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How attractive is the UK for future manufacturing foreign direct investment?

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How attractive is the UK for future manufacturing foreign direct investment?

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I. Executive summary

I.1 Background: FDI in the UK

Over the last three decades, the United Kingdom (UK) has performed well in attracting high volumes of inward foreign direct investment (IFDI). In common with other developed countries, mergers and acquisitions (M&A) have been the preferred entry mode of multinational enterprises (MNEs) in the UK. However, recently the UK has been reinforcing its position as the leading FDI location for Greenfield projects in Europe.

Since 1990 the IFDI stock in the UK has risen six-fold, from US\$204 billion in 1990 to US\$1,199 billion by the end of 2011.

The IFDI stock in the UK is concentrated in the service sector. The value of the IFDI stock in the service sector reached 71% of the total IFDI stock in 2011, up from 63.2% in 1999. In contrast, the contribution of the manufacturing sector to the UK's IFDI stock has significantly declined, from 26.6% in 1999 to 19.3% in 2011, with most industries within this sector experiencing significant reductions.

Traditionally, within the manufacturing sector a large portion of FDI has gone to chemicals and related industries, but in recent years the food sector has also become one of the major industries receiving significant amounts of FDI, hosting almost 30% of the manufacturing IFDI stock in 2011.

Overall, despite being disproportionately more affected than other European countries during the recent financial crisis period, the UK performed relatively well in attracting FDI on the basis of its potential to attract such investments. According to the UNCTAD's Inward FDI Attraction and Inward FDI Potential Index, the UK attracted the expected amounts of IFDI whereas other countries with similar (high) potential to attract foreign investments, such as Germany, France, the US and Japan, performed below their expectations.

The UK is the host of more than 45,000 foreign affiliates. Although they represent less than 2 per cent of the total number of firms in the UK, they play a major role in the UK economy. In 2010, they employed at least 3 million workers, accounting for more than 13% of the workforce employed and contributed to at least 36% of the total turnover in the UK.

Apart from contributing to output and employment generation, affiliates of foreign multinationals have also played an important role in the UK's technological development. They accounted for between 38% and 45% per cent of total expenditure in R&D performed in UK business during the period 1997-2010.

Foreign R&D has been exceptionally important for the manufacturing sector, especially for highly intensive industrial activities such as motor vehicles and parts, electronics and communication equipment, machinery and equipment, and precision instruments and optical products.

I.2 Determinants of inward FDI

I.2.1 Market size and growth

- Larger, fast growing markets are associated with higher FDI inflows. The literature generally captures these market characteristics by using GDP, GDP per capita, GDP growth, or (at sectoral or firm level) market size measured in terms of industry output.
- The initial and potential future demand conditions in a market act as a signal to inward investors on the attractiveness of a location. Furthermore, it allows investors to locate where they can take advantage of scale economies.
- The UK market size, and industry growth performance compares well with its other advanced countries signalling significant potential for inward investors.

I.2.2 Openness

- Host country openness is widely considered to be positively related to inward FDI. Openness is typically measured using published tariff and non-tariff barriers to trade, or observed trade flows.
- The UK has benefited from being in the European Union, and therefore part of the single market, which has also promoted investment rates within and across member countries which in turn brings with it a flow of information and technology.
- There are few countries in the world which have the same level of openness as the UK, which is shown to have served it well and is expected to be an important determinant in attracting FDI.

I.2.3 Distance and infrastructure

- Distance (both physical and cultural) matters for FDI. This would suggest that anything that facilitates not only travel, but the coordination of activities internationally will encourage FDI.
- Infrastructure of all types encourages FDI. While infrastructure does act to attract FDI, it may be that it merely influences location within the country, rather than whether the firm chooses the country in the first place.
- The motivation for FDI is important. If for example a US firm has already decided to enter the UK, then infrastructure may simply determine where in the UK they go. However, if one is focussing on FDI from Asia or South America for example, then “Europe” may be the point of reference. In which case better infrastructure in the UK may have an effect.

I.2.4 Corporate tax rates

- Higher effective average tax rates have a negative influence on inward FDI.
- The literature has shown varying degrees of tax influence, depending on the type of tax rate, country and time period considered. However, for the UK a modest estimate is that a 1 percentage increase in EATR will reduce the probability of a firm locating in the UK by 1.29 percentage points.
- The UK’s main rate of corporation tax stands at 24 per cent in 2012 which is considerably lower than its main rival tax rates, such as the US, France and Japan.

1.2.5 Labour flexibility

- Labour market flexibility is seen as a key determinant for attracting FDI.
- In terms of the World Economic Forum index on labour market flexibility, the UK scores 2.51 and thus makes it more flexible than most countries in the world, particularly among the OECD member countries. Countries which score lower (i.e. more flexible labour markets) are the USA, Denmark and Switzerland.
- Studies which examine the link between FDI and migration show that large diaspora populations attract investment from the home country, and this may explain the high proportions of Indian FDI that targets the UK. More generally, migration of skilled labour influences FDI flows in both directions.

1.2.6 Institutions

- The literature shows that institutional quality differences impact significantly on the ability of a country to attract FDI. It also influences the type of investment that is attracted.
- The UK system of institutions is well placed to attract inward FDI. Numerous indicators from different sources show that the UK compares favourably with its main competitors in the OECD.

1.2.7 Incentives and aftercare

- Industrial and regional policy has a relatively long history in the UK with varying levels of success depending on the objective of a particular policy.
- Deregulation and privatisation programmes over the last two decades have been generally successful in promoting competition, innovation and growth. However, the distributional effects, of grants and subsidies offered to foreign firms to invest in the UK, are argued to be a temporary measure and not self-sustaining.
- However, the RSA program is shown to have had a positive impact on both employment and investment, but that there is no statistically significant effect on productivity (TFP). It is argued that RSA, by supporting less efficient enterprises, maintains their lower productivity performance thus negatively affecting regional and aggregate productivity growth.
- There is survey evidence that some inward investors find the UKTI support in giving information and network contact beneficial in their decision to locate in the UK or on other aspects of their investment. This is also related to the issue of aftercare which is seen to become more important in the future for not only retaining existing stock of FDI, but by doing this well can help in sustaining high levels of new inward FDI.

1.2.8 Exchange rates

- The literature on currency fluctuations shows that a relatively stable exchange rate offers certainty for foreign investors and may increase inward FDI. Sterling has depreciated against the dollar and appreciated against the euro since the onset of the recent financial crises, which will at the margin have had positive effects on inward investments from the US and less of an incentive for EU FDI.

1.2.9 Agglomeration

- The literature on spatial agglomeration shows that FDI inflows are significantly affected by agglomeration economies.
- For the UK, evidence shows that past success is a determinant of future success in attracting foreign FDI inflows, in the sense that previous FDI inflows act as a stimulus for future FDI inflows. This is particularly the case for regional concentrations of given industries which produce goods and services using world leading technology, thus adding support to the importance of agglomeration for the maintenance of industrial advantages.
- The UK compares well with its European counterparts with regards to agglomeration economies having established world renowned clusters in both manufacturing and services sectors across different regions of the UK.

1.2.10 The future for FDI in the UK

- The immediate prospects for global FDI remain very uncertain. For example, at the end of October 2012 UNCTAD further reduced its forecast for total FDI flows in 2012 to below \$1.6 trillion, following a substantial rise in both 2010 and 2011.
- Overall, this analysis suggests the UK will continue to find itself in a very competitive environment for inward FDI, and that FDI into Europe will continue to be a reducing proportion of global FDI flows.
- In the medium-to-long term, we see a world where in general the factors that dominate FDI flows will remain consistent, but how they will influence FDI will change.
- While the underlying forces will remain the same, we do however see that transport costs and being near to customers will again become increasingly important, this time leading global firms to locate in the BRIC world in order to secure their position in those markets. Competition for FDI therefore will occur between locations within continents, but with a far greater proportion of global activity looking east and south. This trend is likely to be more pronounced in manufacturing than in services.
- In general, the UK remains in a relatively good position to continue to attract an above-average share of FDI coming into Europe. However, FDI in Europe is likely to be a dwindling share of global FDI flows, and the UK has more concerns with respect to competition for FDI from BRIC and other emerging economies.
- More generally, the global economic downturn has seen countries reversing the trends of the 1980s and 1990s of offering large subsidies in order to attract internationally mobile capital. It is also true that much of the funding channelled into these activities in the UK has been either directly or indirectly linked to initiatives to redress regional imbalances within the European Union. With the accession of more EU members from central and eastern Europe, funds available for structural adjustment within the EU 15 are more limited.
- This also needs to be considered in terms of the importance of host-country sector performance in attracting the “right sort” of FDI. High performing sectors, with high levels of productivity growth, innovation and export performance, attract inward investment with a similar profile. Equally, sectors whose comparative advantage is based on low wage costs or high levels of public sector support tend to attract FDI of a similar nature.
- This highlights the role for policy more generally, not merely in attracting inward investment, but in supporting innovation, exporting and skills development at the local and sectoral level, in order to maximise the gains from inward investment. Local and national policy makers should better understand the links between the motives for firms to engage in FDI and the likely benefits derived from it.

2. Recent trends in inward foreign direct investments into the UK

2.1 Introduction

Over the last three decades, the United Kingdom (UK) has performed well in attracting high volumes of inward foreign direct investment (IFDI). Although emerging-market multinational enterprises (EMNEs) have started to invest in the UK in recent years, developed economies continue to account for the major share of the UK's IFDI stock. In common with other developed countries, mergers and acquisitions (M&A) have been the preferred entry mode of multinational enterprises (MNEs) in the UK. However, recently the UK has been reinforcing its position as the leading FDI location for greenfield projects¹ in Europe. Although the bulk of the UK's IFDI stock is concentrated in the services sector, foreign companies play a major role in the manufacturing sector, contributing to technology generation, employment and growth. With a relatively high weight of IFDI stock in its GDP, the UK is one of the countries where foreign firms contribute the most to the economy. However, the contribution of foreign affiliates varies significantly across regions within the UK.

2.1.1 Evolution of IFDI stocks

Since 1990 the IFDI stock in the UK has risen six-fold, from US\$204 billion in 1990 to US\$1,199 billion by the end of 2011 (Annex Graph 1 and Annex Table 1). The UK has consistently been one of the best performing countries in terms of attracting inward investment. The IFDI stock has risen from 20% of the UK's GDP in 1990 to 50% in 2011, a ratio that is substantially above similar economies like the US, Germany or Japan (Annex Graph 2 and Table 2).

Developed economies account for much of the IFDI stock in the UK (Annex Graph 3 and Table 3). In 2010 the European Union was responsible for nearly 50% of this, up from 34% in 1995. On average, the Netherlands, France and Germany have been the three countries with the largest IFDI stock in the UK during 1995-2010. However, recent years have seen the emergence of other important investors from the EU, including Spain. Historically, the US has been the single most important country investing in the UK, yet its contribution to the total IFDI stock decreased from 42.8% in 1995 to only 27% in 2010. Although still marginal, EMNEs (largely from Hong Kong, Singapore, India and China) have started to enhance their presence in the UK.

In terms of sectoral distribution, the IFDI stock in the UK is concentrated in the service sector (Annex Graph 4 and Annex Tables 4a and 4b). The value of the IFDI stock in the service sector reached 71% of the total IFDI stock in 2011, up from 63.2% in 1999. Financial services; retail and wholesale trade and repairs; and information and communications have been the main service sectors hosting FDI since 2009. In contrast to the observed upward trend in the service sector, the contribution of the manufacturing sector to the UK's IFDI stock has significantly declined, from 26.6% in 1999 to 19.3% in

¹ Greenfield investment here means physical investment in new facilities in the UK, as opposes to FDI via mergers and acquisitions, joint ventures etc.

2011, with most industries within this sector experiencing significant reductions. Traditionally, within the manufacturing sector a large portion of FDI has gone to chemicals and related industries, but in recent years the food sector has also become one of the major industries receiving significant amounts of FDI, hosting almost 30% of the manufacturing IFDI stock in 2011. Other manufacturing industries that have received important FDI over time include metal and mechanical products and transport equipment. The share of the primary sector, on the other hand, has been subject to wide fluctuations as flows of FDI into the mining sector have been highly volatile. On average the share of the mining sector in the total IFDI stock in the UK has ranged from 7.3% to 17% during the period 1999-2011.

It is difficult to show an international comparison of the sectoral distribution of the IFDI stock across countries given the lack of internationally comparable sectoral FDI data. However, an approximate comparison with Germany, one of the largest host countries for IFDI among developed economies, shows some important differences with the UK. Firstly, although the IFDI stock in Germany has also been highly concentrated in the service sector, the share of the sector has remained relatively stable over time (Annex Table 5). While in 2000 the service sector hosted 68% of the total IFDI stock in Germany, this fraction decreased to 66% in 2009. This pattern contrasts with the increasing importance of the service sector as a host for IFDI in the UK. Second, unlike in the UK, the mining sector in Germany has attracted a very small fraction of the foreign investments, hosting less than 1% of the total IFDI stock in 2009. As a result, the importance of the primary sector as a host for FDI has been significantly lower in Germany than in the UK. Third, the manufacturing sector in Germany has attracted a significantly higher and relatively stable share of the total IFDI in the country. The sector hosted 33% of the IFDI stock in Germany in 2009, up from 32% in 2000. Annex Graph 5a and 5b show that with the exception of chemicals and related industries, the sectoral distribution of the IFDI stock within the manufacturing sector also differs between the two countries. One clear difference is the relative smaller share of the food sector as a host for FDI in Germany in comparison to the UK.

Figures in Annex Tables 4a and 4b might reflect the distribution of activity across sectors more generally. In order to get a better sense of differences in FDI penetration across sectors, Annex Table 6 shows the FDI inward stock as a percentage of gross value added by sector. On average, the presence of FDI in the primary sector has been overwhelming, compared to that in the manufacturing and service sectors. This phenomenon is largely explained by the high shares of FDI in the mining sector in relation to the size of the sector. A comparison between manufacturing and service sectors shows that overall manufacturing industries have displayed a greater presence of FDI, especially in the food, textile and chemical industries. The intensity of FDI in the service sector, on the other hand, varies significantly from industry to industry. On one side of the spectrum, the financial services industry has displayed very high levels of FDI penetration, whereas at the other end of the scale the construction service has shown significantly lower shares of FDI stock compared with the size of the sector.

2.1.2 Evolution of IFDI flows

As Annex Graph 6 and Annex Table 7 show, long run growth in inward FDI has an upward trend, but with a large amount of volatility. From averaging only US\$17 billion during the period 1990-1994, FDI flows into the UK increased at a high annual rate during the years 1995 to 2000, reaching levels of US\$118.8 billion in 2000. This upswing trend then reversed during the subsequent four years and by the end of 2003 the UK

managed to attract foreign investments of only US\$17 billion. M&A is the dominant entry mode of MNEs into the UK, and has been increasingly so since 2004, accounting for the observed boom of FDI inflows into the UK during the period 2004-2007 (Annex Graph 7). Such investments were however severely affected during the recent global economic and financial crisis leading the total IFDI flows to sharply decline during the years 2007-2010, with only a slight recovery in 2011.

In general, during the crisis period FDI patterns changed from cross border M&A to developed countries rich in natural resources, such as Australia and the US, and towards developing and transition economies (Annex Graph 8 and Annex Table 8). The UK experienced a fall of almost 80% between 2007 and 2011 in foreign acquisition. These drops were largely explained by the lower activity of MNEs from other European countries into the UK (Annex Graph 9).

However, during the crisis period, the UK was one of the few developed countries attracting relatively large investments in Greenfield projects during the period 2007-2010, reinforcing its position as the leading FDI location for Greenfield investments in Europe (Annex Graph 10 and Annex Table 9).

Overall, despite being disproportionately more affected than other European countries during the crisis period, UNCTAD have shown that the UK performed relatively well in attracting FDI on the basis of its potential to attract such investments. According to the UNCTAD's Inward FDI Attraction and Inward FDI Potential Index, the UK attracted the expected amounts of IFDI whereas other countries with similar (high) potential to attract foreign investments, such as Germany, France, the US and Japan, performed below their expectations (Annex Tables 10-12)².

2.1.3 Greenfield foreign investment in the UK

During the period 2003-2011, more than 4,500 MNEs invested in Greenfield projects in the UK, around 12% of all companies investing in Greenfield FDI globally. Most of the Greenfield investments during this period were concentrated in the service sector (Annex Graph 11 and Annex Table 13). With relatively few large-scale projects, construction accounted for most of the capital investment in the service sector, whereas an important number of smaller projects were observed in sales and marketing, business services, and the retail industries. Investments in the manufacturing sector accounted for only 10.7% of the number of projects, but they contributed to an important 16.8% of the new jobs created.

² UNCTAD compares the *performance* of countries in attracting FDI over a period of three years with their *potential* to attract foreign investments. Performance is measured by the Inward FDI Attraction Index which ranks economies according to their success in attracting FDI over a rolling three-year period. It is calculated as "the average of a country's rankings in FDI inflows and in FDI inflows as a share of GDP". The potential to attract FDI, in turn, is measured by the Inward FDI Potential Index, which captures four equally weighed key economic determinants to attract foreign direct investors, namely the attractiveness of the domestic market, the availability of low-cost labour and skills, the availability of natural resources and the presence of FDI-enabling infrastructure (UNCTAD, 2012, p. 29-30). A major drawback of the UNCTAD potential index is that it does not include technological indicators such as R&D expenditures or patents, yet there is evidence that technology-seeking is an important motivation for MNEs to invest in the UK (Driffield et al. , 2012).

US companies were actively engaged in Greenfield investments in the UK during the period 2003-2011, accounting for almost 40% of the number of projects, 30% of total investments and 41.5% of the new jobs attributed to Greenfield FDI (Annex Graph 12). Although other major investors were mainly MNEs from other developed countries, especially from the EU, there were few EMNEs actively enhancing their presence in the UK. Two examples of EMNEs actively investing in the UK during the period 2003-2011 were the Tata Group from India and the Dubai Holding from UAE, with 38 and 84 Greenfield projects respectively.

The three main motives for multinational corporations to undertake Greenfield investments in the UK are the proximity to customers, the potential for domestic market growth and the availability of skilled workers (Annex Graph 13)³.

2.1.4 Recent major IFDI deals in the UK

In common with other countries, the volatility of FDI inflows into the UK can be largely influenced by certain single large transactions occurring in some years. During the period 2008-2010 the top M&A transactions (above US\$1 billion) contributed to between 53% and 75% of the total value of cross-border M&A deals in the UK. These transactions, shown in Annex Table 14, have been undertaken by multinational corporations from a range of developed and developing countries across different industries in the UK. Similarly, a small number of individual large transaction have accounted for a high share of the total Greenfield investments into the UK in recent years. Annex Table 15 shows that the top ten largest investments represented 40% and 21% of the total Greenfield IFDI in 2008 and 2009 respectively.

2.1.5 Economic activity of foreign firms in the UK

The UK is the host of more than 45,000 foreign affiliates. Although they represent less than 2 per cent of the total number of firms in the UK, they play a major role in the UK economy. In 2010 they employed at least 3 million workers, accounting for more than 13% of the workforce employed and contributed to at least 36% of the total turnover in the UK⁴. Apart from contributing to output and employment generation, affiliates of foreign multinationals have also played an important role in the UK's technological development. They accounted for between 38% and 45% per cent of total expenditure in R&D performed in UK business during the period 1997-2010 (Annex Graph 14), with subsidiaries of US multinationals being by far the largest foreign investors in R&D (Annex Graph 15)⁵. Foreign R&D has been exceptionally important for the manufacturing sector, especially for highly intensive industrial activities such as motor vehicles and parts,

³ The FDI dataset provides information on the motives for why companies decided to invest abroad. Graph 13 shows the main motives for undertaking Greenfield investments in the UK reported by multinational corporations investing in 1,023 projects, that is, 13% of the total number of projects undertaken in the UK during the period 2003-2011.

⁴ Office for National Statistics, United Kingdom (2010), "Foreign ownership of businesses in the United Kingdom", available at www.ons.gov.uk/ons/publications/rereference-tables/html.

⁵ Office for National Statistics, United Kingdom, "UK Business Enterprise Research and Development" Statistical Bulletins from 1999 to 2010.

electronics and communication equipment, machinery and equipment, and precision instruments and optical products (Annex Graph 16)⁶.

Foreign-owned multinationals have also played an increasingly important role in stimulating investments and output growth in the manufacturing sector. As Annex Graphs 17 and 18 show, the scale of activities of foreign affiliates in terms of investments and added value has been overwhelmingly larger in the manufacturing sector compared to the service sector.

Overall, with a relatively high weight of IFDI stock in its GDP, the UK appears to be one of the countries in the UNCTAD list receiving above-average contributions of foreign firms to the economy (Annex Tables 16-18)⁷. However, the contribution of foreign affiliates to the UK economy differs from region to region. For example, Annex Graph 19 shows that during the period 1998-2008 the average share of investments undertaken by foreign affiliates in the manufacturing sector was on average 33%, with figures ranging from 24.6% for the North West of England to 52.2% for the North East of England. In the case of the service sector, foreign affiliates were most active in the North East and South East of England, with shares of 20% each, whereas service firms located in Northern Ireland and Yorkshire and the Humber contributed to less than 10% of the total services investments. Annex Graph 20 shows that there are also important regional differences in terms of the contribution of foreign firms to total output. Foreign affiliates located in Wales and the North East of England accounted for more than 40% of the manufacturing output, compared with only 25% for foreign manufacturing firms in the North West. Similarly, the contribution of service foreign firms ranged from 9% in Northern Ireland to 23% in the South East of England.

⁶ These figures in themselves may understate the importance of foreign ownership in the United Kingdom. Typically official data use a definition of 50% foreign ownership to designate a firm as “foreign,” though holdings below this may still represent a good degree of control

⁷ UNCTAD assesses the impact of FDI in a host economy by looking at the share of foreign affiliates in the host-country’s total value added, employment, wages and salaries, exports, R&D expenditures, capital formation and tax payments. For each of these impact indicators, countries are classified in four groups with similar contribution levels. Countries classified in the top quartile (i.e. countries with an inward FDI Contribution Index equal to 1 in Annex Table 16) are those host countries where foreign firms contribute the most to the economy for each of the impact types. The ranking of countries in the FDI Contribution Index (i.e. the last column in Annex Table 16) is calculated based on the simple average of the percentile rankings for each impact indicators, using equal weights (UNCTAD, 2012, p. 31). The performance of foreign firms in a host country is assessed in function of the relative size of the foreign investments in the economy (i.e. the share of FDI stock to GDP) (Annex Table 17). UNCTAD does not show data on the gross contribution indicators for each country (i.e. the share of foreign firms in the relevant indicators), but it shows the median values for each of them (these median values are reproduced in Annex Table 18).

3. A review of the (empirical) literature on the effects of inward investment

3.1 Introduction

Attracting inward investment is seen as a vital source of national and regional development. When one considers the limited investment incentives available, and the decline in these over the last 10 years, it is important to have a precise assessment of the impact of such policies, and to distinguish, for example, between policies designed to equalise income levels across regions with those seeking to maximise the benefit to the UK as a whole. One would also wish to consider the extent to which foreign and indigenous investment yield differential effects on, for example, employment generation, regional development, or aggregate productivity. The most common conceptual analysis of FDI suggests that this should be the case, but with little empirical work having been carried out. This is an important issue, with public money being spent on attracting inward investment projects. The remainder of this section provides a review of the empirical literature on the effects of inward FDI, designed to provide policy makers with a better understanding of these effects. For example, in the final section of this review we argue that in order to better understand the likely effects of FDI on the host economy, it is necessary to understand the drivers of that investment. In practical policy terms, this differs on a case by case basis, but we seek here to offer a framework for developing this approach within the setting of the existing literature.

We start this section describing the contribution that inward investment can make on regional development in general. Then we move on to discuss in more detail the effects of inward FDI on employment and labour markets, productivity, competition, domestic investment, technology transfer and trade.

3.2 Regional development

Regional development has always been an important consideration in the context of attracting inward investment. As a result the potential benefits of inward investment are often bound up with concepts familiar in economic geography. Shaver (1998), De Propris and Driffield (2005), Driffield et al. (2004, 2002) Menghinello et al. (2010) for example all stress the importance of location, in terms of agglomeration, cluster formation and embeddedness. This literature makes three distinct links between the theory of international business, regional development and the importance of space. Originally the focus in this literature was the extent to which inward investment created employment directly, as this was the focus of the main policy instruments designed to attract FDI. However the debate then turned to the indirect effects at a local level, with specific focus on multiplier effects, and subsequently spillovers and technology transfer. While the link between FDI, industrial performance and agglomeration is discussed at length in Driffield and Munday (2000, 2001) this was extended to include analysis of the extent to which new inward investment attracts further foreign investment, (Driffield, 1999b) and secondly the extent to which local supply chains play a part in both attracting inward investment and disseminating the benefits. This again was an important issue for policy makers, seeking to maximise the benefits of a given investment incentive.

The direct gains from inward investment to a host region are clear (Young et al. 1994). However, there is also some casual evidence that regional employment is boosted through re-location of UK firms, thus causing a loss in employment elsewhere. This suggests that the interests of a particular region may not coincide with that of the country as a whole (see for example Porter 1996). Such issues are likely to increase in the future, with the abolition of the RDAs and fragmentation into LEPs, who are likely to have to compete for policy resources from a single source.

Much of the theoretical work in this area is based on the work of Markusen and Venables (1995), which from a theoretical perspective stresses the impact of inward investment on a host region. This is articulated in a number of settings, for example productivity spillovers (Harris and Robinson 2004, Girma and Wakelin, 2007), wage spillovers (Latreille and Manning 2000) and innovation (Love et al. 2009). This highlights the importance therefore, even with plant level data, to allow for effects between firms across industries. In addition, it is now widely recognised that the effects of inward investment are transferred between regions. Driffield (2006) highlights the importance of inter-regional effects in productivity in explaining spillovers from FDI, while Driffield and Taylor (2006) highlight the regional spillovers in wage determination, and the differential effects of FDI on skilled and unskilled wages. The regional dimension in the literature also stresses the differential effects of FDI on labour markets across areas with different levels of economic activity. For example Girma and Wakelin (2007) show that the productivity effects of FDI differ between “assisted areas” (those regions of the UK characterised by high levels of structural unemployment) and the rest of the UK.

Typically, inward investment in assisted areas attracts subsidies in the form of EU interventions or Regional Selective Assistance, which are designed to address underlying unemployment problems. As such, building on Driffield and Girma (2003) and Jones and Wren (2008) we argue that in addition to inter-regional and inter-industry effects, it is also necessary to consider heterogeneity between regions. This is important, not only because of the underlying structural labour markets, but also because of the potential differences in motivation for firms to invest in different locations. Wren and Taylor (1999) for example argue that inward investors that enter areas of above average unemployment are essentially attracted by a combination of subsidies and the availability of low cost (relatively low skill) labour. Alternatively, firms that enter the more prosperous regions of the UK are motivated by the desire to exploit and develop core technological competences, and as a result employ higher proportions of high skilled workers. As a result, one would expect that inward investment in assisted areas may reduce wage inequality, while in non-assisted areas it may increase wage inequality.

3.3 Employment and labour market effects

The role of inward investment in direct employment generation is clear; as are the local multiplier effects, see Dunning (1993). There are however further considerations. Foreign firms for example pay significantly higher wages than do domestic firms (see Driffield, 1999), and also have much higher levels of productivity (Temouri et al., 2008). As such, inward investors tend to attract employment away from domestic firms, causing a loss in employment in the domestic sector.

In a similar vein, several studies identify substantial differences in factor demand between foreign and domestic firms (Taylor and Driffield 2005). The inference here is that foreign MNEs demonstrate higher levels of labour productivity and, in turn, greater

demand for high quality labour. Entry by such firms therefore is expected to have an impact on domestic labour markets via two mechanisms. Firstly, inward investment generates a straightforward labour demand effect stemming from an exogenous increase in output. Secondly, that better employees are attracted to inward investors away from other employers. This is consistent with much of the evidence on the impacts of FDI on labour markets (for a discussion of this literature see Driffield and Taylor, 2000) that suggests where inward investors recruit (for a Greenfield site for example) they do not recruit from the pool of unemployed, but from the employed. This increases labour market competition, especially for skilled workers.

It is generally accepted that FDI into western economies has increased inequality, generating greater wage differentials for skilled workers than have hitherto been observed. Increased wage dispersion is generally associated with labour market flexibility, though here causality suggests that FDI generates an increased demand for skilled workers. This in turn is a combination of two effects. Firstly, the entry of MNEs, in possession of technological advantages over domestic firms, and paying higher wages causes wages for skilled workers to be bid up. There is growing evidence for this in the UK. Conyon et al. (2002) find a foreign wage differential of 3.4%, while Girma et al. (1999) find wage and productivity differentials of 5%. Following on from this, foreign owned firms have different factor demands from domestically owned firms – even within the same industry, Driffield (1999).

Theoretical work to date has been based largely upon general equilibrium trade models with endowment driven comparative advantage, where the findings are mixed, variously suggesting that greater MNE activity can either raise or lower the skill mix (Feenstra and Hansen, 1997; Markusen, 1995; Markusen and Venables, 1998). Taylor and Driffield (2005) find that FDI has a significant impact upon wage inequality, even after controlling for the two most common explanations of wage inequality – technology and trade. They also report that inward investment accounts for some 11% of wage inequality between skilled and unskilled workers.

This work has recently been extended by Driffield et al (2009). Inward FDI does indeed impact on labour demand. Interestingly, this effect is significantly greater for the 1980s, when UK manufacturing was declining rapidly, compared with the more recent period. Specifically, inward investment acts to reduce employment of unskilled labour in UK firms, though the effect is relatively small for the 1990s and somewhat larger during the growth period up to 2007. This decline in unskilled labour is due to new foreign investment crowding out domestic employment.

Further, it is possible to distinguish between local and national effects of inward investment. Inward FDI is associated with an increase in inequality nationally, but not locally. This suggests that the local effects of FDI reduce inequality, perhaps through multiplier effects, supply chain linkages or agglomeration effects, while nationally the crowding out or competitive effect of FDI is greater. This work also distinguishes between horizontal (intra-industry) effects and vertical (backward and forward inter-industry) effects of inward investment. Where foreign firms buy from domestic ones, this increases demand for unskilled labour and reduces inequality.

There is a large literature that links the locations of firms to prevailing employment conditions, both within and across countries and industries. As Barrell and Pain (1997) show, one of the major impacts of inward investment into the UK has been to introduce new technology, while Driffield and Taylor (2005) outline the major technological

differences between the foreign owned and domestic firms. Driffield and Taylor (2006) and Bailey and Driffield (2006) highlight this increased return to skilled workers but link this to the greater mobility of skilled workers, such that inter-regional wage effects from inward investment are much larger for skilled workers than for unskilled. Further, productivity spillovers from FDI are partly facilitated by domestic firms becoming more skill intensive, and as such, one may expect wage spillovers to affect the market for skilled, rather than unskilled workers.

The fact that inward investment generates wage spillovers between regions of the UK suggests that inward investment encourages inter-regional mobility of skilled workers due to the higher wages on offer, thus increasing labour market flexibility. This effect is limited to skilled workers and areas with low unemployment as there are no significant external effects on wages for unskilled workers in assisted areas. At the same time, such regions have higher proportions of unskilled workers than non-assisted areas. This suggests that there is a good deal of labour market segmentation in the UK, both between assisted and non-assisted areas, between occupation groups, and between the foreign and domestically owned firms.

Taken together, these findings suggest that there are segmented labour markets in the UK, both in terms of regional differences and industry differences, but importantly between skilled and unskilled workers. These labour markets have different degrees of flexibility, and globalisation contributes to these differences in labour market flexibility, as well as labour market flexibility determining the impacts of globalisation. This suggests that responses to globalisation are rather asymmetric, and that while one can measure “labour market flexibility” there is not one uniform response to globalisation. Skilled workers generally do well from increased inward investment into the UK, and its attendant technology effects, while unskilled workers do less well. In the context of this paper, this highlights one of the key determinants of both labour market flexibility and the responses to globalization: skill levels.

3.4 Productivity: technology transfer and linkages, ‘spillovers’, and the motivation for FDI

It is a long-held view that one of the major benefits to a host country of foreign direct investment (FDI) is the superior foreign technology that accompanies the investment. Most traditional theories of FDI activity are based on Dunning’s (1979) eclectic paradigm, and particularly on the concept of ownership advantages. The broadest literature simply focuses on the basic question of whether productivity in a given sector increases following inward FDI. Barrell and Pain (1997) estimate that around 30 per cent of the productivity growth in UK manufacturing between 1985 and 1995 could be associated to the impact of inward investment. However, it is clear that this analysis does not distinguish between the direct and indirect effects of FDI, but rather looks at things in the aggregate. The major source of productivity growth in this context is simply what is generally known as the “batting average effect”. Simply put, new investment is likely to be more productive than the average incumbent, so average productivity increases. This may then be boosted still further if new entry drives out the least productive incumbents. These effects are uniformly accepted in the literature, and account for the large beneficial effects reported by Barrell and Pain (1997).

It is this area where the methodological approaches are perhaps the most important and the most contentious. A number of review papers, notably Görg and Greenaway (2004),

have highlighted the shortcomings in some of the earlier literature, notably the use of sectoral level data and cross-sectional regressions. This really establishes only that there is a relationship between inward investment and firm performance, rather than establishing a direction of causality. This highlights the need to address the problem of endogeneity (that better performing sectors tend to attract better performing inward investment), as well as the inherent endogeneity in productivity (firms which anticipate a positive productivity shock may invest in new capital, and thus increase productivity faster than firms which did not anticipate the change). As such, what is required econometrically is an approach that addresses these issues, which requires a long enough time series to establish direction of causality, firm level data which is finely enough grained to capture the productivity effect, and with appropriate instruments for the endogeneity problem. This then requires an estimation approach that addresses these issues, with the state of the art being a form of the Blundell-Bond GMM-IV estimator (Blundell and Bond 1998). In general, the literature finds that as sophistication increases in terms of data and estimation, then the potential scale of the estimates for the spillover effects decline by up to 50% compared with the earlier sector-based approach. Here we concentrate mainly on the relatively sophisticated estimates, and distinguish between three possible routes to productivity effects of inward FDI: first, direct technology transfer between MNEs and their foreign affiliates; second, linkage effects between MNEs and domestic enterprises; and finally externality or 'spillover' effects. Finally we consider the link between FDI motivation and productivity effects.

3.4.1 Technology transfer

In recent years a number of studies have questioned the conventional view of knowledge spillovers from parent MNEs to domestic host economies, channelled through foreign affiliates. Much of this has come from the recognition that the nature of the relationship between parent and affiliate, and between affiliate and the domestic economy, can be very flexible and mutually dependent. This frequently includes a substantial role for localised innovative activity at the affiliate level, and a substantial literature has developed on the internationalization of R&D and its role in technology sourcing by MNEs.

Veugelers and Cassiman (2004) seek to move towards a more direct approach towards prising open the 'black box' of knowledge transfer rather than relying wholly on inferring such flows from their indirect impact on local productivity. The most direct analysis of this effect is Driffield et al. (2010), who use a unique survey in intra-firm international technology transfer for inward investors in Italy. They have five main findings.

First, there is clear evidence of very substantial knowledge flows between MNE parent companies and their Italian-based affiliates. Although knowledge flows from parent to affiliates are common, there is also evidence of extensive flows in the reverse direction, often as part of a two-way transfer. Unlike most studies which concentrate on technology, they find that broadly similar patterns of flows exist for both technology and managerial knowledge.

Second, intra-firm trade and intra-firm knowledge flows are strongly related. Affiliates which are embedded into the parents' (physical) supply chain are more likely to receive and impart flows of new knowledge than those which are not. Third, affiliates' intangible capital intensity is strongly linked to 'reverse' knowledge flows from affiliates to parents. However, affiliate R&D capacity has no such effect after the intra-firm trade effect is allowed for. This appears to suggest that, at least for this sample

of foreign affiliates in Italy, technology and managerial knowledge flows running from affiliates to their parents (and other units of the enterprise) are unlikely to flow directly from the technology developed within the affiliate by its R&D efforts, but indirectly from knowledge absorbed from elsewhere. This does imply a degree of technology sourcing by such subsidiaries.

Fourth, export intensity is associated both with a greater likelihood of affiliate-parent technology transfer and with a reduced likelihood of (one-way) parent-affiliate flows. This suggests that the being exposed to external markets enhances the capabilities of the subsidiary, and makes it less (technologically) dependent on the parent organisation.

Finally, country of ownership matters in intra-firm technology transfer, but not in other forms of managerial knowledge flows. Specifically, Japanese affiliates are much more likely than those with European or American parents to have traditional parent-affiliate technology transfer, and are very unlikely to exhibit reverse transfer from affiliates to parents.

3.4.2 Linkages

Perhaps the best known theoretical treatment of inward investment and linkages is Rodriguez-Clare (1996). This shows that where inward investors purchase inputs from indigenous suppliers, then the developmental effects of this inward investment are all the greater. Rodriguez-Clare (1996) relates the extent of linkages between inward investors and domestic firms to the cost of communication between the head office of the MNE and the local subsidiary. Markusen and Venables (1996) extend the theoretical basis for the importance of agglomeration, showing that inward investment into a region will not only stimulate domestic activity, but that this domestic development may eventually replace the original FDI. There are, to the best of our knowledge no formal extensions of this that examine wage dispersion or inequality explicitly, either in terms of direct or indirect effects. However, there are theoretical treatments of the impacts of FDI more generally. Wang and Blomstrom (1992) for example present a model of technology transfer from FDI, and show that effort is required by recipient firms, in the form of human capital. This suggests that workers with more human capital will appropriate more of the beneficial effects of FDI than unskilled workers.

A number of studies examine this issue, generally providing evidence of positive FDI effects through backward linkages (Blalock 2001; Schoors & van der Tol 2001; Driffield et al. 2002; and Smarzynska 2002; Moran 2001).

3.4.3 Spillovers

A key question for example is the impact of ownership change in the context of inward investment. Given this unambiguous batting average effect, the literature has also sought to identify the productivity growth effects of FDI by looking at productivity effects associated with the acquisition of domestic plants by foreign firms. The early literature in this area is well summarised by Conyon et al., 2002; Harris and Robinson, 2002; Harris et al., 2005).

This highlights the various interactions between ownership change and productivity, and in general finds the following:

- Inward investors do have higher productivity than domestic firms
- In terms of ownership change, the largest effect is in terms of the sample selection effects – that is that high productivity firms or firms with the potential for high productivity growth are more likely to be targets.
- For the UK as opposed to work in developing countries, there is little effect either in productivity levels, or productivity growth of foreign firms acquiring domestic ones.

The literature on ownership change and productivity growth highlights one way of isolating the direct firm-level effects of inward investment from the more general aggregate effect. Where the literature is rather more mixed in its findings, is in terms of the indirect effects of FDI. There are many theoretical reasons why indirect effects may be expected, though the evidence is perhaps rather more mixed. For example, the ‘ripple through’ effects of changes in production and working practices triggered by the presence of new inward investors have been particularly important. The above suggests that there could be productivity gains at the industry level connected with foreign investment in that industry. Such firm specific advantages are often characterised as technology based, relating to economies of scale, capital intensity and R&D. Indeed, Blomstrom and Kokko (1996) provide several reasons why such technology is expected to transfer from MNEs to domestic firms. This can occur directly, through the licensing of a particular technology, through supplier networks or subcontracting arrangements, or indirectly as knowledge becomes public, and spillovers are assimilated by the domestic sector.

An important concept in the study of spillovers is the extent to which agglomeration economies occur. These arise from the geographic proximity of similar, technologically advanced enterprises. The presence of MNEs as leaders in both technological and capital accumulation serves to further stimulate the possibility for agglomeration in such locations (Cantwell, 1989). This increases the potential for technology transfer and therefore for improvements in the technological capabilities of domestic firms.

A further possibility for increased domestic productivity concerns the types of advantages possessed by MNEs. The non-technological advantages - such as managerial abilities, the exploitation of scale economies and superior co-ordination of resources - may improve performance if adopted by host-country industries. Related to the transfer of ownership advantages is the ‘demonstration effect’ (Caves, 1996). This includes phenomena such as local firms learning better management techniques or developing co-ordination economies as a result of FDI. A case in point is the so-called ‘Japanisation’ of UK industry.

3.4.4 The importance of motivation

The traditional starting point for considering the determinants of FDI from the perspective of the firm involves the assumed possession of some competitive or ‘ownership’ advantage, often knowledge-based. The public good nature of these firm-specific assets may make international exploitation of the advantage by contractual means hazardous, thus giving an incentive to engage in FDI (Buckley and Casson, 1976; Dunning, 1988; Horstmann and Markusen, 1996). Recent theoretical work predicts that firms which

choose to invest abroad are the most productive in the domestic economy, supporting the ownership advantage idea (Helpman et al., 2004).

However, the empirical and theoretical literature has begun to examine the possibility that an important motivating factor for FDI might be the desire not to exploit technology in a foreign country, but to gain access to technology; thus technology sourcing may be the motivation for FDI. For example, Fosfuri and Motta (1999) present a formal model of the FDI decision which embodies the possibility of technology sourcing. They are able to show that a technological laggard may choose to enter a foreign market by FDI even where this involves (fixed) set-up costs and where the transport costs of exports are zero. This is because there are positive spillover effects arising from close locational proximity to a technological leader in the foreign country which, because of the externalities associated with technology, decreases the production costs of the investing firm both in its foreign subsidiary operations and in its home production base. Where the beneficial technology spillover effect is sufficiently strong, Fosfuri and Motta show that it may even pay the laggard firm to run its foreign subsidiary at a loss to incorporate the benefits of advanced technology in all the markets in which it operates. Similar theoretical results are obtained by Siotis (1999).

Driffield and Love (2003) provide empirical evidence of the domestic-to-foreign 'reverse spillovers' on which the success of technology sourcing depends, and there is support for the technology sourcing motive from elsewhere in the empirical literature. Using R&D intensity differentials between home and host nations, Kogut and Chang (1991) find evidence that US-Japanese R&D differentials has encouraged the entry of Japanese joint ventures into the United States. In a similar vein Neven and Siotis (1996) examined both Japanese and US investment into the EC from 1984 to 1989, and intra EC FDI flows for the same period. Using Kogut and Chang's R&D difference variable to examine the possibility of technological sourcing, Neven and Siotis examine actual FDI flows rather than the propensity for foreign entry, and find evidence that FDI flows from the United States and Japan are associated with sectors in which the EC had a technological advantage, providing support for the technology sourcing argument. Further, the literature on the internationalization of R&D suggests that there is a growing willingness to locate such facilities close to leading centres of research and innovation specifically with a view to absorbing learning spillovers from geographical proximity to such sites (Pearce, 1999; Niosi, 1999). For example, an analysis of foreign R&D direct investment in the United States by Serapio and Dalton (1999) concludes that the nature of such investment is changing, with more emphasis on gaining direct access to American technology and expertise, especially in biotechnology and electronics. They also conclude that foreign firms are increasingly investing in R&D sites in the United States to access technologies that are complementary to those of the investing firms. Pearce (1999) comes to broadly similar conclusions from a survey of multinational corporations' production and laboratory facilities in the UK.

In a series of papers the links between FDI motivation and its effects in the UK are considered in detail (Driffield and Love 2006, 2007; Driffield Love and Taylor 2009). These papers consider explicitly the difference between technology exploiting and technology sourcing FDI (based on R&D intensity differentials at industry level) and also allow for differences in unit labour costs between home and host economies.

The findings are:

- The UK gains from productivity spillovers where the incoming investor has some form of technological advantage (“technology exploiting” FDI);
- This positive spillover is significant only where the technological advantage of the foreign investor is sufficiently great to offset the disadvantage of higher unit labour costs in the UK;
- Technology sourcing FDI has negative effects on UK productivity when it also has lower unit labour costs in the UK;
- Technology exploiting FDI has a positive effect on demand for skilled labour in the UK, especially where there is no labour cost advantage in the UK;
- Technology-sourcing FDI reduces the demand for skilled labour in the UK, especially where the UK has lower labour costs;
- Technology sourcing FDI increases demand for unskilled labour where unit labour costs in the UK are lower than in the home country.

In summary therefore, the links between the motivation for firms to engage in FDI in a given location, and the likely impact of that investment are clear. FDI motivated by the desire to exploit technological advantage in a host country is more likely to generate international technology transfer and technology transfer from the affiliate to the domestic industry, either through supplier linkages or through spillovers more generally. At the same time however, this activity is likely to demand high skill employment, and is unlikely to generate large scale employment. Indeed, such investment may even exacerbate inequality at either a national or regional level. In contrast, FDI attracted to the UK due to our flexible labour markets and (compared with immediate EU neighbours such as France and Germany or Scandinavia) low labour costs, are unlikely to generate international technology transfer, or significant productivity growth, but are more likely to have beneficial employment effects, especially in less advantaged regions.

3.5 Competition

Links between market concentration and FDI have been of interest for many years. This is based on the classic work of Hymer and Kindleberger, for example, who argued that FDI was a feature of market imperfections, motivated by the desire to earn monopoly rents, and that therefore FDI must be associated with market power. The rationale for FDI leading to increases in host market concentration, is set out by Hymer (1960) and Cowling and Sugden (1987). They argue that inward investment will exacerbate the monopoly problem, as MNEs seek to generate the maximum scale economies, through the operation of the international division of labour. As such therefore, the MNEs will act to displace domestic producers, through increasing the industry’s minimum efficient scale, and therefore increase concentration and reduce competition. Cowling and Sugden (1987) then argue that as a result of this, the scope for collusion, and monopoly pricing in the host country will be increased.

While empirical papers linking FDI to host country concentration are limited in number, several authors have tested more indirectly that inward FDI can affect domestic firms market shares or profitability. Aitken and Harrison (1999) for example, argue that one of the impacts of inward FDI, is that the output of domestic firms is reduced as a result of the increased competition from the foreign entrant. Driffield (2001b,c) tests this, and generates a series of findings. First, high levels of profitability attracts inward investment, and second, where entry barriers exist, inward investors with significant firm-specific

assets are able to overcome these where domestic entrants may not. Third, in such cases inward investment acts to reduce competition rather than increase it. This research highlights that in terms of industry competition there are two processes: there is the level of industry concentration, and there is the speed with which this changes (indicative of the speed with which firms can impact each other's market share). This research finds that FDI acts to reduce industry concentration (the five-firm concentration ratio) by about 7 percentage points, such that markets become more competitive. But at the same time, inward investment speeds up the competitive process, such that industries' concentration levels adjust faster than where all the large firms are domestic.

3.6 FDI and domestic investment

Work in this area is rather contradictory. De Mello (1999) for example suggests that one effect is 'capital deepening', that domestic firms respond to FDI by increasing and updating their capital stock. Aitken and Harrison (1999) and Buffie (1993) however suggest that domestic firms experience increased competition as the result of FDI, thus reducing their output, and at least in the short term, investment. Hejazi and Pauly (2003), who argue that inward investment has the effect of replacing, rather than supplementing domestic capital formation report a similar result for Canada.

In contrast, Driffield and Hughes (2003) show that overall the inflow of FDI into the UK in recent years has had the effect of boosting manufacturing investment in the domestic sector. This suggests therefore that there are indeed 'developmental' linkages between foreign and domestic companies, and that this effect is particularly strong in sectors such as motor vehicles and transport equipment for example. However, these effects appear greater for non-assisted areas, and there is evidence that inward FDI in assisted areas (where the FDI attracts the greatest subsidy) has crowded out domestic investment. Moreover, recent analysis for the Manchester Independent Economic Review (MIER 2008) found that there was no evidence of inward investment crowding out domestic investment in the Manchester City Region. Indeed there was evidence that foreign investment in upstream industries actually complemented investment by domestic firms in downstream sectors.

3.7 Balance of trade

The traditional Heckscher-Ohlin-Samuelson framework suggests that international trade and FDI are substitutes assuming labour and capital can move freely between countries and no transportation costs apply. The implication is that international trade involves an indirect exchange of production factors between countries (Liu et al., 2001). Mundell (1957) also holds that international mobility of factors of production, including FDI, may be a substitute for international trade if production functions are identical across countries. However, Kojima (1975) asserts that if the mobility of factors moves towards a country with a shortage then FDI may cause a positive impact on trade.

The concept of trade and FDI being substitutes is also strongly embedded in the theory of FDI. Dunning's (1988) eclectic paradigm theory implies that FDI and trade are substitutes, in that a firm moves from exporting to FDI when both transaction costs and manufacturing costs conditions dictate that this is rational for the firm. The analysis here is similar to that based on Vernon's (1966) product life cycle theory, and suggests there are two possible causal links between foreign direct investment and trade. Initially, trade

may lead to FDI, but over time foreign direct investment stimulates trade as FDI changes from being market seeking to efficiency seeking.

In a similar vein, Gray (1998) suggests that the relationship between FDI and trade is a function of motives of the firm to undertake FDI. If the motive is for market-seeking, FDI and trade tend to replace each other; therefore, substitution relationship occurs. However, if the motive is for efficiency-seeking, the relationship between FDI and trade is complementary in that an increase in the amount of foreign direct investment leads to an increase in the level of trade.

The new trade theory identifies two major determinants of the FDI-trade relationship (Fontagné and Pajot, 2000). Firstly, the way a firm is organised is a key determinant. A vertically arranged firm which locates its production processes in different foreign affiliates will experience a complementary relationship between its foreign trade and investment, with each reinforcing the other. A horizontally arranged firm will produce a given commodity at one location, probably close to the market if transport costs are relatively high and the minimum plant size is not too large. Secondly, economies of scale reduce the number of plants to achieve greater efficiency, yet at the same time transportation costs and trade barriers provide an incentive to increase the number of plants. If a firm has high fixed costs and each plant has limited fixed costs, a firm is provided an incentive to locate production close to its markets and FDI will substitute for trade if transport costs are a significant factor.

Many of these arguments are summed up by Pacheco-López (2005), who points out that there are two possible causal linkages between FDI and imports. Firstly, an increase in imports in a country leads to a rise in FDI inflows to the same country. She argues that imports show the existence of a demand for a commodity. As a result, multinational enterprises might be attracted to carry out direct investment in the same country in order to produce the product domestically. Secondly, the presence of multinational enterprises in the host country stimulates an increase in imports through a rise in demands for imported supplies, such as raw materials and intermediate products, as well as capital goods from the home country.

The bulk of empirical work so far has focused on establishing the relationship between FDI and trade in the home country as opposed to the host country. However, work on China (Liu et al., 2001), Mexico (Alguacil et al., 2002; Pacheco-López, 2005), and Turkey (Mekki, 2005) all focus on the host country. These studies take a range of methodological approaches, and find conflicting results concerning the relationships between trade and FDI.

Blomstrom and Kokko (1994), survey the early literature, and argue that FDI reduces exports by the firm undertaking the investment, but also stimulates intra-firm trade in intermediate goods. The UNCTAD (2002) World Investment Report summarises many of these arguments. An increase in the quantity of inward FDI boosts exports in host countries through the accumulation of capital, introduction of new technology, and improvement in management and marketing strategies which are brought and practised by the multinational enterprises. Thus, according to the UNCTAD, one of the key determinations of exports in a country is its inward direct investment. This is particularly true for the situation where the country is used as an exports platform or base by multinational firms.

3.8 Summary: the gaps in the literature

The gaps in the existing evidence base are essentially related either to the well-known gaps between the theory on which the analysis is based and the practical limitations of testing for indirect effects using econometric approaches, or due to paucity of data. The essential problem in carrying out empirical work in this area, is that, as Narula and Driffield (2012) and Driffield and Jindra (2012) discuss in a good deal of detail, one is essentially seeking to identify what are mostly indirect effects, but employing direct measures. This is most obvious in the case of spillovers, but is also true of technology transfer more generally. There are few datasets that provide good data on knowledge transfer within the firm for example, and fewer still that cover intra-firm trade, or the motivations for firms to engage in FDI. Such sources tend to be limited to either surveys of very small samples, or qualitative approaches such as case studies from which it is difficult to generalise. The existing literature points to a positive relationship between FDI and most measures of firm or industry performance, but few are able to identify the magnitude of the net effect (allowing for the direction of causation), and fewer still able to offer a test of the hypotheses around why this happens. There is a good deal of conceptual development for example on why FDI should be linked to international technology transfer or spillovers, but few tests of how this happens in practice.

In general, this literature points to the positive impact of FDI across these areas, though the areas of disagreement relate to the magnitudes. In general, the main problem is that in most cases what is observed is the net effect of at least two competing forces. For example, in terms of the employment effect, there is the positive effect associated with both direct employment, and the indirect effects associated with both increased activity through supply chains and related industries, and the more general multiplier effects, contrasting the crowding-out effects felt in incumbent firms. One can make the same point about the relationships between inward investment and investment by local firms. Equally, while inward investment is seen as an important part of the competitive process, with MNEs being able to overcome entry barriers that local firms cannot and FDI therefore increasing competition, investment by very large firms that acquire large market shares (perhaps through superior products or better technology) may well be welfare improving, while at the same time reducing competition in the long run. In a similar vein one can consider the relationship between trade and FDI, there is the assumption that market seeking is trade replacing, but may lead to higher trade through intra-firm trade.

4. Determinants of FDI: explaining firm location

There is a large literature that seeks to link firm location to many macroeconomic and other national-level factors to account for differences in FDI flows across countries. The international business and economics literature suggests that there are many interrelated FDI determinants and that the ultimate location decision of MNEs depends on a composite of these various factors and that these will vary in significance between firms. The following sections briefly describe the UK's performance in these determinants vis-à-vis rival host countries.

4.1 Market size

Host country market size is generally found to be positively associated with higher foreign direct investment, due to larger potential demand and lower costs due to scale economies. For example, Resmini (2000), looking into manufacturing FDI, finds that countries in Central and Eastern Europe with larger populations tend to attract more FDI, while Bevan and Estrin (2000) present similar results, namely that transition economies with larger economies also tend to attract more FDI. Higher GDP growth rates of host markets and regions within a host country are of similar importance for potential MNE investments (Pain and Lansbury, 1997).

Driffield and Munday (2000) show evidence that domestic industry performance has a significant effect on FDI inflows into the UK. Domestic sectors characterised by greater scale are also characterised by higher levels of foreign investment. Industry size is also positively associated with new inward investment, thus providing support to the contention that larger markets in absolute terms provide greater potential for foreign entry. The past profits of the industry and industry growth are also significantly and positively associated with new inward investment.

4.2 Openness

There are a large number of macro-level studies based on developing countries data that employ openness as a control variable when seeking to explain variations in FDI inflows. We do not discuss them here for two reasons. Firstly, theoretically there are reasons why openness should both attract FDI and discourage it. Openness of a country is typically associated with lower transaction costs, which are associated with greater FDI inflows. Secondly, most measures of openness are trade based, and as the literature on this recognises, trade and FDI at the country, industry or firm level, are both complements and substitutes.

As such, all one gleans from such analysis is the average net effect for a particular sample of countries. To be more specific, a decrease in openness might be associated with more horizontal FDI, as investing firms might benefit from circumventing trade barriers through building production sites abroad. But Resmini (2000), studying manufacturing investment in Central and Eastern Europe, finds that these largely vertical FDI flows, benefit from increasing openness, as might be expected in a sector for which international trade flows in intermediate and capital goods are important. Singh and Jun

(1995) also find that export orientation is very important in attracting FDI, and link this to the rising complementarity of trade and FDI flows. As is well documented, the UK is possibly the most open economy in the world, both in terms of capital movements, trade flows and FDI flows, with high levels of intra-firm trade with UK MNEs and foreign MNEs based here. It is clear that this openness has encouraged foreign firms to invest in the UK as well as trade with it, shown by consistently high volumes of trade. Pain and Lansbury (1997) report evidence that the European single market has promoted the level of investment rates within EU member states. De Menil (1998) also shows that the EU involves increases in the flow of information and capital, which in turn increase FDI flows.

4.3 Host country sector performance

Much of the empirical literature that seeks to explain variations in FDI between sectors within a given country, focus on the relative performance of the sectors concerned, see for example Driffield and Munday (2000), Driffield (2002). This approach stems from the literature on firm entry more generally, summarised in Geroski (1995), and Siegfried and Evans (1994). This focuses not only on profitability, but also market size (typically proxied by existing sales) and growth.

Equally, it is recognised that innovation locally attracts entry, not merely for technology sourcing reasons, but that in general more innovative sectors are more likely to attract globally mobile firms, an argument linked to the discussion of agglomeration discussed above. Applied work in this area seeks to model what may be considered “intellectual property” more generally, including industry R&D expenditure, and advertising intensity, and related to this are the apparent economies of scale and domestic investment intensity. This literature also includes a measure of revealed comparative advantage, following Maskus and Webster (1995), Neven and Siotis (1996), Milner and Pentecost (1996).

One issue that this literature highlights, based on the analysis of Head et al. (1995) and Krugman (1991) is that many of the forces that stimulate this process are then self-perpetuating. While a very strong sectoral performance may generate entry barriers, deterring FDI, or agglomeration forces may become so strong that saturation occurs, there is little evidence of this happening, and indeed the “hotspots” of FDI into the UK, such as the corridors of the M11, M4 and M40 have been stable for some 20 years.

4.4 Distance/transportation costs

There is a literature that discusses the importance of distance between (typically national) locations and FDI. However, as with the other literatures that link FDI to transport, distance is typically not central to the fundamental hypotheses of the work, but rather a control variable.

This literature typically takes the form of modelling bilateral FDI flows between countries, and employing a measure such as the physical distance between, for example, the capital cities of the countries. This measure has the advantage of being uncontroversial and easily collected, even if for large countries it has a degree of inaccuracy. The literature finds almost uniformly an inverse relationship between distance between countries and FDI flows. In many ways these results are surprising. The theory of international business (usually erroneously) treats FDI and trade as substitutes at the firm

level. It is argued, for example, that typically companies enter foreign markets through exporting, and then when the demand for the product reaches a given scale, the set up costs of undertaking FDI outweigh the transport costs of exporting. This would suggest that while distance should be negatively associated with trade, it may be positively associated with FDI. This argument is made by Egger and Pfaffermayr (2004) to justify their results.

Smarzynska and Wei (2006) for example report elasticities of FDI flows with respect to distance in the magnitude of -0.47. For FDI to transition countries, distance becomes less important, with Bevan and Estrin (2004) reporting elasticities of -0.06. Perhaps more informative, given the large proportion of FDI into the UK that still comes from the US, is a study reported by Blonigen and Davies (2004). They find that the elasticity of FDI with respect to distance from the US is of the magnitude of -0.2. Equally, Grosse and Trevino (1996) find similar results for FDI to the US.

These results suggest that, in explaining FDI, it is not so much the interactions between trade costs and distance as between coordination costs and distance that motivate the location of FDI. Further, it is important to recognise that the motivations for engaging in FDI are numerous and varied, and that many firms engage in both FDI and trade. Most large firms for example have multi levelled international production networks, engaging in both FDI and trade at various stages within the supply chain. As such, the ability to coordinate activities, as well as to trade in intermediate goods and services, both internal to the firm and externally are important considerations in location decisions. Improved transport infrastructure can but improve this.

The inference is similar when one considers the literature seeking to link FDI to cultural, rather than spatial distance. All of this literature uses the same sort of cultural index, typically a composite measure based on the distance of respective countries from the USA on all four dimensions of Hofstede's (1983) cultural distance measures. A low score indicates greater cultural proximity to USA, and a high score greater psychic distance. Universally this literature finds an inverse relationship between cultural distance and FDI flows (see for example Li and Guisinger 1992; Erramilli and DSouza 1993; Barkema et al. (1996). However, the extent to which better transport links can serve to break down cultural distance remains unanswered.

With regards to transportation costs, Brainard (1997) examines the extent to which MNE location choice reflects a trade-off between being close to customers and achieving economies of scale by concentrating production at home. He shows that FDI increases relative to exports the higher the transport costs and trade barriers and the lower the investment barriers and scale economies. Helpman et al. (2004) also incorporate transportation costs in their model and conclude that intra-industry firm heterogeneity plays an important role in explaining exporting and horizontal FDI. Generally, this literature suggests that FDI inflows into a host country depends on the type of FDI that is attracted to it and with it the numerous sunk costs of establishing foreign subsidiaries including transportation costs. This is typically considered alongside infrastructure that facilitates both international and domestic transport.

4.5 Infrastructure

There is a relatively large literature that seeks to link infrastructure quality to a location's ability to attract FDI. Infrastructure here is used in a very general sense to include not just transport infrastructure but related issues such as telecommunications provision. The literature discussed below includes various measures of infrastructure, including road, rail and airports as well as telecommunications and access to ports. However, in most cases, infrastructure is not the main focus, but rather a control variable while the main focus is on governance, labour costs, or subsidy, among others. One of the reasons for this is the difficulty of obtaining consistent data on infrastructure quality or availability.

Much of the literature in this area focuses on the importance of infrastructure within the context of developing economies. While less relevant in terms of the magnitudes of relative effects (the relative importance of infrastructure compared with labour costs for example in explaining the location of FDI), such literature may still be informative for developed economies in linking the decisions involving the location of internationally mobile capital.

However, perhaps the best known papers linking infrastructure to FDI in developed countries, and in turn to regional development, are Coughlin et al. (1991), Coughlin and Segev (2000) and Fredriksson et al. (2003). All of these find a positive link between infrastructure and the ability of a region to attract FDI. The most useful for current purposes is perhaps Coughlin et al. (1991), which uses three measures of transport infrastructure, highways, railways and airports (all per square mile) to explain FDI location across US states. All these are found to impact positively on FDI, but Coughlin et al. (1991) only report the "raw" coefficients rather than the marginal effects or increased probabilities that may result from increased infrastructure⁸. Similarly, Friedman et al. (1992) report that access to a port significantly increases the probability of a US state being able to attract FDI, but only the coefficients from a conditional logit model are provided.

In a UK context, Hill and Munday (1992) show the importance of road spending, which not only influences the number of FDI projects that enter a UK region, but also the level of employment in those projects. Similarly, for Wales, Hill and Munday (1991) illustrate the importance of infrastructure (roads) in attracting inward investment, but again while the coefficients appear large, elasticities are not reported. While there is significant evidence that increased infrastructure spending will attract higher levels of internationally mobile capital for both the UK and US, there is little evidence that provides results from which one can infer that an x% increase in infrastructure will generate a y% increase in inward investment.

An important consideration for the effect of infrastructure investment on levels of FDI is the extent to which different regions compete for FDI. An infrastructure investment in a particular region of the UK will affect the relative attractiveness of making an investment in all the regions of the UK. Improvements in the infrastructure in a region may lead to

⁸ When undertaking any of the limited dependent variable models such as probit or logit it is usual to report "marginal effects", that is how the dependent variable would respond to an x% increase in one of the explanatory factors.

greater investment in that region, but some of this will represent the shifting of investment from other parts of the UK (Hill and Munday, 1992).

4.6 Tax rates

It is widely believed that tax rates and reforms/harmonization in Europe have important repercussions on company behaviour and particularly on MNE location choice (European Commission, 2001; OECD brief 2008). A vast literature, since the 1980s, tends to support this belief by offering many estimates of a significant effect of taxes on FDI inflows.

Generally, in measuring how FDI responds to changes in taxes, the literature makes a distinction between which tax rates to consider or which are considered by foreign investors. For example, Devereux and Griffith (1998) using a conditional logit model show that the effective average tax rate (EATR) – as opposed to the effective marginal tax rate (EMTR) – plays a significant deterring role in the location decision of US MNEs in the period 1980-1994 that locate in Europe, including the UK, Germany and France. In particular, Devereux and Griffith (1998) show that the sensitivity of the UK to average tax increases is higher than Germany and France. The marginal effect of increasing the UK EATR by 1 percentage point will reduce the conditional probability of a firm locating in the UK by 1.29 percentage points. Similarly, for France a 1 percentage point increase in the EATR reduces the conditional probability of a firm locating there by 0.50 percentage points, whereas the for Germany the impact is 0.97 percentage points. The mean elasticities of the probability of choosing each location with respect to the EATR are reported as -0.4 for the UK and -1.7 for France and Germany.

Bénassy-Quéré et al. (2005) also show evidence that tax differentials play a significant role in understanding foreign location decisions. Based on a panel of bilateral FDI flows for 11 OECD countries over the period 1984–2000, they report negative and significant coefficients on tax differentials, highlighting the adverse effect of higher taxation on FDI inflows into a host country. They measure the semi-elasticity of the statutory tax differential to be -4.22, which means that a 1 point rise in the host corporate statutory rate relative to the investor country rate reduces FDI inflows by 4.22%.

Overall, many studies differ in the tax rates considered and country and method used, which partly explains the range of outcomes. However, according to Mooij and Ederveen's (2003) meta-analysis on 25 empirical studies, the median value of elasticity of FDI to tax rates is around -3.3 which means that a 1 per cent reduction in the host country tax rate raises FDI in that country by 3.3 per cent. The range of semi-elasticities starts from -10.9 per cent (Hines, 1996) to +1.3 per cent (Swenson, 1994), which mostly depends on the estimation method (Desai and Hines, 2001). However, the vast majority of the reported elasticities are negative. Other extensive reviews of the literature include Hines (1997, 1999) and Gordon and Hines (2002) who suggests an estimate on the basis of the literature between -0.5 and -0.6 (i.e. a 1% higher tax rate leads to a reduction in FDI inflows of 0.5 to 0.6 per cent). Another literature review by Gorter and De Mooij (2001) suggests that intra-European investment flows tend to be more responsive to tax rate differentials than intercontinental flows.

4.7 Labour market flexibility

Labour market flexibility is seen by policy makers as facilitating better firm performance and higher levels of firm productivity, and is generally considered to be a precondition for economic strength (HM Treasury, 2003; Anderson, 2006). However, labour market flexibility is multifaceted and goes beyond factor cost differentials. It includes for instance labour market regulation (employment protection) and institutional arrangements with regards to wage bargaining. Whether and to what extent changes to labour market conditions affects inward FDI is the focus of a large literature which is summarized below. The economics literature shows that factor cost differentials, and in particular unit labour cost differentials (wages adjusted for productivity differences), are an important determinant of FDI flows. This is evident even in FDI between advanced industrialised economies (Pain, 1993; Bajo-Rubio and Sosvilla-Rivero, 1994; Barrell and Pain, 1996; Love and Lage-Hidalgo, 2000; Love, 2003). For example, Barrell and Pain (1999) suggest that unit labour cost may be a significant factor suggesting that 1 per cent increase in the relative unit labor cost in the USA is associated with a 0.89 per cent increase in FDI inflows into the EU.

Labour market rigidities are generally seen to be a disincentive for attracting FDI, and particularly so for those industries where firms may face higher exit costs due to the greater risk of failure (Whyman and Bainbridge, 2006). Thus, studies indicate that lower closure costs are more likely to attract FDI (Cooke, 1997; Cooke and Noble, 1998; Haaland and Wooton, 2003). Similarly, Dewit et al. (2003) shows that differences in employment protection between countries is a significant determinant of FDI location, and that this effect increases the higher the cost associated with FDI. However, Pain and Lansbury (1997) report ambiguous results concerning the labour market reforms for the UK, where reducing the labour costs did not meet expectations in promoting increased FDI inflows, especially from high technology and innovative sectors.

One source of annual data on labour market flexibility is an index collected by the World Economic Forum in their World Competitiveness Reports. This index is constructed from extensive surveys of managers in 138 countries conducted by the World Economic Forum. In the survey, participants are asked to give a score to a number of questions describing the overall business climate and competitiveness of the country in which the firm operates. The scale of this index ranges from 1-7, where lower numbers represent more flexibility. The UK's labour market is on average much more flexible than many other OECD member countries, with the exception of for example the USA, Denmark and Switzerland.

The relative decline in UK trade union power is seen to be another attractive incentive in attracting FDI. Decentralised wage determination offers remuneration packages to be tailored to the firm specific characteristics such that firms including MNEs could pay different amounts relative to the risks faced in the competitive market place (Whyman and Bainbridge, 2006). For example, Haaland and Wooton (2007), show that with endogenously determined wages, the opportunity cost of labour and the employment protection legislation are key determinants for the location of FDI. They argue that while a country with low opportunity cost and flexible labour markets always wins the competition for FDI (as long as the MNEs are at least as risky as domestic firms), low employment protection dominates the investment decision for high-risk FDI, while for lower-risk FDI (but still more risky than domestic firms) low opportunity costs (and hence low wages and high subsidies) are more important.

A further consideration within the importance of labour markets, and labour market policy, is not merely the importance of the availability of skilled labour, but of immigration. This is considered essentially from two standpoints. Firstly, there is the analysis of Wei and Balasubramanyam (2006) that examines the link between FDI and migration in terms of “push” and “pull” factors for labour mobility. Large diaspora populations attract investment from the home country, and this may explain the high proportions of Indian FDI that targets the UK. More generally, Gheasi et al. (2012) argue that migration of skilled labour influences FDI flows in both directions. One issue with this is the extent to which one can distinguish migration effects from labour market flexibility in general, as more flexible labour markets are better placed to absorb migrant labour, and indeed the extent to which migration is merely another measure of openness.

4.8 Institutions

Surveys of investors have indicated that political and macroeconomic stability is one of the key concerns of potential foreign investors. Institutional quality is seen as a likely determinant of FDI for a variety of reasons. First, good governance is associated with higher economic growth, which should attract more FDI inflows. Second, poor institutions that enable corruption tend to add to investment and transaction costs and thus reduce profits. Third, the high sunk cost of FDI makes investors highly sensitive to uncertainty, including the political uncertainty that arises from poor institutions.

For example, Wei (2000) finds that corruption significantly adds to firm costs and impedes FDI inflows. However, empirical results are mixed. Wheeler and Mody (1992) find that political risk and administrative efficiency are insignificant in determining the production location decisions of U.S. firms. Also regulatory framework, bureaucratic hurdles and red tape, judicial transparency, and the extent of corruption in the host country are found insignificant by Wheeler and Mody (1992) in their analysis of firm-level U.S. data. Differences in results may be due to different measures of institutional quality and different types of data (investing firms versus aggregate FDI inflows).

There is surprisingly little empirical evidence on the potential relationship between planning restrictions and the ability of a country to attract inward investment. There are probably two reasons for this. Firstly, that if a large scale inward investment project is mooted, then any local planning objections are typically addressed at source, through for example infrastructure improvements to ease traffic flow or to remove pressure on utility services. Secondly, that the literature which does exist tends to focus on the planning system as a second order problem, with infrastructure as the primary problem. Peck (1996) discusses this in some detail for example, highlighting the fact that infrastructure renewal is crucial for the continued attraction of inward investment, and as such the planning system needs to serve these needs. Tewdwr-Jones and Phelps (2000) express this in a somewhat different manner, expressing concern that some regions are less flexible than others in their application of planning laws with respect to inward investment projects, and that this led to the somewhat uneven distribution of inward investment through the 1980s and 1990s. There is however little to suggest that the UK’s planning laws have deterred inward investment. It is also true that most local councils appear, on the basis of their websites, to stress their flexibility on planning restrictions when it comes to attracting inward investment.

Data on governance indicators across countries is collected by a number of institutions. An example is the International Risk Country Guide (IRCG) compiled by Political Risk

Services Group. Their measures of indicators are consistent with measures available elsewhere, such as Transparency International, the Heritage Foundation Wall Street Journal or the Worldwide Governance Indicators project by the World Bank (Kaufmann et al. 2009). All of these sources show that the UK is ranked among one of the top in terms of investment climate, the level of bureaucracy, law and order, property rights protection (particularly IPR), government stability, perceived corruption among a host of other institutional indicators. Among the other countries doing similarly well as the UK in terms of institutional quality are the main OECD countries, such as the US, Canada, the Scandinavian and the Benelux countries, Germany and France. However, in Asia there are fewer countries, such as Japan and Hong Kong that can compete with the UK. However, the data for most of the Central and Eastern European countries as well as the BRIC countries show a clear disadvantage in terms of their institutional determinants which are seen as very important for inward investors.

A related issue, though perhaps less related to the UK, is the impact that environmental legislation has on FDI flows. In this context, we argue that environmental protection can be seen as another form of institution. Poelhekke and van der Ploeg (2012) for example argue that industries such as extraction, refining, construction, and food processing, tend to be attracted to countries with less stringent environmental regulation. This is typically known as the “pollution haven” hypothesis. Poelhekke and van der Ploeg (2012) however contrast this with what they label the “green haven” hypothesis, where more stringent environmental protection attracts the most socially responsible firms. This is a similar argument that is made in the context of smoking bans and FDI in the tobacco industry by Crotty et al. (2012).

4.9 Industrial/regional policy

Governmental policies are seen as important determinants of FDI flows since governments consider FDI as a means to promote regional development and try to alleviate slower growth and higher unemployment in peripheral regions of a country. Foreign investment is also seen to stimulate increased productivity growth by strengthening competition and innovation, and increasing access to new ideas and technologies.

National and regional policies can take a variety of forms such as tariff reductions, tax reforms, grants and subsidies, deregulation and privatisation policies. The main instrument that has been employed in the UK since the early 1980s is Regional Selective Assistance (RSA). This was introduced in 1972, and is discussed in Armstrong and Taylor (1993). Other detailed description of the various types of regional policy instruments that have been employed in the UK are described for example in Armstrong (2001).

Wren and Jones (2011) assess the effects of regional investment grants from RSA and Selective Finance for Investment in England schemes on FDI location. They use annual data on FDI and grants for the period 1985-2005 and show with GMM estimates that there is a small and significant effect of grants on FDI location across UK regions. They find that on average every £25 million in grants is associated with six extra FDI projects, which on an annual basis has changed the location of around 75 projects per year across the UK regions. The authors conclude that when compared to the overall number of FDI projects per annum, 800 FDI project, this seems relatively small and may explain the reasons why grants seem to be no longer decisive in FDI location at the UK regional level.

Wren and Jones (2012) follow up their earlier work and show, using a Markov framework that for the period 1985-2005 UK regional policy was able to attract new FDI to the Northern regions of the UK. However, the combination of lower impact of regional policy and agglomeration forces has shifted the FDI distribution in favour of the Southern regions. The authors argue that regional policy can have a distributional effect on FDI, but that this is temporary and not self-sustaining.

Driffield (2004) examines whether large sums spent on regional assistance to attract foreign firms is justified by the assumption of positive externalities (mostly indirect effects) which are assumed to flow from foreign to domestic firms. However, estimates of these spillovers for both assisted areas and non-assisted areas in the UK show that the size of these social returns is small, particularly in regions where significant inward investment incentives are available.

Harris and Robinson (2005) use a decomposition analysis to assess the sources of TFP growth for UK manufacturing plants during the period 1990-1998, allowing for comparisons between RSA assisted and non-assisted plants across regions and industries. They find that entry and exit plays a small role in productivity in RSA-assisted plants. However, in terms of labour productivity, RSA-assisted plants make a significant contribution to productivity growth at the regional level. With regards to TFP, RSA-assisted plants reported negative growth which the authors argue is due to plants with low TFP in 1990 experiencing market share growth with relatively lower productivity (see also Harris and Robinson 2004).

Criscuolo et al. (2007) investigate the causal impact of the RSA on employment, investment, productivity and entry/exit. Instrumental variable estimates show that the RSA program has had a positive impact on both employment and investment, which OLS estimators would underestimate, and that there is no statistically significant effect on TFP. They argue along similar lines to Harris and Robinson (2005) that there is some evidence that RSA, by supporting less efficient enterprises, maintains their lower productivity performance, thus negatively affecting regional and aggregate productivity growth.

The support offered by UKTI, mainly in the form of information flows and network contacts, to foreign firms looking to invest in the UK is also built on an expectation that the superior performance spreads to other domestic firms and thus generates wider 'spillover' benefits. Evidence of a UKTI telephone survey finds a) firms that had used UKTI services state that spillover benefits are occurring from inward investment, but their value is not determined and b) a minority of inward investors reporting any influence on either their decision to locate in the UK, or on other aspects of their project, as a result of UKTI support (UKTI, 2006).

4.10 The importance of inward investment promotion and aftercare

The practitioner-based literature in this area focuses much more on the “softer” side of inward investment promotion, such as aftercare and marketing of locations, rather than simply subsidies. UNCTAD (2007) produced a report on the importance of aftercare, which maps very closely onto the various UKTI publications on aftercare (see for example UKTI 2006, 2009). Both see aftercare as essentially a location-marketing activity. The UNCTAD report however highlights some differences in the way aftercare is implemented across countries, with for example in the case of the UK, responsibility traditionally being divided between the national agency, UKTI, and the now defunct RDAs. While UKTI does have a network of regional offices, it is not clear that the functions previously being performed by the RDAs are now being performed. The newly established LEPs have no similar responsibility, so this may be an area of disadvantage for the UK going forward.

The same can also be said of promotion activities in general, with regions, either through LEPs or through the regional growth funds having to bid for money. This raises the possibility of regional agents not being as flexible in response mode to inward investors as the RDAs had been previously.

What is clear however is that the UNCTAD report argues that in a world of scarcer resources for investment promotion, aftercare is becoming more important. Further, they argue that in countries which have historically attracted significant FDI, such as the UK, Singapore or Malaysia, a high proportion of current flows are strongly linked to existing stocks, such that retention of the existing stock is as important for new investment as it is for retaining existing employment. Perhaps the best known study that highlights the strategic importance of aftercare is Birkenshaw (1998), which argues that aftercare needs to be sustained, rather than simply reacting to potential relocations. The UK strategy on this is cited by UNCTAD as an exemplar:

United Kingdom Trade and Investment (UKTI) has an “Investor Development” programme which is aimed at helping established investors grow, expand and add higher value added activities to their United Kingdom-based operations. A subregion in London operates a “Business Development” programme to support growth and expansion of firms, in collaboration with Think London, a subnational IPA.

An issue for speculation, however, is the extent to which this will be maintained with the current regional nomenclature recently established in the UK. The current emphasis on localities bidding for support from a centrally established source may place the emphasis on efficiency and timeliness rather than on strategic considerations.

4.11 Currency fluctuations

A weaker real exchange rate might be expected to increase vertical FDI as firms take advantage of relatively low prices in host markets to purchase facilities or, if production is re-exported, to increase home-country profits on goods sent to a third market (Ekholm, 2003). Froot and Stein (1991) find evidence that a weaker host country currency tends to increase inward FDI within an imperfect capital market model as depreciation makes host country assets less expensive relative to assets in the home country. Blonigen (1997)

makes a firm-specific asset argument to show that exchange rate depreciation in host countries tend to increase FDI inflows. But on the other hand, a stronger real exchange rate might be expected to strengthen the incentive of MNEs to produce domestically. The exchange rate is in that sense a barrier to entry in the market that could lead to more horizontal FDI. However this hypothesis does not appear to have attracted much support in the empirical literature.

Barrell et al. (2003) show for seven two-digit manufacturing industries, that US MNEs investing in Europe for the period 1982-1998 tend to be risk-averse and decrease their investments as exchange rate volatility rises. Furthermore, they show that the UK is the preferred European location for US firms, since an increase in the correlation between the sterling dollar exchange rate and the euro dollar exchange rate tends to relocate US investment from continental Europe to the UK.

4.12 Agglomeration effects

There is a large literature that shows that firms gather together either due to linkages with the domestic region or due to herding as a larger existing FDI stock is regarded as a signal of a superior business climate for foreign investors. Venables (1996) argues that agglomeration economies arise from the presence of other firms, other industries, as well as from the availability of skilled labour force. FDI may also benefit from the presence of external scale economies, where new investors mimic past investment decisions by other investors in choosing where to invest. Driffield and Munday (2000) show UK industry comparative advantage is determined by a number of factors, including the level of foreign activity and industry agglomeration. They also argue that in the UK context, past success is a determinant of future success in attracting foreign FDI inflows, in the sense that previous FDI inflows contribute significantly to the development of industry comparative advantage and thus acts as a stimulus for future FDI inflows. This is particularly the case for regional concentrations of given industries which can increase industry comparative advantage, thus adding support to the importance of agglomeration for the maintenance of industrial advantages.

By clustering with other firms, new investors benefit from positive spillovers of existing firms in the host country. Evidence for these agglomeration effects are shown empirically by Wheeler and Mody (1992) in the case of U.S. firms. Barrell and Pain (1999) also show that FDI in Europe is attracted by agglomerations proxied by market size and a 5-year moving average of stock manufacturing patterns, among other determinants such as relative costs, technology and integration. Campos and Kinoshita (2003) show similar evidence for transition economies. Head et al. (1995) using plant-level data argue that the locational FDI attraction in a sector is mostly determined by the location of existing firms in that industry. Braunerhjelm and Svensson (1998) also show that FDI is highly sensitive with respect to agglomeration patterns.

Spatial agglomeration can create important economies in training, supply of services and components, and access to other specific social and physical infrastructures. Additionally, Coughlin et al. (1991), and Friedman et al. (1992) show that industrial agglomeration has been an important determinant of FDI location in the US. The importance of such industry-specific factors would also suggest that there may be some persistence in variation of the levels of FDI across industries. Indeed, there is significant evidence, through the work on agglomeration by Cantwell (1991), and Porter (1990), that some industries will attract inward investment consistently, while others have

failed to do so. The importance of past levels of inward investment however, has not been investigated in any systematic sense, as the best studies which examine inward investment are cross-sectional in nature, Neven and Siotis (1996), Maskus and Webster (1995), Milner and Pentecost (1996).

4.13 Liability of foreignness

While there is a large and fairly general literature in the International Business area on the liability of foreignness, it seldom reaches any conclusion beyond the fact that several authors feel it is important. Nachum (2006) for example applies the argument to the City Of London, arguing that as London's comparative advantage changed, location overcame any liability of foreignness, such that London attracted large scale inward investment in financial services. Equally, the agglomeration literature discussed above highlights the importance of embeddedness for overcoming this disadvantage, and indeed that the very act of engaging in inward investment erodes this liability much faster than trade can do.

More generally, the issue of liability of foreignness is typically linked to cultural distance, or to economic distance. So for example it is assumed that a German firm selling into the UK would be less likely to suffer this than say a Thai firm, due to both cultural similarity and similarity in terms of level of development. There is some suggestion that firms from emerging markets are engaging in FDI to overcome this through the acquisition of well-known brands.

4.14 Summary and conclusions

4.14.1 Market size and growth

- Larger, fast growing markets are associated with higher FDI inflows. The literature generally captures these market characteristics by using GDP, GDP per capita, GDP growth, or (at sectoral or firm level) market size measured in terms of industry output.
- The initial and potential future demand conditions in a market act as a signal to inward investors on the attractiveness of a location. Furthermore, it allows investors to locate where they can take advantage of scale economies.
- The UK market size, and industry growth performance compares well with its other advanced countries signalling significant potential for inward investors.

4.14.2 Openness

- Host country openness is widely considered to be positively related to inward FDI. Openness is typically measured using published tariff and non-tariff barriers to trade, or observed trade flows.
- The UK has benefited from being in the European Union, and therefore part of the single market, which has also promoted investment rates within and across member countries which in turn brings with it a flow of information and technology.
- There are few countries in the world which have the same level of openness as the UK, which is shown to have served it well and is expected to be an important determinant in attracting FDI.

4.14.3 Distance and infrastructure

- Distance (both physical and cultural) matters for FDI. This would suggest that anything that facilitates not only travel, but the coordination of activities internationally will encourage FDI. At the moment, the main inward investor (and recipient of outward FDI from the UK) is the US, but many regional development agencies are focussing on China or India as major sources for the future.
- Infrastructure of all types encourages FDI. It is surprising perhaps that these results are so strong, even for the US. However, one should point out that the studies into this essentially explain the location of FDI within a country. While infrastructure does act to attract FDI, it may be that it merely influences location within the country, rather than whether the firm chooses the country in the first place.
- The motivation for FDI is important. If for example a US firm has already decided to enter the UK, then infrastructure may simply determine where in the UK they go. However, if one is focussing on FDI from Asia or South America for example, then “Europe” may be the point of reference. In which case better infrastructure in the UK may have an effect.
- More research is needed in this area to determine more precisely the nature of the relationship between infrastructure and a location’s ability to attract inward investment. Ideally for the UK, this would be done at the regional level, but focusing on all the regions of Europe.

4.14.4 Corporate tax rates

- Higher effective average tax rates have a negative influence on inward FDI.
- The literature has shown varying degrees of tax influence, depending on the type of tax rate, country and time period considered. However, for the UK a modest estimate is that a 1 percentage increase in EATR will reduce the probability of a firm locating in the UK by 1.29 percentage points.
- The UK’s main rate of corporation tax stands at 24 per cent in 2012 which is considerably lower than its main rival tax rates, such as the US, France and Japan.

4.14.5 Labour flexibility

- Labour market flexibility is seen as a key determinant for attracting FDI.
- Labour market flexibility reflects the degree of deregulation in labour markets. It both reflects, and is evidenced by, the magnitude of wage differentials, as well as the speed of adjustment in employment relative to earnings. In practice it includes factor cost differentials, but also includes institutional regulation such as hiring and firing laws and wage bargaining arrangements.
- In terms of the World Economic Forum index on labour market flexibility, the UK scores 2.51 and thus makes it more flexible than most countries in the world, particularly among the OECD member countries. Countries which score lower (i.e. more flexible labour markets) are the USA, Denmark and Switzerland.
- Studies which examine the link between FDI and migration show that large diaspora populations attract investment from the home country, and this may explain the high proportions of Indian FDI that targets the UK. More generally, migration of skilled labour influences FDI flows in both directions. One issue with this is the extent to which one can distinguish migration effects from labour market flexibility in general, as more flexible labour markets are better placed to absorb migrant labour, and indeed the extent to which migration is merely another measure of openness.

4.14.6 Institutions

- The literature shows that institutional quality differences impact significantly on the ability of a country to attract FDI. It also influences the type of investment that is attracted. For example, a country with a well-developed institutional framework can expect to receive horizontal as well as vertical FDI, which may embody low as well as high technology investments.
- The UK system of institutions is well placed to attract inward FDI. Numerous indicators from different sources show that the UK compares favourably with its main competitors in the OECD.

4.14.7 Incentives and aftercare

- Industrial and regional policy has a relatively long history in the UK with varying levels of success depending on the objective of a particular policy.
- Deregulation and privatisation programmes over the last two decades have been generally successful in promoting competition, innovation and growth. However, the distributional effects, of grants and subsidies offered to foreign firms to invest in the UK, are argued to be a temporary measure and not self-sustaining. Estimates show that every £25 million in RSA grants is associated with about six extra FDI projects in the UK, which on an annual basis has changed the location of around 75 projects per year across the UK regions. In comparison with the overall number of 800 FDI projects per annum, this seems relatively small and may explain the reasons why grants seem to be no longer decisive in FDI location at the U.K. regional level.
- However, the RSA program is shown to have had a positive impact on both employment and investment, but that there is no statistically significant effect on TFP. It is argued that RSA, by supporting less efficient enterprises, maintains their lower productivity performance thus negatively affecting regional and aggregate productivity growth. Furthermore, any spillover effects that are assumed to flow from foreign to domestic firms, especially in assisted areas of the country, are estimated to be small.
- There is survey evidence that some inward investors find the UKTI support in giving information and network contact beneficial in their decision to locate in the UK or on other aspects of their investment. This is also related to the issue of aftercare which is seen to become more important in the future for not only retaining existing stock of FDI, but by doing this well can help in sustaining high levels of new inward FDI.

4.14.8 Exchange rates

- The literature on currency fluctuations shows that a relatively stable exchange rate offers certainty for foreign investors and may increase inward FDI. However, the degree of exchange rate variability depends on many macroeconomic factors, which have for example determined the dollar/sterling exchange rate of recent decades. Sterling has depreciated against the dollar and appreciated against the euro since the onset of the recent financial crises, which will at the margin have had positive effects on inward investments from the US and less of an incentive for EU FDI.

4.14.9 Agglomeration

- The literature on spatial agglomeration shows that FDI inflows are significantly affected by agglomeration economies. Clusters of knowledge exhibit certain industry and region-specific effects which attract similar firms to benefit from skilled labour,

superior technology, access to services and components and other specific social and physical infrastructure.

- For the UK, evidence shows that past success is a determinant of future success in attracting foreign FDI inflows, with previous FDI inflows act as a stimulus for future inflows. This is particularly the case for regional concentrations of industries which produce goods and services using world leading technology, thus adding support to the importance of agglomeration for the maintenance of industrial advantages.
- The UK compares well with its European counterparts with regards to agglomeration economies having established world renowned clusters in both manufacturing and services sectors across different regions of the UK. However, more research is needed in quantitatively assessing cluster performance across countries.

4.14.10 Liability of foreignness

- The various characteristics of the UK economy, including its openness and investment promotion programmes reduce any liability of foreignness that is attached to inward FDI. Liability is further reduced compared with other rival countries, by the success of the UK in consistently attracting substantial flows of FDI from around the world in diverse investment projects as well as the linkages between foreign and domestic firms which have developed over time, particularly in regionally concentrated areas.

The Table below summarises key aspects of these determinants of FDI. For each locational determinant the Table provides: an indication of the importance of the determinant, based on the literature; an indicative summary of the UK's position relative to both the EU and emerging market economies (green=good; orange=moderate; red=problematic); and a brief overall summary of the UK's position.

Issue	Importance	Key literature	Comparison of UK with EU	Comparison of UK with emerging markets	Overall position
Market size	high	Pain and Lansbury (1997); Driffield and Munday (2000)	Green	Orange	Large economy in EU but not compared with BRICS
Host sector performance	medium	Neven and Siotis (1996), Driffield (2002)	Orange	Green	Less innovative or productive than some of EU, innovation rates still ahead of Emerging economies
Openness	medium	De Menil (1999)	Green	Green	Possibly the most open economy in the world
Distance	medium	Brainard (1997); Helpman et al. (2004)	Orange	Red	Close to but not at the heart of Europe, a long way from Asia
Infrastructure	low	Coughlin et al. (1991); Fredriksson et al. (2003).	Orange	Orange	Issues with transport
Corporate tax rates	low	Devereux and Griffith (1998); Bénassy-Quéré et al. (2005)	Orange	Red	Comparable with developed world, and historically relaxed on tax avoidance
Labour costs	high	Barrell and Pain (1999); HM Treasury (2003)	Orange	Red	Low compared with EU12, high compared with Asia
Labour market flexibility	high	Dewit et al. (2003); Haaland and Wooton (2007)	Green	Red	Most flexible labour market for any developed economy apart from US
Institutions	high	Wheeler and Mody (1992); Wei (2000)	Green	Orange	Very highly regarded legal system and institutions
Incentives / aftercare	medium	Driffield (2004); Birkenshaw (1998)	Green	Green	Traditionally strong, current position at a local level unclear
Exchange rate risk	low	Barrell et al. (2003); Ekholm (2003)	Green	Orange	Outside Euro, sterling traditionally safe
Agglomeration / supply linkages	medium	Venables (1996); Head et al. (1995)	Orange	Orange	Some hollowing out of supply chains in recent years

5. Future trends in FDI

5.1 The short-to-medium term

The immediate prospects for global FDI remain very uncertain. For example, at the end of October 2012 UNCTAD further reduced its forecast for total FDI flows in 2012 to below \$1.6 trillion, following a substantial rise in both 2010 and 2011⁹. Despite this (at best) levelling off of growth in FDI flows, UNCTAD still expects to see global FDI flows growing again in 2013-15, and approaching \$2 trillion by the middle of the decade¹⁰.

UNCTAD's relative optimism about medium-term trends arises in part from the results of their World Investment Prospects Survey which polls executives of multinational enterprises on a regular basis, and which points to short-term uncertainty but more optimism about the medium term. Other key points derived from UNCTAD's most recent assessment¹¹ includes the following:

- Multinationals are now sitting on large cash reserves which may fuel a surge in FDI when investment opportunities appear more favourable;
- FDI into Latin America has been particularly volatile recently, but is expected to exhibit long-term growth. There is evidence of increased use of the use of industrial policies designed to boost domestic manufacturing and build domestic productive capacity. While such measures may make exporting more difficult to Latin American countries, there may be more 'tariff jumping' FDI, especially in the automobile, computer and agricultural machinery sectors;
- While China continues to be the preferred destination within East Asia for FDI, rising wages and production costs in China has led to the relative desirability of other South-East Asian economies to rise markedly relative to China, especially Thailand and Indonesia.
- FDI flows into transition economies are expected to continue to increase, boosted by increasingly investor-friendly environments and the Russian Federation's accession to WTO.
- By contrast, prospects for FDI into Europe, and especially the Eurozone, are seen as being hampered in the short to medium-term by economic fragility and doubts about the stability of the Euro.

Overall, this analysis suggests the UK will continue to find itself in a very competitive environment for inward FDI, and that FDI into Europe will continue to be a reducing proportion of global FDI flows. Set against this trend, there is some suggestion that the thrust of national policymaking on FDI may have shifted slightly since 2000. During the 1990s, 95% of national FDI policy changes worldwide made the investment climate more welcoming for MNEs. However, the share of national FDI policy changes worldwide that made the investment climate less welcoming rose from 6% in 2002 to 32% in 2010, and a number of countries (particularly developed ones) have strengthened their screening

⁹ UNCTAD *Global Investment Trends Monitor* No. 10 (23 October 2012)

¹⁰ UNCTAD *World Investment Report* 2012.

¹¹ *Ibid.*

mechanisms of incoming mergers and acquisitions (M&As)¹². While it may be premature to say that any fundamental shift away from liberalization has occurred¹³, continuing moves in this direction may represent an opportunity for the UK to leverage the benefits of a relatively liberal regime towards inward FDI in general and mergers and acquisitions in particular.

5.2 The medium-to-long term

In general we see a world where in general the factors that dominate FDI flows will remain consistent, but how they will influence FDI will change.

In the world described by John Dunning's seminal analysis in 1958, FDI was transatlantic, and driven by the desire of US firms to locate near to UK and European markets for post-war consumer goods. This became known as market-seeking FDI, and was mirrored by the Japanese investment in the UK of the 1980s, as Japanese firms sought to overcome transport costs and other trade barriers by investing in Europe. The UK, with its language and labour market advantages, attracted far more than its share of these investment cycles.

The past 15 years or so have seen a fraying round the edges of Dunning's tapestry, with evidence of the dominance of cost over market size in terms of explaining location, with FDI attracted to low-cost areas of Europe (including peripheral areas of the UK) as well as to Asia, first to countries such as Malaysia, and subsequently to India and China. Equally, more sophisticated analysis has linked FDI to markets for global technology, identifying technology sourcing and strategic asset seeking as increasingly important motivations for FDI, often through acquisition rather than Greenfield FDI.

While the underlying forces will remain the same, we do however see that transport costs and being near to customers will again become increasingly important, this time leading global firms to locate in the BRIC world in order to secure their position in those markets. This may also become to be seen as part of the environmental agenda 'make here to sell here', at least on a continental or regional basis. Competition for FDI therefore will occur between locations within continents, but with a far greater proportion of global activity looking east and south. This trend is likely to be more pronounced in manufacturing than in services. Services FDI is typically market-seeking in nature, often focussed on particular key clients or markets. By contrast, while costs are important in manufacturing these are increasingly not simply labour costs but the transaction costs of developing and maintaining supply chains. In manufacturing, first-tier suppliers frequently follow customers (e.g. in the car industry), which can lead to hollowing out of supply chains as main suppliers relocate east and south. The way in which this may manifest itself in services is typically through outsourcing of back office functions in professional services, but typically this is outsourcing (i.e. inter-firm transactions) rather than offshoring through FDI.

¹² Karl P. Sauvant (2012) 'The times they are a-changin' -- again -- in the relationships between governments and multinational enterprises: From control, to liberalization to rebalancing' *Columbia FDI Perspective* No. 69 May 21, 2012.

<http://www.vcc.columbia.edu/content/fdi-perspectives>

¹³ The percentage of more restrictive FDI policy measures declined again in 2011 to 22% (UNCTAD 2012 *op cit*)

On the basis of the summary table above, in general, the UK remains in a relatively good position to continue to attract an above-average share of FDI coming into Europe. However, FDI in Europe is likely to be a dwindling share of global FDI flows, and the UK has more concerns with respect to competition for FDI from BRIC and other emerging economies. For example, while labour flexibility is a major plus point for the UK generally, this is much less of a positive aspect relative to many emerging economies: similar arguments apply to labour costs, corporate tax rates and issues of distance. As a result, it is difficult to see anything other than a continuation of the trend noted in Annex Tables 4a and 6 of decline in the share of manufacturing as a proportion of total inward FDI into the UK, both absolutely and in relation to sectoral GVA.

More generally, the global economic downturn has seen countries reversing the trends of the 1980s and 1990s of offering large subsidies in order to attract internationally mobile capital. It is also true that much of the funding channelled into these activities in the UK has been either directly or indirectly linked to initiatives to redress regional imbalances within the European Union. With the accession of more EU members from central and eastern Europe, funds available for structural adjustment within the EU 15 are more limited.

The final issue in terms of the UK's position in Europe is its non-membership of the Euro. It was suggested through the 2000s that the UK's non membership of the Euro would damage our ability to attract inward investment, and indeed there were well documented examples in the automotive industry of inward investors insisting that their suppliers agree prices in Euros, in order to avoid currency risks. What this highlights, however, is that in terms of currency, and currency fluctuations, it is uncertainty that deters FDI, and that the government's consistent policy on the Euro has certainly not deterred inward investors from entering the UK.

It is also true that in the immediate future, the mechanisms by which such structural funds are to be delivered are uncertain, with the demise of the Regional Development Agencies (RDAs) and the LEPs still finding their feet. It is also uncertain how the bidding process that the LEPs are expected to undertake will allow the strategic support and aftercare of inward investors in the way that the RDAs did previously.

This also needs to be considered in terms of the importance of host-country sector performance in attracting the "right sort" of FDI. As the literature review discusses in some detail, high performing sectors, with high levels of productivity growth, innovation and export performance, attract inward investment with a similar profile. Equally, sectors whose comparative advantage is based on low wage costs or high levels of public sector support tend to attract FDI of a similar nature. The difference in the beneficial effects of these investments is then clear, with technology transfer or spillovers largely limited to the first example, alongside considerations such as agglomeration and supply chain linkages.

Linked to this is the importance of local supply chains in attracting inward investment. Many of the world's richest countries have seen a "hollowing out" of their supply base, as tier two and three suppliers, as well as producers of generic manufacturing inputs, have relocated to China. Transport costs from China are perhaps starting to reverse this in some cases, but more should be done to encourage a supply base in these activities in order to attract firms at the frontier of technology. Again, as indicated above, this is an issue that is particularly relevant to manufacturing, and rather less so to services.

This highlights the role for policy more generally, not merely in attracting inward investment, but in supporting innovation, exporting and skills development at the local and sectoral level, in order to maximise the gains from inward investment. This develops our final comment, which again comes through in the literature review – a belief that local and national policy makers should better understand the links between the motives for firms to engage in FDI and the likely benefits derived from it. This understanding can, we believe, be developed prior to the investment, and as such the desired outcome, whether it be agglomeration, technology transfer, increased competition, or the creation of employment for relatively low-skill workers, can be developed accordingly.

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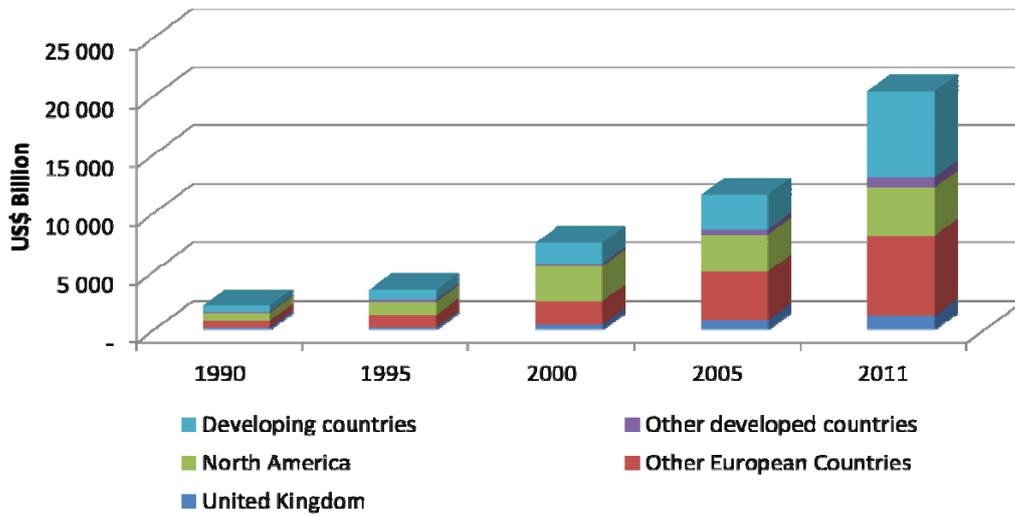
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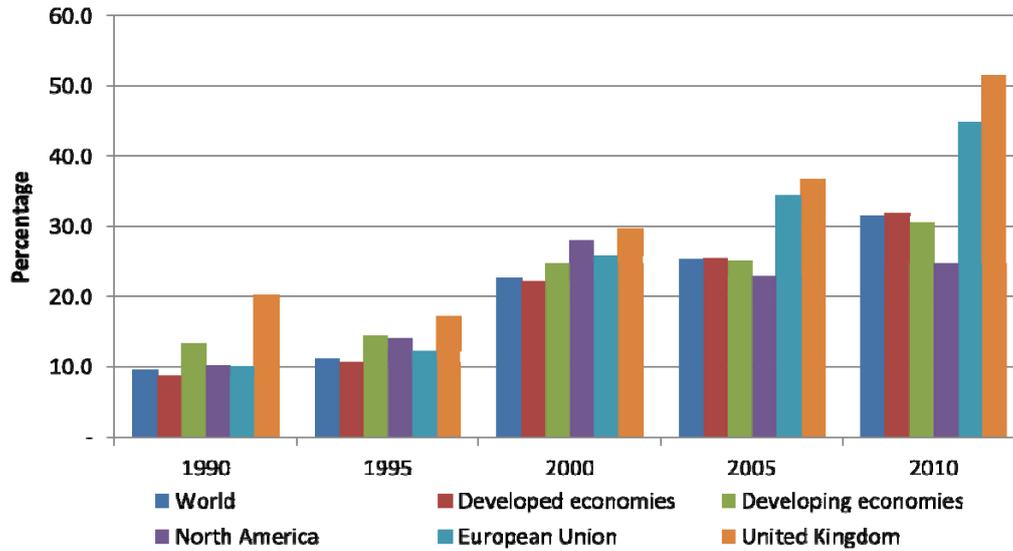
Annex

Graph 1. Global FDI inward stock, 1990-2011



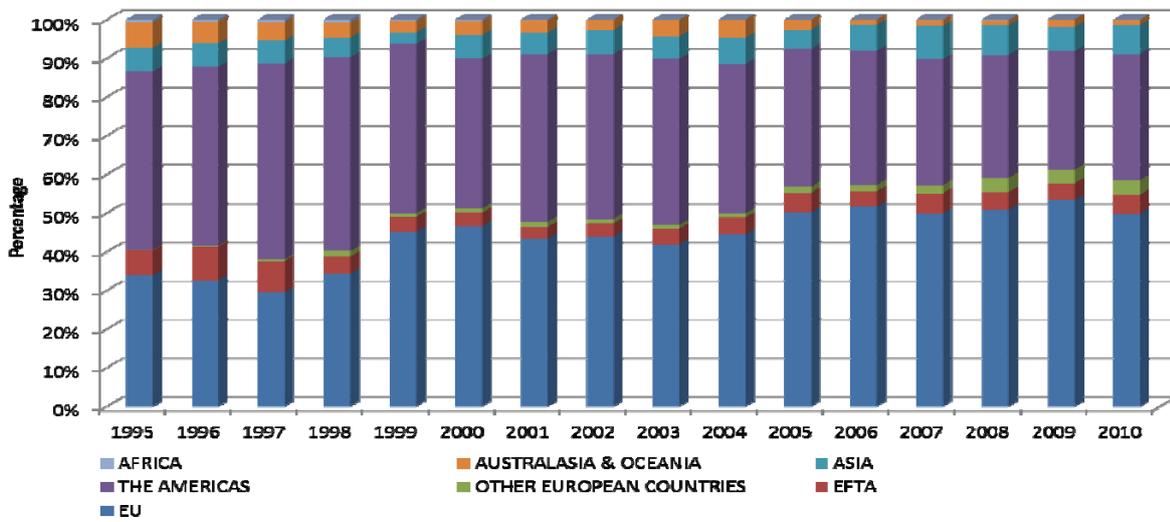
Source: The authors, based on UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics)

Graph 2. FDI stocks as a percentage of gross domestic product



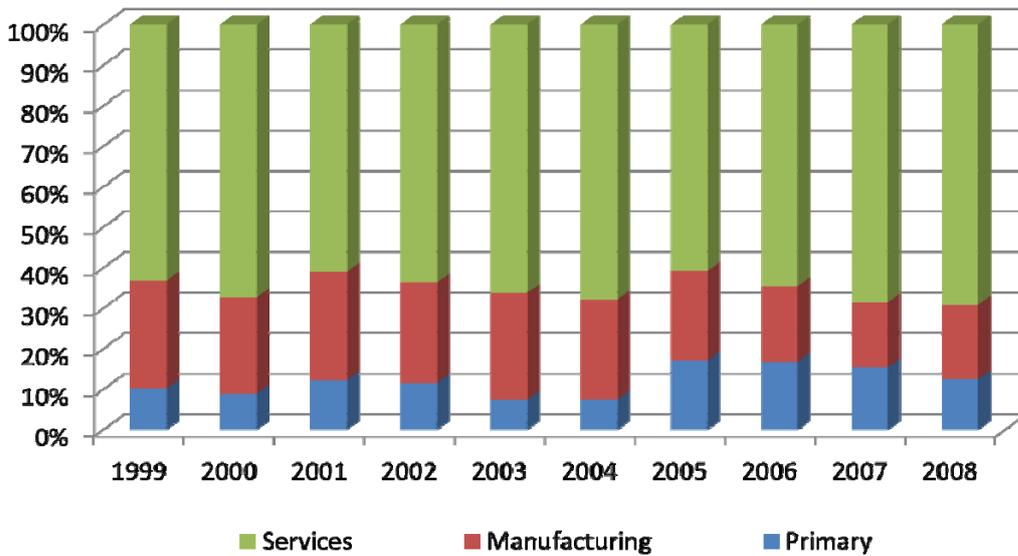
Sources: the authors, based on UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics).

Graph 3. Net foreign direct investment stocks in the UK by source area 1995 to 2010



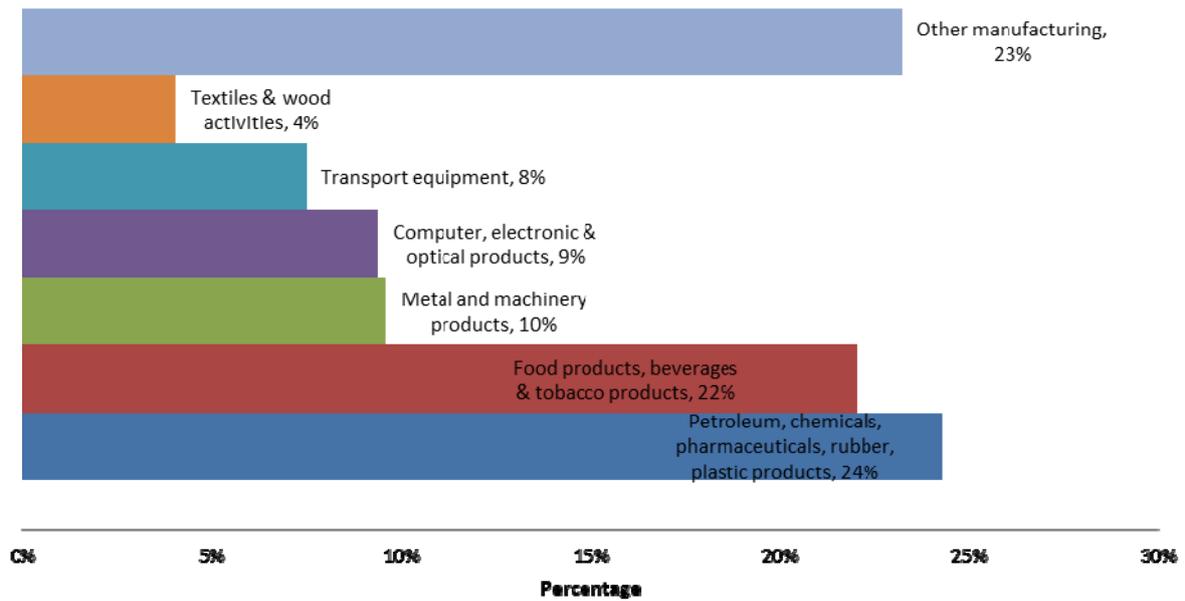
Source: The authors, based on Office for National Statistics, United Kingdom, Business Monitor MA4 Foreign Direct Investment,

Graph 4. Net IFDI stock in the UK by sector, 1999-2008
Percentage

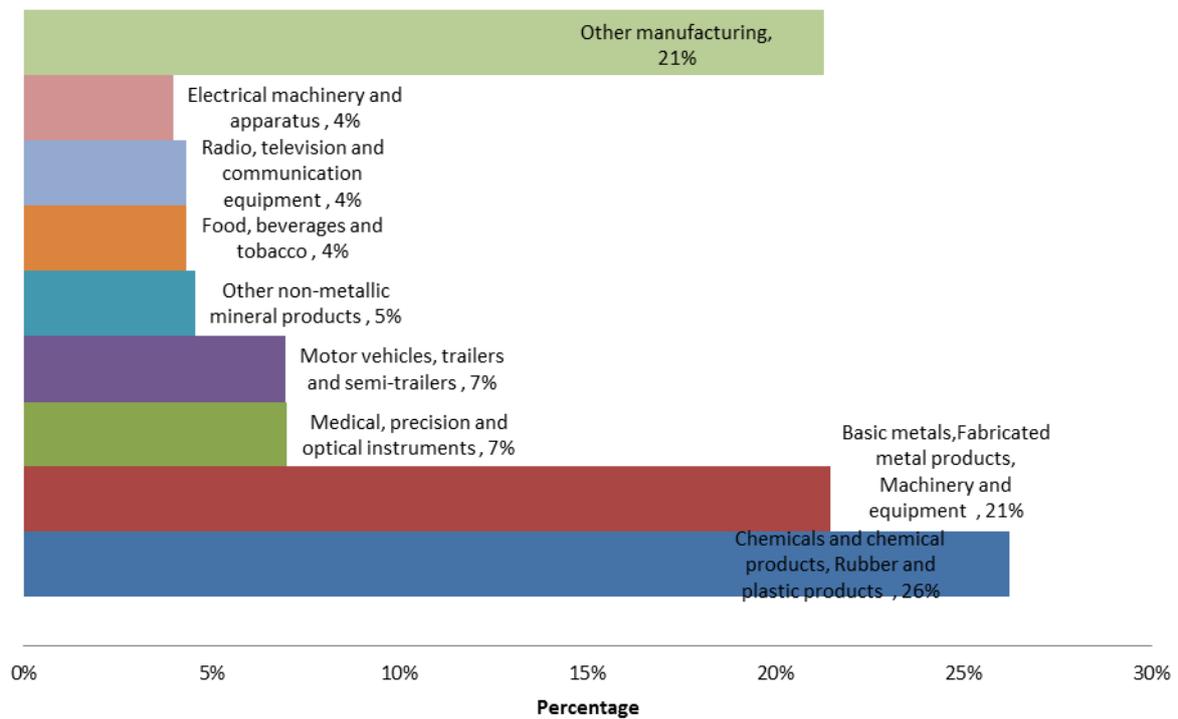


Source: The authors, based on Office for National Statistics, United Kingdom, Business Monitor MA4 Foreign Direct Investment, available at: <http://www.ons.gov.uk/ons>

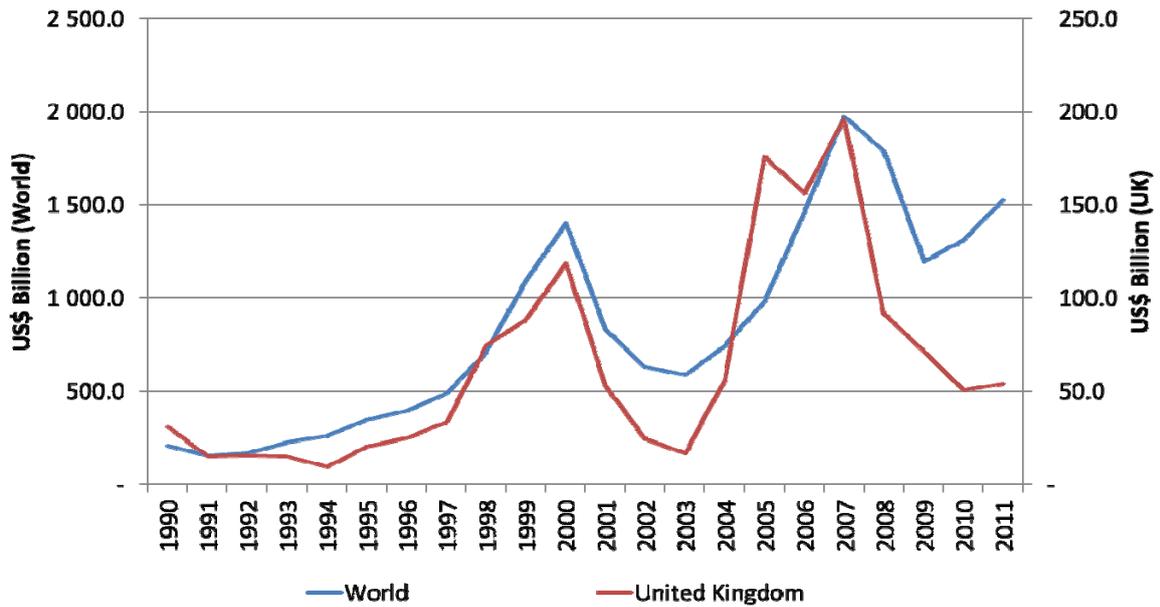
Graph 5a. Sectoral distribution of IFDI stock in the manufacturing sector in the UK, 2009



Graph 5b. Sectoral distribution of IFDI stock in the manufacturing sector in Germany, 2009

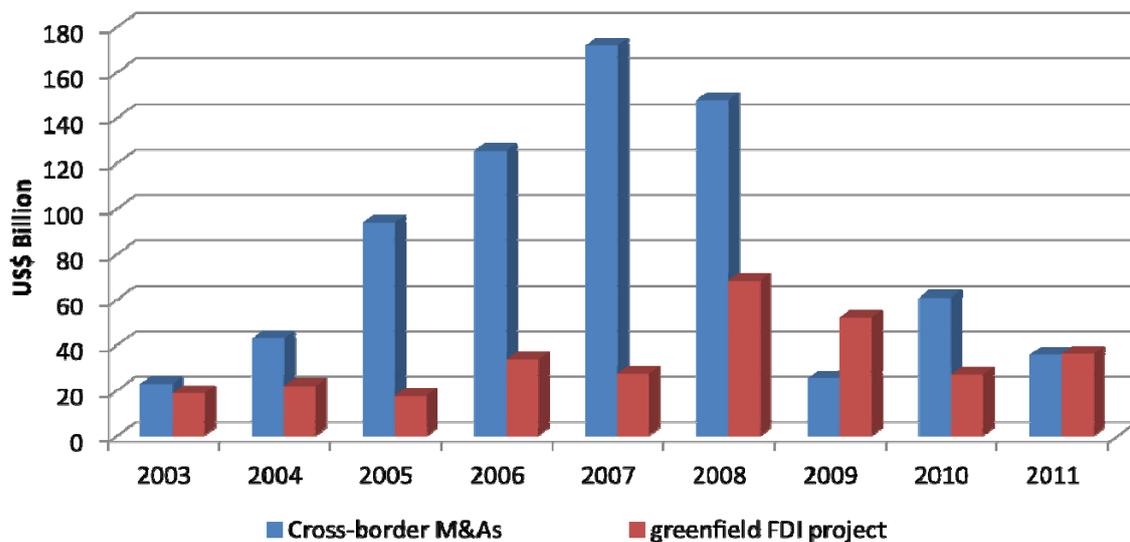


Graph 6. Flows of IFDI into the UK vs global IFDI flows, 1990-2011
US\$ Billion



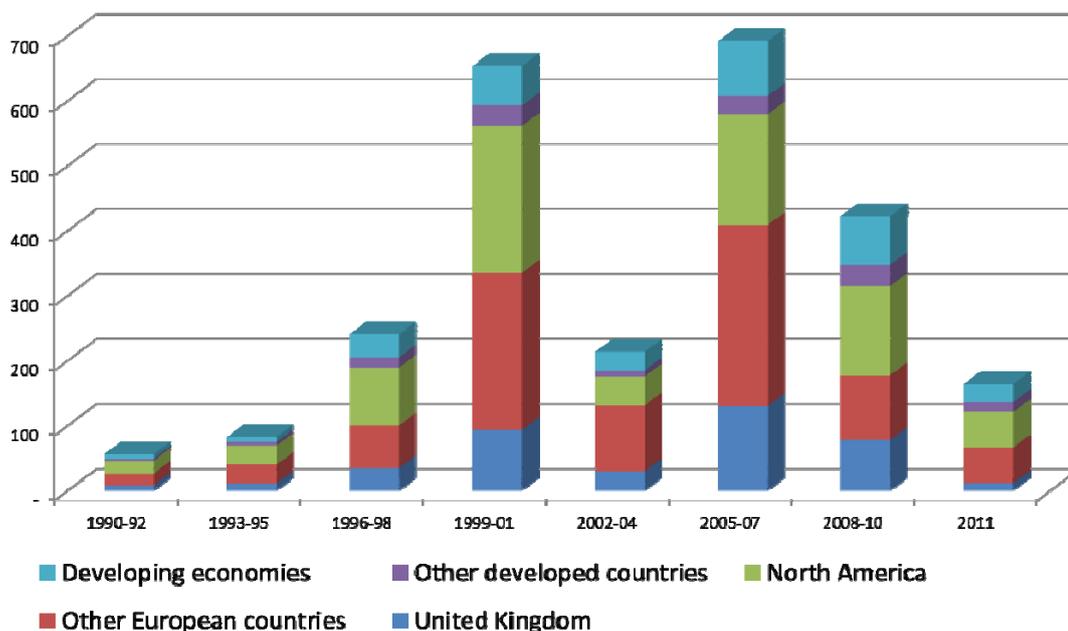
Source: The authors, based on UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics).

Graph 7. Cross-border M&As versus greenfield FDI projects in the UK, 2003-2011



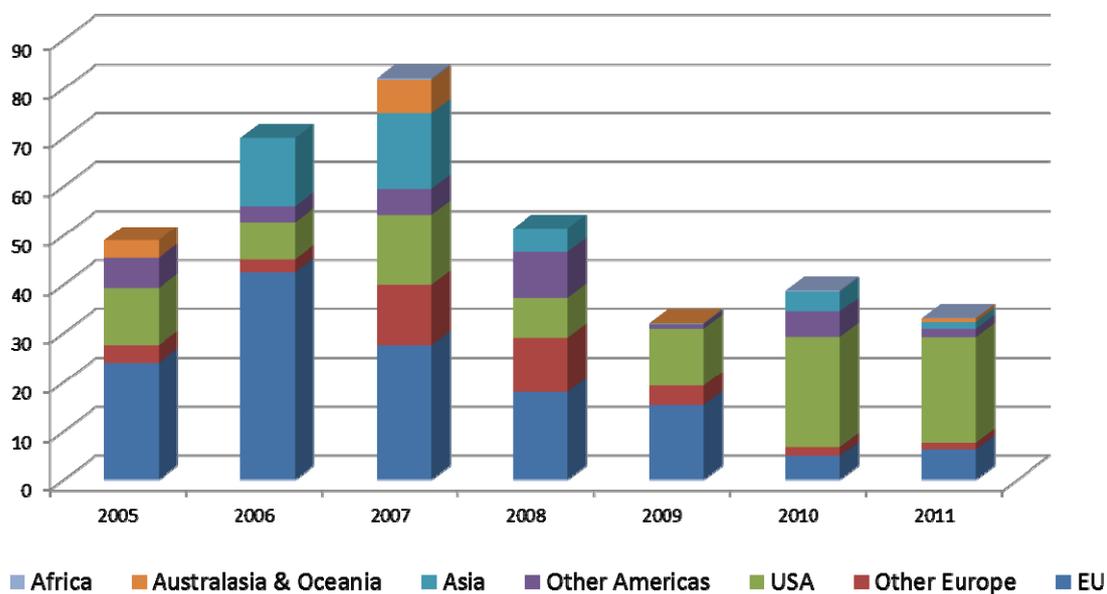
Source: The authors, based on UNCTAD cross-border M&A database (www.unctad.org/fdistatistics).

**Graph 8. Cross-border M&As of seller, 1990-2011
(US\$ Billion)**



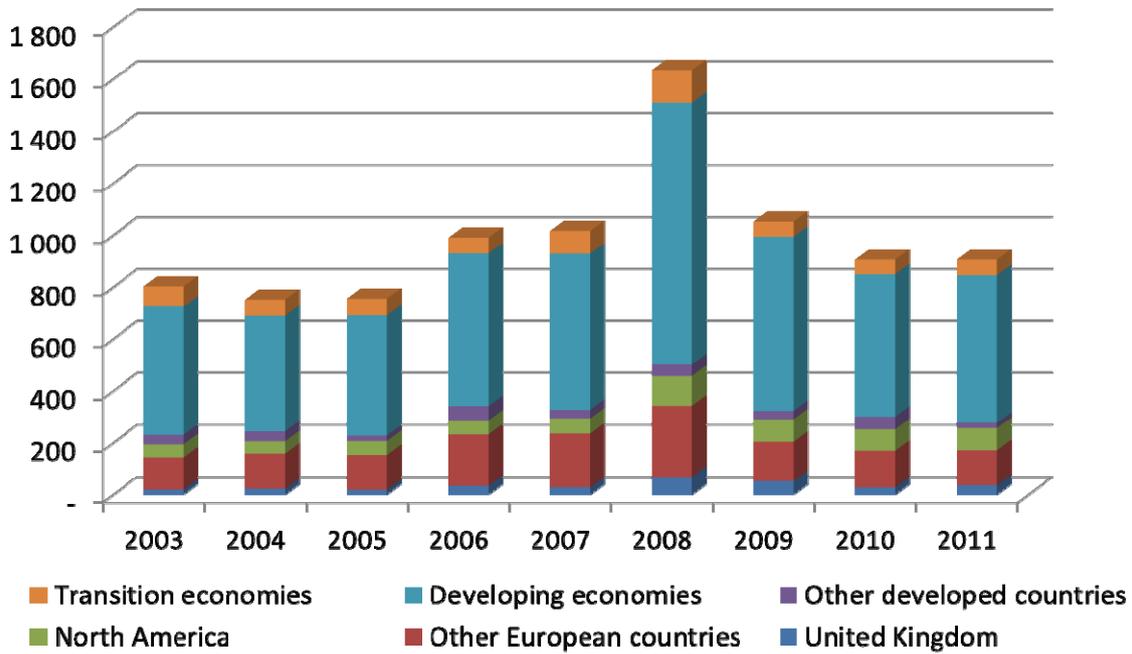
Source: The authors, based on UNCTAD cross-border M&A database (www.unctad.org/fdistatistics).

**Graph 9. Acquisitions in the UK by foreign companies
£Billion**



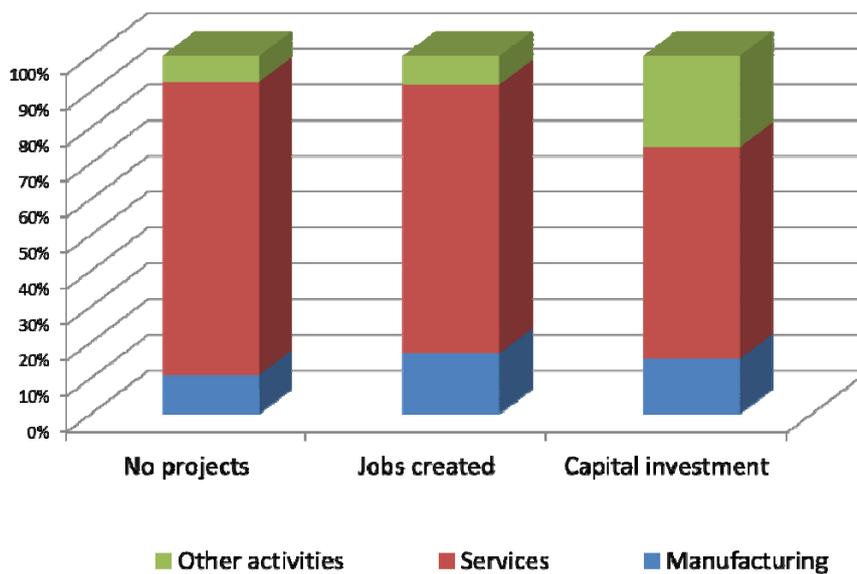
Source: The Authors based on Mergers and Acquisitions Surveys, Office for National Statistics, available at: <http://www.ons.gov.uk/ons>

**Graph 10. Greenfield FDI projects by destination, 2003-2011
(US\$ Billion)**



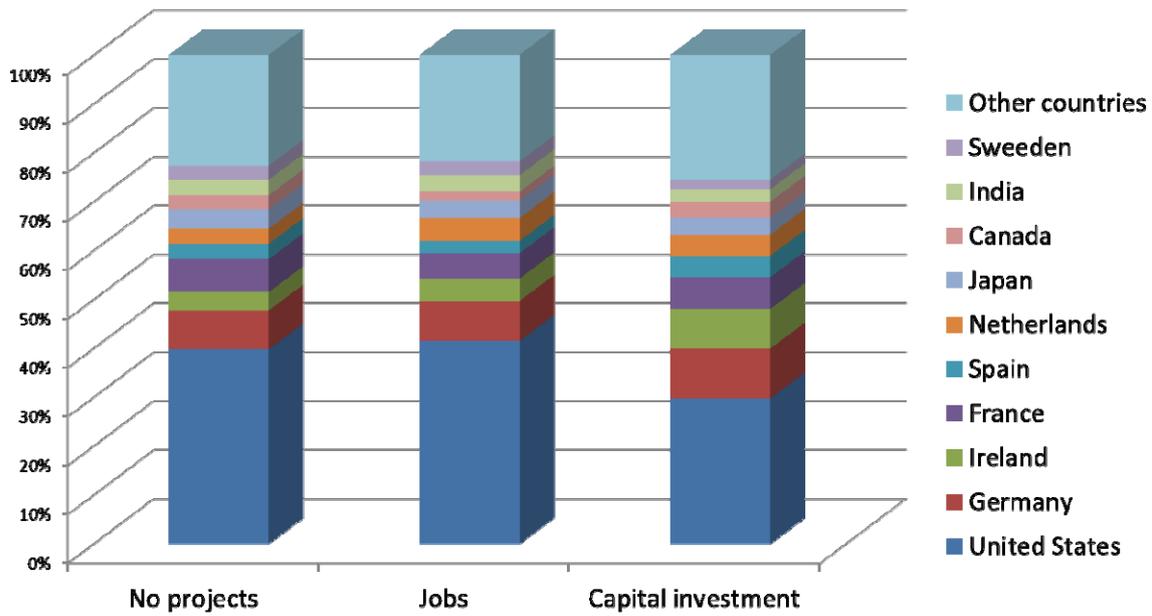
Source: The authors, based on UNCTAD, based on information from the Financial Times Ltd, fDI Markets (www.fdimarkets.com).

**Graph 11. Distribution of greenfield IFDI by sector
2003-2011**



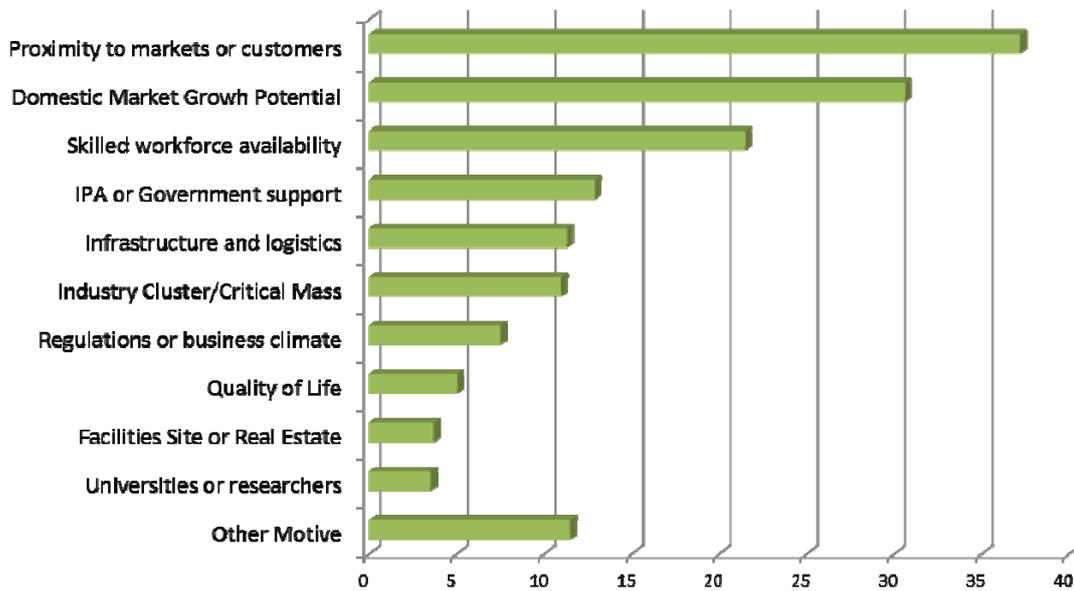
Source: The authors, based on Financial Times Ltd, fDI Markets (www.fdimarkets.com).

Graph 12. Distribution of greenfield IFDI by source country, 2003-2011



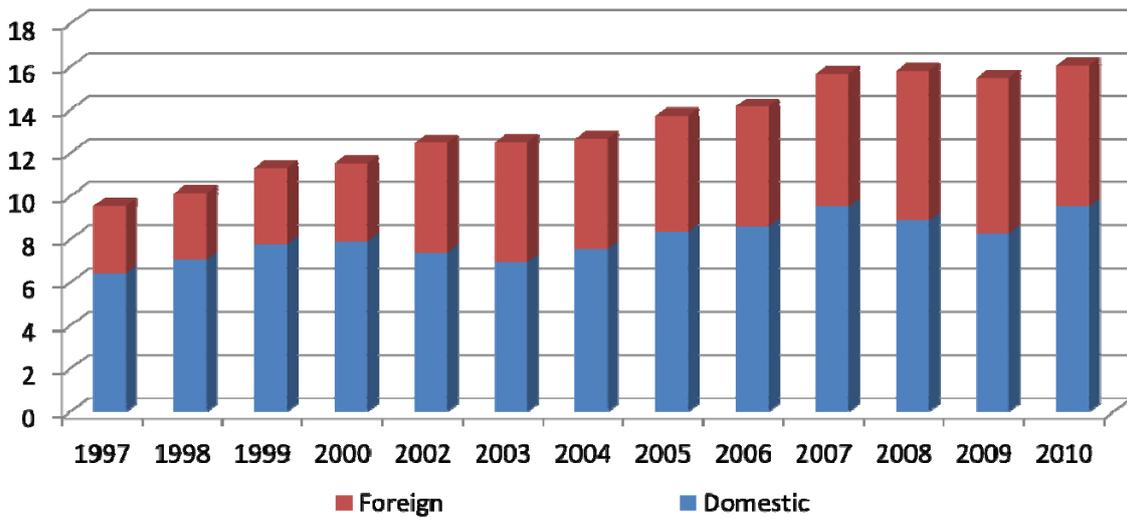
Source: The authors, based on Financial Times Ltd, fDI Markets (www.fdimarkets.com).

Graph 13. Top location determinants for greenfield investments: percentage of projects citing investment motives



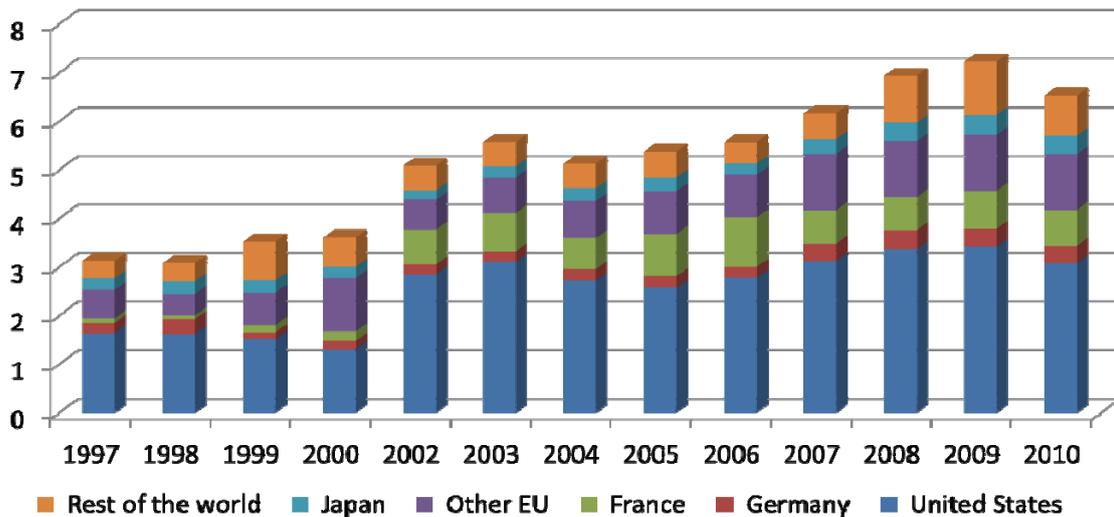
Source: The authors, based on Financial Times Ltd, fDI Markets (www.fdimarkets.com).

**Graph 14. Expenditure in R&D performed in UK business by foreign and domestic firms
£ Billions**



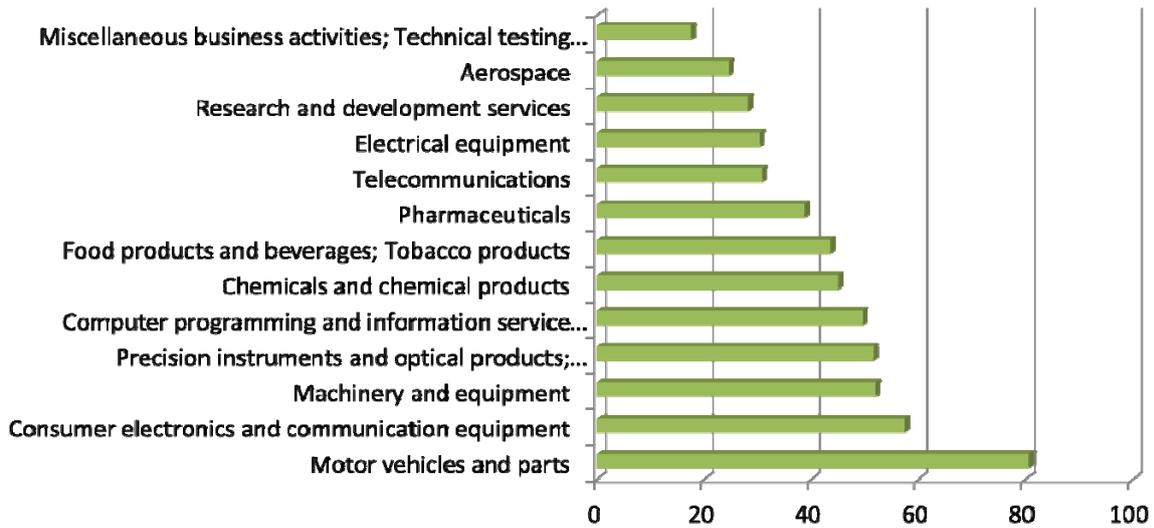
Source: The authors, based on Office for National Statistics, United Kingdom, UK Business Enterprise Research and Development, Statistical bulletins from 1999 to 2010

**Graph 15. Expenditure in R&D performed in UK business by foreign firms by country of ownership
£ Billions**



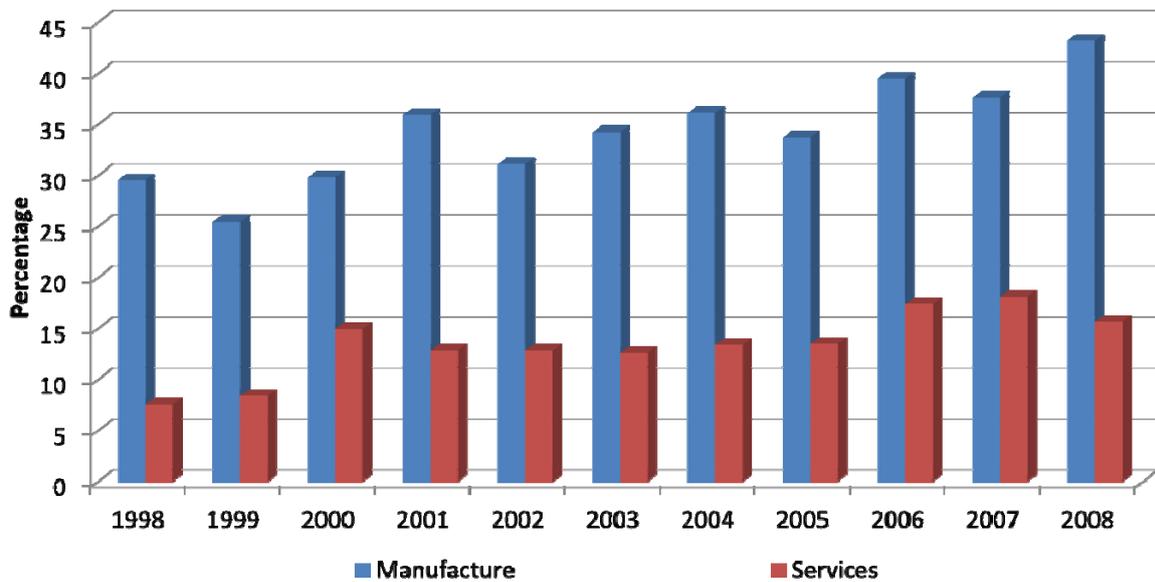
Source: The authors, based on Office for National Statistics, United Kingdom, UK Business Enterprise Research and Development, Statistical bulletins from 1999 to 2010

**Graph 16. Contribution of foreign firms to R&D expenditure in R&D intensive sectors
Average 2001-2010**



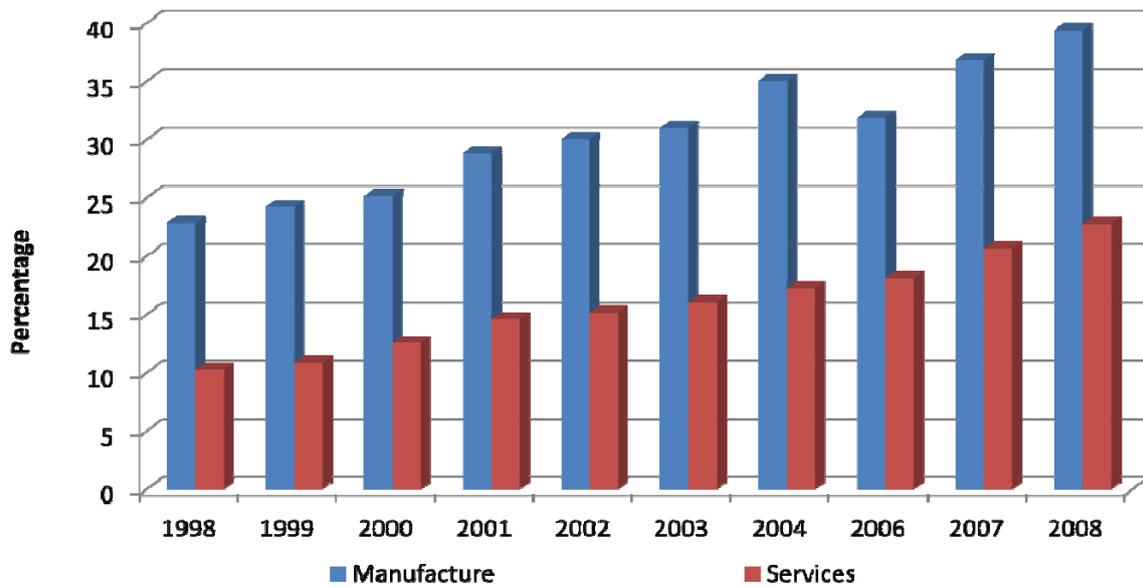
Source: The authors, based on Office for National Statistics, United Kingdom, UK Business Enterprise Research and Development, Statistical bulletins from 1999 to 2010

Graph 17. Contribution of foreign firms to total manufacturing and services investments



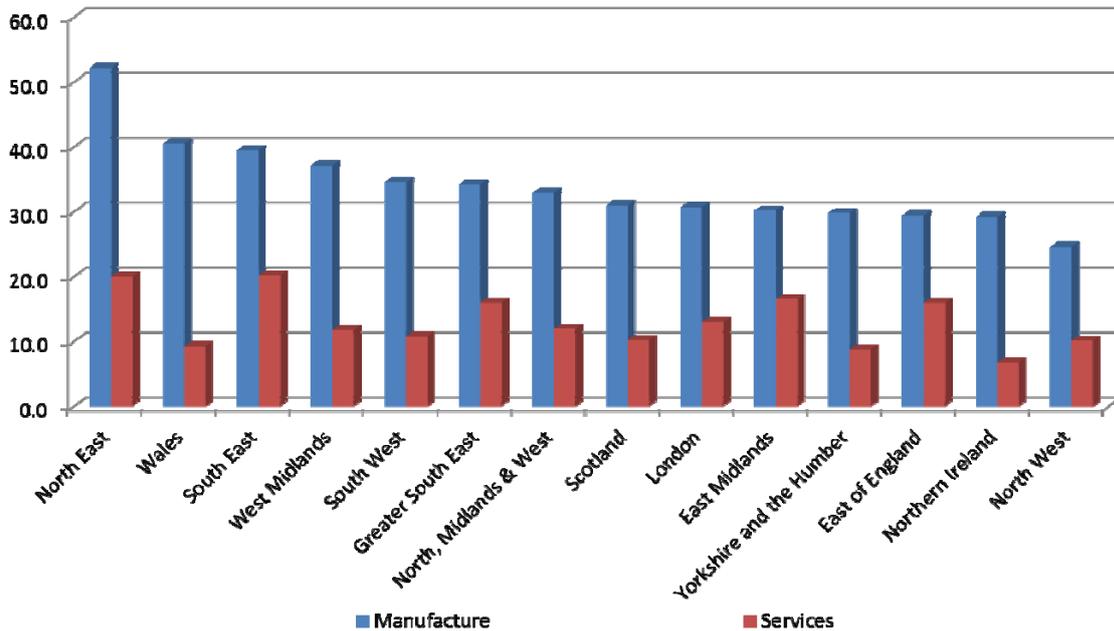
Source: The Authors based on Annual Business Inquiry, Office for National Statistics

Graph 18. Contribution of foreign firms to total manufacturing and services output

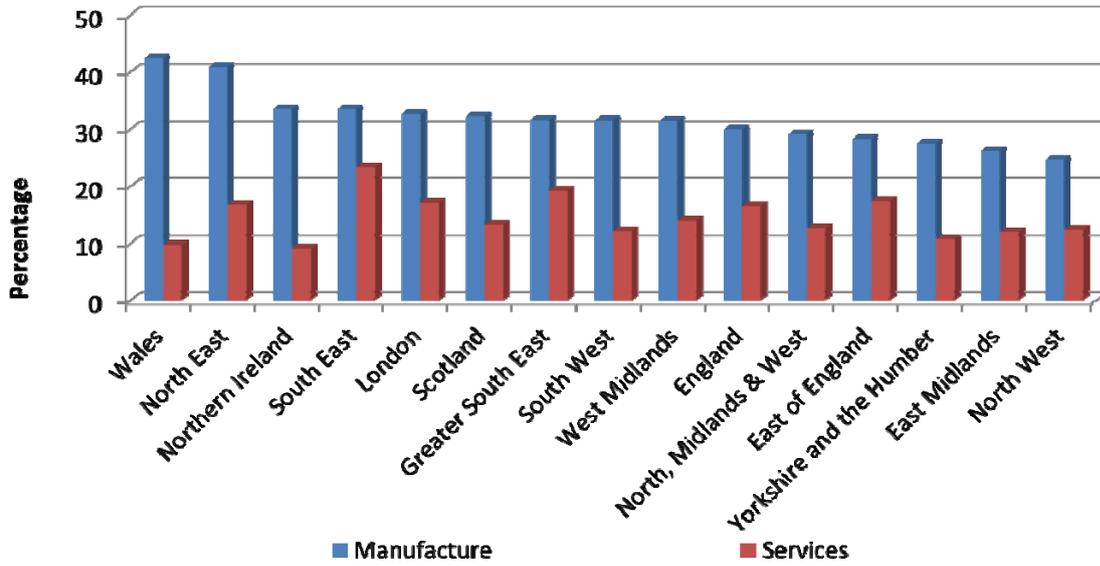


Source: The Authors based on Annual Business Inquiry, Office for National Statistics

Graph 19. Contribution of foreign firms to total manufacturing and services investments by region, average 1998-2008



**Graph 20. Contribution of foreign firms to total manufacturing and services output by region
Average 1998-2008**



Source: The Authors based on Annual Business Inquiry, Office for National Statistics

Table 1. FDI inward stock, by region and economy, 1990-2011

(Billions of dollars-in current prices)

Region/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	
World	2 081	2 344	2 425	2 609	2 852	3 438	3 986	4 588	5 763	7 138	7 450	7 478	7 501	9 388	11 101	11 563	14 300	17 901	15 451	18 041	19 907	20 438	
Developed economies	1 564	1 788	1 811	1 913	2 081	2 579	2 985	3 444	4 491	5 498	5 654	5 592	5 655	7 254	8 578	8 577	10 550	12 738	10 813	12 297	12 891	13 056	
Europe	809	893	894	913	1 066	1 274	1 428	1 496	1 985	2 301	2 443	2 606	3 131	4 139	5 086	4 991	6 372	8 030	7 263	8 002	8 063	8 081	
European Union	762	841	847	860	1 000	1 198	1 352	1 413	1 887	2 193	2 324	2 482	2 959	3 923	4 801	4 732	5 984	7 503	6 654	7 323	7 290	7 276	
United Kingdom	204	208	173	179	190	200	229	253	337	385	439	507	523	606	702	841	1 139	1 243	980	1 056	1 163	1 199	
Germany	111	124	120	116	139	166	163	159	207	235	272	272	298	395	512	476	591	695	668	701	698	714	
France	98	110	128	135	163	237	315	326	454	597	391	384	441	653	867	889	1 107	1 247	905	1 039	1 046	964	
Netherlands	69	72	74	74	93	116	128	124	164	192	244	283	350	458	519	479	553	767	646	660	593	589	
Spain	66	80	108	80	96	110	111	105	126	125	156	177	257	340	407	385	462	586	589	632	641	635	
Italy	60	62	50	54	60	65	75	85	109	109	123	115	135	188	232	237	312	377	328	364	332	333	
Belgium and Luxembourg	58	70	76	94	106	113	124	129	180	180	195	204	-	-	-	-	-	-	-	-	-	-	
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	230	351	467	378	481	811	854	948	901	958
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	35	42	50	44	60	81	83	102	102	115	
Other EU countries	96	114	118	126	152	190	208	232	309	369	504	540	690	890	1 044	1 003	1 278	1 696	1 601	1 820	1 815	1 771	
Other developed Europe	47	52	47	53	65	76	76	83	98	108	119	124	172	216	285	259	389	527	609	679	773	806	
North America	652	786	805	875	868	1 129	1 362	1 773	2 322	2 973	2 996	2 774	2 248	2 744	3 033	3 160	3 668	4 070	2 936	3 543	3 982	4 104	
United States	540	669	696	768	758	1 006	1 229	1 637	2 179	2 798	2 783	2 560	2 022	2 455	2 717	2 818	3 293	3 551	2 486	2 995	3 397	3 509	
Canada	113	117	109	107	110	123	133	136	143	175	213	214	226	289	315	342	375	518	450	547	585	595	
Other developed countries	103	109	112	125	147	176	195	174	183	224	215	212	276	370	459	427	510	638	614	752	846	870	
Australia	80	82	80	88	101	111	123	106	113	127	119	122	150	214	285	242	297	386	306	429	497	500	
Japan	10	12	16	17	19	34	30	27	26	46	50	50	78	90	97	101	108	133	203	200	215	226	
Developing economies	517	556	614	693	764	847	984	1 115	1 238	1 597	1 735	1 797	1 731	1 980	2 325	2 713	3 355	4 487	4 214	5 120	6 256	6 625	
Africa	61	65	69	73	82	89	92	102	110	154	154	150	167	201	239	260	315	393	391	489	561	570	
Asia	343	365	396	450	498	568	664	712	756	1 000	1 072	1 065	1 033	1 178	1 368	1 625	2 080	2 892	2 586	3 112	3 716	3 991	
Hong Kong, China	202	203	207	213	221	228	238	249	225	405	455	419	336	381	453	523	742	1 178	816	936	1 090	1 138	
Singapore	30	36	36	42	55	66	89	75	87	103	111	128	141	158	185	200	250	339	353	394	461	519	
China	21	25	36	64	74	101	128	154	175	186	193	203	217	228	245	272	293	327	378	473	588	712	
Latin America & the Caribbean	111	123	146	167	181	187	225	298	369	440	507	580	529	597	715	823	955	1 196	1 228	1 508	1 964	2 048	
Transition economies			1	3	7	11	17	30	34	43	61	88	115	154	197	273	395	675	424	624	760	757	
Oceania	2	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	6	7	9	11	15	17	

Source: The authors, based on UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics).

Table 2. FDI inward stock as a percentage of gross domestic product, 1990-2011

Region/economy	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
World	9.6	10.2	9.8	10.0	10.2	11.2	12.8	14.8	18.7	22.4	22.7	22.8	22.4	25.0	26.3	25.3	28.8	32.0	25.2	31.1	31.6	28.7
Developed economies	8.7	9.4	8.9	9.3	9.4	10.6	12.3	14.5	18.6	21.9	22.2	22.0	21.9	25.0	26.6	25.4	29.7	32.7	26.2	31.6	31.9	30.1
Europe	10.1	10.7	9.8	10.7	11.8	12.4	13.6	15.2	19.4	22.8	26.0	27.4	31.8	34.6	36.8	34.6	41.3	45.1	37.8	46.5	46.9	43.2
European Union	10.0	10.6	9.7	10.5	11.6	12.2	13.5	15.0	19.2	22.7	25.9	27.4	31.6	34.4	36.5	34.4	40.8	44.2	36.5	44.9	44.9	41.4
Luxembourg	..	..	..	..	..	..	..	..	..	..	..	..	154.9	143.1	145.9	115.9	140.4	158.7	144.5	195.4	190.3	195.2
Belgium	..	..	..	..	..	..	..	..	..	..	..	..	90.8	112.8	129.0	100.2	120.4	176.5	168.5	200.5	192.0	186.7
Malta	18.3	19.7	19.3	24.0	13.9	15.7	23.0	23.6	30.8	46.2	57.2	60.4	54.7	64.6	72.0	71.9	102.3	110.5	93.7	118.3	205.0	186.7
Ireland	79.4	81.5	75.2	82.4	77.1	65.9	63.3	60.3	70.9	75.6	130.3	126.8	148.0	140.0	111.1	80.4	70.0	78.4	71.4	110.9	119.6	112.0
Bulgaria	0.5	2.2	2.4	2.3	3.7	3.4	5.6	10.2	12.5	16.5	21.0	21.2	25.5	30.8	40.0	47.9	70.7	90.1	85.0	101.4	98.3	89.1
Estonia	..	..	2.2	6.2	11.5	15.4	17.4	22.7	32.6	43.2	46.6	50.6	57.7	71.1	83.6	81.4	75.6	76.2	69.5	87.2	86.7	75.4
Netherlands	23.3	23.9	22.1	22.7	26.6	27.6	30.7	32.0	40.8	46.7	63.3	70.6	79.9	85.1	85.2	75.1	81.6	98.0	74.1	83.2	76.1	70.2
Cyprus	- 14.7	- 12.9	- 9.2	- 8.5	- 6.5	- 1.4	3.2	9.6	12.5	20.6	31.0	39.3	46.1	51.3	54.3	50.2	74.7	83.7	66.3	78.6	76.1	65.8
Sweden	5.2	7.0	5.3	6.5	10.4	12.2	12.6	16.4	20.0	28.3	38.0	40.4	47.6	50.5	54.5	46.6	57.0	63.4	57.3	82.3	76.2	63.4
Hungary	1.6	6.2	9.0	14.1	16.7	24.7	28.5	38.1	42.5	47.4	49.3	52.0	54.6	57.9	60.4	55.4	71.2	70.1	57.1	78.3	70.6	60.4
Czech Republic	..	..	..	9.2	10.4	13.3	13.8	16.2	23.2	29.2	36.8	42.1	49.3	47.5	50.2	46.6	53.8	62.3	50.2	64.1	65.0	58.2
Slovakia	..	..	..	4.8	5.8	6.6	9.7	9.7	13.0	15.8	23.3	27.1	36.5	47.4	51.9	49.4	60.2	57.0	54.1	60.1	57.6	53.3
United Kingdom	20.1	19.7	15.8	18.3	17.9	17.3	18.7	18.6	23.2	25.6	29.7	34.5	32.5	32.6	31.9	36.9	46.6	44.2	37.2	48.6	51.6	49.8
Denmark	6.8	10.8	9.6	10.4	11.8	13.1	12.1	13.1	20.6	27.4	46.0	47.0	47.6	47.1	47.7	45.2	48.8	52.2	45.2	50.8	45.9	46.2
Portugal	13.6	14.8	14.0	17.5	18.0	16.3	17.5	19.4	24.6	21.3	27.4	30.0	33.8	37.5	36.2	33.1	44.0	49.8	39.7	49.0	48.8	45.7
Latvia	..	..	3.2	4.6	8.9	12.4	16.5	20.3	23.1	24.6	26.8	28.3	29.8	29.4	33.0	30.9	37.7	37.8	34.5	44.9	44.8	42.8
Spain	12.7	14.2	17.6	15.8	18.7	18.5	17.9	18.4	21.0	20.3	26.9	29.1	37.5	38.4	39.0	34.0	37.4	40.6	36.9	43.2	45.5	42.1
Poland	0.2	0.5	1.5	2.5	3.5	5.6	7.3	9.3	13.0	15.5	20.0	21.7	24.4	26.7	34.3	29.9	36.8	42.0	31.0	43.0	42.8	38.5
Romania	0.0	0.2	0.6	0.8	1.3	2.3	3.1	6.8	10.7	15.8	18.6	20.5	17.1	20.5	27.0	26.0	37.0	36.9	33.2	43.8	43.5	37.7
Austria	6.7	6.7	6.2	6.4	7.4	8.3	8.4	9.4	11.1	11.1	16.2	18.3	21.6	22.7	24.3	27.1	34.2	43.3	35.8	45.2	43.8	35.6
France	7.8	8.8	9.3	10.4	12.0	15.1	19.9	22.9	30.8	40.9	29.4	28.7	30.3	36.4	42.1	41.5	49.0	48.2	31.9	39.5	40.8	34.7
Lithuania	..	..	1.3	2.0	5.0	5.2	8.3	10.3	14.4	18.8	20.3	21.8	28.0	26.5	28.2	31.5	36.4	38.3	27.2	37.1	37.3	32.6
Finland	3.7	3.4	3.3	4.8	6.7	6.5	6.9	7.8	12.7	14.1	19.9	19.3	25.2	30.6	30.4	28.0	34.0	37.3	30.7	35.2	35.9	31.0
Slovenia	..	..	14.0	14.6	8.9	8.5	9.5	10.9	12.9	12.1	14.5	12.7	17.8	21.6	22.4	20.3	23.1	30.4	28.6	30.9	30.7	30.6
Germany	6.5	6.9	5.8	5.8	6.5	6.6	6.7	7.4	9.5	11.0	14.4	14.5	14.8	16.3	18.8	17.2	20.4	20.9	18.4	21.3	21.3	20.0
Italy	5.3	5.2	3.9	5.3	5.7	5.8	5.9	7.2	8.9	9.0	11.2	10.3	11.1	12.5	13.4	13.4	16.8	17.8	14.3	17.3	16.2	15.2
Greece	6.0	6.7	7.1	8.5	8.8	8.3	8.6	9.6	9.6	11.3	11.1	10.6	10.6	11.5	12.4	12.2	15.8	17.5	11.2	13.1	11.6	9.2
Other developed Europe	12.9	14.0	12.1	14.2	16.1	16.0	15.8	19.0	22.6	24.5	27.7	28.3	35.5	38.1	44.5	37.2	51.8	62.1	62.6	76.9	80.5	70.8
North America	10.2	12.0	11.6	12.1	11.4	14.1	16.1	19.8	24.7	29.7	28.0	25.2	19.7	22.8	23.6	22.9	25.0	26.3	18.6	23.2	24.7	24.4
Canada	19.4	19.6	18.7	19.0	19.5	20.9	21.7	21.3	23.2	26.5	29.3	29.9	30.7	33.4	31.8	30.1	29.3	36.4	29.9	40.9	37.1	34.3
United States	9.3	11.2	11.0	11.5	10.7	13.6	15.7	19.6	24.8	29.9	27.9	24.8	19.0	22.0	22.9	22.3	24.6	25.3	17.4	21.5	23.4	23.2
Other developed countries	2.9	2.8	2.6	2.6	2.8	3.0	3.7	3.6	4.1	4.5	4.1	4.5	6.1	7.4	8.3	7.7	9.4	11.2	9.8	11.8	11.9	11.1
Japan	0.3	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.7	1.1	1.1	1.2	2.0	2.1	2.1	2.2	2.5	3.0	4.2	4.0	3.9	3.9
Developing economies	13.4	13.7	13.8	14.3	14.7	14.4	15.3	16.6	19.5	24.8	24.7	25.9	24.3	25.1	25.3	25.0	26.5	29.8	24.0	29.6	30.5	26.0
Africa	12.3	13.4	13.5	14.6	16.6	16.8	16.5	17.7	19.4	26.7	25.6	25.9	28.3	28.6	27.8	25.9	27.3	29.4	24.9	32.9	32.8	30.2
Asia	15.4	15.6	15.3	15.6	16.7	16.1	17.1	17.9	21.0	25.6	25.0	25.0	22.2	22.5	22.4	22.8	25.1	29.1	22.3	26.5	27.0	24.5
China	5.1	5.9	7.2	9.9	12.7	13.4	14.4	15.6	16.8	16.9	16.2	15.4	14.9	13.8	12.6	11.9	10.5	9.4	8.3	9.4	10.2	10.1
Hong Kong, China	262.3	228.2	198.6	178.0	163.3	157.8	149.7	141.4	134.9	248.2	269.3	251.7	205.3	240.5	273.1	294.3	390.9	568.6	379.0	447.4	485.6	467.3
Latin America & the Caribbean	10.0	10.1	11.1	11.6	10.6	10.2	11.4	13.8	17.1	22.8	23.8	27.9	28.4	30.9	32.1	30.5	30.0	31.9	28.1	37.2	39.3	28.8

Source: The authors, based on UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics).

Table 3. FDI inward stock in the United Kingdom by area and main country, 1995-2010

	<i>Percentage</i>															
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EUROPE	40.5	41.5	37.9	40.1	49.9	51.1	47.7	48.5	46.8	49.9	56.7	57.2	57.1	59.0	61.1	58.4
EU	33.9	32.6	29.4	34.2	45.1	46.6	43.3	43.9	41.9	44.4	50.1	51.7	49.8	50.8	53.2	49.7
NETHERLANDS	13.3	13.9	7.9	13.9	14.2	14.1	17.4	12.2	13.8	13.1	19.6	20.7	17.9	20.8	16.3	15.7
FRANCE	6.4	6.8	9.1	8.0	8.3	16.7	10.1	11.5	10.8	11.3	11.5	10.3	8.8	7.8	10.8	9.3
LUXEMBOURG	0.9	0.5	0.6	0.7	0.9	0.6	0.7	1.5	1.7	1.6	1.6	2.8	3.3	4.1	7.2	8.9
GERMANY	6.9	7.1	6.6	5.7	15.2	8.9	8.5	11.6	9.5	10.8	10.5	9.4	10.4	10.9	9.9	6.9
SPAIN	0.1	0.1	0.2	0.2	0.4	0.2	0.2	0.7	1.0	1.2	1.8	3.6	4.5	1.7	3.9	4.2
IRISH_REPUBLIC	0.5	0.5	1.2	1.4	1.3	1.2	1.2	1.4	1.4	1.4	1.5	1.4	1.4	1.5	1.6	1.3
BELGIUM	0.8	0.5	0.6	0.7	0.8	0.7	0.6	0.5	0.6	1.2	0.9	1.0	0.7	0.6	0.6	1.0
DENMARK	0.9	0.6	0.6	0.8	0.8	0.9	1.1	0.7	0.6	0.6	0.3	0.7	0.9	1.3	0.8	0.6
ITALY	0.9	0.7	0.5	0.7	0.6	0.8	1.9	1.8	1.3	1.8	1.3	0.8	0.8	0.9	0.7	0.6
SWEDEN	2.3	1.4	1.6	1.4	1.7	1.3	1.0	1.3	0.7	0.8	0.7	0.7	0.7	0.7	0.9	0.4
CYPRUS	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3
Other EU countries	0.7	0.5	0.4	0.6	0.6	0.6	0.5	0.6	0.5	0.4	0.3	0.3	0.4	0.3	0.4	0.5
EFTA	6.4	8.7	8.1	4.5	3.9	3.4	3.0	3.4	4.1	4.3	5.1	3.9	5.2	4.5	4.4	4.9
of which	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SWITZERLAND	5.8	7.5	6.8	3.7	3.6	3.1	2.7	3.0	3.7	4.0	4.4	3.3	4.7	4.1	3.9	4.5
OTHER EUROPEAN COUNTRIES	0.2	0.2	0.4	1.4	0.9	1.1	1.4	1.2	0.8	1.1	1.6	1.7	2.1	3.7	3.5	3.8
of which	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UK OFFSHORE ISLANDS (2)	0.0	0.1	0.2	1.2	0.7	0.9	1.2	1.0	0.7	1.0	1.4	1.6	1.9	3.3	3.4	3.6
THE AMERICAS	46.1	46.2	50.6	50.1	43.8	38.7	43.3	42.6	43.0	38.5	35.6	34.6	32.6	31.8	30.6	32.6
of which	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
USA	42.8	41.6	45.9	46.1	39.2	34.4	39.2	38.4	38.4	33.6	30.7	29.4	26.9	25.5	25.0	27.4
ASIA	6.2	6.0	6.0	5.1	3.0	6.1	5.5	6.3	5.9	6.8	4.9	6.8	8.6	7.6	6.2	7.5
of which	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JAPAN	4.3	4.4	4.3	3.6	1.8	3.6	3.1	3.6	3.5	3.4	2.2	2.5	4.1	4.6	3.6	3.8
HONG KONG	0.0	0.0	0.0	0.2	0.2	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.3
SINGAPORE	0.4	0.4	0.5	0.2	0.4	0.6	0.5	0.5	0.2	0.3	0.2	0.7	2.0	0.2	0.5	0.9
SOUTH KOREA	0.0	-0.2	-0.2	0.0	-0.1	-0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.4
INDIA	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.5	0.3	0.4
CHINA	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
AUSTRALASIA & OCEANIA	6.6	5.7	4.8	3.9	3.0	3.6	3.2	2.6	4.2	4.6	2.6	1.3	1.5	1.2	1.9	1.3
of which	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUSTRALIA	5.4	4.6	3.9	2.9	2.3	3.4	3.1	2.6	4.2	4.6	2.5	1.2	1.4	1.2	1.8	1.3
AFRICA	0.7	0.6	0.6	0.8	0.4	0.4	0.3	0.1	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.2
WORLD TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(2) The UK Offshore Islands consist of the Channel Islands & the Isle of Man, excluded from the definition of the economic territory of the UK from 1997.

Source: The authors, based on Office for National Statistics, United Kingdom, Business Monitor MA4 Foreign Direct Investment, available at: <http://www.ons.gov.uk/ons>

Table 4a. Sectoral composition of FDI inward stock in the United Kingdom, 1999-2008

	Percentage									
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Primary	10.2	8.9	12.2	11.5	7.4	7.5	17.1	16.8	15.3	12.4
Agriculture, forestry & fishing	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
Mining & quarrying (including oil/gas)	10.1	8.8	12.2	11.5	7.3	7.4	17.0	16.7	15.2	12.3
Secondary	26.6	23.7	26.8	24.8	26.4	24.8	22.1	18.6	16.1	18.4
Chemical, plastic & fuel products	6.2	4.9	4.6	5.3	6.1	5.6	4.1	3.8	2.8	4.0
Textile & wood, printing & publishing	4.8	5.6	4.6	4.0	6.0	6.3	6.4	3.2	3.0	3.1
Metal & mechanical products	4.1	3.7	3.1	2.7	2.8	3.0	2.7	2.2	1.9	2.4
Food products	3.5	2.2	2.0	2.1	2.2	2.1	1.8	1.6	3.5	3.9
Transport equipment	2.8	2.6	4.9	3.9	2.3	1.2	0.8	1.2	1.1	1.1
Office, IT & communications equipment	2.7	2.4	2.2	1.6	1.9	1.7	1.1	1.4	1.2	1.2
Other manufacturing	2.5	2.4	5.4	5.3	5.2	4.8	5.1	5.3	2.5	2.7
Services	63.2	67.4	61.0	63.6	66.2	67.8	60.8	64.6	68.6	69.2
Financial services	20.5	20.4	22.5	23.6	27.2	26.7	20.6	22.5	24.8	24.5
Retail/ wholesale trade & repairs	12.3	10.3	11.5	11.0	11.8	11.6	9.9	10.4	14.9	15.2
Transport & communications	16.5	18.6	9.9	10.3	7.6	8.9	10.1	12.8	9.6	7.6
Real estate & business services	6.2	9.9	9.9	11.2	10.1	10.0	7.0	7.7	8.3	9.7
Electricity, gas & water	3.1	4.0	3.0	3.8	4.3	6.1	5.5	3.8	3.8	3.8
Hotels & restaurants	1.7	1.4	1.2	0.9	1.9	1.4	1.7	1.0	1.0	1.5
Construction	0.3	0.6	0.8	0.8	0.9	0.7	0.8	1.1	0.9	1.4
Other services	2.6	2.0	2.2	2.0	2.4	2.4	5.2	5.3	5.5	5.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: The authors, based on Office for National Statistics, United Kingdom, Business Monitor MA4 Foreign Direct Investment, available at: <http://www.ons.gov.uk/ons>

Notes: Data in tables 4a and 4b are not fully comparable as they are based on different versions of the SIC system. Data in table 4a is based on the 2003 version of the SIC system, whereas data in table 4b is based on the 2007 version of the SIC system

Table 4b. Sectoral composition of FDI inward stock in the United Kingdom, 2009-2011

	Percentage		
	2009	2010	2011
Primary	11.7	12.4	9.7
Agriculture, forest & fishing	0.1	0.2	0.1
Mining & quarrying	11.6	12.2	9.6
Secondary	20.2	19.7	19.3
Petroleum, chemicals, pharmaceuticals, rubber, plastic products	4.9	4.6	4.3
Textiles & wood activities	0.8	0.8	0.9
Metal and machinery products	1.9	2.4	2.2
Food products, beverages & tobacco products	4.5	6.5	5.7
Transport equipment	1.5	1.0	2.1
Computer, electronic & optical products	1.9	0.0	0.0
Other manufacturing	4.7	4.3	4.1
Services	68.1	67.9	71.0
Financial services	26.9	25.3	24.7
Retails & wholesale trade, repair of motor vehicles & motor cycles	10.1	9.5	13.6
Information and communication	9.7	12.4	11.1
Transportation & storage	4.2	5.9	5.0
Electricity, gas, water & waste	7.2	5.5	6.9
Professional, scientific & technical services	2.6	2.4	3.2
Construction	1.3	0.7	0.9
Other services	6.1	6.1	5.7
Total	100.0	100.0	100.0

Table 5. Sectoral composition of FDI inward stock in Germany, 2000, 2009
Percentage

	2000	2009
Primary	0.5	1.0
Agriculture, hunting, forestry, and fishing	0.1	0.0
Mining, quarrying and petroleum	0.4	0.9
Secondary	32	33
Food, beverages and tobacco	1.9	1.4
Chemicals and chemical products	6.8	7.3
Rubber and plastic products	1.5	1.4
Other non-metallic mineral products	1.2	1.5
Basic metals	1.3	1.2
Fabricated metal products, except machinery and equipment	1.2	1.3
Machinery and equipment	3.3	4.6
Electrical machinery and apparatus	1.7	1.3
Radio, television and communication equipment	3.1	1.4
Medical, precision and optical instruments	1.2	2.3
Motor vehicles, trailers and semi-trailers	4.2	2.3
Services	67.7	65.9
Electricity, gas, and water supply	0.8	2.8
Trade, repair of motor vehicles, motorcycles and personal and household goods	13.1	13.0
Transport and communication	2.4	8.5
Finance and insurance	15.4	14.1
of which: Monetary Intermediation	5.2	9.0
Other monetary intermediation	8.2	2.0
Insurance and pension funding (except compulsory social security)	1.9	2.7
Real estate, renting and business activities	34.5	25.9
of which: Holding companies	27.7	13.9
Total	100	100

Source: The authors, based on data reported in the Columbia FDI Profile, "Inward FDI in Germany and its policy context: Update 2011"

Table 6. FDI inward stock as a percentage of gross value added by sector, 2009-2011

	Percentage		
	2009	2010	2011
Primary	287	282	227
Agriculture, forest & fishing	31	53	44
Mining & quarrying	309	299	240
Secondary	99	89	88
Food products, beverages & tobacco products	109	159	142
Textiles & wood activities	133	130	140
Petroleum, chemicals, pharmaceuticals, rubber, plastic products	125	102	102
Metal and machinery products	81	100	87
Computer, electronic & optical products	163	2	3
Transport equipment	69	38	73
Other manufacturing	77	66	63
Services	58	59	63
Construction	12	7	9
Retails & wholesale trade, repair of motor vehicles & motor cycles,	43	41	61
Transportation & storage	47	65	57
Information and communication	75	96	83
Financial services	304	293	422
Professional, scientific & technical services	16	15	19
Administrative and support service activities	23	26	25
Other services	19	17	15
Electricity, gas, water & waste	113	98	121

Source: The authors, based on Office for National Statistics, United Kingdom, Business Monitor MA4 Foreign Direct Investment and Annual Business Survey, 2011 available at: <http://www.ons.gov.uk/ons>

Table 7. FDI inflows, by region and economy, 1990-2011

(Billions of dollars-in current prices)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Growth rate (%)	
																						2007-2010	2007-2011	
World	207	154	166	223	256	343	391	488	706	1,091	1,401	828	628	587	744	981	1,463	1,976	1,791	1,198	1,309	1,524	- 33.7	- 22.8
Developed economies	173	114	111	143	151	222	236	285	509	852	1,138	601	443	377	422	623	982	1,310	1,020	606	619	748	- 52.8	- 42.9
Europe	104	83	78	80	89	137	132	155	297	523	725	395	319	295	230	507	640	899	569	399	357	425	- 60.3	- 52.7
European Union	97	80	78	79	83	132	125	144	284	505	698	384	312	274	226	499	585	854	542	357	318	421	- 62.7	- 50.7
United Kingdom	30	15	15	15	9	20	24	33	74	88	119	53	24	17	56	176	156	196	91	71	51	54	- 74.2	- 72.5
France	16	15	18	16	16	24	22	23	31	47	43	50	49	42	33	85	72	96	64	24	31	41	- 68.2	- 57.4
Spain	13	12	15	10	9	8	10	9	14	19	40	28	39	26	25	25	31	64	77	10	41	29	- 36.6	- 54.1
Netherlands	11	6	6	6	7	12	17	11	37	41	64	52	25	33	12	39	14	119	5	36	- 9	17	- 107.5	- 85.7
Belgium and Luxembourg	8	9	11	11	9	11	14	12	23	120	89	88	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	16	33	44	34	59	93	194	62	81	89	- 13.1	- 4.6
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	4	3	5	7	32	-28	11	22	9	18	- 132.6	- 162.0
Italy	6	2	3	4	2	5	4	5	4	7	13	15	17	19	20	23	43	44	- 11	20	9	29	- 79.1	- 33.7
Germany	3	5	- 2	0	7	12	7	12	25	56	198	26	54	32	- 10	47	56	80	8	24	47	40	- 41.6	- 49.6
Portugal	3	3	2	2	1	1	1	2	3	1	7	6	2	7	2	4	11	3	5	3	3	10	- 13.6	237.8
Other EU countries	7	13	9	15	22	40	27	36	73	126	126	65	82	61	40	59	112	185	98	84	56	93	- 69.7	- 50.0
Other developed Europe	7	3	- 0	1	6	5	6	11	13	19	27	11	7	20	4	8	55	45	27	42	38	5	- 15.3	- 89.9
North America	56	26	24	55	53	68	94	115	197	308	381	187	97	61	135	130	297	331	364	165	221	268	- 33.1	- 19.0
United States	48	23	19	51	45	59	84	103	174	283	314	159	74	53	136	105	237	216	306	144	198	227	- 8.4	5.1
Canada	8	3	5	5	8	9	10	12	23	25	67	28	22	7	- 0	26	60	115	57	21	23	41	- 79.6	- 64.3
Other developed countries	12	6	9	8	8	18	10	15	15	20	32	19	28	22	56	- 15	45	81	87	42	41	55	- 49.5	- 32.1
Australia	8	3	5	5	4	13	5	8	8	2	16	11	15	9	42	- 24	31	46	47	27	36	41	- 21.9	- 9.3
Israel	0	0	0	0	0	2	2	2	2	4	7	2	2	3	3	5	15	9	11	5	6	11	- 37.4	29.3
New Zealand	2	2	1	2	3	3	4	2	2	1	1	- 0	2	2	2	5	3	4	- 1	1	3	3	- 79.7	7.6
Bermuda	-	-	-	-	-	-	-	0	0	0	0	0	0	0	1	0	0	1	0	- 0	0	0	- 62.6	- 31.4
Japan	2	1	3	0	1	0	0	3	3	13	8	6	9	6	8	3	- 7	23	24	12	- 1	- 2	- 105.6	- 107.8
Developing economies	35	40	53	77	103	116	149	192	189	231	255	217	173	190	292	327	427	574	650	519	617	684	7.4	19.2
Africa	3	4	4	5	6	6	6	11	10	12	10	20	15	18	17	31	37	51	58	53	43	43	- 16.2	- 17.1
Asia	23	24	33	56	68	80	97	107	93	114	148	116	100	124	178	218	291	349	380	315	384	423	9.9	21.1
China	3	4	11	28	34	38	42	45	45	40	41	47	53	54	61	72	73	84	108	95	115	124	37.4	48.4
Hong Kong, China	3	1	4	7	8	6	10	11	15	25	62	24	10	14	34	34	45	54	60	52	71	83	30.8	53.0
Singapore	6	5	2	5	9	12	11	16	6	19	16	17	6	17	24	18	37	47	12	24	49	64	3.6	36.4
India	0	0	0	1	1	2	3	4	3	2	4	5	6	4	6	8	20	26	43	36	24	32	- 5.3	23.7
Latin America and the Caribbean	9	12	16	15	29	30	46	73	86	105	98	81	58	48	96	78	98	172	210	149	187	217	8.8	26.0
Brazil	1	1	2	1	2	4	11	19	29	29	33	22	17	10	18	15	19	35	45	26	49	67	40.3	92.7
British Virgin Islands	0	0	- 0	1	1	- 1	1	4	9	8	10	3	1	3	18	- 9	8	32	52	47	49	54	54.4	69.1
Transition economies			2	3	2	4	6	10	8	9	7	10	11	20	30	31	54	91	121	72	74	92	- 18.8	1.5
Russian Federation	-	-	1	1	1	2	3	5	3	3	3	3	3	8	15	13	30	55	75	36	43	53	- 21.4	- 4.0
Oceania	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1	2	2	2	2	82.1	40.6

Source: The authors, based on UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics).

Table 8. Value of cross-border M&As by region/economy of seller, 1990-2011

(Billions of dollars-in current prices)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Growth rate (%)	
																								2007-2010	2007-2011
World	99	21	48	44	92	113	143	181	406	631	905	429	248	183	227	462	625	1 023	707	250	344	526	- 66	- 49
Developed economies	89	17	40	39	81	105	120	139	355	562	852	364	204	153	197	404	527	892	581	204	257	410	- 71	- 54
Europe	43	9	27	25	40	55	62	68	170	308	516	183	144	101	149	317	351	559	273	134	125	200	- 78	- 64
European Union	39	9	26	23	40	53	56	64	166	296	497	168	139	88	144	305	333	528	251	116	116	172	- 78	- 67
United Kingdom	18	2	4	6	7	21	18	20	66	114	113	54	24	23	43	94	125	172	148	25	61	36	- 65	- 79
France	7	2	7	4	11	7	13	9	22	23	34	12	17	11	13	25	19	28	5	1	4	24	- 86	- 14
Spain	2	1	4	1	1	1	1	4	12	- 7	20	5	9	3	0	21	8	52	34	32	9	17	- 83	- 67
Netherlands	1	1	- 0	1	1	1	2	5	13	17	27	23	8	6	16	21	26	163	- 8	18	4	14	- 97	- 91
Italy	1	0	2	2	7	0	3	1	5	11	11	3	9	9	17	40	26	24	- 2	1	6	13	- 73	- 43
Germany	4	- 0	2	1	4	6	3	9	13	36	233	32	35	20	34	48	41	44	32	13	9	13	- 81	- 71
Poland	-	0	1	0	0	1	1	1	1	3	9	3	1	0	1	1	1	1	1	1	1	10	46	1 279
Luxembourg	0	0	-	0	0	-	-	3	0	5	0	1	5	0	0	8	35	7	- 4	0	5	9	- 26	28
Denmark	0	0	0	1	0	0	0	1	4	3	12	2	2	1	3	12	11	6	6	2	1	8	- 75	34
Sweden	1	1	2	1	5	9	4	3	11	60	25	6	7	3	5	8	15	5	19	1	0	8	- 95	67
Austria	0	0	0	0	0	1	0	1	4	- 0	0	9	- 0	2	1	2	1	10	1	2	0	7	- 96	- 28
Belgium	3	- 0	0	1	1	1	7	5	5	15	2	3	3	2	3	4	2	1	2	12	9	4	883	308
Ireland	0	0	- 0	1	0	1	0	0	0	3	4	9	2	- 0	2	1	3	1	3	2	2	2	162	169
Hungary	0	0	0	1	0	2	1	0	1	0	0	0	1	1	0	2	2	1	2	2	0	2	- 70	138
Greece	0	0	0	0	0	0	0	0	0	1	1	2	1	1	1	1	7	1	7	0	- 1	1	- 213	67
Other EU countries	0	1	2	1	1	4	2	3	11	12	8	5	16	5	6	16	10	14	6	4	4	4	- 72	- 72
Other developed Europe	3	0	1	2	0	2	6	4	4	12	18	15	5	13	5	12	17	31	22	18	9	28	- 71	- 10
Switzerland	3	0	1	0	0	2	3	3	3	3	6	9	4	8	4	7	12	22	7	15	1	20	- 94	- 12
Norway	0	0	0	2	- 0	0	3	1	1	9	12	6	1	5	1	5	4	8	15	2	7	9	- 8	9
Other	-	0	-	-	-	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	- 0	- 62	- 107
North America	41	7	12	11	39	38	43	62	162	222	303	154	54	42	37	80	166	266	263	51	98	164	- 63	- 38
Canada	4	1	1	1	2	10	3	6	19	19	31	30	14	2	- 1	12	38	101	35	11	15	30	- 85	- 70
United States	36	5	11	10	36	28	41	56	143	202	272	124	41	40	38	67	128	165	227	40	83	134	- 50	- 19
Other developed countries	6	2	2	3	2	12	15	9	23	32	34	28	6	10	11	7	11	67	45	18	34	45	- 49	- 33
Australia	1	2	1	2	1	9	8	6	5	6	13	3	4	4	- 2	2	11	44	34	22	27	35	- 39	- 20
Japan	0	- 0	- 0	0	1	0	2	1	4	21	12	19	2	4	11	1	- 12	17	9	- 6	7	5	- 58	- 70
Others	4	0	1	1	0	2	5	2	14	5	9	6	- 0	2	2	4	12	6	3	2	1	5	- 92	- 27
Developing economies	10	4	8	5	10	7	20	36	51	68	52	62	42	20	25	64	89	100	105	39	82	83	- 18	- 17
Africa	0	- 0	0	0	0	1	1	4	- 5	1	2	15	1	4	1	9	11	8	21	5	8	7	- 0	- 11
Asia	1	2	2	1	4	2	7	16	16	31	14	24	32	13	15	41	65	71	69	38	37	55	- 48	- 23
China	-	- 0	0	0	1	0	1	2	4	7	37	2	16	4	5	7	11	9	5	11	6	11	- 32	20
Hong Kong, China	0	1	1	1	1	1	0	7	2	3	- 36	8	1	0	1	5	9	7	9	3	12	1	72	- 86
India	0	-	0	0	0	0	0	0	0	1	1	1	1	1	1	1	4	4	10	6	6	13	26	185
Latin America and the Caribbean	9	2	5	3	7	4	12	17	39	36	36	23	9	4	8	15	13	21	15	- 4	28	21	38	0
Transition economies	-	-	0	0	0	1	2	5	0	2	1	3	2	10	5	- 5	9	30	20	7	4	33	- 85	8

Source: The authors, based on UNCTAD cross-border M&A database (www.unctad.org/fdistatistics).

Table 9. Composition of greenfield FDI projects, by destination, 2003-2011

Destination region/economy	Percentage								
	2003	2004	2005	2006	2007	2008	2009	2010	2011
World	100	100	100	100	100	100	100	100	100
Developed countries	29	32	30	34	32	31	31	33	31
Europe	18	21	20	23	23	21	19	19	19
European Union	17	21	20	23	23	20	19	18	19
United Kingdom	2	3	2	3	3	4	5	3	4
Romania	0	1	2	2	2	2	1	1	2
Germany	3	2	2	2	2	2	2	2	2
Poland	1	2	2	2	2	2	1	1	1
Spain	2	2	1	2	2	2	2	2	1
France	1	1	2	2	2	1	1	1	1
Other EU countries (1)	7	10	9	10	9	6	6	8	7
Other developed Europe	1	0	0	0	1	1	1	1	0
North America	6	6	7	5	6	7	8	9	9
United States	3	4	5	4	5	6	7	7	6
Canada	3	2	2	2	1	1	1	2	3
Other developed countries	5	5	3	6	3	3	3	5	2
Australia	3	4	1	4	2	2	2	5	1
Japan	1	1	1	1	1	1	1	1	1
Developing economies	62	59	61	59	59	62	64	61	63
Africa	8	6	12	11	9	14	9	10	9
Asia	41	43	38	41	42	38	43	37	38
China	19	18	12	13	11	8	11	11	11
India	3	5	4	9	5	5	5	6	6
Indonesia	2	2	2	1	2	3	3	2	3
Singapore	1	1	1	1	2	1	1	2	2
Latin America and the Caribbean	13	10	11	7	7	9	12	13	15
Brazil	4	4	5	2	2	3	4	5	7
Mexico	2	1	1	2	2	2	2	2	2
Chile	2	1	1	0	0	1	1	1	2
Argentina	1	1	0	1	1	0	1	1	1
Colombia	1	0	0	0	0	1	0	1	1
Oceania	0	0	0	0	0	0	0	0	0
Papua New Guinea	0	0	0	0	0	0	0	0	0
Transition economies	10	8	9	6	9	8	6	6	7
Russian Federation	4	6	6	4	5	4	3	4	2

Source: The authors, based on UNCTAD, based on information from the Financial Times Ltd, fDi Markets (www.fDimarkets.com).

Note: Data refer to estimated amounts of capital investment.

Table 10. Country rankings by UNCTAD's Inward FDI Attraction Index, 2000–2011: Top 50 economies

Economy	2000	2003	2007	2008	2009	2010	2011
Hong Kong, China	1	Ireland	1	Hong Kong, China	1	Hong Kong, China	1
Netherlands	2	Singapore	2	Singapore	2	Belgium	2
Ireland	3	Belgium	3	Belgium	3	Singapore	3
Sweden	3	Netherlands	4	Bulgaria	4	Singapore	4
Singapore	5	Hong Kong, China	5	Netherlands	5	Kazakhstan	5
Denmark	6	Luxembourg	6	Iceland	6	Saudi Arabia	6
United Kingdom	7	Angola	7	United Kingdom	7	Chile	7
Angola	8	Slovakia	8	Jordan	8	Viet Nam	8
Chile	9	Czech Republic	9	Egypt	8	Switzerland	9
Czech Republic	10	Kazakhstan	10	Congo	10	Jordan	10
Canada	11	Azerbaijan	11	Lebanon	11	Lebanon	10
Finland	12	Brunei Darussalam	12	Switzerland	12	United Kingdom	12
Bahamas	13	Spain	13	Romania	13	Chile	13
Germany	14	Lebanon	14	Kazakhstan	14	Egypt	14
Hungary	15	Chad	15	Estonia	15	Romania	15
Switzerland	16	Chile	16	Israel	15	Netherlands	16
Bolivia	17	Equatorial Guinea	17	Canada	17	Canada	17
Argentina	18	China	18	Saudi Arabia	18	Switzerland	18
Brunei Darussalam	19	Cyprus	19	Ukraine	19	Luxembourg	19
Malta	20	Denmark	20	Bahamas	20	Viet Nam	20
Brazil	21	Bulgaria	21	Chile	21	Israel	21
Kazakhstan	21	Hungary	22	Bahrain	22	Bahamas	22
Panama	23	Trinidad and Tobago	23	Sweden	23	Bahrain	23
Trinidad and Tobago	24	Mexico	24	Czech Republic	24	Croatia	24
Azerbaijan	25	Switzerland	25	Malta	25	Serbia	25
China	26	France	26	United Arab Emirates	26	Panama	26
Spain	27	Portugal	27	Montenegro	27	Georgia	27
Thailand	28	Sweden	28	Panama	28	Ukraine	28
Poland	29	Finland	29	Luxembourg	29	Estonia	29
Cyprus	30	Croatia	30	Poland	30	Malta	30
Lebanon	31	Bahamas	31	Georgia	30	United Arab Emirates	31
Viet Nam	32	Estonia	31	France	32	Montenegro	32
Bulgaria	33	Brazil	33	Cyprus	33	Congo	33
Equatorial Guinea	34	Morocco	33	Austria	34	Australia	34
United States	35	Thailand	35	Saudi Arabia	35	Russian Federation	35
France	36	Jamaica	36	Croatia	36	Spain	36
Croatia	37	Sudan	37	Colombia	37	Poland	37
Liberia	38	Canada	38	Thailand	38	Cyprus	38
Venezuela	38	Bolivia	38	Spain	39	Austria	39
Estonia	40	Australia	40	Russian Federation	40	France	40
Norway	40	Viet Nam	41	Equatorial Guinea	41	Slovakia	41
Malaysia	42	Serbia	42	Slovakia	42	Colombia	42
Israel	43	Mozambique	43	Viet Nam	42	Tunisia	43
Slovakia	43	Liberia	44	Antigua and Barbuda	44	Madagascar	44
Mexico	45	United Kingdom	45	Hungary	45	Antigua and Barbuda	45
Congo	46	Germany	46	Latvia	46	Costa Rica	46
Lithuania	47	Poland	46	China	47	Jamaica	46
							47

Source: The authors, based on UNCTAD (www.unctad.org/fdistatistics).

Table 11. Country rankings by Inward FDI Potential Index, 2011: top 50 economies

Economy	Economic determinants groupings				Overall rank
	Market attractiveness	Availability of low-cost labour and skills	Enabling infrastructure	Presence of natural resources	
China	6	3	43	6	1
United States	20	25	11	1	2
India	24	1	79	5	3
Korea, Republic of	10	5	13	28	4
Australia	25	..	39	4	5
Russian Federation	14	24	31	2	6
Turkey	5	9	42	24	7
Germany	11	47	2	10	8
Indonesia	31	2	89	8	9
Japan	51	11	11	19	10
France	31	41	5	14	11
Italy	52	31	6	16	12
Mexico	27	12	69	9	13
Argentina	2	27	55	22	14
Saudi Arabia	4	14	70	25	15
United Kingdom	40	48	4	13	16
Canada	17	51	27	3	17
Poland	15	32	26	20	18
United Arab Emirates	9	..	28	45	19
Thailand	90	4	58	20	20
Netherlands	37	37	7	26	21
Ukraine	50	19	37	23	22
Singapore	8	38	3	70	23
Spain	49	43	8	17	24
Brazil	47	20	73	7	25
Malaysia	19	15	53	33	26
Belarus	34	7	52	56	27
Iran, Islamic Republic of	59	18	71	12	28
Chile	13	12	74	53	29
Switzerland	35	..	18	60	30
Sweden	12	60	16	29	31
Belgium	36	46	10	34	32
Kazakhstan	16	50	75	11	33
South Africa	54	30	76	15	34
Czech Republic	61	26	30	38	35
Peru	23	8	108	31	36
Colombia	21	16	91	58	37
Viet Nam	56	..	65	35	38
Romania	67	34	47	32	39
Hong Kong, China	7	74	1	103	40
Venezuela, Bolivarian Republic of	41	..	98	27	41
Austria	22	66	21	49	42
Hungary	68	35	50	43	43
Finland	39	69	25	40	44
Ireland	63	33	35	76	45
Egypt	81	21	78	41	46
Norway	44	72	29	30	47
Qatar	1	71	45	85	48
Bulgaria	91	36	40	46	49
Pakistan	94	6	101	55	50

Source: The authors, based on UNCTAD (www.unctad.org/fdistatistics).

Note: The Inward FDI Potential Index ranking is based on the simple average of a country's percentile rank in each of the economic determinants areas. A country's ranking within each group of determinants is based on the simple average of the country's percentile rank of each variable included in the group. For information on the variables used in constructing this index see Box 1.3 in WIR12 Chapter 1.

Table 12. FDI Attraction Index vs FDI Potential Index Matrix, 2011

		Above expectations	In line with expectations	Below expectations	
FDI Attraction Index	High				
	1st quartile	Chad, Liberia, Madagascar, Niger	Albania, Bahamas, Congo, Congo (Democratic Republic of), Equatorial Guinea, Jordan, Lebanon, Luxembourg, Mongolia, Mozambique, Zambia	Bulgaria, Ghana, Ireland, Israel, Nigeria, Norway, Panama, Turkmenistan, Uruguay	Australia, Belarus, Belgium, Brazil, Chile, China, Colombia, Hong Kong (China), Kazakhstan, Malaysia, Peru, Poland, Russian Federation, Saudi Arabia, Singapore, Switzerland, Ukraine, United Kingdom , Viet Nam
	2nd quartile	Armenia, Cambodia, Guinea, Nicaragua, Saint Vincent and the Grenadines, Solomon Islands	Costa Rica, Georgia, Honduras, Kyrgyzstan, Libya, Maldives, Malta, Namibia, Seychelles, Sudan, United Republic of Tanzania	Brunei Darussalam, Croatia, Dominican Republic, Egypt, Estonia, Iraq, Portugal, Qatar, Serbia, Tunisia, Uzbekistan	Austria, Canada, Czech Republic, France , Germany , Hungary, India, Indonesia, Mexico, Netherlands, Romania, Spain, Thailand, Turkey, United Arab Emirates, United States
	3rd quartile	Antigua and Barbuda, Belize, Cape Verde, Central African Republic, Djibouti, Dominica, Fiji, Grenada, Guyana, Mali, São Tomé and Príncipe, Vanuatu	Barbados, Botswana, Cameroon, Lao People's Democratic Republic, the former Yugoslav Republic of Macedonia, Mauritius, the Republic of Moldova, Myanmar, Uganda, Zimbabwe	Algeria, Azerbaijan, Bolivia (Plurinational State of), Denmark, Gabon, Guatemala, Iceland, Jamaica, Latvia, Morocco, Oman, Pakistan, Syrian Arab Republic, Trinidad and Tobago	Argentina, Finland, Iran (Islamic Republic of), Italy, Japan, Korea (Republic of), South Africa, Sweden
4th quartile	Afghanistan, Benin, Bhutan, Burkina Faso, Burundi, Comoros, Côte d'Ivoire, Eritrea, Gambia, Guinea-Bissau, Haiti, Kiribati, Lesotho, Malawi, Mauritania, Nepal, Rwanda, Samoa, Sierra Leone, Suriname, Swaziland, Togo, Tonga	Angola, Bangladesh, Bosnia and Herzegovina, El Salvador, Ethiopia, Kenya, Papua New Guinea, Paraguay, Senegal, Tajikistan, Yemen	Bahrain, Ecuador, Greece, Kuwait, Lithuania, New Zealand, Philippines, Slovakia, Slovenia, Sri Lanka	Venezuela (Bolivarian Republic of)	
	Low	4th quartile	3rd quartile	2nd quartile	1st quartile
		Low	FDI Potential Index		High

Source: UNCTAD (2012)

Table 13. Composition of Greenfield FDI investments in the UK by business activity , 2003-2011

Business activity	Percentage		
	No projects	Jobs	Capital investment
Manufacturing	10.7	16.8	15.3
Services	81.9	75.0	59.1
Construction	3.5	14.1	19.9
Retail	14.9	26.6	9.3
Logistic, distribution and transportation	4.8	7.9	8.8
Business services	16.6	6.3	8.3
Sales, Marketing and support	26.5	5.3	6.2
Headquarters	7.7	4.2	3.0
Research and Development	2.0	2.1	1.8
Desing, development and testing	3.7	3.1	1.5
Customer contact centre	2.1	5.4	0.4
Other activities	7.4	8.1	25.6
Total	100.0	100.0	100.0

Source: The authors, based on Financial Times Ltd, fDi Markets (www.fDimarkets.com).

Table 14. Main cross-border M&A deals in the UK , 2008-2010

Year	Acquiring company	Home economy	Target company	Target industry	Shares acquired (%)	Estimated/ announced transaction value (US\$ billion)
2010	Kraft Foods Inc	United States	Cadbury PLC	Confectionery products	100	18.8
2010	Investor Group	Hong Kong (China)	EDF Energy-PLC	Electric services	100	9.1
2010	Pinafore Acquisitions Ltd	Canada	Tomkins PLC	Mechanical power transmission equipment	100	4.4
2010	Investor Group	United States	RBS WorldPay	Depository banking	80	3.0
2010	KNOOC	Korea (Rep. of)	Dana Petroleum PLC	Crude petroleum and natural gas	100	2.6
2010	Deutsche Bahn AG	Germany	Arriva PLC	Local bus charter service	100	2.4
2010	Qatar Holding LLC	Qatar	Harrods	Clothing and accessory stores	100	2.2
2010	JPMorgan Chase & Co	United States	JPMorgan Cazenove Ltd	Security brokers, dealers, and flotation companies	50	1.7
2010	JPMorgan Chase & Co	United States	RBS Sempra Commodities LLP-Ops	Commodity contracts brokers and dealers	100	1.6
2009	Thomson Reuters Corp	United States	Thomson Reuters PLC	Information retrieval services	100	4.9
2009	Global Infrastructure Partners	United States	London Gatwick Airport Ltd	Airports and terminal services	100	2.5
2009	Blackstone Group LP	United States	British Land Co PLC-Broadgate	Operators of non-residential buildings	50	1.7
2009	Watson Pharmaceuticals Inc	United States	The Arrow Group	Pharmaceutical preparations	100	1.7
2009	Mitsubishi Rayon Co Ltd	Japan	Lucite International Ltd	Plastics materials and synthetic resins	100	1.6
2009	Investor Group	Qatar	Songbird Estates PLC	Land sub-dividers and developers, except cemeteries	n.a.	1.5
2009	Liberty Acquisition Holdings	British Virgin Islands	Pearl Group Ltd	Life insurance	100	1.2
2009	OAQ Gazprom Neft	Russia	Sibir Energy PLC	Crude petroleum and natural gas	33	1.0
2008	Shareholders	Switzerland	British American Tobacco PLC	Cigarettes	27	19.8
2008	Thomson Corp	United States	Reuters Group PLC	News syndicates	100	17.6
2008	Akzo Nobel NV	Netherlands	ICI PLC	Paints, varnishes, lacquers, and allied products	100	16.3
2008	Shining Prospect Pte Ltd	Singapore	Rio Tinto PLC	Gold ores	12	14.3
2008	Investor Group	Australia	Angel Trains Ltd	Rental of railroad cars	100	7.0
2008	Qatar Holding LLC	Qatar	Barclays PLC	Banks	8	3.5
2008	Jarpeno Ltd	Cyprus	Imperial Energy Corp PLC	Crude petroleum and natural gas	100	2.6
2008	Banco Santander SA	Spain	Alliance & Leicester PLC	Banks	100	2.5
2008	Tata Motors Ltd	India	Jaguar Cars Ltd	Motor vehicles and passenger car bodies	100	2.3

Source: The authors, based on Thomson ONE Banker, Thomson Reuters

Table 15. Main greenfield projects announced in the UK , 2008-2010

Year	Investing company	Home economy	Industry	Business activity	Investment (US\$ million)
2010	Orascom Development Holding	Switzerland	Hotels and tourism	Construction	1.6
2010	Ford	United States	Automotive OEM	Manufacturing	1.5
2010	GMR Group	India	Coal, oil and natural gas	Electricity	0.8
2010	McDonalds	United States	Food and tobacco	Retail	0.7
2010	Apache	United States	Coal, oil and natural gas	Extraction	0.5
2010	The GEO Group	United States	Real estate	Construction	0.4
2010	Tata Group	India	Automotive OEM	Manufacturing	0.4
2010	RWE	Germany	Renewable energy	Electricity	0.4
2010	Iberdrola	Spain	Renewable energy	Electricity	0.4
2010	Stena Line	Sweden	Transportation	Logistics, distribution and transportation	0.3
2009	Best Buy	United States	Consumer electronics	Retail	2.1
2009	Statkraft	Norway	Renewable energy	Electricity	1.8
2009	Ryanair	Ireland	Aerospace	Logistics, distribution and transportation	1.4
2009	Wal-Mart	United States	Food and tobacco	Retail	1.0
2009	Bombardier	Canada	Aerospace	Manufacturing	0.9
2009	EirGrid Plc	Ireland	Transportation	Logistics, distribution and transportation	0.8
2009	Dong Energy	Denmark	Renewable energy	Electricity	0.7
2009	Statkraft	Norway	Renewable energy	Electricity	0.7
2009	Fraser & Neave (Fraser and Neave)	Singapore	Real estate	Construction	0.6
2009	Royal BAM Group (Koninklijke BAM Groep)	Netherlands	Real estate	Construction	0.6
2009	Mirax Group	Russia	Real estate	Construction	0.6
2009	Multi Development (Multi Vastgoed)	Netherlands	Real estate	Construction	0.6
2008	Treasury Holdings	Ireland	Real estate	Construction	8.0
2008	Total	France	Coal, oil and natural gas	Extraction	3.7
2008	Dong Energy	Denmark	Renewable energy	Electricity	3.6
2008	RWE	Germany	Renewable energy	Electricity	2.8
2008	Iberdrola	Spain	Renewable energy	Electricity	2.6
2008	RWE	Germany	Renewable energy	Electricity	2.4
2008	News Corporation	United States	Paper, printing and packaging	Manufacturing	1.3
2008	Wal-Mart	United States	Food and tobacco	Retail	1.3
2008	Econcern	Netherlands	Renewable energy	Electricity	1.2
2008	ING Groep (ING Group)	Netherlands	Real estate	Construction	0.7

Source: The authors, based on fDi Intelligence, a service from the Financial Times Ltd.

Table 16. Country rankings by FDI Contribution Index, 2009: Top 50 economies

Economy	(Quartile rankings)								Overall rank	Memorandum item: FDI inward stock/GDP
	Economic contribution areas									
	Value added	Employment	Exports	Tax revenue	Wages and salaries	R&D expenditures	Capital expenditures			
Hungary	1	1	1	1	1	1	1	1	1	1
Belgium	..	1	1	1	1	1	..	1	2	1
Czech Republic	1	1	1	1	1	1	1	1	3	1
Romania	1	1	1	..	1	1	2	1	4	2
Hong Kong, China	1	1	1	1	1	1	1	1	5	1
Poland	1	1	1	1	1	1	2	1	6	2
Malaysia	1	2	2	1	..	..	1	1	7	2
Estonia	1	1	..	2	1	3	2	2	8	1
Bolivia, Plurinational State of	2	2	..	..	2	..	1	1	9	3
Colombia	2	4	2	1	2	1	2	2	10	3
Switzerland	1	3	1	2	2	1	2	2	11	1
Sweden	2	1	1	4	1	..	2	2	12	1
Singapore	3	2	2	1	1	3	1	1	13	1
Finland	3	1	2	2	3	1	1	1	14	3
United Kingdom	2	1	3	2	2	1	2	2	15	2
Thailand	1	3	3	..	2	..	1	1	16	2
Ireland	1	1	1	3	4	..	..	..	17	1
South Africa	2	3	2	1	2	2	2	2	18	3
Cambodia	3	1	..	..	2	..	3	1	19	2
Panama	2	2	1	..	1	4	2	2	20	1
Morocco	1	2	..	..	2	4	1	1	21	2
Portugal	4	2	2	2	1	3	1	1	22	2
Trinidad and Tobago	1	3	..	..	4	..	1	1	23	1
Kazakhstan	1	4	..	..	4	..	1	1	24	2
Costa Rica	1	4	2	3	1	..	2	2	25	2
Netherlands	2	2	..	3	2	2	3	3	26	1
Dominican Republic	3	4	1	1	..	..	2	2	27	3
Brazil	3	3	2	2	3	2	2	2	28	3
Norway	2	1	4	1	3	4	1	1	29	2
Germany	3	2	3	4	1	1	2	2	30	4
Slovenia	4	2	1	..	3	..	1	1	31	3
Italy	3	3	3	2	2	1	3	3	32	4
Denmark	2	1	4	2	2	3	2	2	33	2
Croatia	1	4	..	..	2	3	2	2	34	2
Bosnia and Herzegovina	1	4	..	..	2	..	3	3	35	2
Honduras	1	4	..	2	1	..	4	4	36	2
Argentina	2	2	3	..	2	3	1	1	37	4
Cyprus	4	3	..	..	1	..	2	2	38	1
France	3	2	2	3	2	2	3	3	39	3
Austria	2	1	2	3	3	3	3	3	40	3
Canada	3	2	1	3	3	3	2	2	41	3
Ukraine	1	3	..	..	3	3	2	2	42	2
United Arab Emirates	1	3	4	..	1	..	4	4	43	3
Lithuania	2	2	..	..	3	2	4	4	44	3
Indonesia	3	3	4	..	1	1	3	3	45	4
Bulgaria	2	2	..	..	2	..	4	4	46	1
Peru	2	4	3	1	2	..	2	2	47	3
Latvia	2	1	..	..	3	..	4	4	48	2
Egypt	3	2	4	2	4	3	1	1	49	3
Australia	3	2	3	3	3	3	2	2	50	3

Source: UNCTAD estimates.

Table 17. FDI Contribution Index vs FDI presence, 2011

		Above expectations	In line with expectations	Below expectations		
FDI Contribution Index	High					
	1st quartile		Bolivia (Plurinational State of), Colombia, Finland, South Africa	Cambodia, Malaysia, Poland, Romania, Thailand, United Kingdom		
	2nd quartile	Argentina, Germany , Italy	Brazil, Dominican Republic, France , Slovenia	Bosnia and Herzegovina, Costa Rica, Croatia, Denmark, Honduras, Kazakhstan, Morocco, Norway, Portugal		
	3rd quartile	China, Ecuador, Guatemala, Indonesia, Sri Lanka	Australia, Austria, Canada, Egypt, Lithuania, Peru, United Arab Emirates, Uruguay	Latvia, New Zealand, Spain, Ukraine		
4th quartile	Algeria, Greece, India, Japan , Kenya, Korea (Republic of), Paraguay, Philippines, Taiwan Province of China, Turkey, United States , Venezuela (Bolivarian Republic of)	Israel, Mexico, Russian Federation, Saudi Arabia	Bahamas, Barbados, Bermuda Luxembourg			
	Low	4th quartile	3rd quartile	2nd quartile	1st quartile	High
		FDI inward stock/GDP				

Source: UNCTAD (2012)

Table 18. FDI Contribution Index median values, by indicator

(Per cent of economy totals)

Quartiles	Value added	FDI Contribution Index indicators						Memorandum item:
		Employment	Exports	Tax revenue	Wages and salaries	R&D expenditures	Capital expenditures	FDI inward stock/GDP
1	41	22	47	65	37	63	38	75.4
2	25	12	20	28	23	34	18	42.8
3	17	5	8	13	12	20	7	31.2
4	6	1	2	5	5	8	2	13.3

Source: UNCTAD
(2012)

