 35% of total tradable services FDI projects into Europe but just 13% of R&D projects, meaning it has a very low intensity for projects with R&D activities. Conversely, the ROI attracts 8% of total tradable services FDI projects into Europe but 26% of R&D projects, suggesting it has a very high intensity for projects with R&D activities. This analysis is then replicated for every country and activity to identify those with the greatest intensity.

An overview of the top three European locations intensity for activities of US tradable services FDI projects is shown below in Table 15, alongside the number of projects and their average size in terms of jobs. We can see that sales, marketing & support activities, which are the largest source of tradable services projects into Europe, are most intensive in the three largest European economies; however, these projects tend to be small and therefore will not deliver as many jobs as the project numbers would suggest. Conversely, when we consider the activities that bring the largest number of jobs per project it is the economies of ROI, Bulgaria, Hungary, Poland and Romania which are most intensive. Indeed, the ROI comes out has having the highest intensity for four of these business activities, and the second highest for a further two.

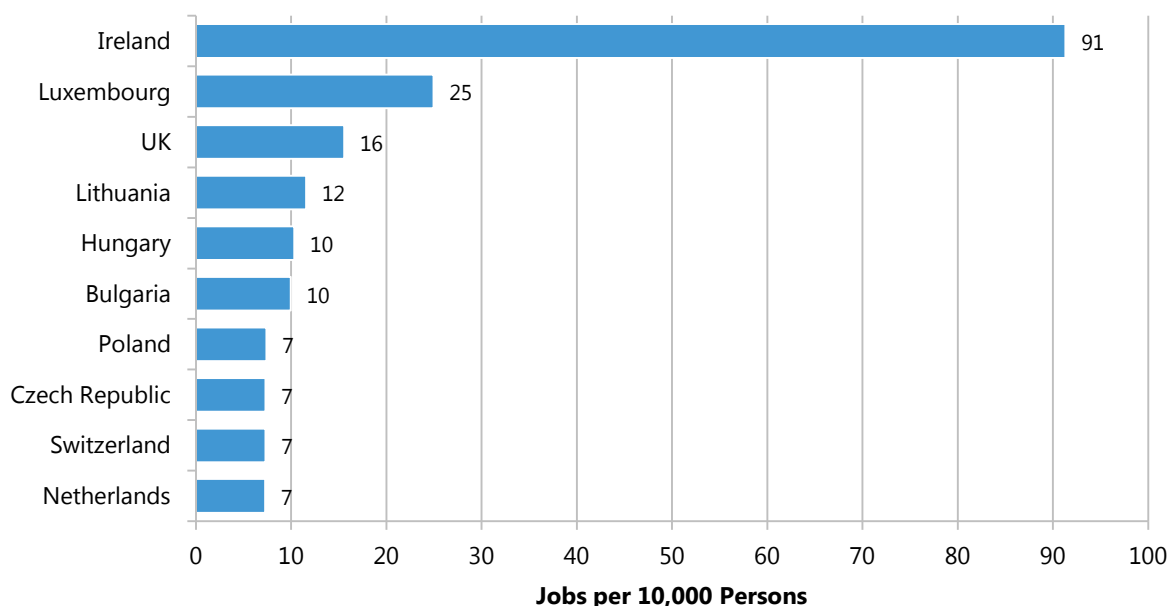
Table 15: European Countries with Highest Intensity by Business Activity, 2003-15

Activity	Projects	Ave Jobs	First	Second	Third
Sales, marketing & support	2,224	22	Germany	France	United Kingdom
Business services	2,068	39	Switzerland	Italy	Belgium
Headquarters	688	61	United Kingdom	Rep of Ireland	Netherlands
Design, development & testing	442	82	Rep of Ireland	Poland	Romania
ICT & Internet infrastructure	189	69	Netherlands	Germany	Belgium
Customer contact centre	150	251	Bulgaria	Rep of Ireland	Poland
Technical support centre	122	147	Rep of Ireland	Romania	Hungary
Shared services centre	103	249	Rep of Ireland	Poland	Hungary
Education & training	83	39	Poland	Czech Republic	France
Research & development	80	52	Rep of Ireland	Spain	Hungary

Source: fDi Markets

The implication of this is that when success at attracting FDI is considered in terms of jobs rather than projects, the picture will look different. Figure 32 shows that, when compared with the 10 locations earlier in Figure 33, the top three locations – ROI, Luxembourg and UK – remain the same. However, Switzerland and Netherlands have fallen significantly down the list and been replaced by a number of economies in Central and Eastern Europe which do not attract as many projects, but those they do tend to bring with them the most jobs.

Figure 32: Most Successful European Locations for US Tradable Services FDI Jobs, 2003-15



Sources: fDi Markets; World Bank Databank

Table 16 considers the relative success of each European country for each of the three tradable services sectors. This shows that the overall hierarchy is largely common across each, with the exception of financial services where Lithuania appears as a key destination for US FDI jobs.

Table 16: Sector Breakdown of Most Successful European Locations for US FDI Jobs, 2003-15

Sector	First	Second	Third
Software & IT services	Republic of Ireland	Luxembourg	United Kingdom
Business services	Republic of Ireland	Luxembourg	United Kingdom
Financial services	Republic of Ireland	Lithuania	United Kingdom

Sources: fDi Markets; World Bank Databank

Note: Success as measured by FDI jobs per 10,000 persons

3.3 Tradable Services FDI to UK and Ireland

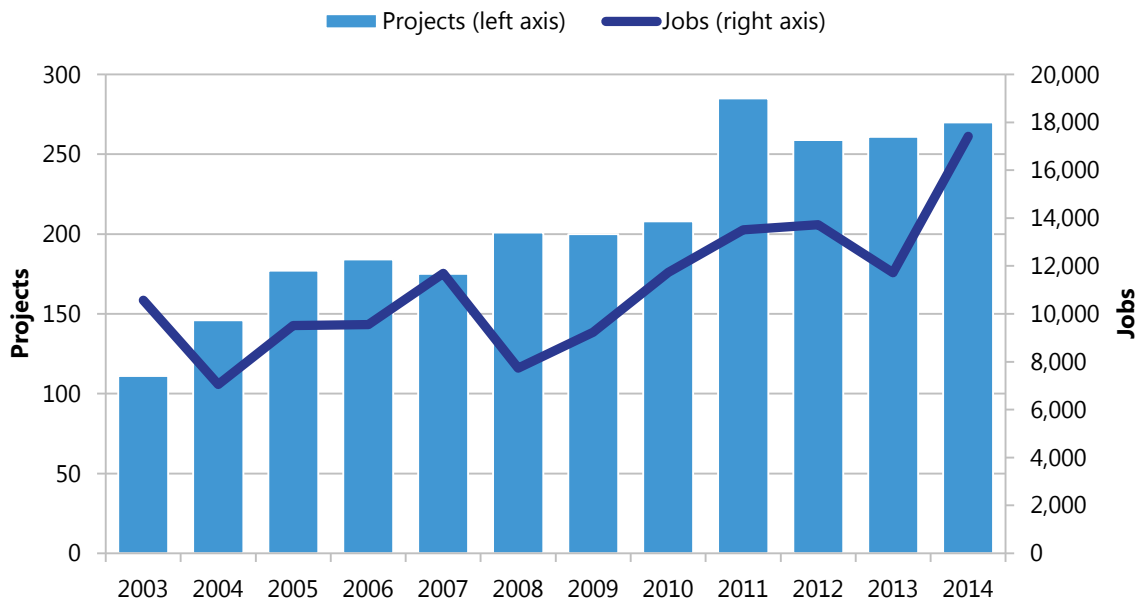
This chapter has highlighted that the UK and ROI are two of the most important destinations for US tradable services FDI to Europe. The UK is the largest European destination for US investment projects whilst the ROI is the most successful when size is taken into account, and together they represent 43% of total projects and 45% of total jobs in tradable services into Europe since 2003. The remainder of

this chapter will provide an analysis of US tradable services FDI into the UK and ROI at a more detailed level, considering individual regions and cities to get a better picture as to which areas have been most successful and at what.

Whilst the UK and ROI may seem like very different propositions – one with 64.5 million people and the other with just 4.6 million – these differences largely disappear when we compare the ROI against UK regions. Indeed, at this level, there are many similarities for US investors – both are English speaking, part of the EU, highly developed, geographically close, and share strong historic cultural links with the US.

These two locations together are an attractive proposition for US investors in tradable services sectors, attracting 2,700 projects and almost 143,000 jobs since 2003. Four in five (79%) of these projects have been new mobile projects rather than expansions or co-location projects. Figure 33 shows that recent performance to these two countries has been strong, with projects numbers significantly higher from 2011-14 to previous years and a peak in jobs being reached in 2014.

Figure 33: US Tradable Services FDI to UK and Ireland

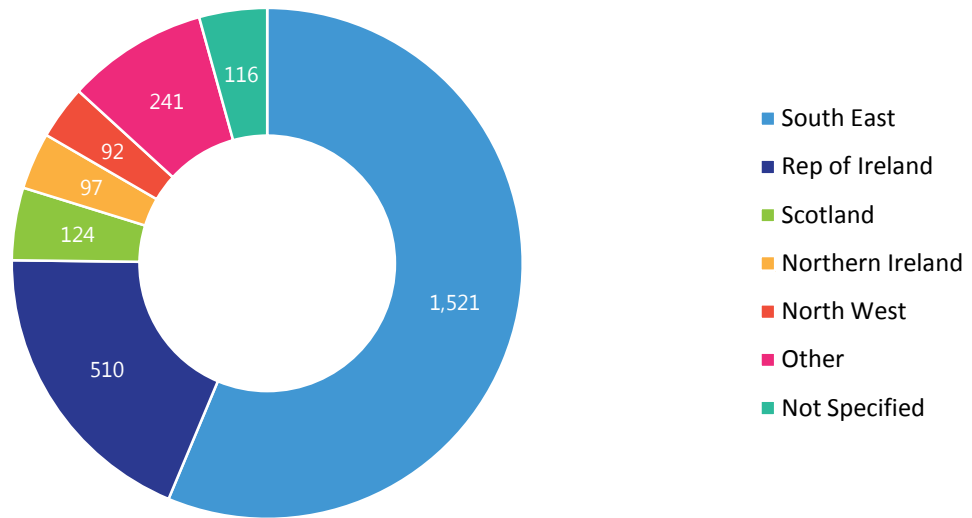


Source: fDi Markets

Destinations

A breakdown of the destinations of US tradable services FDI projects into the UK and Ireland is shown in Figure 34. In total, just five locations account for 87% of total US tradable services FDI projects into the UK and Ireland. The South East (which includes London in the fDi Markets database) is clearly the large single destination, followed by the ROI. Scotland, NI and the North West are the other regions which round off these top five locations.

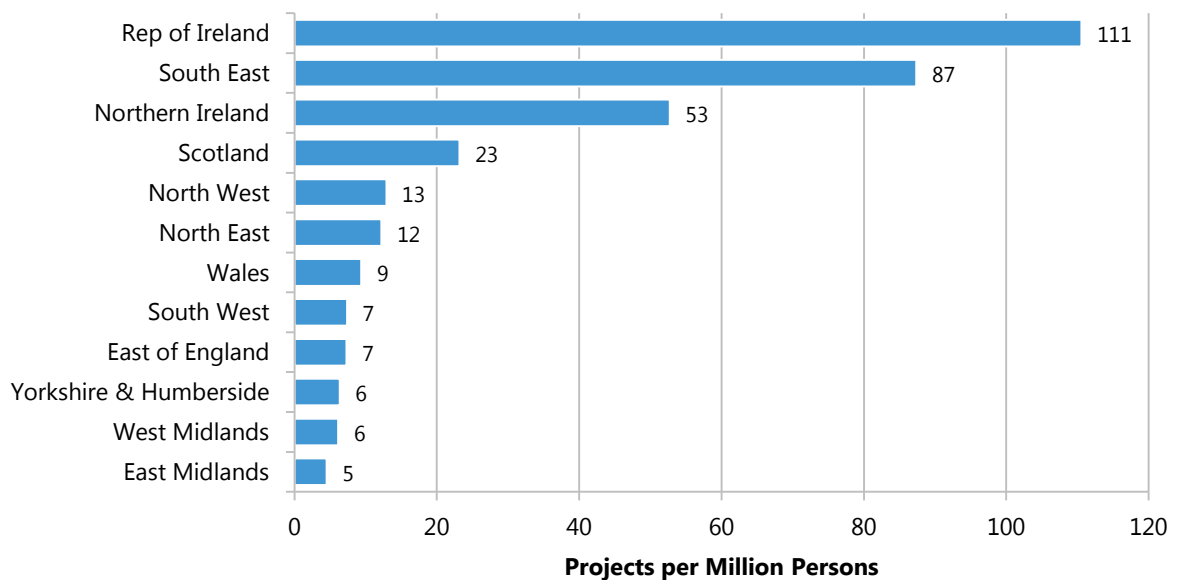
Figure 34: Destinations of US Tradable Services FDI Projects to UK and Ireland, 2003-15



Source: fDi Markets

Of course these locations are all very different sizes and, in order to take this into account, a measure of FDI projects per capita is presented in Figure 35. This shows that the ROI is the most successful location when size is reflected, followed by the South East and NI. Whilst all other locations are well behind these top three, within them the ROI still attracts double the FDI per capita as NI.

Figure 35: Success at Attracting US Tradable Services FDI Projects, 2003-15



Sources: fDi Markets; World Bank Databank; NOMIS Population Estimates

A breakdown of FDI success for each of the three tradable services sectors is provided in Table 17. Taking into account size, the ROI is the number one location for all three followed by the South East. NI is within this top three for both software & IT services and business, but ranks fourth for financial services with Scotland replacing it at third.

Table 17: Sector Breakdown of Successful UK and Ireland Locations for US FDI Projects, 2003-15

Sector	First	Second	Third
Software & IT services	Republic of Ireland	South East	Northern Ireland
Business services	Republic of Ireland	South East	Northern Ireland
Financial services	Republic of Ireland	South East	Scotland
Overall	Republic of Ireland	South East	Northern Ireland

Sources: fDi Markets; World Bank Databank; NOMIS Population Estimates

Note: Success as measured by FDI projects per million persons

As shown earlier in this chapter, the jobs impacts of these projects will vary significantly depending on which types of activities are being attracted. Rather than simply look at the share of projects by location (which will often result in the largest locations ranking highest), we replicate our earlier analysis to assess the relative intensity for business activities by comparing each location's share of FDI projects into the UK and Ireland for each activity against its overall share. This analysis for the top 10 activities for US tradable services FDI into the UK and Ireland is provided in Table 18.

Table 18: UK and Ireland Locations with Highest Intensity by Business Activity, 2003-15

Activity	Projects	Ave Jobs	First	Second	Third
Sales, Marketing & Support	926	21	South East	East of England	Yorkshire & Humberside
Business Services	834	44	South East	North West	-
Headquarters	440	64	Rep of Ireland	South East	-
Design, Development & Testing	199	95	Northern Ireland	Rep of Ireland	Scotland
ICT & Internet Infrastructure	74	49	Rep of Ireland	Yorkshire & Humberside	East of England
Customer Contact Centre	70	270	North East	Scotland	Northern Ireland
Technical Support Centre	48	98	Rep of Ireland	Northern Ireland	West Midlands
Shared Services Centre	44	169	Rep of Ireland	Scotland	Wales
Research & Development	31	46	Rep of Ireland	Northern Ireland	Wales
Education & Training	25	34	South West	South East	Scotland

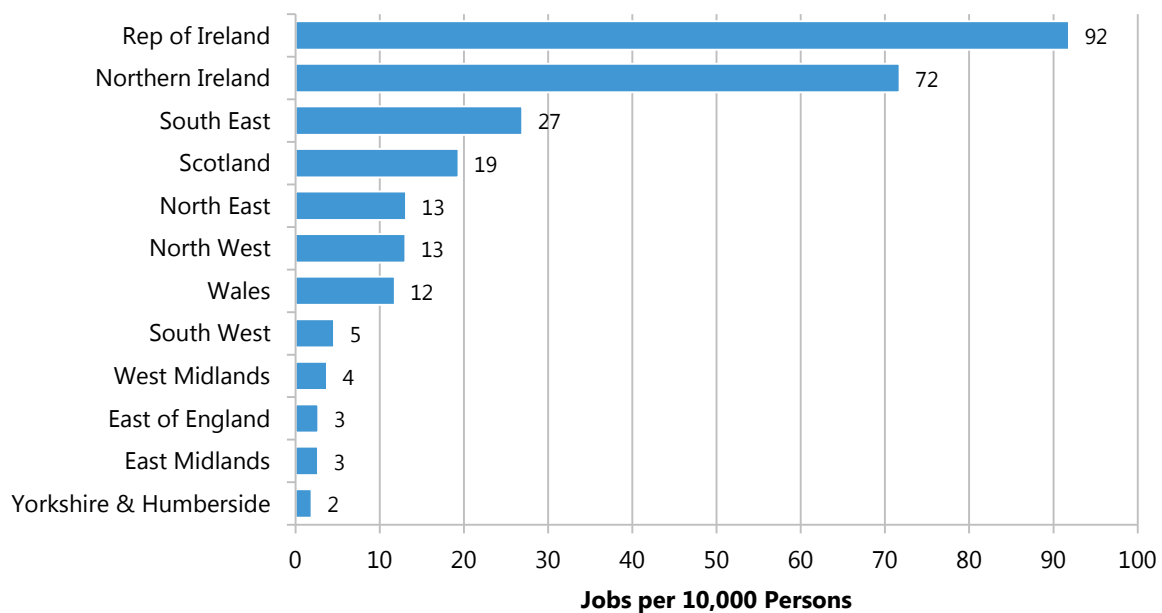
Source: fDi Markets

Note: Locations only included where there is at least one percentage point difference from their overall share

We see here that the most common projects – sales & marketing and businesses services – tend to be smaller and are dominated by the South East. The largest employment activities – customer contact centres, shared services centres and technical support centres – tend to be relatively more attracted to peripheral locations such as NI, Scotland, Wales the North East and the ROI (presumably areas which have lower labour costs). NI emerges as a clear leader for design, development & testing projects into the UK and Ireland, whilst the ROI’s attractiveness for headquarters, ICT & internet infrastructure and R&D activities is also apparent alongside those already mentioned.

Given the types of activities that each location is attracting, the rank of successful locations within is different when jobs are considered (Figure 36). The ROI remains the most successful location, but NI emerges as having, by far, the greatest number of US tradable services jobs (relative to its size) of any UK region. The South East is a distant third, followed by peripheral regions such as Scotland, North East, North West and Wales.

Figure 36: Success at Attracting US Tradable Services FDI Jobs, 2003-15



Sources: fDi Markets; World Bank Databank; NOMIS Population Estimates

The lack of jobs going to many English regions is very apparent here. It is notable that the ROI¹⁴, NI¹⁵ and Scotland¹⁶ each have their own IPAs, all of which have in-market personnel in the US. A number of our consultations have suggested that UK Trade and Investment (UKTI)¹⁷, the IPA for the entire of the UK, mainly deals with projects going to London. The Northern English regions do still attract tradable services FDI, as does Wales, but to nowhere near to the same extent as locations such as NI and ROI. The five bottom English regions, however, attract very little relative to their size. This is perhaps unsurprising given the fact that the English Regional Development Agencies (RDAs) were abolished in 2012, although they did still exist for much of the period being considered here.

¹⁴ <http://www.idaireland.com/>

¹⁵ <http://www.investni.com/>

¹⁶ <http://www.sdi.co.uk/>

¹⁷ <https://www.gov.uk/government/organisations/uk-trade-investment>

Focusing purely on UK destinations, an overview of key cities driving US tradable services FDI is in Table 19. Although many of the English regions do not rank highly at attracting tradable services jobs, this demonstrates that many of their main cities do; all these top 10 locations are large urban hubs with universities in the immediate vicinity (with the exception of Chester which is heavily skewed by just five very large projects, although it does have a university campus and is in close proximity to both Manchester and Liverpool). The fact that Belfast has attracted the second largest share of US tradable services jobs across the UK demonstrates how successful NI has been as a destination, as well as the ninth position occupied by Derry~Londonderry.

Table 19: Top 10 UK Cities at Attracting US Tradable Services FDI Projects, 2003-15

Rank	City	Location	% of Projects	Ave Jobs	% of Jobs
1	London	South East	48.1%	30	28.1%
2	Belfast	Northern Ireland	3.0%	132	7.4%
3	Glasgow	Scotland	1.3%	127	3.0%
4	Chester	North West	0.2%	770	2.7%
5	Manchester	North West	2.0%	53	2.0%
6	Newcastle	North East	0.7%	149	1.9%
7	Cardiff	Wales	0.5%	177	1.7%
8	Edinburgh	Scotland	1.9%	44	1.6%
9	Derry~Londonderry	Northern Ireland	0.4%	184	1.3%
10	Liverpool	North West	0.3%	204	1.0%

Source: fDi Markets

3.4 Summary

Tradable services is the main area for US FDI into Europe, UK and ROI. The attractiveness of Europe as a location for US tradable services investors is now greater than it was before the global downturn, although recent years have seen more mixed performance. Over four-fifths of US tradable services projects are new mobile opportunities rather than expansions, with projects mainly serving the broader EU regional and/or global markets rather than individual domestic markets. A small number of US investors contribute a large share of tradable services FDI into Europe, and much of this comes from just three US states (California, New York and Massachusetts).

Within tradable services, software & IT presents the most FDI opportunities for European locations. California is the main source state for US software & IT investors, who tend locate sales & marketing, headquarter and design, development & testing activities in Europe. There are also substantial tradable services FDI opportunities from US business & financial services firms, with New York being the capital for these sectors. These sectors mainly locate business services activities in Europe, with headquarters, customer contact centres and shared services centres also important here.

The UK is *the* key destination for US tradable services FDI into Europe, attracting three times as many projects as Germany and four times as much as France. It has also seen unprecedented growth in recent years whilst other locations have fallen back and, even when taking account of population size, the UK still remains the third most successful European location for US tradable services FDI. On this measure of FDI relative to size, the ROI ranks first across both projects and jobs. It is managing this by

not only competing effectively for headquarters projects against larger Western countries such as the UK and Netherlands, but also by being successful for US projects in areas where CEE economies are otherwise most competitive (e.g. design, development & testing, technical support centres, shared services centres, customer contact centres and R&D).

NI is highly successful at attracting US tradable services FDI within the UK. Relative to its size, NI is second only to the Greater South East (which includes London) on project numbers and is the most successful location on FDI jobs. NI has attracted around 2.5 times the number of US tradable services jobs as the Greater South East since 2003, and almost four times as much as Scotland. This has been particularly due to success in design, development & testing alongside technical support centres, R&D and customer contact centres. This means that Belfast has attracted more US tradable services jobs than any other UK city outside of London, whilst Derry~Londonderry ranks ninth.

4 US Manufacturing FDI

The UK is the largest European location for attracting US manufacturing FDI, with the ROI being the most successful when size is accounted for. NI is still relatively successful at attracting manufacturing investment, although not to the same extent as in tradable services.

4.1 Key Manufacturing Sectors

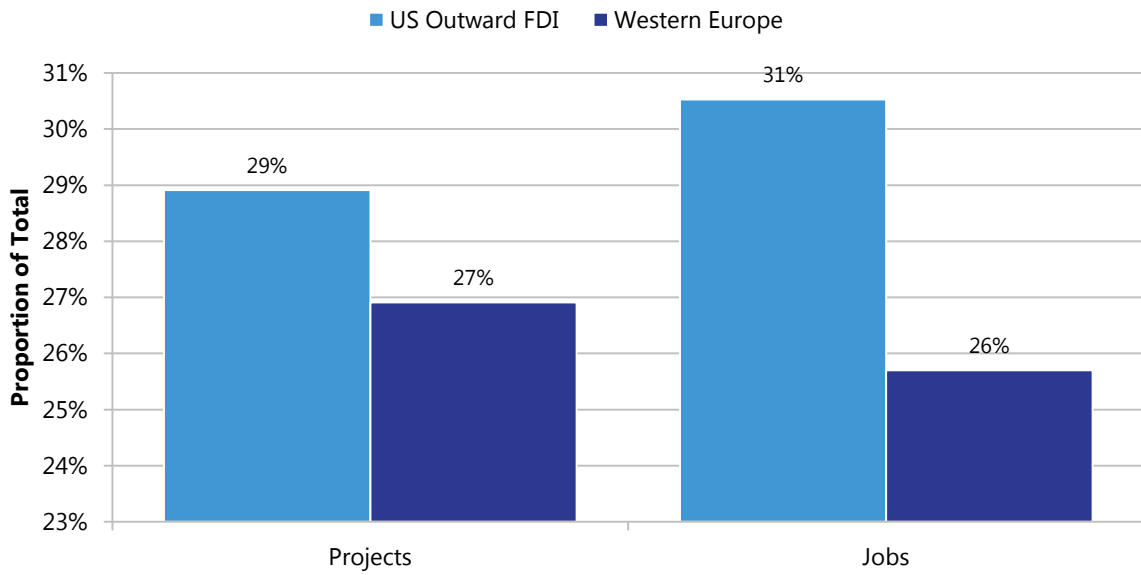
Identifying key tradable services sectors in the previous chapter was relatively straightforward given the importance of just three sectors in this area for total US FDI. However, of the 39 sectors in the fDi Markets database with US investment projects since 2003, a review of the business activity of each suggests that 28 comprise of manufacturing activities. Including all of these would lead to an unfocused analysis covering many different unrelated activities.

In order to ensure that the focus is on relevant manufacturing sectors, data on US FDI to the UK, NI and ROI since 2003 were downloaded for each of the manufacturing sectors as a starting point. These data were then analysed to assess how important each sector was for overall manufacturing FDI to the UK and ROI. The following sectors emerged as contributing at least 5% of total US manufacturing FDI to either the UK, NI or ROI:

- Aerospace
- Automotive components
- Biotechnology
- Business machines & equipment
- Chemicals
- Electronic components
- Food & tobacco
- Industrial machinery, equipment & tools
- Medical devices
- Pharmaceuticals
- Plastics
- Semiconductors

These 12 sectors have therefore been chosen as the focus of manufacturing FDI for this chapter. As Figure 37 highlights, US manufacturing FDI in these sectors has accounted for 29% of total US outward projects and 31% of jobs since 2003. Focusing on Western Europe, these shares drop to 27% and 26% respectively, which still represents a large proportion of US FDI to this region. This suggests that there is still a significant amount of contestable manufacturing FDI coming from the US to Western Europe, even if it has become more focused on other world regions over time.

Figure 37: Importance of Manufacturing for US Outward FDI, 2003-15



Source: fDi Markets

4.2 Manufacturing FDI to Europe

This analysis of manufacturing FDI to Europe will use the same definition of manufacturing as outlined above and the same group of 31 European countries used in the previous chapter.¹⁸ Trends in US manufacturing FDI to Europe since 2003 are shown in Figure 38.

Figure 38: US Manufacturing FDI to European Locations



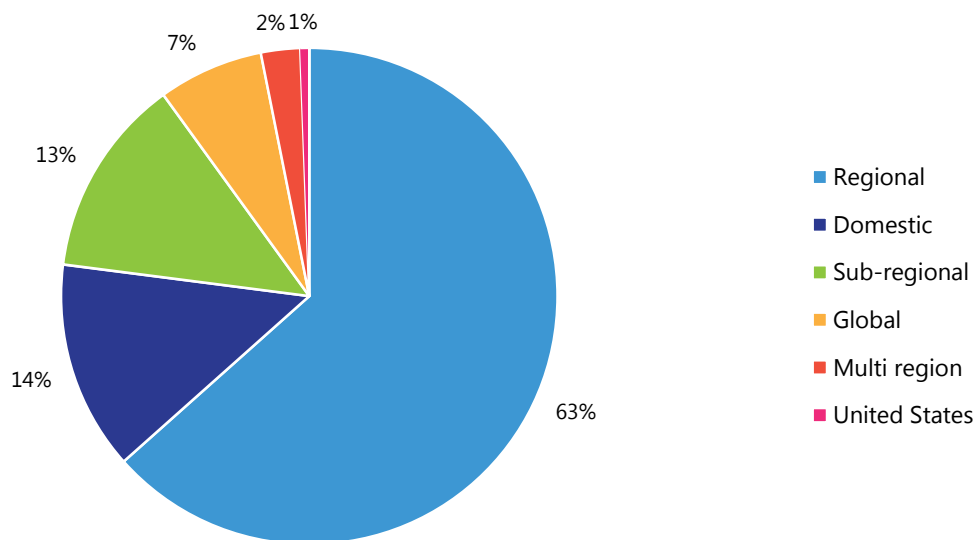
Source: fDi Markets

¹⁸ No US manufacturing FDI projects to Iceland were found in the database so in reality only covers 30 European countries.

Since 2003, there has been a total of 3,700 manufacturing projects from the US to Europe creating 312,000 jobs. This is equivalent to 59% of the projects and 98% of the jobs going to tradable services over the same period. On average, Europe has seen 293 manufacturing projects and nearly 24,900 jobs each year from the US. Prior to the downturn, US manufacturing FDI to Europe had been strong in both projects and jobs. However, manufacturing FDI has not recovered since the global downturn, with 14% less projects and 31% fewer jobs in 2014 than in 2008.

Figure 39 highlights that almost two-thirds of US manufacturing FDI to Europe since 2003 has been to serve the regional (EU) market, with a further 10% serving global, multiple regional or US markets. Setting aside any particular logistical advantaged from a particular location, these projects could largely have been located anywhere in the EU to serve these markets. Only just over one-quarter of the project served domestic or sub-regional markets and would have benefitted from establishing in the location they ultimately did.

Figure 39: Market Served by US Manufacturing FDI to Europe, 2003-15



Source: fDi Markets

As Table 21 shows, the majority of new manufacturing projects and jobs into Europe have been new projects. However, with 35% of projects and 39% of jobs being expansions, this suggests that fewer manufacturing projects are in new mobile activities than for tradable services, where the equivalent figures are 14% and 28%. This also shows that expansions projects tend to be larger in jobs terms.

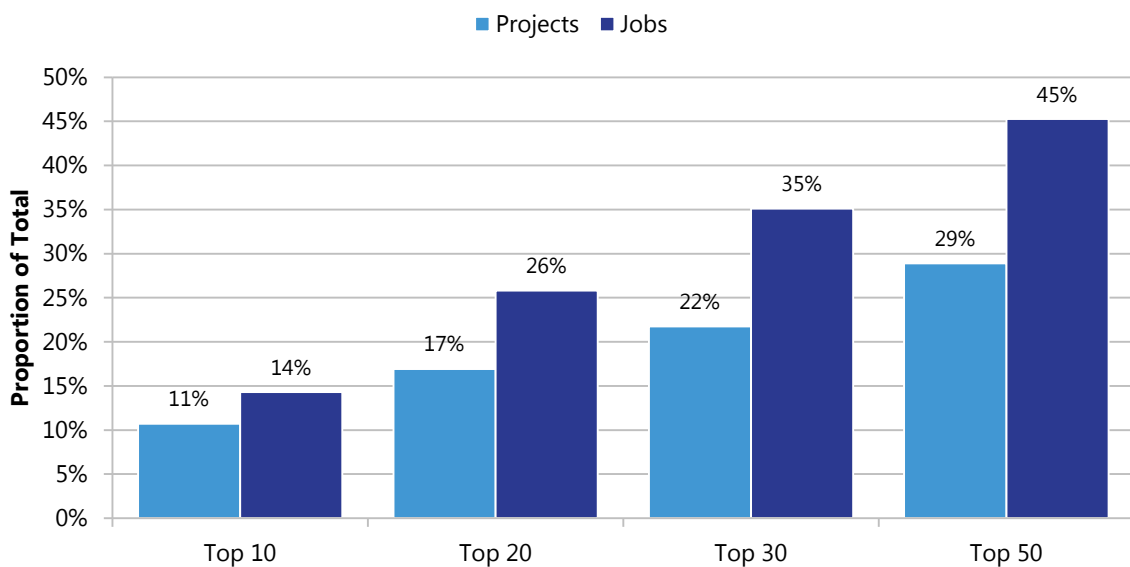
Table 21: US Tradable Services FDI to Europe by Project Type, 2003-15

Type	Projects (% of total)	Jobs (% of total)	Average Size
New	62%	57%	77
Expansion	35%	39%	95
Co-location	4%	4%	92
Total	3,703	311,770	84

Source: fDi Markets

These projects have come from almost 1,900 individual manufacturing companies investing into Europe since 2003. As with tradable services, a small number of these manufacturers account for a large share of total projects and jobs into Europe (Figure 40). Just 10 companies, including General Electric, Pfizer, Hewlett Packard, Dow Chemical and DuPont, have contributed almost one in 10 projects and one quarter of jobs. Expanding this to the top 50 investors covers over 29% of projects and 45% of jobs. Attracting just one of these key investors can therefore generate many further investment opportunities for a location.

Figure 40: Importance of Top Companies for US Manufacturing FDI to Europe, 2003-15



Source: fDi Markets

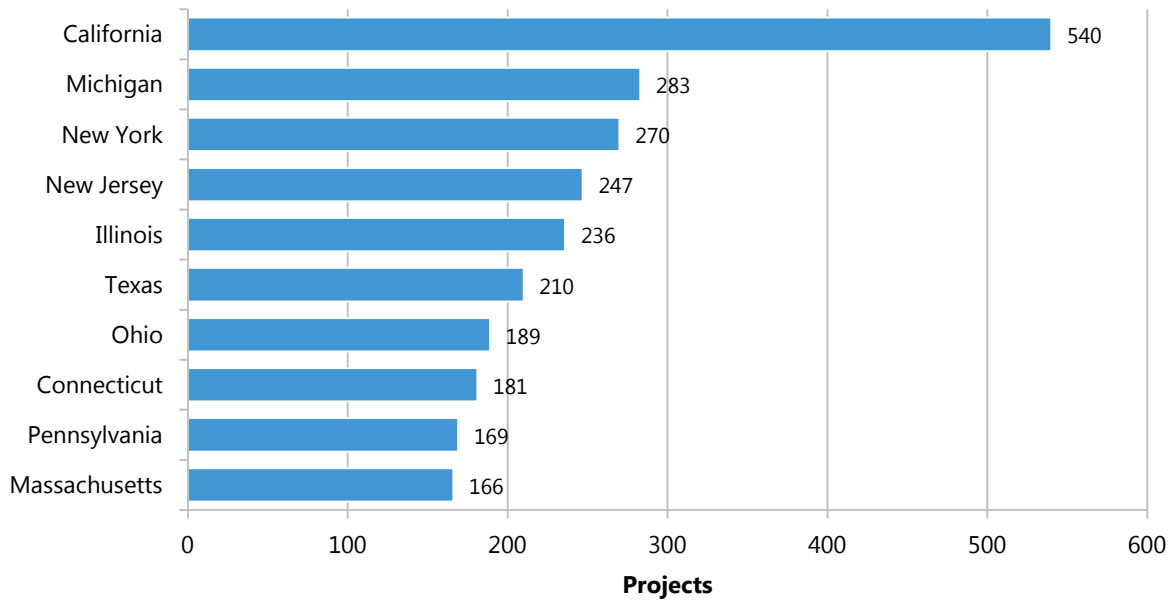
Note: Based on the parent company which may cover multiple subsidiaries

The previous chapter showed that three states – California, New York and Massachusetts – accounted for almost 60% of the tradable services projects and jobs into Europe. By comparison, Figure 41 highlights that manufacturing FDI is much more spread around US states, with just 30% coming from the top three states. For IPAs, this means that a much presence across the US is needed to compete for these projects. California emerges as not just the largest tradable services source, but also the largest manufacturing source. New York and Illinois are also important for both, but other states such as Michigan and New Jersey are much more important for US manufacturing FDI to Europe.

Sectors and Business Activities

As shown in Figure 42, there have been manufacturing FDI opportunities across each of the manufacturing sectors. Industrial machinery & equipment is the largest manufacturing sector, with 16% of projects, followed by chemicals and pharmaceuticals. The three life sciences sectors – pharmaceuticals, medical devices and biotechnology – have contributed 25% of projects and 21% of jobs. The sectors which generate the most jobs on average are automotive components (162 jobs per project), business machines & equipment (135) and food & tobacco (114), which explains why they account for a large proportion of jobs relative to projects. The sector with the fewest projects has been aerospace.

Figure 41: Main Source States for US Manufacturing FDI to Europe, 2003-15



Source: fDi Markets

Figure 42: Sector Breakdown of US Manufacturing FDI to Europe, 2003-15



Source: fDi Markets

The main source states for each of the manufacturing sectors are presented in Table 22. California is the largest source for five of the 12 sectors, and states such as New York, New Jersey, Texas, Illinois

and Michigan appear multiple times too, but a trend that strongly comes through is the diversity in source states depending on the manufacturing sector. This is not like for tradable services where most of the projects tended to come from the same states.

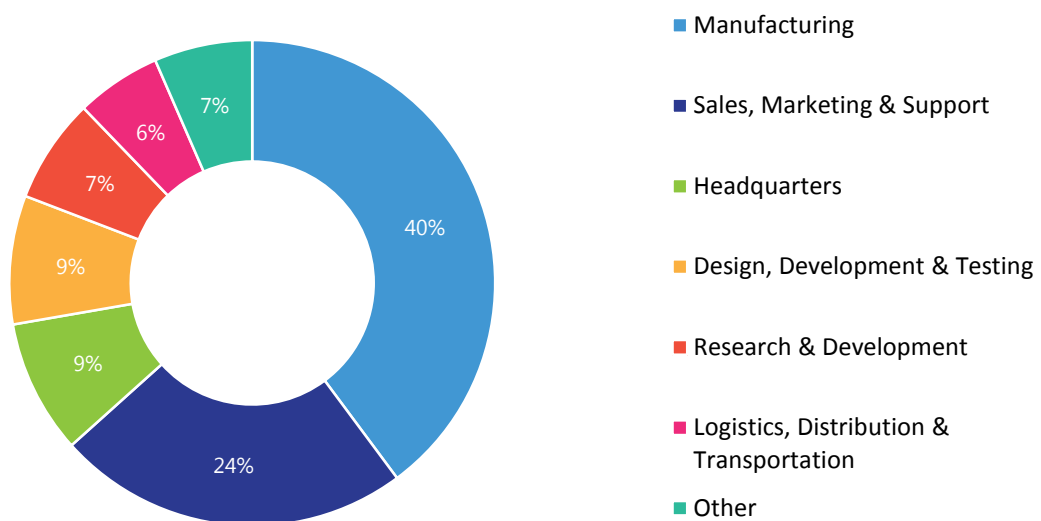
Table 22: Top Source States for US Manufacturing Projects to Europe by Sector, 2003-15

Sector	First	Second	Third
Industrial Machinery	Texas	Illinois	California
Chemicals	Pennsylvania	Ohio	Michigan
Pharmaceuticals	New Jersey	New York	North Carolina
Medical Devices	California	New Jersey	Illinois
Electronic Components	California	Wisconsin	Florida
Food & Tobacco	Illinois	New York	Virginia
Automotive Components	Michigan	Wisconsin	New York
Business Machines	California	Texas	New York
Plastics	Michigan	Minnesota	Connecticut
Biotechnology	California	Massachusetts	New Jersey
Semiconductors	California	Arizona	New York
Aerospace	Connecticut	North Carolina	Illinois

Source: fDi Markets

This chapter has not yet looked at the actual activities that these manufacturing projects carry out. As Figure 43 highlights, only 40% of the projects to Europe in manufacturing sectors are actually doing the manufacturing activity. The remaining 60% are split across activities such as sales & marketing, headquarters, design, development & testing, R&D and logistics. WEF (2012) highlights the importance of services in the global value chains of manufacturing firms, and the high proportion of services activities in US manufacturing FDI projects to Europe demonstrates this in practice.

Figure 43: US Manufacturing Projects to Europe by Activity, 2003-15



Source: fDi Markets

Whilst this is the overall picture, Table 23 suggests that the role of European FDI projects for US manufacturers differs greatly for each sector. Indeed, for only one sector (automotive components) is manufacturing the main activity being carried out. US manufacturers in many sectors are seeking to carry out value added activities such as R&D, design, development & testing and headquarters, or support activities such as customer contact centres, shared services centres or technical support centres. These are much more aligned with the activities in tradable services sectors, albeit for a physical good rather than a service.

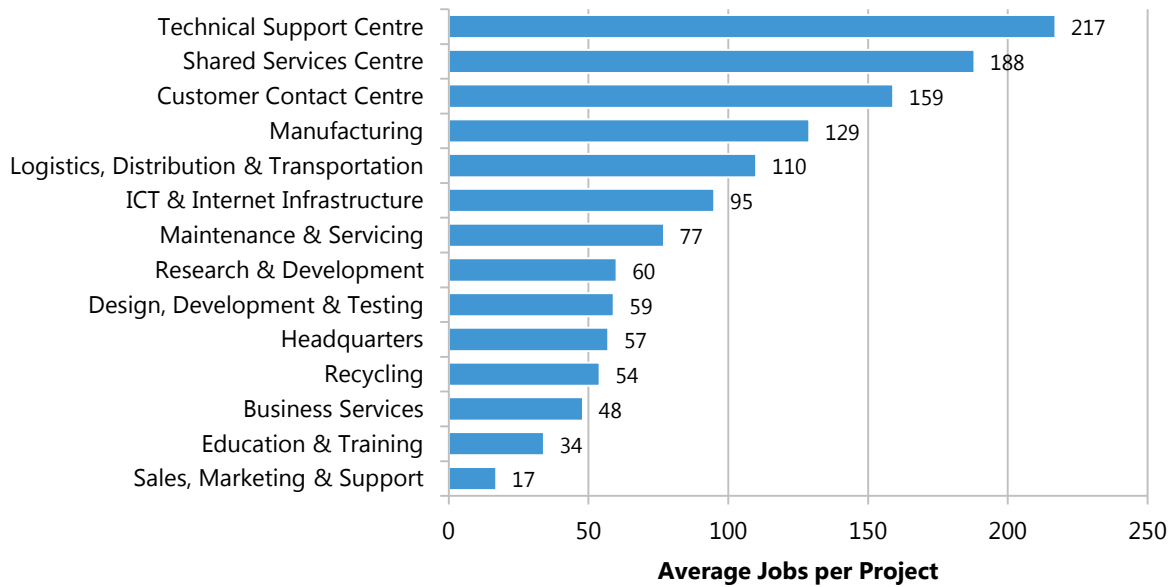
Table 23: US Manufacturing Projects to Europe by Business Sector, 2003-15

Sector	First	Second	Third
Industrial Machinery	Maintenance & Servicing	ICT & Internet Infrastructure	Customer Contact Centre
Chemicals	Shared Services Centre	Manufacturing	Design, Development & Testing
Pharmaceuticals	Research & Development	Business Services	Shared Services Centre
Medical Devices	Business Services	Education & Training	Logistics & Distribution
Electronic Components	Sales, Marketing & Support	Headquarters	Logistics & Distribution
Food & Tobacco	Logistics & Distribution	Manufacturing	Education & Training
Automotive Components	Manufacturing	Design, Development & Testing	Education & Training
Business Machines	ICT & Internet Infrastructure	Technical Support Centre	Customer Contact Centre
Plastics	Recycling	Manufacturing	Design, Development & Testing
Biotechnology	Research & Development	Headquarters	Business Services
Semiconductors	Design, Development & Testing	Research & Development	Headquarters
Aerospace	Maintenance & Servicing	Logistics & Distribution	Design, Development & Testing

Source: fDi Markets

Figure 44 highlights that the average size of manufacturing projects to Europe varies widely depending on activity. Whilst the greatest number of projects are for manufacturing activities, those which bring with them the most jobs tend to technical support centres, shared services centres and customer contact centres. Activities such as sales & marketing, education & training and business services tend to be much smaller by comparison.

Figure 44: Average Size of US Manufacturing Projects to Europe by Activity, 2003-15

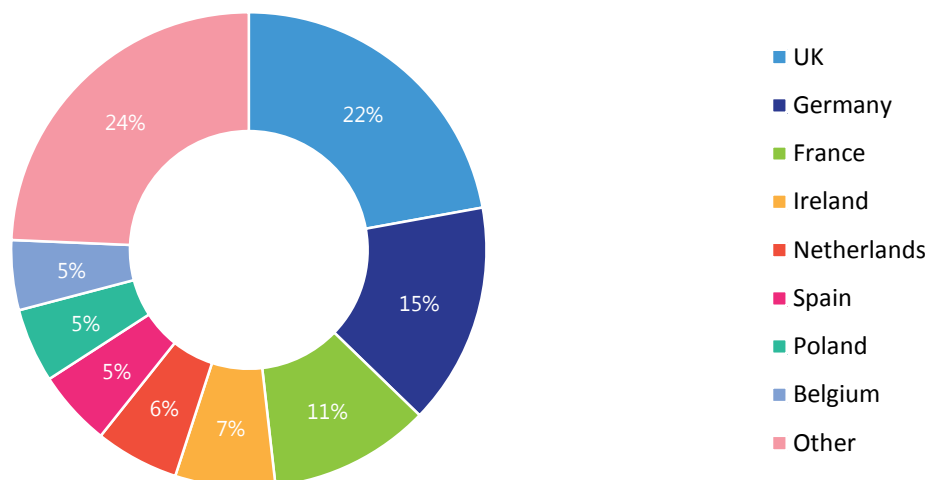


Source: fDi Markets

Destinations

As with tradable services, the three top locations for US manufacturing FDI projects into Europe are the UK, Germany and France (Figure 45). Germany and France attract a greater share of FDI here than in tradable services, whilst the UK attracts relatively less despite still being top. Western European locations remain the preferred destination for US investors, with Poland the highest CEE country in seventh.

Figure 45: Top European Locations for US Manufacturing Projects, 2003-15



Source: fDi Markets

If we assess the growth trends of the top five European locations, Table 24 suggests that the UK and, to a slightly lesser extent, the ROI have been the strongest performing of the top European locations for US manufacturing FDI. Germany, France and Netherlands have all seen declines in projects since 2008 against the backdrop of overall falls across Europe, although France has still managed to generate more jobs.

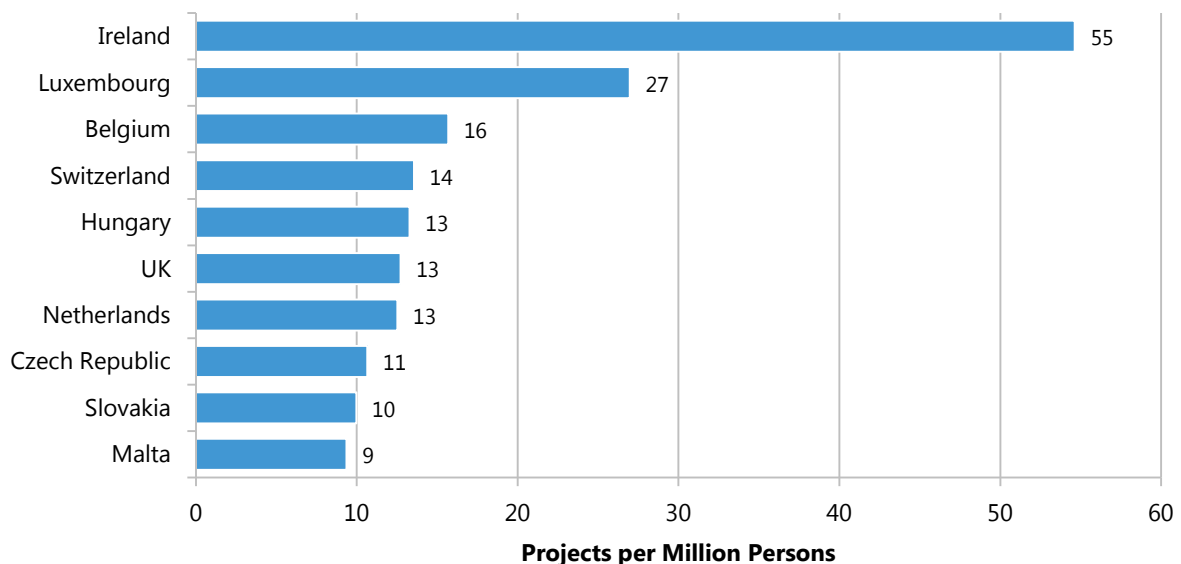
Table 24: Growth Trends for the Top Five Destination Countries

Country	Project Numbers		FDI Jobs	
	2008-14	2012-14	2008-14	2012-14
UK	35%	38%	124%	76%
Germany	-4%	-8%	-54%	-17%
France	-45%	-13%	19%	17%
Republic of Ireland	-8%	21%	14%	56%
Netherlands	-6%	-35%	-65%	9%
Total Europe	-14%	-2%	-31%	-26%

Source: fDi Markets

Reflecting the relative size of each European country allows us to assess which have had the most success in attracting US manufacturing FDI since 2003. Figure 46 highlights the ROI has attracted the most US manufacturing projects given its size, followed by Luxembourg and Belgium. Switzerland and Hungary complete the top five locations, with the UK being the only large economy to remain in this list at sixth.

Figure 46: Most Successful European Locations for US Manufacturing FDI Projects, 2003-15



Sources: fDi Markets; World Bank Databank

Table 25 presents this same assessment broken down into each of the 12 manufacturing sectors. This shows that the ROI is the leading destination for seven of the manufacturing sectors, including all three of the life sciences sectors, and ranks third for both chemicals and electronic components. The

UK is the leading destination for aerospace, and also performs strongly in semiconductors, electronic components and industrial machinery. The strengths of the former soviet states is particularly evident in automotive components, as well as aerospace and electronic components.

Table 25: Sector Breakdown of Most Successful European Locations for US Projects, 2003-15

Sector	First	Second	Third
Industrial Machinery	Republic of Ireland	Hungary	UK
Chemicals	Luxembourg	Belgium	Republic of Ireland
Pharmaceuticals	Republic of Ireland	Belgium	Switzerland
Medical Devices	Republic of Ireland	Switzerland	Netherlands
Electronic Components	Hungary	UK	Republic of Ireland
Food & Tobacco	Belgium	Switzerland	Netherlands
Automotive Components	Czech Republic	Slovakia	Hungary
Business Machines	Republic of Ireland	Slovakia	Denmark
Plastics	Republic of Ireland	Netherlands	Belgium
Biotechnology	Republic of Ireland	Switzerland	Belgium
Semiconductors	Republic of Ireland	UK	Hungary
Aerospace	UK	Czech Republic	Poland

Sources: fDi Markets; World Bank Databank

Note: Countries only included where they have had five or more projects in the sector

We have already shown that the jobs created from these manufacturing projects will depend on the activity being created; the average sales & marketing project brings less than 20 jobs on average whereas a technical support centre can bring over 200. However, there are very few of these large projects about (just 20 technical support centre projects going to Europe from the US).

To assess which European countries are attracting more than their proportionate share of activities, and therefore which are most likely to attract projects with high or low job creation, we have repeated the analysis in the previous chapter looking at the intensity of each activity by country. As a reminder on the methodology here, if the ROI attracts 7% of total US manufacturing FDI projects to Europe but 14% of those with carrying out R&D activities then it has a very high intensity and will rank amongst the top countries here. Conversely, if Germany attracts 15% of total US manufacturing FDI projects but only 8% of the R&D activities then it has a low intensity and will not. This therefore a measure of how successful a country is relative to its overall performance, not against other countries.

Table 26 presents the findings of this analysis for those activities with more than 20 projects since 2003. For the two activities which create the most jobs – shared services centres and technical support centres – the ROI has the highest specialism in Europe, whilst also ranking first for R&D projects. The UK has the greatest intensity across two activities, including design, development & testing, as well as being a preferred location for headquarters, sales & marketing, R&D and logistics. The strengths of CEE economies at the actual manufacturing activities, as well as shared services centres and customer contact centres, is also evident.

Table 26: European Countries with Highest Intensity by Business Activity, 2003-15

Activity	Projects	Ave Jobs	First	Second	Third
Manufacturing	1,475	129	Poland	Hungary	France
Sales, Marketing & Support	871	17	Germany	UK	Sweden
Headquarters	330	57	Switzerland	UK	Netherlands
Design, Development & Testing	317	59	UK	Germany	Norway
Research & Development	258	60	Rep of Ireland	UK	Finland
Logistics, Distribution & Transportation	210	110	Netherlands	Belgium	UK
Maintenance & Servicing	71	77	UK	Spain	France
Shared Services Centre	55	188	Rep of Ireland	Poland	Hungary
Education & Training	35	34	France	Belgium	Spain
Customer Contact Centre	30	159	Denmark	Romania	Bulgaria
Technical Support Centre	20	217	Rep of Ireland	Germany	Bulgaria

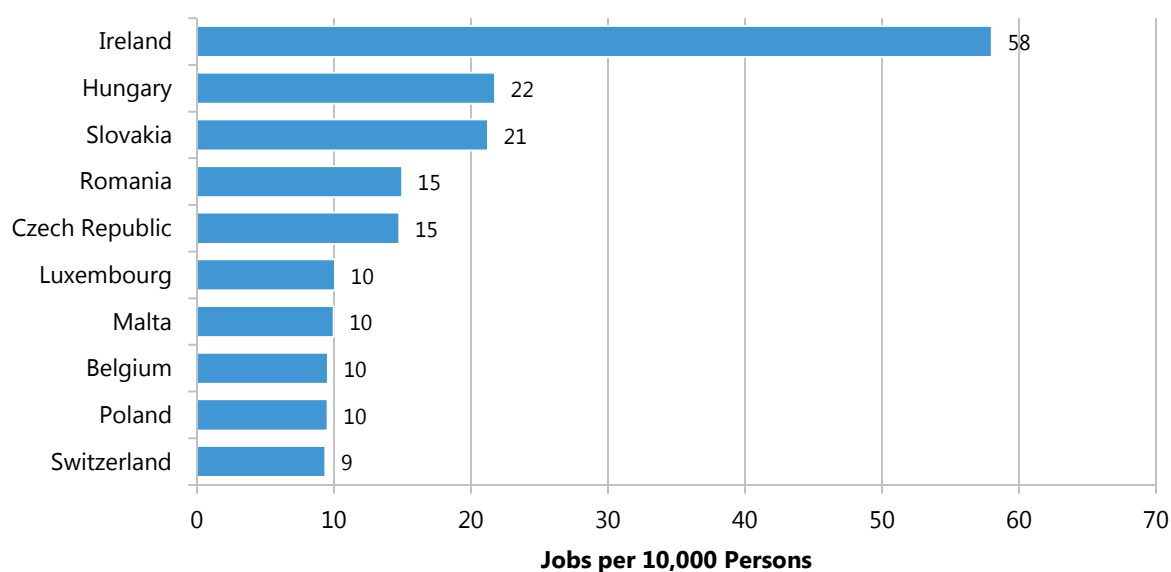
Source: fDi Markets

Given these different specialisms, our ranking of most successful European countries at attracting US manufacturing projects will look different when assessed by jobs rather than projects. Figure 47 shows that that ROI remains first, but the rest of the top five are dominated by the CEE economies of Hungary, Slovakia, Romania and Czech Republic. The UK, which ranked sixth on the measure of success by projects, is not in the top 10 here.

This analysis has been replicated for each manufacturing sector to assess which countries perform best in which areas. The ROI has been the most successful country at attracting jobs in the three life sciences sectors (pharmaceuticals, medical devices, biotechnology) as well as business machines & equipment and semiconductors; in addition, it has also ranked in the top three for industrial machinery, chemicals and plastics.

Table 27 highlights that the UK only ranks in the top three at attracting jobs in aerospace. The CEE countries have been particularly strong at attracting US manufacturing jobs in electronic components, automotive components, industrial machinery, plastics and aerospace. Our consultations highlighted that some of these manufacturing strengths come from their historic expertise in providing goods such as automobiles and electronics for the old Soviet Union.

Figure 47: Most Successful European Locations for US Manufacturing FDI Jobs, 2003-15



Sources: fDi Markets; World Bank Databank

Table 27: Sector Breakdown of Most Successful European Locations for US FDI Jobs, 2003-15

Sector	First	Second	Third
Industrial Machinery	Czech Republic	Hungary	Rep of Ireland
Chemicals	Luxembourg	Belgium	Rep of Ireland
Pharmaceuticals	Rep of Ireland	Belgium	Denmark
Medical Devices	Rep of Ireland	Netherlands	Belgium
Electronic Components	Romania	Hungary	Poland
Food & Tobacco	Switzerland	Romania	Poland
Automotive Components	Slovakia	Hungary	Czech Republic
Business Machines	Rep of Ireland	Slovakia	Bulgaria
Plastics	Slovakia	Hungary	Rep of Ireland
Biotechnology	Rep of Ireland	Switzerland	Belgium
Semiconductors	Rep of Ireland	Hungary	Germany
Aerospace	Czech Republic	Poland	UK

Sources: fDi Markets; World Bank Databank

Note: Countries only included where they have had five or more projects in the sector

4.3 Manufacturing FDI to UK and Ireland

This chapter has shown that the UK is the largest destination for US manufacturing projects, with the ROI fourth in absolute numbers but the most successful when size is taken into account. This section will focus on the 1,072 projects and 80,457 jobs from US manufacturing FDI that have gone into the UK and Ireland since 2003. Figure 48 highlights that although the number of projects fell from 2010-12, the past few years have seen a strong upturn with manufacturing project numbers in 2014 equal to the 2010 peak but bringing 42% more jobs.

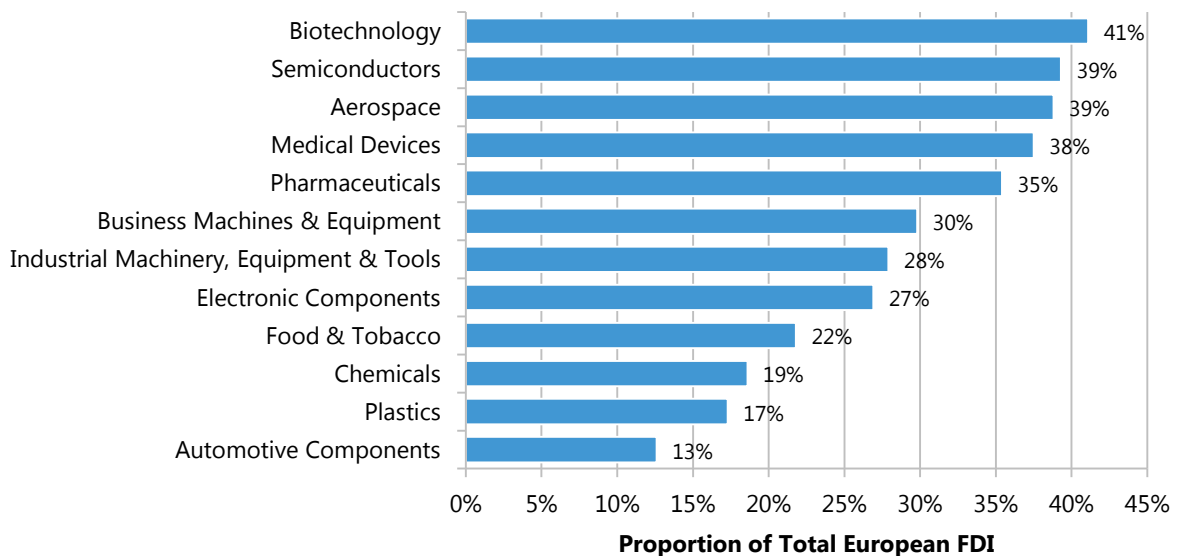
Figure 48: US Manufacturing FDI to UK and Ireland, 2003-15



Source: fDi Markets

In total, the UK and Ireland accounts for 29% of total US manufacturing projects into Europe and 26% of jobs. However, the profile of US manufacturing FDI going to the UK and Ireland differs quite a bit from elsewhere in Europe, with a comparison of the proportion of total European projects presented in Figure 49. This suggests that the UK and Ireland attract a significantly higher share of European manufacturing project from the US in life sciences (biotechnology, medical devices, pharmaceuticals), semiconductors and aerospace. Conversely, relatively few projects in sectors such as automotive components, plastics and chemicals go to either the UK or ROI.

Figure 49: UK and Ireland Share of Total US Manufacturing FDI Projects to Europe, 2003-15

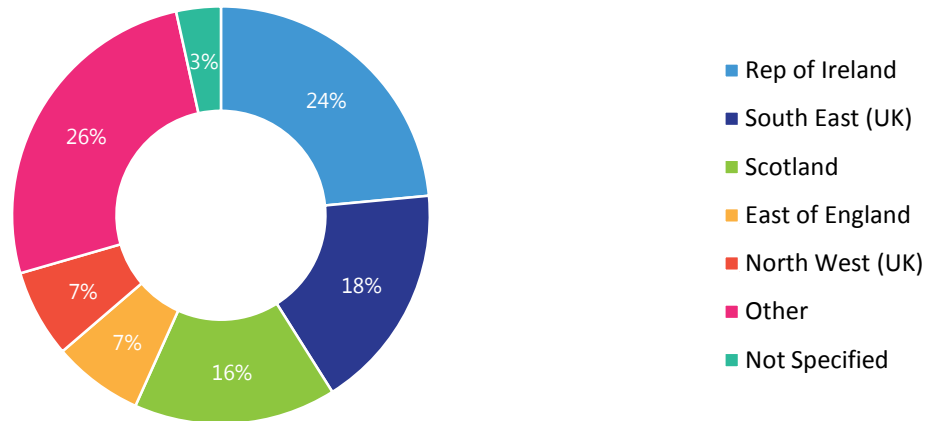


Source: fDi Markets

Destinations

In terms of individual locations, Figure 50 highlights that the ROI is the single largest destination for US manufacturing FDI, attracting almost one-quarter of the projects into either the UK or Ireland. The South East and Scotland rank second and third, with East of England and the North West rounding off the top five. NI ranks ninth here in absolute numbers.

Figure 50: Destination of US Manufacturing FDI Projects to UK and Ireland, 2003-15



Source: fDi Markets

Compared with US tradable services FDI projects into the UK and Ireland, where the large majority (79%) were new projects, only half (50%) of the US manufacturing projects since 2003 have been new. A breakdown of project type across the UK and Ireland is shown in Figure 51.

Figure 51: Type of US Manufacturing Projects to UK and Ireland, 2003-15

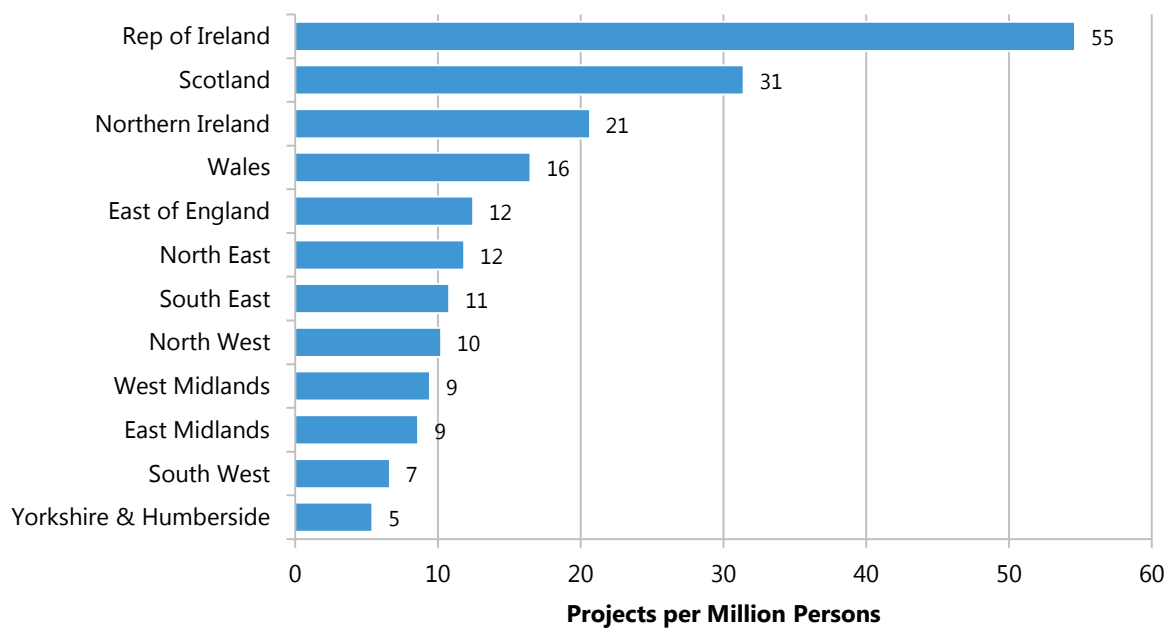


Source: fDi Markets

Just over 50% of ROI manufacturing projects are expansions of existing activities, which is similar to UK regions such as Scotland, Wales and NI. The largest UK destination for US manufacturers – South East – has a much higher emphasis on new mobile projects at over 70% of total projects, whilst expansions make up just one quarter of projects into the region. With an average of 45% of manufacturing projects coming from expansions of existing activities, there is clearly a greater emphasis on expanding established plants. For locations which have already attracted the most active US manufacturers in the UK or Ireland, such as General Electric, Johnson & Johnson, Pfizer, Caterpillar or Dell, this is good news as projects by these companies are not as mobile. However, for IPA’s seeking to attract new manufacturing FDI, it is clearly going to make it more difficult.

As with any of the location analysis carried out to date, we need to consider the relative size of each location to determine whether these absolute figures are representative of success or just a larger population/economy. Figure 52 presents a rank of each UK and Ireland location relative to their size. The ROI is clearly first here, followed by Scotland. NI, which was ninth in absolute project numbers, moves up to third when size is reflected in the figures, suggesting that NI does perform well here given that it is the smallest location of all 12. The South East, which dominated UK manufacturing project numbers, falls significantly down the list on the basis of its very large population.

Figure 52: Success of UK and Ireland Locations at Attracting US Manufacturing FDI Projects, 2003-15



Sources: fDi Markets; World Bank Databank; NOMIS Population Estimates

This analysis has been replicated for US projects into each individual manufacturing sector in Table 28 to show those areas where locations have been particularly successful. The ROI was Europe’s leading location in life sciences (pharmaceuticals, medical devices, biotechnology) and semiconductors, so it is no surprise to see it rank top against the UK regions for these, where it is also top for chemicals and plastics. NI’s engineering strengths come through with strong performance in both industrial machinery and business machines, areas where Scotland is also an attractive location alongside electronic components and aerospace. Wales also ranks in the top three for four of these sectors.

Table 28: Sector Breakdown of Successful UK and Ireland Locations for US FDI Projects, 2003-15

Sector	First	Second	Third
Industrial Machinery	Scotland	Northern Ireland	Rep of Ireland
Pharmaceuticals	Rep of Ireland	Scotland	Wales
Medical Devices	Rep of Ireland	Wales	Scotland
Electronic Components	Scotland	East of England	South East
Biotechnology	Rep of Ireland	Scotland	East of England
Semiconductors	Rep of Ireland	Scotland	South East
Chemicals	Rep of Ireland	Wales	North West
Business Machines	Northern Ireland	Rep of Ireland	Scotland
Food & Tobacco	East Midlands	East of England	Scotland
Aerospace	Scotland	Wales	West Midlands
Automotive Components	North East	Yorkshire & Humber	West Midlands
Plastics	Rep of Ireland	East Midlands	Yorkshire & Humber

Sources: fDi Markets; World Bank Databank

The jobs arising from these projects will depend on the activity they are carrying out. An overview of the regions with the most intensive focus on each activity (i.e. where their share of projects for that activity is significantly higher than their overall share) is provided in Table 29 for the 10 activities with the most projects into the UK and Ireland since 2003.

Table 29: UK and Ireland Locations with Highest Intensity by Business Activity, 2003-15

Activity	Projects	Ave Jobs	First	Second	Third
Manufacturing	367	108	Rep of Ireland	North East	Wales
Sales, Marketing & Support	209	23	South East	East of England	-
Headquarters	115	57	South East	Yorkshire & Humber	East of England
Design, Development & Testing	108	50	Scotland	East Midlands	North West
Research & Development	107	59	Rep of Ireland	Scotland	Northern Ireland
Logistics & Distribution	58	150	North West	East Midlands	South West
Maintenance & Servicing	24	72	Scotland	East of England	South West
Shared Services Centre	19	94	Rep of Ireland	Northern Ireland	South West
Customer Contact Centre	11	136	Scotland	Rep of Ireland	North East
Technical Support Centre	7	177	Rep of Ireland	-	-

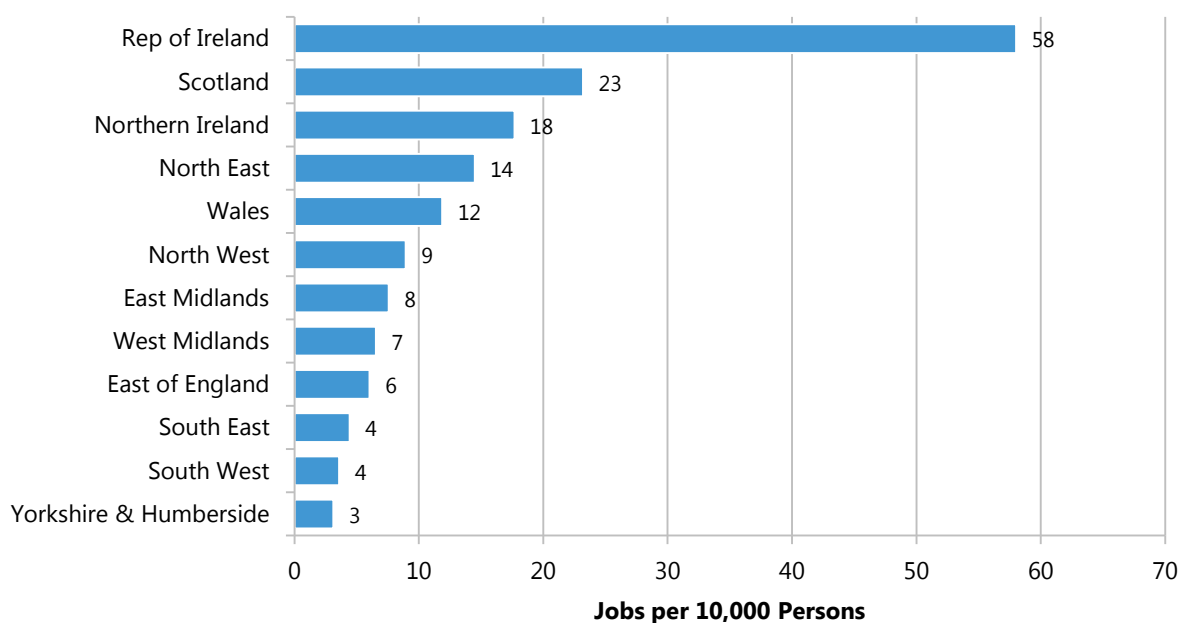
Source: fDi Markets

Note: Locations only included where there is at least one percentage point difference from their overall share

The ROI has significant specialisms in the high employment activities of technical support centres, manufacturing and shared services centres, as well as R&D projects. NI also has a high intensity in two of these – shared services centres and R&D. Scotland’s specialisms in areas such as design, development & testing, maintenance & servicing and customer contact centres are also evident here.

Given the ROI’s high intensity in large employment projects, it is unsurprising that they are also the most successful location in the UK and Ireland, by some distance, for US manufacturing when jobs are considered relative to size. Figure 53 shows that the top three, which includes Scotland and NI, remains the same as when looking at success in terms of projects, but that the South East moves down the list even lower with the North East moving up.

Figure 53: Success of UK and Ireland Locations at Attracting US Manufacturing FDI Jobs, 2003-15



Sources: fDi Markets; World Bank Databank

In comparison with tradable services, where NI was clearly the most successful UK region and many English regions outside of the South East did not attract as many jobs as their size would suggest, the balance of manufacturing FDI across the UK is much more even. Setting aside the ROI for now, the five UK locations which have been most successful at attracting these US manufacturing FDI jobs are all peripheral regions, with those in the south of England tending to rank amongst the bottom when size is taken into account. This is perhaps unsurprising given the industrial background of these regions but suggests that, other than NI which outperforms all other UK regions on tradable services, they have (with exceptions of cities in Scotland and the North of England) not adapted as well to a new environment competing for services FDI, at least when it comes to the US as a source location.

Focusing on UK locations, an overview of the top cities for US manufacturing jobs since 2003 (shown in Table 30) shows just how dispersed these have been across the UK. In contrast with tradable services, these manufacturing jobs have not just been going to the major cities in each region, which is particularly true in Scotland where many cities have attracted a large share of US manufacturing

jobs. Unlike for tradable services, where Belfast has attracted the second most jobs across the UK, it is notable that no NI city appears in this top 10, although Derry~Londonderry is just outside at 11th.

Table 30: Top 10 UK Cities at Attracting US Manufacturing FDI Jobs, 2003-15

Rank	City/Town	Location	% of Projects	Ave Jobs	% of Jobs
1	London	South East	6.2%	32	2.7%
2	Liverpool	North West	0.8%	216	2.4%
3	Aberdeen	Scotland	2.2%	72	2.2%
4	Sunderland	North East	0.7%	248	2.2%
5	Glasgow	Scotland	1.4%	95	1.8%
6	Birmingham	East Midlands	1.1%	109	1.6%
7	Cambridge	South East	2.4%	46	1.5%
8	Livingstone	Scotland	1.0%	88	1.2%
9	Manchester	North West	1.9%	40	1.0%
10	Dunfermline	Scotland	0.5%	149	0.9%

Source: fDi Markets

4.4 Summary

Although US investors in manufacturing sectors are less likely to chose Western Europe as a location for investments that those in tradable services, there is still a significant volume of US manufacturing FDI which locates in this part of the world. Manufacturing FDI from the US has, however, yet to fully recover from the global downturn, with both jobs and projects below the recent 2008 peak. Just over one-third of projects in manufacturing are expansions, which is considerably higher than in tradable services and suggests fewer mobile opportunities (although still a majority of projects are new). As with services, a small number of US investors account for a large share of projects and jobs.

There are opportunities for European locations across a range of sectors, although many of these are linked to either life sciences or engineering. Industrial machinery & equipment is the single largest manufacturing sector for US FDI projects to Europe, with automotive components accounting for the most jobs. The main US source states of projects varies significantly by sector; whilst California has most projects in medical devices, electronic components, business machines, biotechnology and semiconductors, states such as Texas (industrial machinery), Connecticut (aerospace), Michigan (plastics and automotive components), Illinois (food & tobacco), Pennsylvania (chemicals) and New Jersey (pharmaceuticals) come to the fore elsewhere. Just 40% of these investment projects actually relate to the manufacture of goods, with US manufacturers choosing Europe for activities such as sales & marketing, headquarters, design, development & testing and R&D.

The UK is the main location of choice for US manufacturing investors into Europe, and has seen growth in both projects and jobs in recent years despite the wider fall in manufacturing FDI. Germany and France are also strong here and, despite being a small economy, the ROI ranks fourth in absolute terms in attracting US manufacturing. The ROI has also seen growth in project numbers and jobs in recent years and, when size is taken into account, emerges as the most successful European location for US manufacturing investment. The ROI is the most successful European location for projects across all life sciences sectors (pharma, medical devices, biotechnology) as well as industrial

machinery, business machinery, plastics and semiconductors. CEE economies such as Czech Republic and Slovakia become more prominent when looking at success in terms of FDI jobs.

NI does not share the same success in manufacturing FDI within the UK as it does for tradable services although, when size is taken into account, it still emerges as the second most successful UK location for FDI jobs and projects behind Scotland (the ROI is significantly ahead on both these measures). NI is the most successful UK location for US FDI in business machines and second for industrial machinery, reflecting its strong engineering base. NI emerges as highly successful for both shared services centres and R&D activities but, despite this, no NI location ranks amongst the top ten UK cities at attracting US manufacturing FDI.

5

Summary and Conclusions

The United States provides a wide range of FDI opportunities for UK and European locations. Northern Ireland has a strong track record at attracting this investment, particularly in tradable services sectors where Belfast and Derry~Londonderry rank amongst the leading UK cities.

5.1 US FDI Opportunities

The total scale of US mobile investment is evenly split between projects going to other US states and heading overseas. The majority of intra-state US investment is domestically-focused, but some of this could potentially have headed overseas, and many states have particularly aggressive financial and tax incentives to retain US companies and attract business from elsewhere in the US.

The broader FDI landscape remains challenging, with both the global number of FDI projects and jobs still below their peak. There is some positivity about global FDI prospects over the coming years with steady, rather than spectacular, growth forecast. The US is the single largest source of this global FDI but has also yet to recover from the economic downturn and there are fewer projects globally than before to compete for. The profile of US outward FDI has also changed in recent years. Projects to Asia-Pacific, which had typically been the largest destination for US FDI, have declined whereas Western Europe has held strong. These two regions now both account for an equal share of US FDI, around 35% of the total each, meaning that Western Europe has become relatively more important as a destination for US FDI since the downturn.

In terms of the FDI opportunities from US projects:

- Half of projects emerge from just five states – California, New York, Texas, Illinois and Massachusetts. This means that IPAs are able to cover a large amount of potential FDI by establishing relatively few offices in these locations;
- The software and IT services sector presents the most US FDI opportunities, followed by business services and financial services. The broader FDI trend of falling projects and jobs since the start of the downturn has been evident in both business and financial services, but not in software & IT which has continued to grow in project numbers (although not jobs); and
- The top five US FDI activities are sales & marketing, manufacturing, business services, design, development & testing and headquarters. Of these, only manufacturing projects tend to bring significant numbers of jobs, with other activities tending to be smaller. Support services activities such as customer contact centres, shared services centres and technical support centres bring many more jobs on average, but there are fewer of these to go around.

Tradable Services

Tradable services is the main area for US FDI into Europe, UK and ROI. The attractiveness of Europe as a location for US tradable services investors is now greater than it was before the global downturn, although recent years have seen more mixed performance. Over four-fifths of US tradable services projects are new mobile opportunities rather than expansions of existing activities, with projects mainly serving the broader EU regional and/or global markets rather than individual domestic markets. A small number of US investors contribute a large share of tradable services FDI into Europe, and much of this comes from just three US states (California, New York and Massachusetts).

Within tradable services, software & IT presents the most FDI opportunities for European locations. California is the main source state for US software & IT investors, who tend locate sales & marketing, headquarter and design, development & testing activities in Europe. There are also substantial tradable services FDI opportunities from US business & financial services firms, with New York being the capital for these sectors. These sectors mainly locate business services activities in Europe, with headquarters, customer contact centres and shared services centres also important here.

Manufacturing

Although US investors in manufacturing sectors are less likely to choose Western Europe as a location for investments than those in tradable services, there is still a significant volume of US manufacturing FDI which locates in this part of the world. Manufacturing FDI from the US has, however, yet to fully recover from the global downturn, with both jobs and projects below the recent 2008 peak. Just over one-third of projects in manufacturing are expansions, which is considerably higher than in tradable services and suggests fewer mobile opportunities (although still a majority of projects are new). As with services, a small number of US investors account for a large share of projects and jobs.

There are opportunities for European locations across a range of sectors, although many of these are linked to either life sciences or engineering. Industrial machinery & equipment is the single largest manufacturing sector for US FDI projects to Europe, with automotive components accounting for the most jobs. The main US source states of projects varies significantly by sector; whilst California has most projects in medical devices, electronic components, business machines, biotechnology and semiconductors, states such as Texas (industrial machinery), Connecticut (aerospace), Michigan (plastics and automotive components), Illinois (food & tobacco), Pennsylvania (chemicals) and New Jersey (pharmaceuticals) come to the fore elsewhere. Just 40% of these investment projects actually relate to the manufacture of goods, with US manufacturers choosing Europe for activities such as sales & marketing, headquarters, design, development & testing and R&D.

5.2 US FDI Destinations

United Kingdom

The UK is the location of choice amongst US firms economies for this overseas investment. It attracts more than double the FDI of the next largest developed location – Germany – and has seen a rise of more than 50% since 2007 against a backdrop of declining FDI more generally. The main FDI activity going to the UK is sales, marketing & support, followed by business services and headquarters.

The UK is the key destination for US tradable services FDI into Europe, attracting three times as many projects as Germany and four times as much as France. It has also seen unprecedented growth in recent years whilst other locations have fallen back and, even when taking account of population size, the UK still remains the third most successful European location for US tradable services FDI.

It is also the main location of choice for US manufacturing investors into Europe, and has seen growth in both projects and jobs in recent years despite the wider fall in manufacturing FDI. Germany and France are also strong here and, despite being a small economy, the ROI ranks fourth in absolute terms in attracting US manufacturing.

Republic of Ireland

Taking into account size, the ROI is the most successful European location at attracting US tradable services FDI. The ROI is not only competing effectively for headquarters projects against larger Western countries such as the UK and Netherlands, but also by being successful for US projects in areas where CEE economies are otherwise most competitive (e.g. design, development & testing, technical support centres, shared services centres, customer contact centres and R&D).

This success is not only limited to services sectors. The ROI has seen growth in project numbers and jobs in recent years within manufacturing sectors and, when size is taken into account, emerges as the most successful European location for US manufacturing investment. The ROI is the most successful European location for projects across all life sciences sectors (pharma, medical devices, biotechnology) as well as industrial machinery, business machinery, plastics and semiconductors.

Northern Ireland

NI is highly successful at attracting US tradable services FDI within the UK. Relative to its size, NI is second only to the Greater South East (which includes London) on project numbers and is the most successful location on FDI jobs. Looking at jobs, NI has attracted around 2.5 times as many US FDI jobs as the Greater South East since 2003, and almost four times as much as Scotland. This has been particularly due to success in design, development & testing alongside technical support centres, R&D and customer contact centres. This means that Belfast has attracted more US tradable services jobs than any other UK city outside of London, whilst Derry~Londonderry ranks ninth.

NI does reasonably well at attracting US manufacturing FDI but does not share the same success as in tradable services although, when size is taken into account, it still emerges as the second most successful UK location for FDI jobs and projects behind Scotland (the ROI is significantly ahead on both these measures). NI is the most successful UK location for US FDI in business machines and second for industrial machinery, reflecting its strong engineering base. NI emerges as highly successful for both shared services centres and R&D activities but, despite this, no NI location ranks amongst the top ten UK cities at attracting US manufacturing FDI.

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CONTACT DETAILS

Email analyticalservices@economy-ni.gov.uk

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