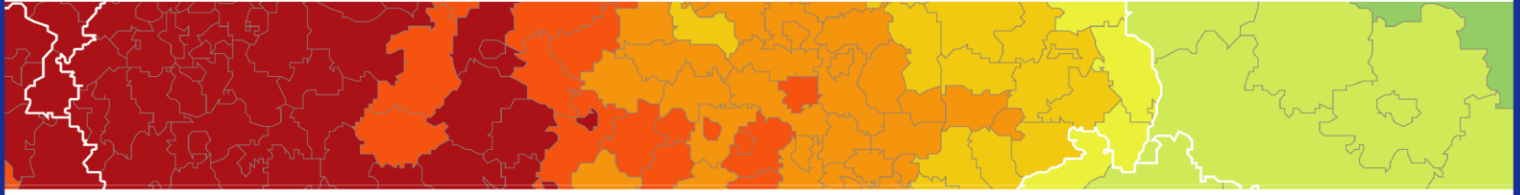


Inspire policy making by territorial evidence



The World in Europe, global FDI flows towards Europe

Intra-European FDI

Applied Research

Main Report

March 2018

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The World in Europe,
global FDI flows towards Europe

Intra-European FDI

Scope and introduction to the study

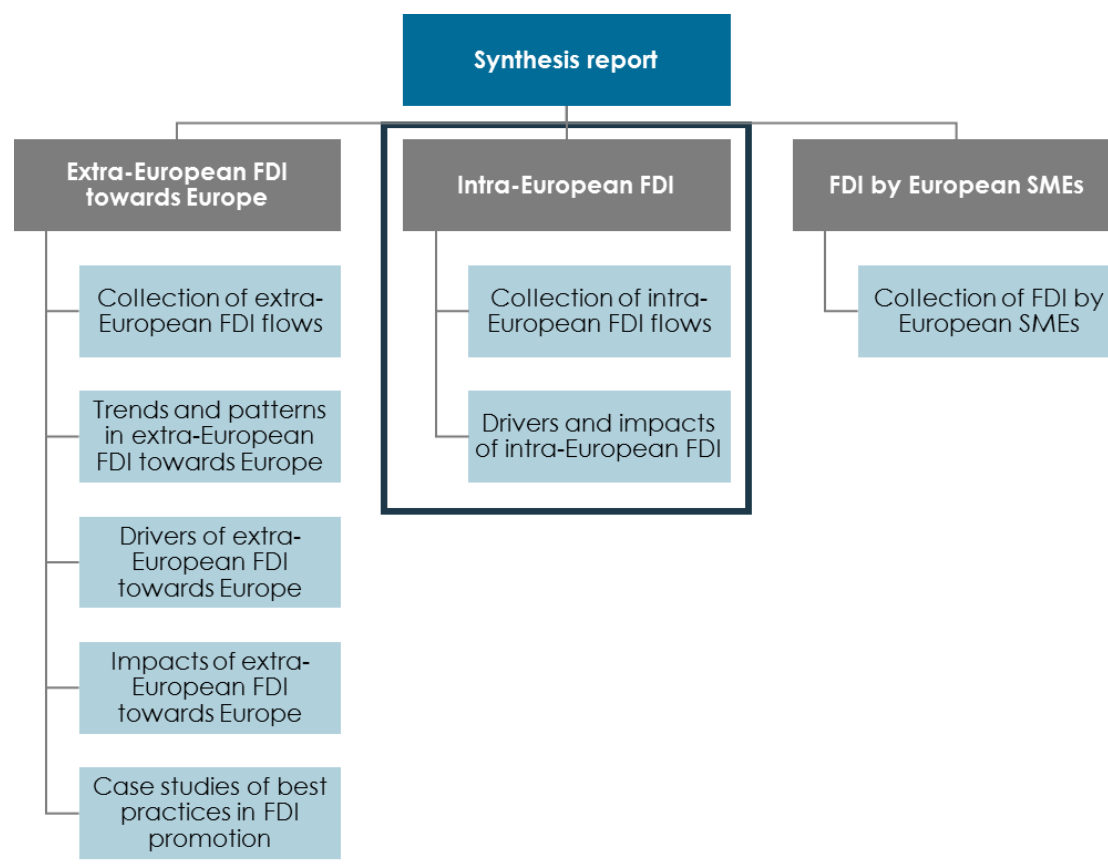
This report is part of the study, *The World in Europe, global FDI flows towards Europe*. The study casts new light on three topics related to the integration of Europe in the world economy:

1. Extra-European FDI towards Europe
2. Intra-European FDI
3. FDI by European SMEs

Key conclusions and recommendations related to each of these questions can be found in three stand-alone reports. Each report is supported by a number of scientific reports that contain detailed methodological descriptions and results. The insights gained from the study are summarised in a synthesis report that cuts across the three topics.

This stand-alone report analyses FDI within Europe by European investors (intra-European FDI). The insights gained in this part of the study will be used to develop tailor-made policy recommendations that can help bring down barriers to investments within Europe. An overview of the assembly of the database can be found in the accompanying scientific report, *Collection of intra-European flows*. Detailed findings and descriptive statistics can be found in the scientific report, *Drivers and impacts of intra-European FDI*.

Overview of the study



The analysis of intra-European FDI addresses the following key policy questions:

- What is the relevance of intra-European FDI flows to convergence in Europe and to boost productivity? What comparison and differences can be identified in this issue in relation to extra-European FDI inflows?
- How does the Single Market facilitate intra-EU FDI flows, and how do regions and cities take advantage of that?
- What can be done to remove obstacles to intra-EU FDI investments keeping in mind that consumer and environmental protection are important issues for Europe?

We distinguish between two main types of FDI: Greenfield investments, and mergers and acquisitions (M&As). Greenfield investments take place when a new foreign firm establishes itself in the region and sets up new or expands existing production facilities. M&As take place when a foreign firm acquires more than 10 per cent of the voting stock in an existing domestic firm.

Chapter 1 provides an overview of total FDI (intra-European and extra-European) towards Europe. **Chapter 2** describes the trends and patterns in intra-European FDI based on the unique database of FDI at a regional level that has been developed as part of this study. We use the results to compare with trends and patterns in extra-European FDI. We use the following categories to analyse groups of regions with similar characteristics:

- The **rural-urban typology** from Eurostat

Rural regions: Regions where the population in rural grid cells accounts for 50% or more of the total population.

Intermediate regions: Regions where the population in rural grid cells accounts for a share between 20% and 50% of the total population.

Urban regions: Regions where the population in rural grid cells accounts for less than 20% of the total population.

- The **metropolitan typology** from Eurostat

Capital metropolitan regions: Regions that host the capital city.

Other metropolitan regions: A single or a combination of NUTS3 regions, which cover agglomerations of at least 250,000 inhabitants across a city and its commuting zones.

Non-metropolitan regions: All other regions.

- The **level of economic development**

More developed regions: Regions where the average GDP per capita over the period 2010-2013 was more than 90 per cent of the EU28 average.

Transition regions: Regions where the average GDP per capita over the period 2010-2013 was between 75 per cent and 90 per cent of the EU28 average.

Less developed regions: Regions where the average GDP per capita over the period 2010-2013 was less than 75 per cent of the EU28 average.

Chapter 3 analyses the drivers of intra-European FDI. We focus mainly on drivers that can be influenced by regional policy makers but address also drivers at the bilateral, EU and national levels.

Chapter 4 analyses the impacts of intra-European FDI.

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Abbreviations

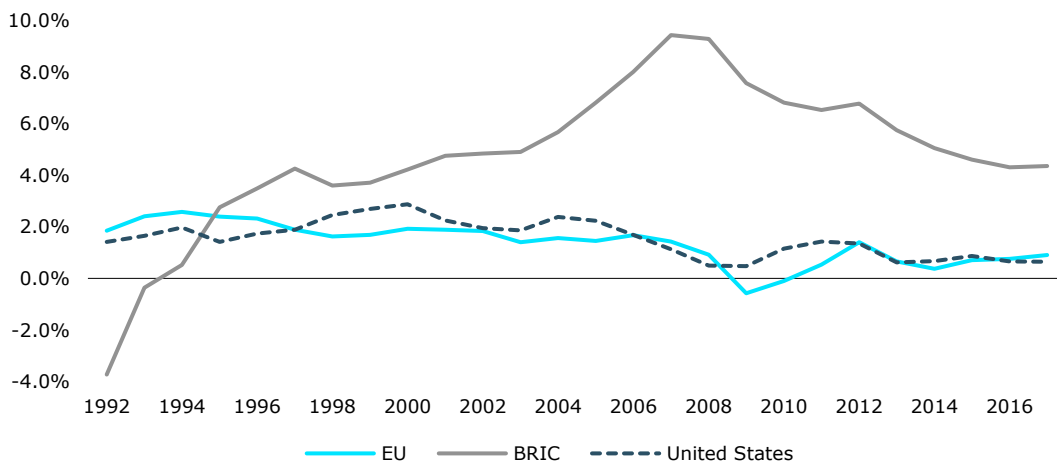
EC	European Commission
ESPON	European Territorial Observatory Network
EU	European Union
FDI	Foreign Direct Investment
FT database	fDi Markets database offered by the Financial Times
M&A	Mergers and acquisitions
NUTS	Nomenclature of Territorial Units for Statistics

Executive summary

Productivity growth is essential to ensuring economic growth, jobs and welfare in Europe. Since the late 1990s, productivity growth has been falling in Europe and reached a historically low level during the financial crisis in 2009. Productivity growth rebounded in the first years after the crisis, but has remained subdued in recent years, and Europe is now facing a productivity challenge, cf. Figure 1.

This is a challenge which Europe shares with other advanced and emerging economies (IMF, 2017). In the US, productivity growth has also been on a downward trajectory since the early 2000s, although the slowdown in the crisis years was less severe than in Europe. In the BRIC countries, productivity growth began to fall in the crisis years in 2008-2009 following a period of rapid growth. While the slowdown has continued, productivity growth in the BRIC countries remains at a much higher level than in Europe and the US, cf. Figure 1. In order to remain globally competitive, it is paramount that Europe increase productivity growth.

Figure 1 Productivity growth in the EU, US and BRIC countries, 1992-2016



Note: The figure shows the growth in labour productivity (output per employee) for the EU28, the US and the BRIC countries. Annual percentage changes are calculated as three-year moving averages.

Source: ESPON FDI (2018) based on data from Conference Board

While the slowdown in productivity growth is caused by a number of factors including slowing innovation and technological adoption in the aftermath of the ICT revolution in the late 1990's and early 2000s, population aging and slowing global trade, an important factor is also a lack of private investments (IMF, 2017). Sluggish private investment also subdues employment and can reinforce the negative feedback loop between productivity growth and low levels of investment. Lower levels of private investment can, for example, lead to a slower adoption of new technologies, which lowers productivity growth further, which then feeds back into weak private investments (IMF, 2017).

While the productivity challenge facing Europe is multifaceted, part of the solution lies in increasing private investments, and increased FDI is part of the solution to Europe's productivity challenge. From a policy perspective, it is therefore important to get a good understanding of the drivers and impacts of European FDI.

The main focus in the study, *The world in Europe, global FDI flows towards Europe* is FDI inflows into Europe originating outside Europe (extra-European FDI inflows). As cross-border FDI within Europe (intra-European FDI) accounts for around 60 per cent of the total FDI inflows into Europe, it is important to understand if the drivers and impacts of intra-European FDI resemble those of extra-European FDI or if specific policy initiatives are required to stimulate intra-European FDI. This report summarises the findings of such an analysis.

Intra-European FDI boosts productivity and stimulates convergence more than extra-European FDI

In this study, we have used an advanced econometric model to assess what impact the presence of European firms has on the productivity and employment of local firms in the host region. We find that:

- Intra-European FDI is associated with productivity gains for local firms in the host regions across Europe. Productivity gains accrue to both for local firms *within the same industry and regions*, as well as *within the same region* more broadly.
- Intra-European FDI does not affect employment levels among local firms.

The productivity spillovers from intra-European FDI are generally lower than spillovers from extra-European FDI. However, the difference is relatively small and could be driven by a different sectoral and regional distribution.

We have also analysed the distribution of intra-European FDI across different groups of regions. In particular, we are interested in assessing the extent to which intra-European FDI flows stimulate convergence across regions by flowing to disadvantaged regions with low levels of economic activity and urgent needs of capital. We find some indications that intra-European FDI stimulates convergence across countries. *First*, the old member states and the four EFTA countries are generally net investors, while the new member states and the candidate countries are generally net recipients of intra-European FDI.

Second, intra-European FDI stimulates convergence across European regions to a greater degree than extra-European FDI. We therefore find that:

- Intra-European FDI is more evenly distributed across regions than extra-European FDI. While capital cities, urban regions and more developed regions still receive the majority of intra-European FDI, the more disadvantaged regions receive a larger share of intra-European FDI than extra-European FDI.

- Relative to their economic size, rural, non-metropolitan and less developed regions receive a greater share of intra-European greenfield FDI. This type of FDI expands the capital stock and is more likely to create new jobs than M&As.
- Disadvantaged regions receive the least investment both from within and outside of Europe, but European owned firms are significantly more frequent in these regions and have a larger direct impact per firm. European firms support more jobs in the disadvantaged regions than non-European firms.
- European firms support convergence in both transition and less developed regions, while non-European firms support convergence only in transition regions.
- Intra-European FDI is associated with productivity gains for local firms in all groups of regions, also in less developed regions where no impact can be recorded from extra-European FDI. In addition, intra-European FDI give rise to productivity gains for local firms *within the same industry and regions*, as well as *within the same region* more broadly in intermediate and rural regions, where both types of productivity spillovers are not found to arise from extra-European FDI. The opposite is true for transition regions.

The internal market is a driver of intra-European FDI

The analysis of extra-European FDI carried out in other parts of this study underlined the importance of the internal market as a driver of global FDI towards Europe. The internal market has for example:

- Expanded product markets by removing most obstacles to cross border trade ensuring access to 500 million high value consumers.
- Increased labour markets by removing most obstacles to the free movement of labour thereby expanding the available pool of qualified labour.
- Ensured efficient competitive policies, e.g. by implementing common rules regarding for example state aid, and thereby ensuring a level playing field for local and foreign firms.

The analysis carried out in this study confirms that intra-European FDI is driven by many of the same factors as extra-European FDI. In combination with the free movement of capital, the internal market has reduced the risk and cost of investing across borders and has thus facilitated intra-European FDI. The internal market has enabled European firms to split up their value chains and locate production in the most cost-efficient location. This is an important motive for many European investors. We thus find that the new member states receive a larger share of intra-European than extra-European FDI. Poland, for example, receives only 0.2 per cent of extra-European FDI, but 3.6 per cent of intra-European FDI. This finding reflects the fact that many western European firms relocate parts of their production to Eastern Europe as costs are generally lower there.

Studies have also found that FDI tends to flow into countries when they have announced that they are going to join the EU (Kommerskollegium, 2015). Fournier (2016), for example, finds that joining the internal market has been a 'game changer' in terms attracting FDI for the Czech Republic, Estonia, Hungary, Poland, the Slovak Republic and Slovenia, whose share of FDI into these countries doubled between 2000 and 2008.

Overall, we find that intra-European FDI accounts for a larger share of European inward FDI, both in terms of the number of projects (57 per cent) and in terms of value (52 per cent).

The results show a clear tendency for intra-European FDI to flow to and from the larger European countries. We find that 54 per cent of intra-European FDI (measured in value) flows *from* the UK, France, the Netherlands and Germany, while almost 50 per cent of total intra-European FDI flows *into* the UK, Germany, Italy, Spain, the Netherlands and France. We have seen a similar picture for extra-European FDI.

As intra-European FDI is, to a large extent, driven by the same factors that also attract FDI from outside of Europe, the policy recommendations from the main report are also valid for intra-European FDI. However, we also find some small variations:

- European investors place relatively *more* emphasis on strong industrial clusters and large regional markets.
- European investors place relatively *less* emphasis on the regional FDI concentration, population density, labour abundance and the share of the population with a tertiary education.

In terms of policy implications, this suggests that:

- Initiatives to build strong industry clusters around existing strengths are especially important for attracting intra-European FDI. Depending on the characteristics of the specific industry, such initiatives could involve public R&D, R&D incentives, collaboration between universities and private firms, and education programs.
- Targeted international branding of regions and other measures to increase the attention of potential investors to European regions are more important for attracting extra-European FDI.
- Ensuring labour market flexibility, securing a competitive skills base and attracting foreign talent are more important for attracting extra-European FDI.

More can be done to remove obstacles to intra-European FDI

While the internal market has been a driver of intra-European FDI, more can be done to remove obstacles to cross-border investments in the internal market. This includes, but is not limited to:

- **Improving regulatory harmonisation in the service sector.** In the service sector, divergence in national regulations poses a barrier to FDI. Based on an empirical analysis of bilateral FDI flows across OECD countries, Fournier (2015) thus found that services is one of the areas in which divergence in regulations matters the most. Significant progress to reduce cross-border barriers within the service sector was achieved with the Services Directive from 2006. However, as noted by Business Europe (2015) in their list of priorities for enhancing the internal market, many barriers remain due to a “diverse interpretation and application” of the directive. Improving the implementation of the Services Directive may therefore help remove some of the remaining obstacles to intra-EU FDI.

- **Increasing labour mobility across borders.** There continues to be limited labour mobility across borders. Business Europe (2015) suggests that labour mobility can be enhanced by improved recognition of professional qualifications. According to OECD (2016), part of the problem in terms of the recognition of professional qualifications lies in slow decision making.¹ Introducing a silence-is-consent rule in areas without major safety or environmental concern may thus help to increase labour mobility (OECD, 2016).
- **Reducing country specific regulation.** Regulatory heterogeneity across countries remains a barrier to cross-border FDI that increases both the costs and risks of investing abroad. As stated by Fournier (2015), “each regulation is indeed likely to induce country specificities and procedures with which local firms are more familiar”, which will be a relative hindrance for non-local firms. In fact, OECD (2016) finds that 77 per cent of firms at the EU level report that “the lack of predictability and stability of legislation remains an important obstacle to their activity”. Furthermore, Business Europe (2015) notes that “addressing remaining obstacles does often not require new EU legislation but rather more consistent application or clarification of existing rules”.
- **Increasing capital mobility.** Capital availability is a necessity for cross-border investments. OECD (2016) finds that lowering regulatory barriers, widening of the investor base and deepening financial integration could stimulate cross-border investments, particularly by SMEs. In addition, OECD (2016) finds that supporting tools to match SMEs to funding sources can be a way to reduce barriers to capital movement. Another area where the Capital Markets Union proposes deregulation is through burdensome withholding tax procedures, which remain a long-standing barrier to cross-border investment (OECD, 2016).
- **The digital Single Market.** By stimulating and replicating innovative ideas, digitalisation and information and communication technology are likely to remain the main drivers of productivity growth in mature economies in the years to come (OECD, 2016). Business Europe (2015) points to two main aspects of improvements for the digital Single Market. First, consumer and data protection rules need be transparent and standardised. Second, better cross-border licensing and transfer of copyright across national borders are recommended.

Suggestion for further research

This study has answered a number of important questions regarding the drivers and impacts of intra-European FDI and how these compare to the drivers and impacts of extra-European FDI, but that study has also opened a number of new questions:

- **What are the regional impacts of outward European investment?**

Previous findings suggest that firms become more productive when they engage in outward FDI but little is known about the regional impacts of outward FDI, i.e. how productivity and employment among local firms in the region are affected by outward FDI. From a policy perspective, it is important to identify initiatives that can support local firms

¹ OECD (2016) notes that only 5 per cent of the applications for the recognition of qualification have been rejected EU-wide since 2014.

that are looking for investment opportunities abroad, that can optimise positive spillovers to other firms in the region and that can reduce potential adverse impacts of outward FDI.

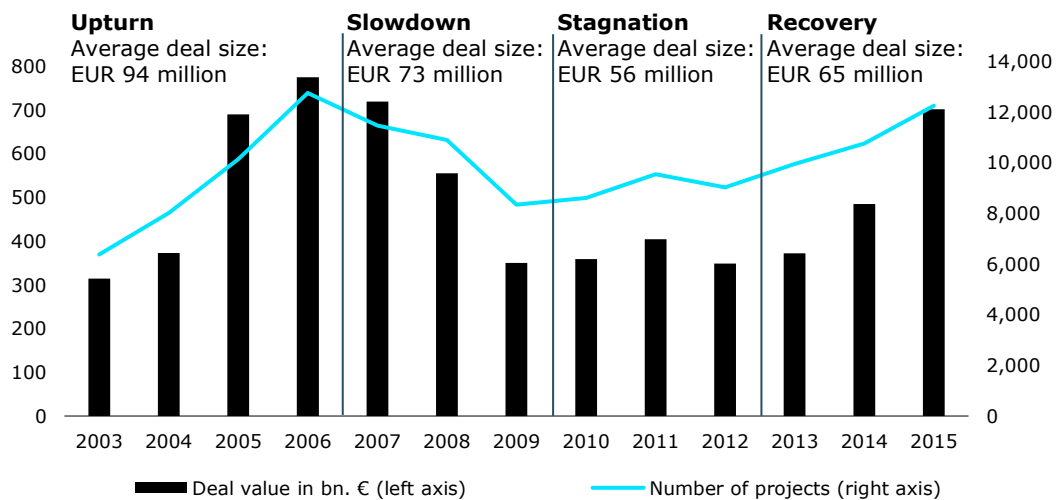
- **How do remaining barriers in the internal market affect intra-European FDI flows, and which barriers are most limiting?**

From a policy perspective, it is likewise important to have a good understanding about which factors are the most limiting for cross-border investments in the internal market and in Europe more broadly. Such knowledge can help policy makers prioritise their efforts and could be collected through case studies and surveys.

1 Trends in FDI inflows towards Europe

Total European FDI inflows have undergone four major phases during the period 2003-2015, cf. Figure 2. The total number of projects and the value of FDI both experienced a sharp increase and peak during the pre-crisis years. In the years around the financial crisis in 2007-2009, direct investments in Europe undertaken by European and non-European investors experienced a slowdown and reverted almost to the 2004 level. In the following years, the level of FDI inflows towards Europe stagnated, before a recovery phase started in 2013 and continued towards 2015. After the crisis, the number of projects was the fastest to pick up, while the deal value only started to increase in 2014. The number of FDI projects thus started increasing in the recovery phase, the value of these investments were lower than before the crisis and during the slowdown. The average deal value of EUR 65 million in the recovery phase was still substantially smaller than the average deal value of EUR 94 million in the upturn period.

Figure 2 Total FDI inflows towards Europe by number and value, 2003-2015

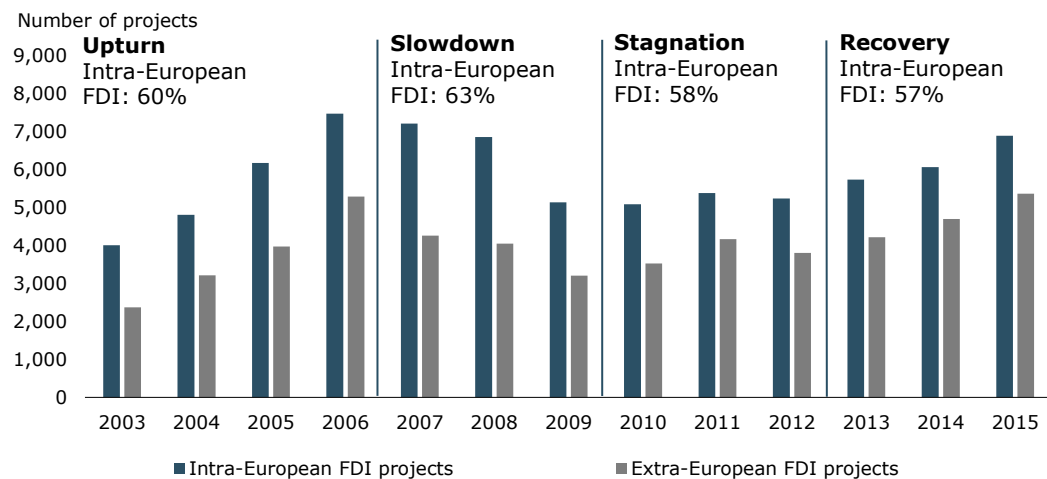


Note: The figure depicts the aggregate FDI flows into Europe in number of projects and values across the period 2003-2015 from both European and non-European investors.

Source: ESPON FDI (2018) based on data from the BvD Zephyr and FT databases

Figure 3 depicts the trend in the number of FDI projects originating from European and non-European investors, respectively. Both intra-European and extra-European FDI depict a peak in the number of FDI projects in the pre-crisis years followed by a slowdown, a period of stagnation and a recovery period. The majority of FDI projects in Europe in every year were undertaken by European investors. However, intra-European FDI has played a smaller role during the most recent years, with the share of intra-European FDI projects accounting for 57 per cent during the recovery phase compared to 63 per cent in the slowdown phase.

Figure 3 Number of FDI projects in Europe by origin, 2003-2015

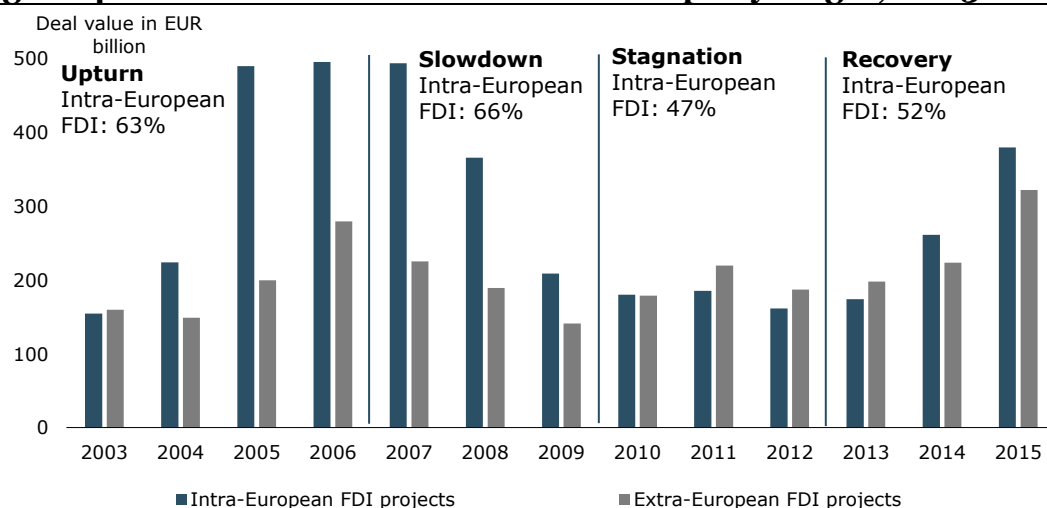


Note: The figure shows the number of M&A and greenfield FDI projects undertaken by European and a non-European investor, respectively. The numbers in the four periods report the share of intra-European FDI to total FDI in that period.

Source: ESPON FDI (2018) based on data from the BvD Zephyr and FT databases

The total value of intra-European FDI is higher than the total value of extra-European FDI in most years during 2003-2015, Figure 4. The upturn in FDI inflows was driven mainly by intra-European FDI, while extra-European FDI was relatively more important for Europe following the crisis due to the faster recovery of extra-European FDI. From 2010 and forth, intra-European FDI has constituted around 50 per cent of the total value of FDI, while this share was above 60 per cent during the period 2003-2009.

Figure 4 Value of FDI inflows towards Europe by origin, 2003-2015



Note: Some M&As do not have a reported deal value. This can potentially distort the observed pattern as some years could be missing the deal value for the largest projects. The numbers in the four periods report the share of intra-European FDI to total FDI in that period.

Source: ESPON FDI (2018) based on data from the BvD Zephyr and FT databases

1.1 FDI inflows towards Europe can boost productivity

Europe has slow productivity growth and needs to increase private investments in order to turn this around. Increasing FDI inflows can help Europe meet this challenge.

As demonstrated in other parts of this study, FDI originating outside Europe brings new capital to Europe, stimulates employment and boosts productivity in local firms through various spillover mechanisms. However, it is important to keep in mind that intra-European FDI also has the potential to boost productivity in local firms through the exact same spillover channels.

Moreover, the investing firm may itself become more productive by investing abroad. European firms undertake outward FDI for market-seeking (e.g. improved market access through relations with clients), efficiency-seeking (e.g. lower costs and improved profitability), resource-seeking (e.g. source new talent and technologies or improved resource allocation) or strategic purposes (e.g. strategic considerations of improving the quality of existing products, introducing new products and benefitting from financial incentives).

Market-seeking outward FDI takes place when a European firm establishes itself abroad to access important markets instead of exporting. The firm's direct presence in local markets might lead to a greater understanding of clients' needs and demands, and relations with the client are likely to be improved. Going abroad can, in some cases, be the only way to access new markets, e.g. in the service sectors where local presence, knowledge and experience are often required. This type of FDI can then give the investing firm scale and knowledge to improve its productivity.

By undertaking *efficiency-seeking outward FDI*, European firms get better access to factor markets for both productive resources and labour. Lower costs will improve the productivity, profitability and competitiveness of firms.

Resource-seeking outward FDI takes place when European firms establish foreign affiliates in order to access specific knowledge or technology that is not available in their home country. If such knowledge or technology is successfully repatriated, outward FDI can significantly improve employment, productivity and profitability in the European firm. The firm might also carry out resource-seeking outward FDI by moving part of the production abroad in order to break up the value chain. In this way, outward FDI allows EU firms to reduce costs and improve productivity.

Outward FDI is also sometime driven by *strategic considerations* where, for example, improved quality of existing products, introduction of new products and financial incentives make investments abroad attractive for European firms.

Going one step further, the growth of a productive European firm will have an impact on local firms and clients in the home country:

- Suppliers are likely to benefit from the increased activity level in the investing firm. Since it becomes more attractive to sell to the investing firm, competition among suppliers will increase, and it will become more attractive for suppliers in the industry to adopt new technologies in order to win contracts with the multinational firm.
- Competitors are being challenged by the growth of a strong local firm, and they therefore have a stronger incentive to increase productivity.
- Other firms across industries may learn from the international experience in the investing firm, which makes it easier for them to follow suit and invest abroad.
- The investment may also give the country a better image abroad (a country-of-origin effect), which may boost demand for home country products from overseas and spur FDI inflows.
- Clients are likely to benefit since part of the cost savings is likely to benefit clients through cheaper products. Also, the clients might benefit from an improved quality of the inputs purchased from the multinational firm, and the client might also be required to adopt more advanced technologies in order to use the inputs produced by the investing firm.

Therefore, intra-European FDI flows can help boost productivity in Europe both as inward FDI (through productivity spillovers on local firms in other European countries) and outward FDI (through productivity spillovers on local firms in the home country).

From a policy perspective, it is therefore important to understand whether the drivers and impacts of intra-European FDI are similar to those of extra-European FDI. In this report, we analyse intra-European FDI and compare our findings with the equivalent findings for extra-European FDI.

We especially focus on differences in:

- The trends and patterns of intra- and extra European FDI across European regions;
- Drivers of FDI intra- and extra European FDI across European regions;
- Impacts of FDI intra- and extra European FDI across European regions.

2 Trends and patterns of intra-European FDI flows

Intra-European FDI flows are around 50 per cent larger than extra-European inflows into Europe in terms of value. Intra-European greenfield investments are close to EUR 1,100 billion compared with EUR 700 billion in extra-European investments. M&As are likewise significantly higher within Europe (EUR 2,700 billion) than from non-European investors (EUR 1,900 billion). These numbers imply that during the period 2003-2015, around EUR 6,400 billion were invested in the European countries, either by another European country or by a non-European investor. Close to 60 per cent of these projects are undertaken by a European investor.

Intra-European investments may stimulate convergence in Europe and boost productivity, depending on the distribution of investments across various geographical regions. Productivity is likely to increase since investments either increase the capital stock or possibly bring in know-how to a specific firm in a region.

2.1 Overview of intra-European FDI flows

During 2003-2015, European owned firms carried out close to 76,000 FDI projects in Europe amounting to a total value close to EUR 3,800 billion, cf. Figure 5. Close to 45,000 projects worth almost EUR 2,700 billion (71 per cent of the total deal value) were M&As with an average deal value of EUR 137 million.² Greenfield investments amounted to EUR 1,076 billion, and the average deal value was EUR 34 million.

This implies that intra-European FDI projects are more numerous and have higher aggregate deal value than extra-European investments, highlighting the importance of getting a better understanding of trends and patterns of FDI with a European source. The share of intra-European projects that are greenfield FDI equals 41 per cent.

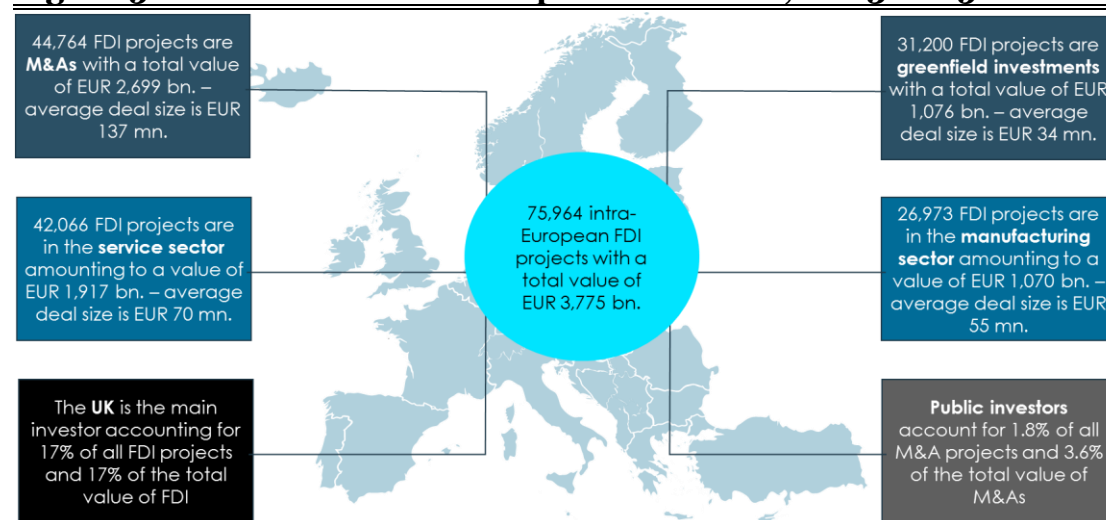
The majority of the FDI projects were in the service sector (55 per cent) and the average deal value of EUR 70 million was larger than the average deal value of EUR 55 million for FDI projects in the manufacturing sector. Investments by public investors accounted for 3.6 per cent of the total deal value in M&As. The UK is the largest investor, accounting for 17 per cent of the total value of intra-European FDI during 2003-2015.

Compared to extra-European FDI, we find that the share of greenfield FDI in terms of the number of projects is lower for intra-European investments, where 41 per cent was greenfield FDI, while 46 per cent of the extra-European FDI projects were classed as greenfield. This reveals that M&As play a relatively larger role in intra-European projects. Since greenfield FDI expands the capital stock in a region, it is more likely to support new jobs. Hence, the composition of intra-European FDI could indicate a lower number of jobs created per one million worth of FDI. However, intra-European projects are more numerous, indicating that more jobs are created due to intra-European FDI than from extra-European FDI.

² Based on the 19,650 FDI projects where the deal value was available from the databases.

The share of intra-European FDI undertaken by a public entity is lower than extra-European FDI, where 7.1 per cent of the total value invested was by public investors.

Figure 5 Overview of intra-European FDI flows, 2003-2015



Note: For M&As, the investor is classified as a public investor if the acquirer is labelled "Public authority, State, Government". It is assumed that no greenfield FDI is undertaken by a public entity. This follows the assumption in the extra-European analysis and thus generates comparability between the numbers. The average deal sizes are calculated using only the projects with a reported deal value.

Source: ESPON FDI (2018) based on data from the BvD Zephyr and FT databases. See the scientific report, *Collection of intra-European FDI flows* for further details

Table 1 shows that the mature economies in the EU (the old member states or EU15) received around 68 per cent of total intra-European FDI during 2003-2015 when measured in number of projects and 76 per cent of the total value. This implies that the projects in the EU15 generally were larger than the average investment. In the same period, the EU15 accounted for 77.6 per cent of the European GDP, which suggests that these countries receive a slightly smaller share of intra-European FDI than their economic size would have predicted. The EFTA countries received 5.4 per cent of the projects and 4.6 per cent of the total value, both of which surpasses the share of European GDP the EFTA countries constitute.

Table 1 GDP and FDI inflows across country groups

	Share of European GDP 2003-2015	Share of FDI inflows from European countries 2003- 2015 by value	Share of FDI inflows from European countries 2003- 2015 by number of projects
EU15 (old member states)	77.6%	75.6%	68.4%
EU13 (new member states)	11.5%	14.6%	22.3%
Candidate countries	7.1%	5.3%	3.8%
Non-EU (EFTA) countries	3.8%	4.6%	5.4%

Note: The EU15 comprises the following 15 countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the UK. The EU13 includes Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia. The candidate countries are Albania, the former Yugoslav Republic of Macedonia (fYRoM), Montenegro, Serbia and Turkey. The non-EU countries include Iceland, Liechtenstein, Norway and Switzerland.

Source: ESPON FDI (2018) based on data from the BvD Zephyr and FT databases

The EU13 accounted for 15 per cent of the value of FDI but 22 per cent of the number of FDI projects. This indicates that an FDI project on average has a smaller value in these countries than in EU15. Relative to the economic size of the EU13, the EU13 received a large share of the intra-European investments.

The candidate countries received 5.3 per cent of the total number of intra-European FDI projects during 2003-2015 and 3.8 per cent of the FDI value. The pattern is similar to the one for the EU15 in that projects in the candidate countries generally are larger than the average.

Compared to extra-European FDI, we find that the EU15 accounted for around 82 per cent of the investments which is more than their economic size would have predicted and in turn more than they accounted for of the intra-European FDI. The EU13 received 7.6 per cent of the value of extra-European investments, making the 14.6 per cent of European FDI into the EU13 disproportionately large. In addition, the share of intra-European investments that accrue to the candidate countries are much larger than the share of extra-European investments, where the candidate countries only received 3 per cent of the total value. This implies that intra-European FDI support convergence across countries, contrary to the case of extra-European FDI.

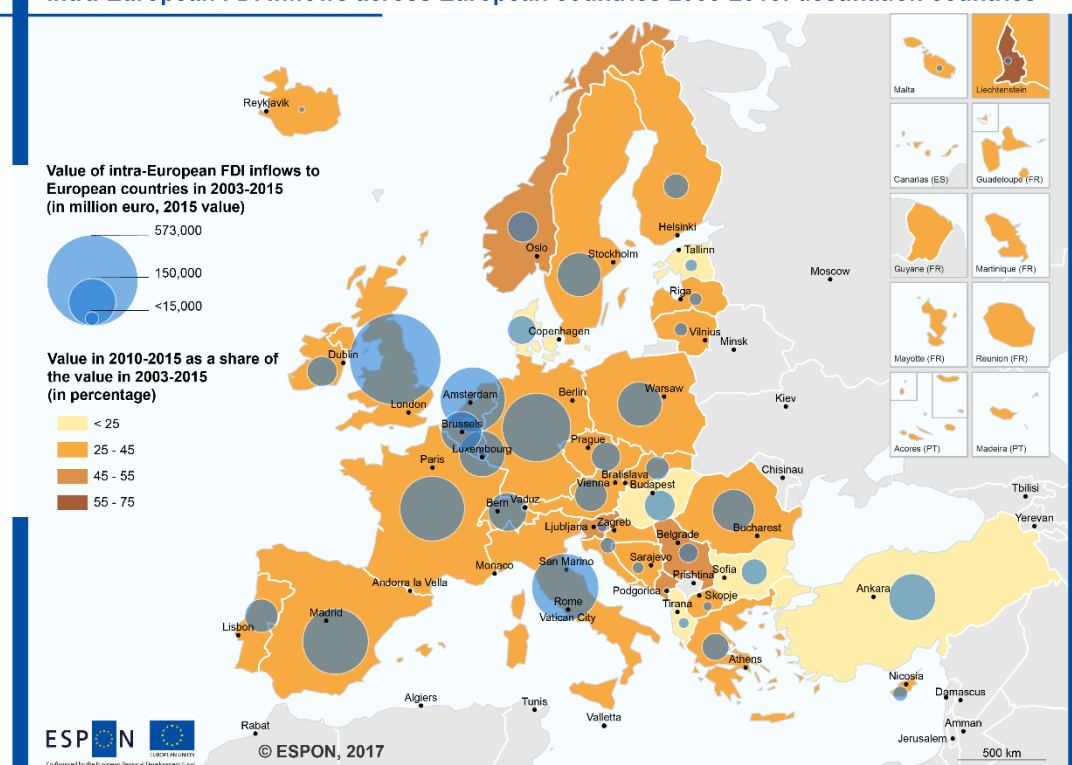
2.2 Destination and origin of intra-European FDI flows

The UK, Germany, Italy, Spain, the Netherlands and France are the main destinations for intra-European FDI, cf. Map 1. The UK alone attracted 15 per cent of the total value of intra-European FDI. At the same time, the UK accounts for 16 per cent of the combined EU GDP in the analysed period. Generally, there is a clear tendency for FDI to flow to large countries. The five largest countries in terms of GDP (i.e. Germany, the UK, France, Italy and Spain) were thus the recipients for almost 50 per cent of total intra-European FDI flows measured in value over the period 2003-2015 – approximately 45 per cent in terms of number of projects.

Other countries also received large amounts of FDI in the period. Belgium, Switzerland, Luxembourg, Poland, Romania, Sweden and Turkey were all large recipients of intra-European investments, each receiving projects worth more than EUR 100 billion during 2003-2015. Taking their economic size into consideration reveals that several smaller countries in terms of GDP are attracting a larger share of FDI to GDP than their larger counterparts. Where, e.g. France receives intra-European FDI corresponding to 1.2 per cent of its GDP, the figures are 2.7 per cent for Belgium and 2.6 per cent for Switzerland. Again this indicates that economic size is not the sole driver for attracting FDI.

Map 1 Destination of intra-European FDI, 2003-2015

Intra-European FDI inflows across European countries 2003-2015: destination countries



Note: The FDI values cover both greenfield investment and M&As. Not all M&As listed in the database have a deal value recorded. Of the 44,764 M&A projects recorded, 19,650 have a deal value and are included in this figure. More information about the regional FDI data can be found in the scientific report, *Collection of intra-European FDI flows*.

Source: ESPON FDI (2018) based on the BvD's Zephyr and the FT databases

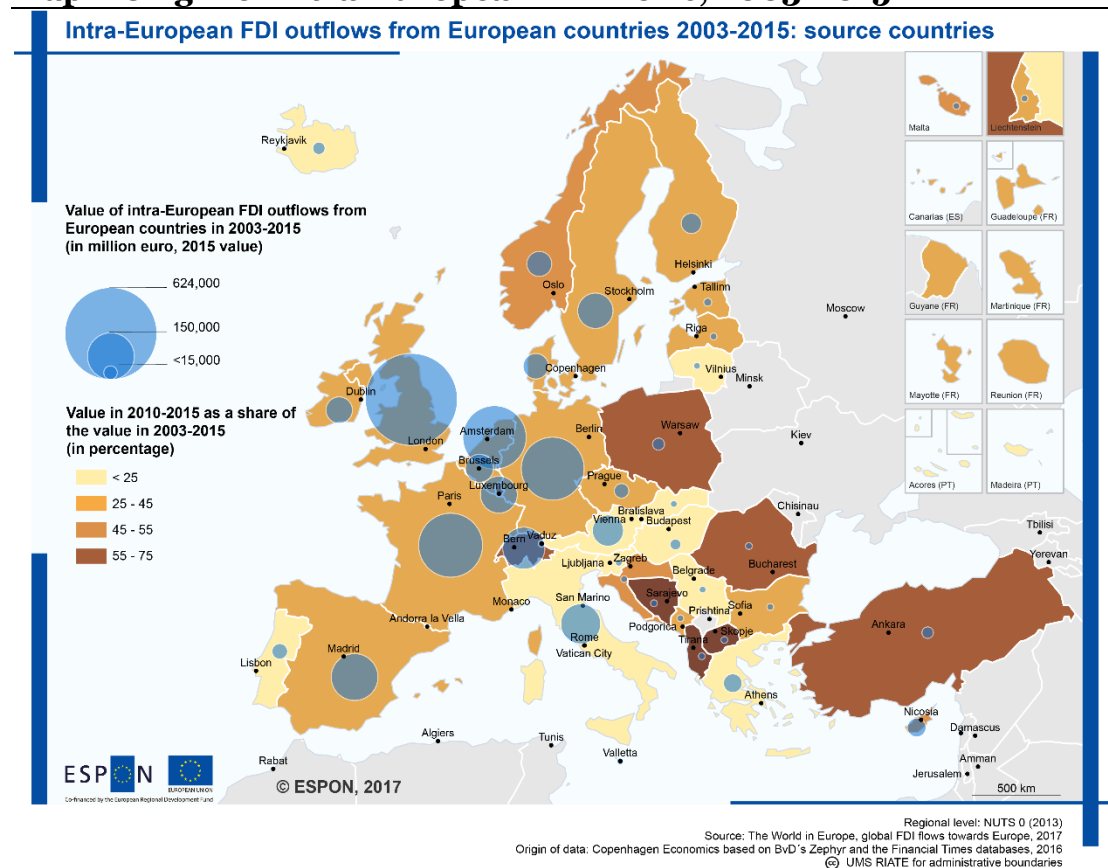
Brexit is likely to have an impact on intra-European FDI. If more frictions arise in trade between the EU and the UK, Brexit may cause reallocations of FDI between the UK and other EU member states. European owned firms located in the UK that are dependent on access to the Internal Market may choose to relocate to another EU Member State following Brexit. Likewise, firms located in an EU Member State that sell a large share of their production on the UK market may wish to relocate to the UK in order to avoid tariffs and non-tariff barriers to trade which might arise in the future. The extent to which Brexit will influence the location of future FDI flows within Europe and cause relocations of existing investments remains to be seen.

There are some interesting differences in the patterns of intra-European FDI compared to extra-European FDI in Europe. *First*, the UK received around 30 per cent of the total value of extra-European FDI, but only 15 per cent of intra-European FDI. More generally, the new member states receive a larger share of intra-European FDI compared with extra-European FDI. Poland, for example, received a miniscule 0.2 per cent of the extra-European FDI, but 3.6 per cent of the total value of intra-European investments. This finding could suggest that the underlying

motive for undertaking the FDI differs. In Chapter 3, we test if drivers for FDI differs depending on the source of the investment.

Intra-European FDI likewise originates from larger countries in terms of GDP, cf. Map 2. The UK, France, the Netherlands and Germany are the largest investors and account for 49 per cent of the projects and 54 per cent of the total value of intra-European FDI. The UK is the source country in 16.1 per cent of the projects, accounting for 16.5 per cent of the value of FDI. Comparing this to the share of intra-European investments that the UK receives shows that the UK is a net investor in Europe. However, this is not unique to the UK. The old member states and the four EFTA countries in combination account for 92 per cent of the total number of projects and 96 per cent of the total value.

Map 2 Origin of intra-European FDI flows, 2003-2015

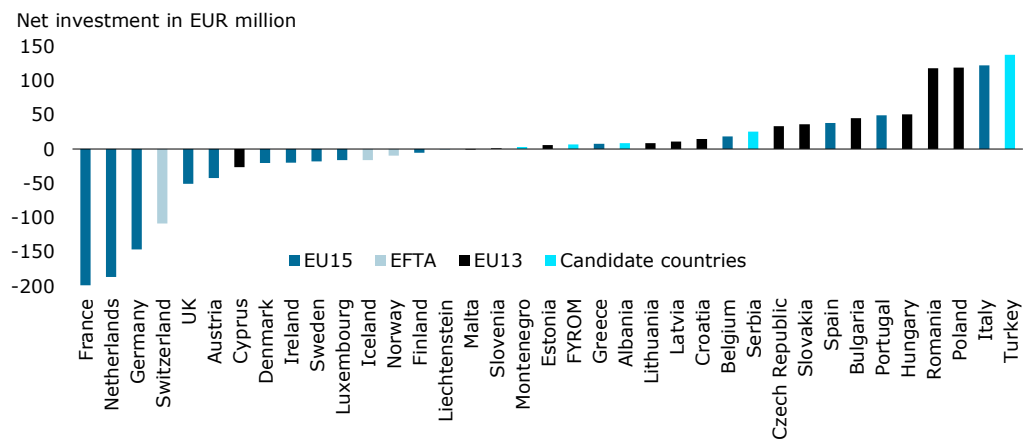


Note: The FDI values cover both greenfield investment and M&As. Not all M&As listed in the database have a deal value recorded. Of the 44,764 M&A projects recorded, 19,650 have a deal value and are included in this figure. More information about the regional FDI data can be found in the scientific report, *Collection of intra-European FDI flows*.

Source: ESPON FDI (2018) based on the BvD's Zephyr and the FT databases

Figure 6 illustrates a clear pattern of these countries as net investors. A majority of the investments are in other old member states and EFTA countries. However, the difference of around 10 per cent of the total value invested between destination and origin country being either the old member states or EFTA countries equals the net investment in the new member states and the candidate countries.

Figure 6 The EU15 and EFTA countries are net investors in Europe



Note: Bosnia-Herzegovina has been excluded as it is classified as a "Potential candidate" by Eurostat as the only country in our sample. The figure shows the net investment in EUR million, i.e. the value of FDI into a country net of the value of FDI into the same country.

Source: ESPON FDI (2018) based on the BvD's Zephyr and the FT databases

2.3 Patterns of intra-European FDI flows across European territories

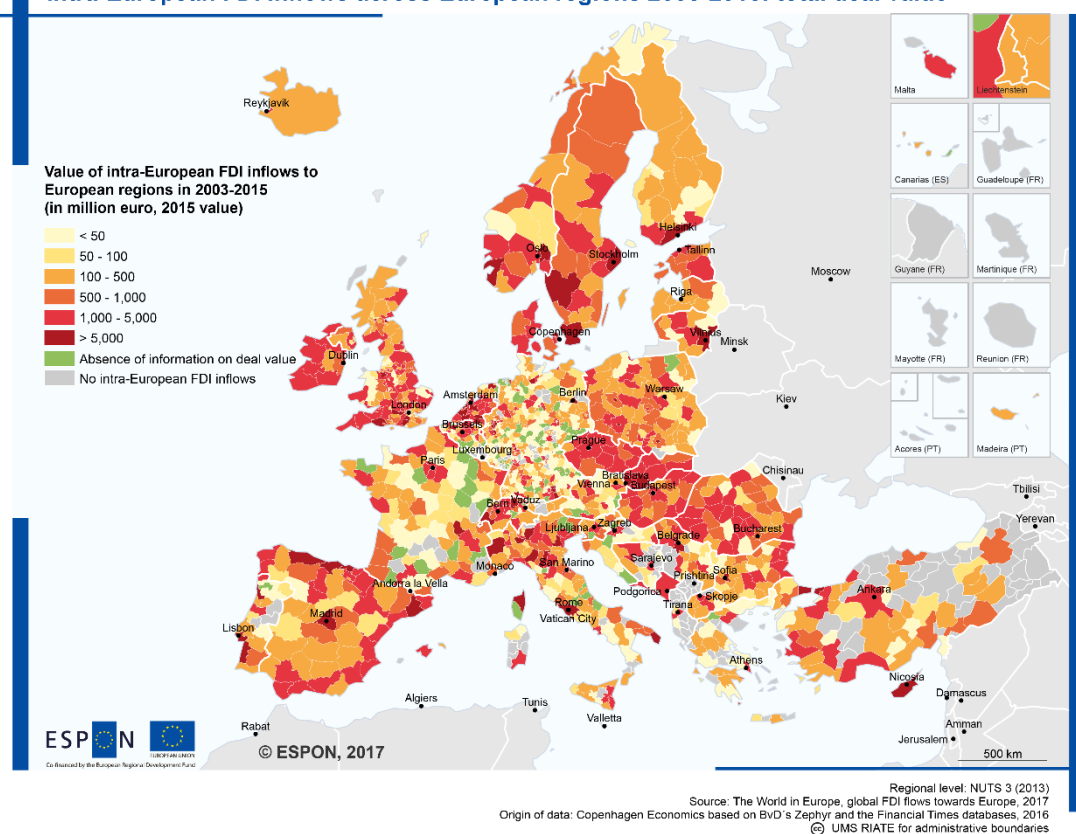
The findings in this report are based on a unique and very detailed database on intra-European FDI for NUTS3 regions in Europe. Of the 75,964 intra-European FDI projects recorded during 2003-2015, 64,294 projects can be mapped at the NUTS3 level. For the rest of the projects, we only have information about the country or larger regional area.

The NUTS3 regions with the largest FDI inflows during 2003-2015 are Luxembourg (EUR 145,807 million), Madrid (EUR 145,523 million), Greater Amsterdam (EUR 144,534 million), Paris (EUR 110,519 million) and Istanbul Province (EUR 106,760 million).

It should be noted that London, comprising several NUTS3 codes, receives an even larger amount of intra-European FDI of EUR 234,809 million in the period 2003-2015. However, these investments are spread across the 21 NUTS3 regions that belong to London.

Map 3 Intra-European FDI across European regions, 2003-2015

Intra-European FDI inflows across European regions 2003-2015: total deal value



Note: The FDI values cover both greenfield investment and M&As. Not all M&As listed in the database have a deal value recorded. Of the 44,764 M&A projects recorded, 19,650 have a deal value and are included in this figure. More information about the regional FDI data can be found in the scientific report, *Collection of Intra-European FDI flows*.

Source: ESPON FDI (2018) based on BvD's Zephyr and the FT databases

Intra-European FDI is primarily directed to urban, developed and capital city metropolitan regions, cf. Table 2. Specifically, two thirds of the investments are in urban regions, while 26 and 9 per cent go to intermediate and rural regions, respectively. Capital city metropolitan regions and other metropolitan regions combined received 75 per cent of total intra-European FDI. This implies that these regions overperform in attracting FDI considering their economic size (column one in Table 2).

Regions classified as rural, non-metropolitan or less-developed all receive less FDI than their economic size would predict. This indicates that intra-European FDI does not support convergence on a regional level.

Compared to extra-European FDI, the top five NUTS3 regions in terms of value all receive more intra-European FDI. Greater Amsterdam, Madrid, Luxembourg and Paris were also among the five NUTS3 regions that received the most extra-European investments. The Istanbul Province received EUR 42,773 million in extra-European investments. This implies that Istanbul attracts large amounts of investments, but that intra-European FDI has the largest value. Further, the discrepancy between economic size and intra-European FDI received is much smaller than

between GDP and extra-European FDI, which to a larger extent cluster in urban, metropolitan and more developed regions. For example, rural regions accounted for 12.6 per cent of European GDP and received 9 per cent of intra-European FDI in terms of value, but only 5.3 per cent of extra-European FDI.

Table 2 Distribution of FDI across groups of regions

	Share of European GDP 2003-2014	Share of intra-European FDI i 2003-2015 by value	Share of intra-European FDI 2003-2015 by number of projects
Urban regions	54.6%	65.3%	63.1%
Intermediate regions	32.7%	25.7%	26.2%
Rural regions	12.6%	9.0%	10.7%
Capital city metropolitan regions	22.6%	50.3%	42.3%
Other metropolitan regions	44.2%	24.7%	30.1%
Non-metropolitan regions	33.2%	24.9%	27.6%
More developed regions	73.1%	81.5%	78.2%
Transition regions	14.5%	7.9%	8.9%
Less developed regions	12.4%	10.6%	13.0%
Regions next to capital city regions	8.6%	6.9%	9.4%
Regions along national land borders	18.0%	19.9%	22.3%

Note: The figures do not include regions in Albania, Bosnia-Herzegovina, Serbia and Turkey. The figures on share of European GDP do not include Iceland, Liechtenstein and Switzerland.

Source: ESPON FDI (2018) based on data from the BvD Zephyr and FT databases

2.4 The location of M&As and greenfield

Greenfield investments take place when a new foreign firm establishes itself in the region and sets up new production facilities, e.g. to access new markets or reduce its costs of production. This type of FDI stimulates economic activity in the region during the construction phase and expands the capital stock in the region.

M&As take place when a foreign firm or public entity acquires more than 10 per cent of the voting stock in an existing domestic firm. M&As may help sustain existing economic activity in the region, but this type of FDI does not directly expand the capital stock in the region. Over time, the change of ownership may improve the competitiveness of the firm and stimulate growth.

M&As accounted for more than 70 per cent of the total value of intra-European FDI during 2003-2015, and the pattern of M&As across regions thus to a large extent resemble the pattern of total FDI. M&As mainly take place in more developed, urban and capital regions where it is likely that there are more local firms that can potentially be acquired, cf. Table 3.

During 2003-2015, the M&As in Europe were distributed as:

- 91 per cent went to more developed regions, 5 per cent to transition regions and 4 per cent to developing regions;
- 73 per cent to urban, 23 per cent to intermediate and 4 per cent to rural regions;
- 60 per cent to capital city metropolitan regions, 22 per cent to other metropolitan regions and 18 per cent to non-metropolitan regions.

Table 3 Types and sectoral composition of FDI in groups of regions, 2003-2015

Share of:	Total FDI	Type of FDI		Sector		
		M&As	Greenfield	Services	Manuf.	Other
Urban regions	65.3%	72.8%	47.0%	77.9%	56.7%	63.3%
Intermediate regions	25.6%	23.0%	32.3%	18.9%	31.8%	26.9%
Rural regions	9.0%	4.2%	20.7%	3.2%	11.5%	9.7%
Capital city metropolitan regions	50.4%	60.0%	24.8%	62.8%	37.8%	50.2%
Other metropolitan regions	24.9%	21.7%	32.7%	21.2%	29.8%	28.2%
Non-metropolitan regions	24.7%	18.3%	42.5%	15.9%	32.4%	21.6%
More developed regions	81.7%	91.4%	55.8%	90.4%	77.9%	80.5%
Transition regions	7.7%	5.0%	15.4%	4.2%	9.2%	9.4%
Less developed regions	10.5%	3.6%	28.7%	5.4%	12.9%	10.2%
Regions next to capital city regions	6.8%	4.3%	13.6%	3.8%	9.5%	7.1%
Regions along national land borders	19.9%	17.7%	25.7%	18.6%	28.2%	12.9%

Note: The figures do not include regions in Albania, Bosnia & Herzegovina, Serbia and Turkey. Each investment is classified as either services, manufacturing or other, where other includes, but is not limited to, agriculture, mining, quarrying and construction.

Source: ESPON FDI (2018) based on data from the BvD Zephyr and FT databases

Greenfield investments account for the remaining 30 per cent. As this type of FDI expands the capital stock, it is more likely to create new jobs. The share of greenfield investments is generally higher in a large number of provincial regions in Eastern Europe as well as Spain and Ireland, cf. Map 4. During 2003-2015, intra-European greenfield FDI were distributed as:

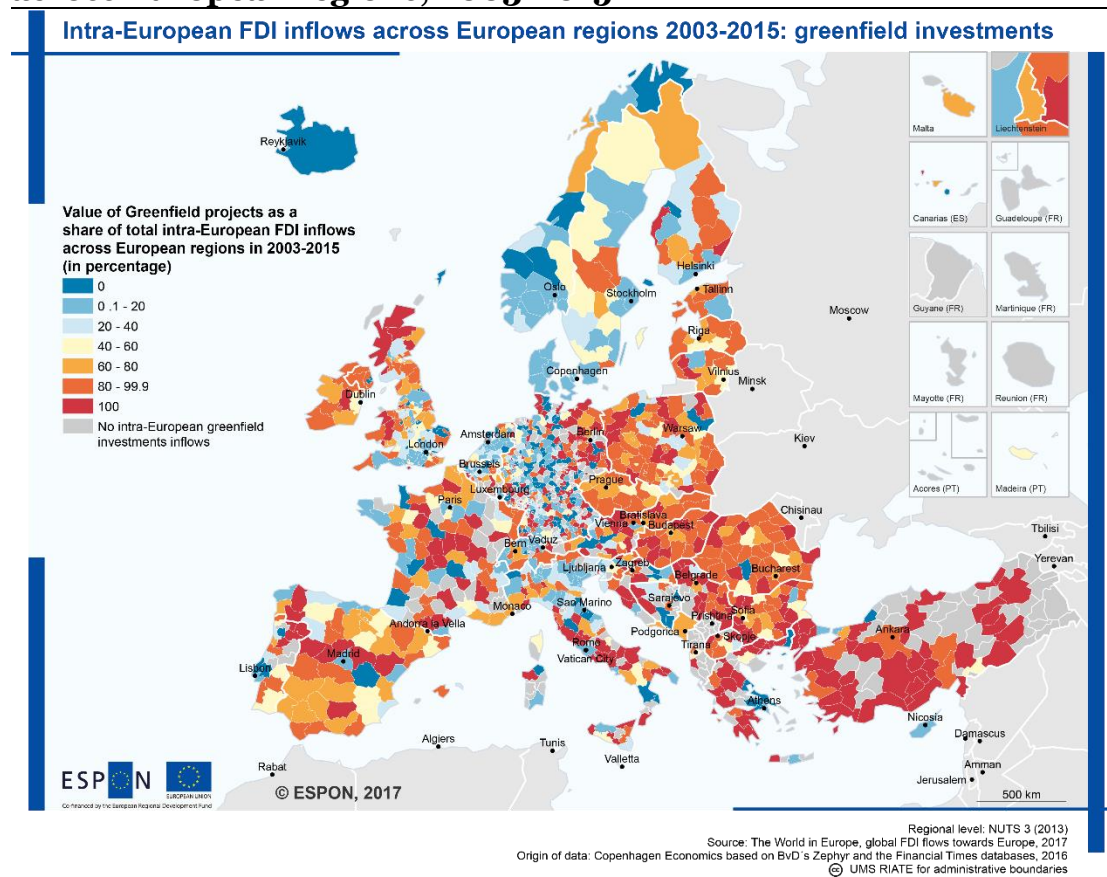
- 56 per cent went to more developed regions, 15 per cent to transition regions and 29 per cent to developing regions;
- 47 per cent to urban, 32 per cent to intermediate and 21 per cent to rural regions;
- 25 per cent to capital city metropolitan regions, 33 per cent for other metropolitan regions and 42 per cent to non-metropolitan regions.

Compared to M&As, greenfield investments seem to stimulate convergence across European regions to a larger extent, due to the higher share of investments in rural, less developed and non-metropolitan regions.

There are several major differences between extra-European FDI and FDI that comes from within Europe. The most interesting difference is that intra-European greenfield investments go to rural, less developed and non-metropolitan regions to a much larger extent. These regions received 3, 20 and 31 per cent, respectively, from investors from outside Europe. On the other hand, the shares of intra-European investments that go to rural, less developed and non-metropolitan regions are 21, 29 and 42 per cent, respectively. This implies that intra-European FDI, compared to extra-European FDI, seem to induce economic convergence in Europe. Since greenfield FDI to a larger extent support job creation, these numbers are indicative that intra-European FDI is highly important for these regions. Furthermore, rural, non-metropolitan or less developed regions all receive a much larger share of greenfield investments than their economic size would predict, cf. Table 3.

Another interesting difference is that capital city metropolitan regions receive 60 per cent of intra-European M&As, while only receiving 46 per cent of extra-European M&As. This can possibly be explained by market-seeking being an important driver for extra-European FDI. When obtaining access to the Internal Market, the specific location is of less importance.

Map 4 Share of greenfield investments in total intra-European FDI across European regions, 2003-2015



Note: For a number of regions, no greenfield investments have been registered.

Source: ESPON FDI (2018) based on data from the BvD Zephyr and FT databases

2.5 The sectoral composition of intra-European FDI across different types of regions

The motives for locating abroad are likely to differ across sectors. Market-seeking FDI in service sectors, for example, is likely to be more oriented towards the local market (as services are generally less tradable across borders), whereas market-seeking FDI in manufacturing sectors is more likely to be oriented towards nearby markets with easy access from the region. If the motive for undertaking these investments differs, so will the location pattern of FDI across different types of regions.

The share of FDI in services in total FDI inflows is higher in more developed, urban and capital regions. During 2003-2015, intra-European FDI in the service sectors were distributed as:

- 90 per cent went to more developed regions, 4 per cent to transition regions and 5 per cent to developing regions;
- 78 per cent to urban, 19 per cent to intermediate and 3 per cent to rural regions;
- 63 per cent to capital city metropolitan regions, 21 per cent for other metropolitan regions and 16 per cent to non-metropolitan regions.

Intra-European FDI in manufacturing is located more evenly across the various regional types:

- 78 per cent went to more developed regions, 9 per cent to transition regions and 13 per cent to developing regions;
- 57 per cent to urban, 32 per cent to intermediate and 12 per cent to rural regions;
- 38 per cent to capital city metropolitan regions, 30 per cent for other metropolitan regions and 32 per cent to non-metropolitan regions.

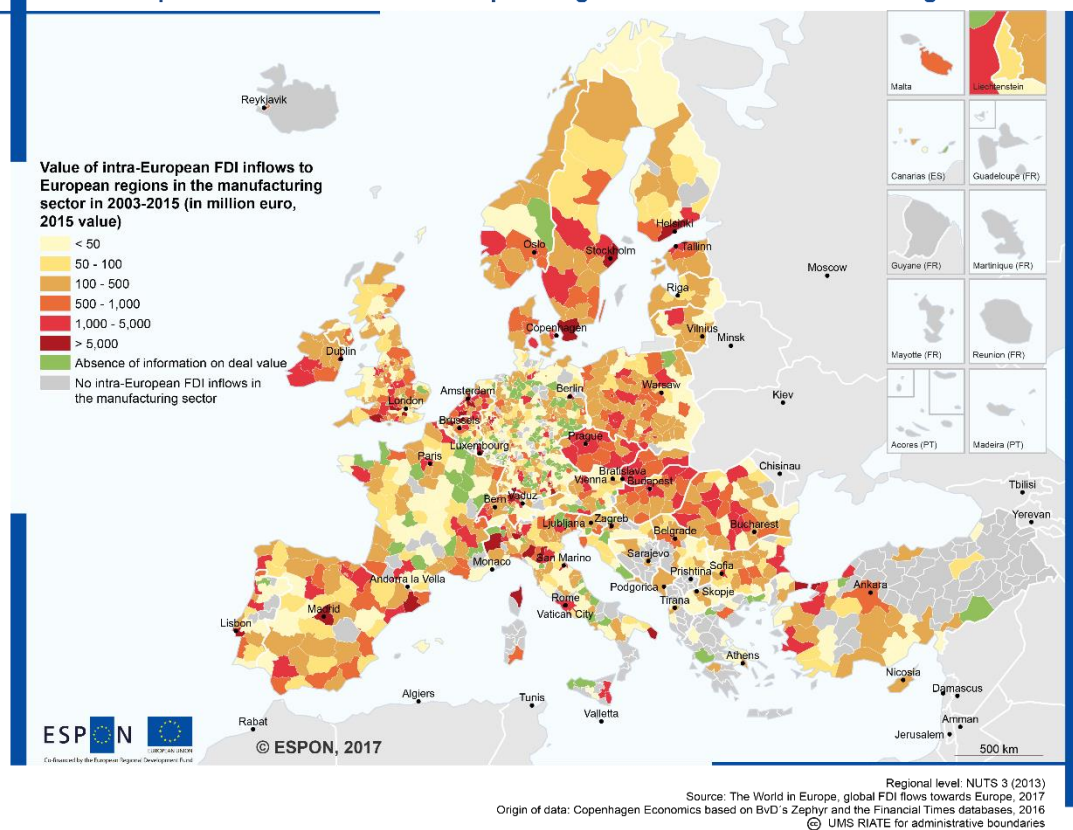
Intra-European FDI in the remaining projects is located across the various regional types in the following way:

- 81 per cent went to more developed regions, 9 per cent to transition regions and 10 per cent to developing regions;
- 63 per cent to urban, 27 per cent to intermediate and 10 per cent to rural regions;
- 50 per cent to capital city metropolitan regions, 28 per cent for other metropolitan regions and 21 per cent to non-metropolitan regions.

Intra-European FDI flows in the manufacturing sector across regions can be seen in Map 5. For both services and manufacturing, there is a larger tendency to invest in capital city metropolitan regions by European investors at the expense of other metropolitan regions compared with extra-European investments. The share of investments in the service sector is up from 53 per cent for extra-European FDI to 66 per cent for intra-European FDI. The numbers are 32 per cent to 47 per cent in the manufacturing sector.

Map 5 Value of intra-European FDI in manufacturing across European regions, 2003-2015

Intra-European FDI inflows across European regions 2003-2015: manufacturing sector



Note: The sector classification follows Table 4 in the scientific report, *Trends and patterns in extra-European FDI towards Europe*.

Source: ESPON FDI (2018) based on data from the BvD Zephyr and FT databases

2.6 Concluding remarks

Intra-European FDI flows are much larger than extra-European FDI flows into Europe in terms of both value and number of projects. Intra-European greenfield FDI amount to almost EUR 1,100 billion, while M&As accumulate to EUR 2,700 billion during 2003-2015. The total level of FDI, including both intra-European and extra-European, amount to around EUR 6,400 billion, implying that close to 60 per cent of all FDI projects are undertaken by a European investor. The service sector received the largest amount of intra-European FDI with more than EUR 1,900 billion, while the manufacturing sector received more intra-European FDI than EUR 1,000 billion. The UK was the main investor, accounting for 17 per cent of the total value of FDI.

Intra-European FDI stimulate convergence across countries since the old member states and the four EFTA countries generally are net investors, while the new member states and the candidate countries generally are net recipients of intra-European FDI, cf. Figure 6. On a regional level, intra-European FDI is concentrated in developed, capital city metropolitan and urban regions, irrespective of whether FDI takes the form of greenfield or M&As. However, intra-European FDI are more evenly distributed than extra-European FDI at a regional level.

Analysing intra-European FDI on a more disaggregated level reveals that rural, non-metropolitan and less developed regions receive a larger share of intra-European greenfield FDI than their economic size would predict. Hence, as greenfield FDI expands the capital stock and is more likely to create new jobs in a region, the larger share of greenfield FDI to rural, non-metropolitan and less developed regions implies that intra-European FDI could lead to convergence across Europe on a regional level. This indicates that intra-European FDI – and especially greenfield FDI – potentially plays a large role in generating economic convergence within Europe.

3 Drivers of intra-European FDI flows

A wide range of factors go into the decision to invest across borders, including factors most commonly determined at national level, the supra-national level (in this context mainly at the EU level), the bilateral level and the regional level.

Different investors will place emphasis on different factors, depending on their motive for undertaking FDI. Investors that engage in FDI in order to sell to consumers in the local market will thus place especial emphasis on market potential, while investors seeking to gain access to certain resources or special competences will have this as their main criteria.

In this chapter, we address the questions: What factors determine intra-European FDI location and how can local regulation affect the location choice of European investors? How does this compare with the equivalent findings for extra-European FDI?

3.1 Drivers of intra-European FDI across European regions

The empirical analysis shows that a number of regional drivers matter for the attractiveness of European regions towards European investors, cf. Figure 7 below. Among these are both so-called policy and fundamental FDI drivers, where the former group includes regional drivers that can be influenced by policy in the short to medium term, while the latter group includes drivers that are more difficult for policy makers to influence within this timeframe.

The findings show that the policy FDI drivers that help attract investors from other European countries are the same as the equivalent drivers that help attract investors from outside of Europe. These include strong industry clusters, labour abundance, a higher share of the workforce with a tertiary education, good accessibility, and a high level of innovation.

Strong industry clusters matter because a number of positive externalities arise when similar firms locate together, which makes individual firms more productive. In areas with strong industry clusters, pools of specialised labour and inputs will thus often be available, and new ideas and innovation spread more easily across firms. In terms of magnitude, the results imply that when the strength of industry clusters in a region increases by one per cent, the likelihood of a given European FDI project being located in the region increases by 1.8 per cent.³ This is a slightly larger impact than found for non-European investors (1.4 per cent) suggesting that the motive for European investors more often is to tap into existing skills and technologies in these clusters.

As in the case of extra-European FDI, strong industry clusters are especially important drivers of intra-European FDI in rural and intermediate regions, as well as in other metropolitan and

^{3 3} In the analysis, we measure industry clusters as the share of a region's employment in a given sector (2-digit NACE) relative to the country's employment in that sector. Strong industry clusters are therefore equivalent to a strong regional concentration of firms in the same sector. As sector affiliation is defined at the 2-digit NACE level (e.g. manufacturing of motor vehicles, trailers and semi-trailers), so clusters can include both final goods producers (e.g. motor vehicles) and suppliers (e.g. parts and accessories for motor vehicles).

less developed regions. The reason may be that rural and intermediate regions attract a larger share of manufacturing firms, for which industry clusters are especially important, and that firms locating in less populated and less attractive markets do so mainly to access specialised labour.

Labour abundance is also an attraction factor, as firms in some cases establish abroad to secure labour. A high unemployment rate signals to potential investors that there is abundant labour and that workers are likely to exert high efforts to maintain their job. The magnitude of the effect implies that when the supply of available labour (measured as the regional unemployment rate) in a region increases by one per cent, the likelihood of a given European FDI project being located in the region increases by 0.1 per cent, which is slightly less than the equivalent effect found for extra-European FDI (0.2 per cent). It should be kept in mind, however, that labour abundance will not always be a driver of FDI if the right skills and competences are not available. As in the case of extra-European FDI, labour abundance is an especially important driver of intra-European FDI into urban regions, capital metropolitan regions, other metropolitan regions and more developed regions, where labour shortages can limit firms' possibilities for expanding their businesses.

This means that the same policies that can be used to attract extra-European investment into these regions, including flexible labour laws and policies that increase the mobility of workers from surrounding rural territories into urban centres, can also be used to attract intra-European FDI into these regions.

The third most important policy driver of intra-European FDI is the share of the regional population with a **tertiary education**. The reason why this factor matters is that investors gain better access to human capital in regions with a high level of education, which may be especially attractive to investors in knowledge intensive industries. Increasing this share by one per cent is thus found to increase the likelihood of a given European FDI project being located the region by 0.1 per cent, which again is slightly less than the equivalent effect found for non-European investors (0.1 per cent). As in the case of extra-European FDI, a high level of education is an especially important driver of intra-European FDI into urban regions, capital metropolitan regions, other metropolitan regions and more developed regions, where universities tend to be located.

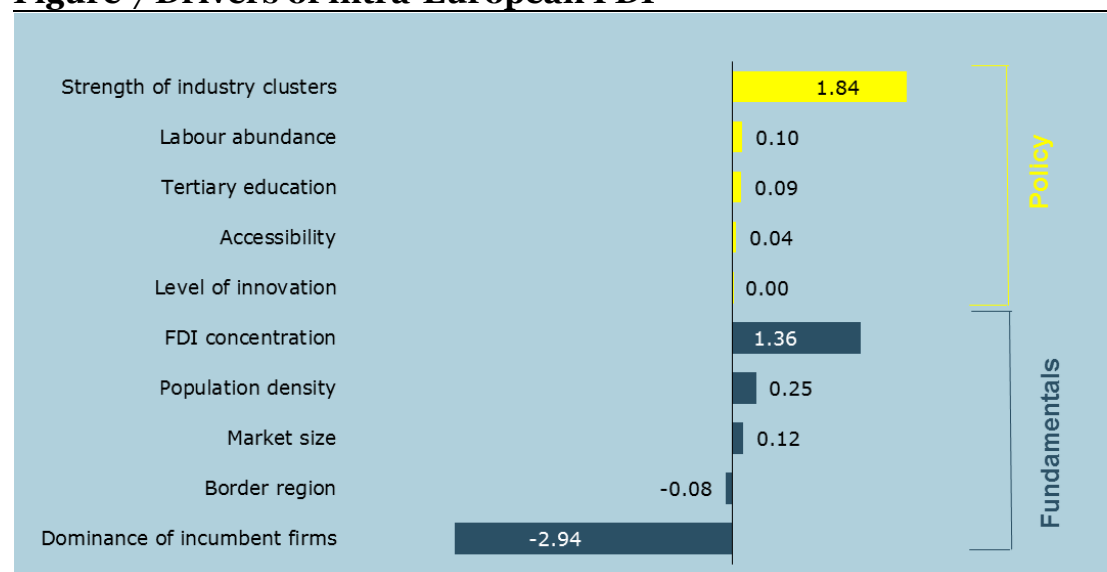
Better regional **accessibility** also helps attract European investors, as it reduces the cost of transporting goods to and from the region and facilitates travel from the investing firm's headquarters.⁴ Increasing regional accessibility by 1 per cent increases the likelihood of a given European FDI project being located in the region by 0.04 per cent, which is equivalent to the

⁴ Regional accessibility is measured using the European potential accessibility index for freight, obtained from TRACC (2015). For each NUTS3 region, the index value is computed as the sum of GDP in all other European regions weighted by the generalised travel cost by multimodal (non-unitised), road, rail, air and/or water to go there.

impact found for extra-European FDI. As in the case of extra-European FDI, accessibility is especially important for attracting intra-European FDI to capital metropolitan regions.

Finally, a high **level of innovation** is important for firms that establish abroad in order to acquire new knowledge and hire R&D workers. While we find innovation to be a driver of intra-European FDI, the impact is very small as in the case of extra-European FDI.⁵ The small impact may be due to a number of issues, including the fact that innovation is measured via regional patent applications, which may not fully reflect the regional level of innovation.⁶

Figure 7 Drivers of intra-European FDI



Note: The figure shows the results from the regression analysis conducted across the subset of all regions. The percentages shown in the figure are the change in the likelihood of a given FDI project being located in a given region, when the value of the respective regional driver is increased by 1 per cent (i.e. the average probability elasticity).

Source: ESPON FDI (2018) based on data described in the scientific report, *Drivers and impacts of intra-European FDI*

We also find that the fundamental FDI drivers that help attract investors from inside Europe, are the same as those, which help attract investors from outside of Europe. This includes FDI concentration, population density and market size, while border regions and the dominance of incumbent firms deter both types of investors.

The most important fundamental attraction factor is **FDI concentration**, which measures the regional concentration of other European FDI projects. Regions with a larger stock of European FDI will find it easier to attract new European investments, as the existing investments signal low risk and high profitability. We find that increasing FDI concentration by one per cent increases the likelihood of a given European FDI project being located in the region by 1.4 per

⁵ Increasing the level of innovation by one per cent increases the likelihood that a given FDI project is located in the region by 0.000318 per cent. In Figure 7, this is rounded off to zero.

⁶ See the main report *Extra-European FDI towards Europe* for details.

cent. This impact is a lot smaller than the equivalent impact (3.3 per cent) of FDI concentration on the attractiveness of EU regions towards non-European investors.⁷ One reason why the signalling effect is weaker for European investors compared to non-European investors may be that European investors are more familiar with potential investment locations in Europe than non-European investors for whom existing FDI projects may help brand European regions to a larger degree. In addition, the perceived risk of investing within the internal market may be smaller, due to the removal of investment barriers and shared regulation in a number of areas.

FDI concentration is an especially important driver of intra-European FDI into rural regions, non-metropolitan regions and less developed regions, which may be less known regions for many investors. Existing FDI projects may help bring these regions to the attention of potential European investors. In contrast to extra-European FDI, we however also find FDI concentration to be especially important in intermediate regions, other metropolitan regions and transition regions, where branding may also be part of the reason.

The regional **population density** also matters for attracting European investments, as a higher density will indicate a larger mass of consumers for some firms. For other firms, a higher density may be a deterrence as it will be associated with higher rents and land costs. However, overall we find that the first effect dominates and that a higher population density increases the regional attractiveness. Increasing this factor by one per cent increases the likelihood of a given European FDI project being located in the region by 0.3 per cent. This is a slightly smaller impact than found for extra-European FDI (0.4 per cent). While the difference is small, this suggests that a larger share of extra-European investments is motivated by market-seeking behaviour than European investments.

As in the case of extra-European FDI, we find that the impact of the population density varies across different groups of regions. The population density is thus an especially important attraction factor of both intra- and extra-European FDI into capital metropolitan regions and transition regions, but a deterrence in urban regions. In the case of intra-European FDI, we furthermore find it to be an especially important attraction factor in less developed regions and a deterrence in other metropolitan regions.

The regional **market size** is also an important driver of intra-European investments, as a larger regional market offers better local sales opportunities for most firms. Increasing this factor by one per cent increases the likelihood of a given European FDI project being located in the region by 0.1 per cent. This is a slightly larger effect than found for non-European firms (0.1 per cent). This may suggest that European investors are relative more focused on the regional market than non-European investors, who often invest within the internal market to sell their products across Europe.

⁷ In the analysis of the drivers of extra-European FDI into European regions, FDI concentration is measured as the regional concentration of extra-European FDI projects.

As in the case of extra-European FDI, a large market size is found to be an especially important attraction factor for intra-European FDI in urban regions, other metropolitan regions and more developed regions, where a higher share of investments is likely to be market-seeking investment. In the case of intra-European FDI, a large market size is also found to be an especially important attraction factor in transition regions, while it is found to deter FDI into rural regions.

We furthermore find that **border regions** are less likely than non-border regions to receive intra-European FDI, which was also the result found for extra-European FDI. This is likely due to a market limiting effect of borders. Thus, while the internal market has removed most barriers to cross border sales, a number of other barriers remain, including differences in language, culture and taste preferences, which may limit the local market for firms located in border regions. The negative impact is, however, very sensitive across different specification of the model, and it seems likely that this impact is driven by specific countries as opposed to different types of regions, as we the impact turns positive, once we focus on specific types of regions. The impact is therefore somewhat uncertain and comparisons with the impacts across different types of regions, with the equivalent impacts for extra-European FDI, should therefore be undertaken with care.

Finally, we also find that European investors are deterred by the **dominance of incumbent firms**. This is not surprising as it can be hard to break into markets dominated by one or a few existing firms. This was also found to be the case for non-European investors. Across different types of regions, the results are also similar across the two types of investors. Dominant incumbent firms are thus an especially important deterrence of FDI in urban, non-metropolitan and less developed regions. In addition, this factor is also an especially important deterrence of intra-European FDI in rural regions.

We have also tested the importance of the allowance for financial investments. As data on this variable is only available for EU member states, we have tested the importance of this driver in an extended model.

We find that regions that allow for the use of **financial investment incentives** are more likely to host European owned firms. As regions that allow for the use of financial investment incentives lag behind relative to other regions in the EU or within the country itself, this suggests that investment incentives can stimulate convergence across European regions. While this is also what we found for non-European investors, it is important to note that this result is only indicative, as we do not know to what extent such investment incentives are actually used, nor whether they are an efficient and sustainable way of increasing FDI into these regions.

The drivers of intra-European FDI for different groups of regions are summarised in Figure 8.

Figure 8 Overview of intra-European FDI drivers

	Regional drivers	Impact	Significant for...
Policy FDI drivers	Strength of industry clusters	+	All regions, but especially important for intermediate and rural regions, other metropolitan regions and less developed regions
	Labour abundance	+	All regions, but especially important for urban regions, capital metropolitan regions, other metropolitan regions and more developed regions
	Tertiary education	+	All regions, but especially important for urban regions, capital metropolitan regions, other metropolitan regions and more developed regions
	Accessibility	+	All regions, but especially important for capital metropolitan regions
	Level of innovation	+	All regions, but the effect is very small
Fundamental FDI drivers	FDI concentration	+	All regions, but especially important for intermediate and rural regions, other metropolitan regions, non-metropolitan regions, transition regions and less developed regions
	Population density	+ / -	All regions (positive), but especially important for urban regions (negative), capital metropolitan regions (positive), other metropolitan regions (negative), less developed regions (positive) and transition regions (positive)
	Market size	+ / -	All regions, but especially important for urban regions (positive), rural regions (negative), other metropolitan regions (positive), transition regions (positive) and more developed regions (positive)
	Border region	- / +	All regions (negative), but especially important for intermediate regions (positive), non-metropolitan regions (positive) and transition regions (positive)
	Dominance of incumbent firms	-	All regions, but especially important for rural and urban regions, non-metropolitan regions and less developed regions

Note: The figure summarises the findings from the FDI driver analysis. The green plus indicates that higher values of the regional driver is associated with a higher likelihood of an intra-European owned firm being located within the given region, while a red minus indicates the opposite.

Source: ESPON FDI (2018) based on the econometric analysis in the scientific report, *Drivers of extra-European FDI towards Europe*

Compared to non-European investors, we find that:

- European investors place relatively *more* emphasis on strong industrial clusters and large regional markets;
- European investors place relatively *less* emphasis on the regional FDI concentration, population density, labour abundance and the share of the population with a tertiary education.

In terms of policy implications, this suggests that:

- Initiatives to build strong industry clusters around existing strengths are especially important for attracting intra-European FDI. Depending on the characteristics of the specific industry, such initiatives could involve public R&D, R&D tax incentives, collaboration between universities and private firms and education programs;
- Targeted international branding of regions and other measures to increase the attention of potential investors to European regions are more important for attracting extra-European FDI;
- Ensuring labour market flexibility, securing a competitive skills base and attracting foreign talent is more important for attracting extra-European FDI.

3.2 Drivers of FDI across sectors and types of FDI

The drivers of intra-European FDI vary in magnitude across sectors and the type of FDI, cf. Figure 9. For the location of European owned firms in the manufacturing sector, strong industry clusters, a high FDI concentration and a dense regional population are especially important, while the market size does not seem to be a factor of attraction. This suggests that industry-specific knowledge and an attractive investment climate are important factors for the location of intra-European FDI in the manufacturing sector. Access to a broad consumer base may also be factor for consideration, although regional markets may be of less importance to European investors in the manufacturing sector.

For the location of European owned firms in the service sector, labour abundance, the level of education and the regional market size are especially important, suggesting that these types of investments are driven by attractive local markets and the access to a large pool of qualified labour.

These findings are broadly in line with the equivalent findings for non-European investments, with the exceptions that FDI concentration and population density are factors of especial importance to non-European investors in services as opposed to manufacturing for European investors.

Figure 9 Drivers of intra-European FDI across sectors

	Regional drivers	Impact	Significant for...
Policy FDI drivers	Strength of industry clusters	+	All European firms, but especially in manufacturing and for M&As
	Labour abundance	+	All European firms, but especially in services
	Tertiary education	+	All European firms, but especially in services
	Accessibility	+	All European firms
	Level of innovation	+	All European firms, but the effect is very small
Fundamental FDI drivers	FDI concentration	+	All European firms, but especially in manufacturing and M&As
	Population density	+	All European firms, but especially in manufacturing and M&As
	Market size	+ / -	All European firms, but especially in services, and for and M&As (positive). Negative in manufacturing
	Border region	- / +	All European firms, but especially in services (negative). Positive in manufacturing
	Dominance of incumbent firms	-	All European firms, but especially in services

Note: The figure summarises the findings from the FDI driver analysis. The green plus signs indicate that higher values of the regional driver is associated with a higher likelihood of an intra-European owned firm being located within the given region, while a red minus sign indicates the opposite.

Source: ESPON FDI (2018) based on the econometric analysis in the scientific report, *Drivers and impacts of intra-European FDI*

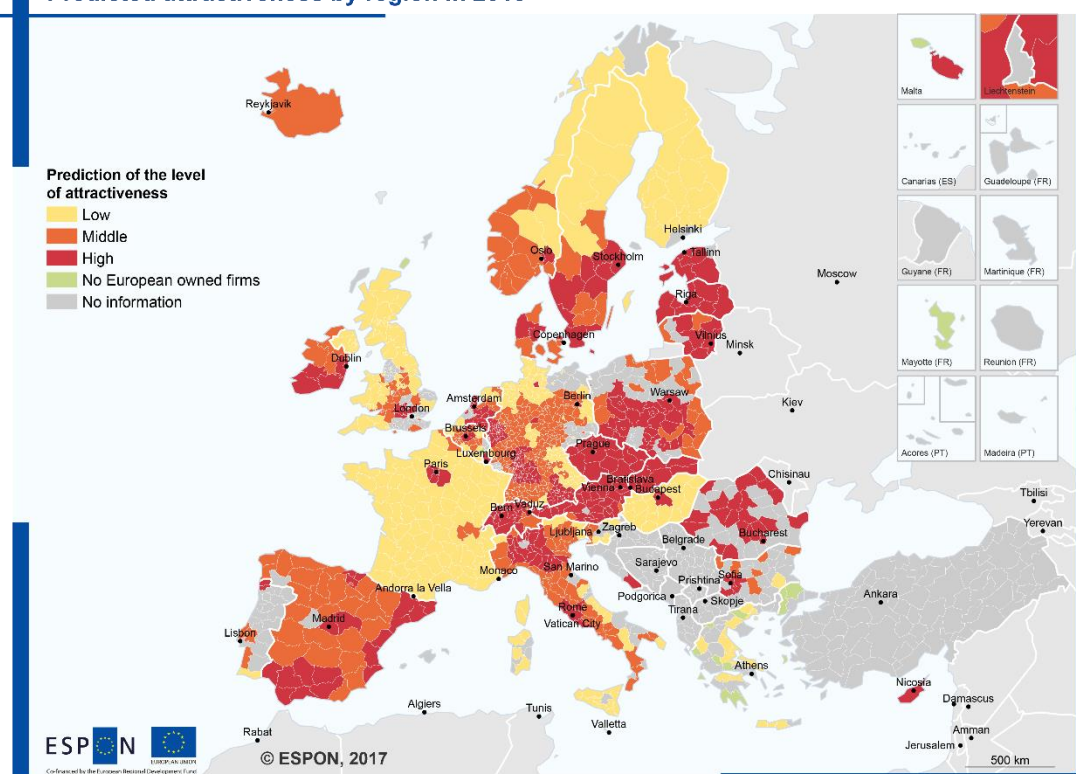
In terms of the type of FDI, we find that strong industry clusters, a large FDI concentration, a dense population and large regional markets are especially attractive to European investors engaging in M&As, similar to the results found for non-European investors. These are all factors that are associated with a larger pool of potential target firms. Due to data limitations, it has not been possible to identify factors that are especially relevant to the location of greenfield investments.

3.3 The FDI attractiveness of European regions

The driver model can be used to assess the relative attractiveness of individual regions in Europe towards intra-European FDI, cf. Map 6.

Map 6 The attractiveness of different regions, 2015

Predicted attractiveness by region in 2015



Note: The attractiveness of individual regions is measured as the predicted values from the driver analysis. The 'High' attractiveness category includes the third most attractive regions, and the category 'Low' includes the third least attractive regions. The category 'Middle' includes the remaining regions. The attractiveness of a region is measured relative to the average attractiveness of all regions taking both national and regional drivers into account.

Source: ESPON FDI (2018) based on the scientific report, *Drivers and impacts of intra-European FDI*

We find that the most attractive regions are located in the many different parts of Europe, from north to south. While many highly attractive regions are found in Eastern Europe, Western European countries also have many highly attractive regions. Similar to the equivalent findings for extra-European FDI, it is especially the capital metropolitan regions and their neighbouring regions that are highly attractive, across all European countries. This suggests that these types of regions have some inherent characteristics that attract FDI both from within and outside of Europe. As other types of regions will therefore almost always appear less attractive than capital metropolitan regions, we also assess the attractiveness of regions relative to their peers (e.g. rural regions relative to other rural regions). This gives a more nuanced picture, presented in the scientific report, *Drivers and impacts of intra-European FDI*.

3.4 Concluding remarks

The results show that while there some common factors that increase the attractiveness of European regions towards intra-European FDI, some factors are especially relevant for different groups of regions, as summarised in the first two columns in Figure 10.

Figure 10 Comparison of drivers of intra-European and extra-European FDI towards Europe

Groups of regions	Especially important drivers for intra-European FDI	Especially important drivers for extra-European FDI
Urban regions	Labour abundance, tertiary education, population density (negative), market size, dominance of incumbent firms (negative)	Labour abundance, tertiary education, population density (negative), market size, dominance of incumbent firms (negative)
Intermediate regions	Strength of industry clusters, FDI concentration, border regions	Strength of industry clusters
Rural regions	Strength of industry clusters, FDI concentration, market size (negative), dominance of incumbent firms (negative)	Strength of industry clusters, FDI concentration
Capital metropolitan regions	Labour abundance, tertiary education, accessibility, population density	Labour abundance, tertiary education, accessibility, population density, dominance of incumbent firms (negative)
Other metropolitan regions	Strength of industry clusters, labour abundance, tertiary education, FDI concentration, population density (negative), market size	Strength of industry clusters, labour abundance, tertiary education, market size
Non-metropolitan regions	FDI concentration, border regions, dominance of incumbent firms (negative)	FDI concentration, dominance of incumbent firms (negative)
More developed regions	Labour abundance, tertiary education, market size	Labour abundance, tertiary education, market size
Transition regions	FDI concentration, population density, market size, border regions	Population density
Less developed regions	Strength of industry clusters, FDI concentration, population density (negative), dominance of incumbent firms (negative)	Strength of industry clusters, FDI concentration, dominance of incumbent firms (negative)

Note: The figure summarises the drivers that are especially important for attracting intra-European and extra-European FDI across different types of region.

Source: ESPON FDI (2018) based on the econometric analyses described in the scientific reports, *Drivers and impacts of intra-European FDI* and *Drivers of extra-European FDI towards Europe*

Compared to drivers of special importance to attracting extra-European FDI, there are many similarities but also some differences. In urban and more developed regions, we thus find no differences, but in the remaining groups of regions, the following differences are found in Figure 10:

- In **intermediate regions**, FDI concentration and a shared border with a different European country are especially important drivers for attracting intra-European FDI only;
- In **rural regions**, market size and the dominance of incumbent firms are especially important deterrents to intra-European FDI only;
- In **capital metropolitan regions**, the dominance of incumbent firms is an especially important deterrent to extra-European FDI only;
- In **other metropolitan regions**, FDI concentration is an especially important driver of intra-European FDI only, while population density is an especially important deterrent;
- In **non-metropolitan regions**, a shared border with another European country is an especially important driver for attracting intra-European FDI only;

- In **transition regions**, FDI concentration, market size and a shared border with another European country are especially important drivers for attracting intra-European FDI only;
- In **less developed regions**, the population density is an especially strong deterrent to intra-European FDI.

The differences between the drivers of intra- and extra-European FDI are relatively minor across most regions. In terms of policy implications, the differences imply that:

- **Targeted branding** of regions towards potential European and non-European investors is especially important in rural regions, non-metropolitan regions and less developed regions. In the case of potential European investors, this is also important in intermediate regions, other metropolitan regions and transition regions;
- **Efficient competition policies** are especially important for attracting potential European and non-European investors to urban regions, non-metropolitan regions and less developed regions. For non-European investors this is also especially important in capital metropolitan regions, while European investors also place especial emphasis on this in rural regions;
- **Policies to reduce location costs** can help counteract the negative consequences of a high population density, such as high land and rent costs, and can be an instrument for attracting potential European and non-European investors to urban regions. For European investors, this is also especially in other metropolitan regions and less developed regions.

In terms of developing cohesion policies that foster convergence across regions, the recommendations are therefore also to a large degree the same. Initiatives to strengthen industry clusters, pro-competitive policies that ensure foreign firms can compete on equal terms with incumbent firms and policies that brand regions towards foreign investors will thus help attract both intra- and extra-European FDI to less developed regions and to rural regions. In addition, a case could be made for the use of financial investment incentives to reduce the cost of location and in less developed regions.

4 Impacts of intra-European FDI flows

Intra-European FDI contributes significantly to the regional host economies both directly and indirectly. In total, European owned firms thus account for around 19.2 million jobs in the 34 European countries covered in this study, which amounts to 13 per cent per cent of the total employment in these countries. Likewise, European owned firms account for 21 per cent of production and 19 per cent of value added in these countries. The *direct* impact of FDI inflows is, therefore, significant.

Intra-European FDI does not reflect a mere shifting of capital and jobs across Europe, but can help create new jobs and stimulate economic growth. *First*, intra-European investments may cause the investing firm to become more productive and increase its growth potential. As the investing firm grows, demand for headquarter services will also grow and generate new jobs in the home region (Copenhagen Economics, 2010).

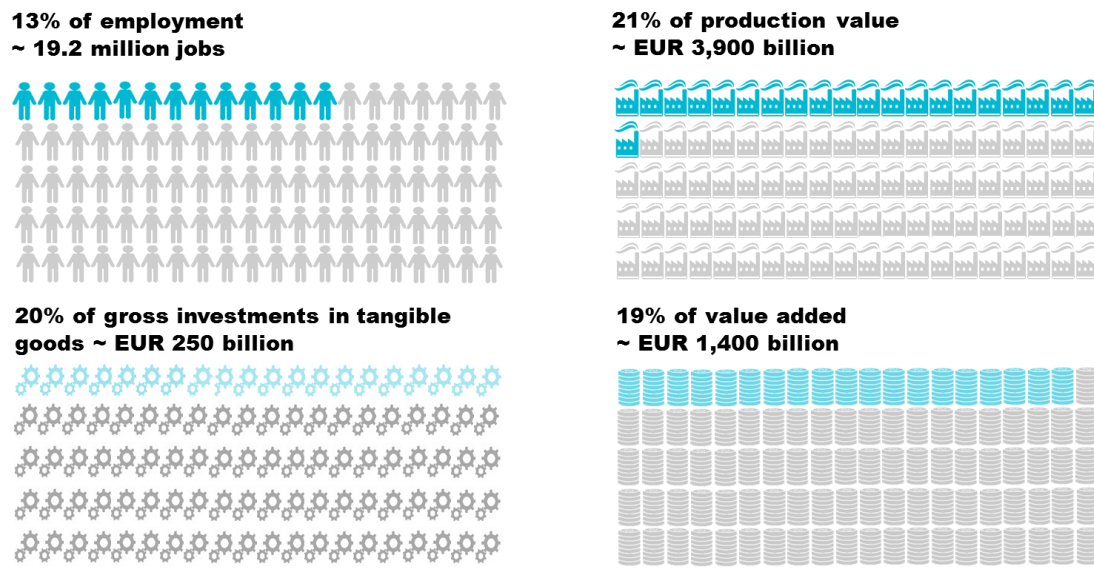
Second, intra-European investments can also lead to productivity gains for local firms in host regions. Local firms can then tap into the superior technical, operational and managerial knowledge that the investing firms holds, and improve their own productivity. However, just as in the case of extra-European FDI inflows, a net positive impact of intra-European FDI on the regional economy cannot be taken for granted. European owned firms may also crowd out local firms and force the most inefficient out of the market, which could result in a loss of jobs in the region. The knowledge spillovers may also be limited, e.g. if the local firms have limited interaction with the European firm or have low absorption capacity. The *indirect* impact of FDI in terms of positive productivity spillovers and increased competitiveness of local firms will depend, among others, on characteristics of the firms and the regional economy.

In this chapter, we will address the questions: What relevance do intra-European FDI flows have for regional growth and competitiveness as well as for reducing economic disparities in Europe? To what degree does the impact of intra-European flows differ from the equivalent impact of FDI flows originated from outside of Europe?

4.1 Direct impacts of intra-European FDI flows across European regions

While European owned firms account for approximately two per cent of the total number of firms, they account for an average of 13 per cent of employment, 21 per cent of production and 19 per cent of value added and thus contribute disproportionately to the European economy, cf. Figure 11. European owned firms also account for a disproportionately high share (20 per cent) of investments in tangible goods, which cover investments in capital goods, including land.

Figure 11 Key performance indicators of European owned firms in Europe



Note: The average share of each of the four outcome measures accounted for by non-European owned firms across individual European countries. This is measured as the simple average across all 28 European countries for which data is available. The country specific results are contained in the scientific report, *Drivers and impacts of intra-European FDI*.

Source: ESPON FDI (2018) based on Eurostat's Foreign Affiliates and Structural Business Statistics

In total, the European owned firms comprise more than double the amount of non-European owned firms. The impact the two types of foreign owned firms have is, however, almost proportional, implying that the intra-European foreign owned firms has twice the impact on the European economy compared with non-European foreign owned companies. In other words, foreign owned firms are rather similar independently of the origin of ownership. However, intra-European foreign owned enterprises has a slightly higher gross investment in tangible goods and higher employment per company than non-European owned firms do.

European owned firms are unevenly distributed across different types of regions. Urban, capital metropolitan and more developed regions host the largest number of European owned firms. Urban regions thus on average hosts just over 500 European firms, while rural regions receive the lowest number of European owned firms and on average host only 97 European owned firms. Relative to the overall number of firms in each group of regions, the differences are however smaller, with European firms accounting for 2.7 per cent of firms in urban regions and 1.9 per cent in rural regions, cf. Table 4.

Table 4 Direct impacts of intra-European FDI across different types of territories

	Average number of European owned firms	Average share of firms (per cent)	Average number of employees per European owned firms	Average operating revenue per European owned firms (EUR million)
Urban regions	502	2.7	47	18
Intermediate regions	175	2.0	42	12
Rural regions	97	1.9	40	8
Capital metropolitan regions	1,219	3.6	49	15
Other metropolitan regions	251	2.0	44	18
Non-metropolitan regions	108	1.7	42	11
More developed regions	340	2.7	46	19
Transition regions	100	1.5	54	14
Less developed regions	173	2.0	42	6

Note: The table shows the average share of the four outcome measures accounted for by non-European owned firms in the different types of territories across individual European countries. The average share is weighted by the number of firms in each region.

Source: ESPON FDI (2018) based on data from the Amadeus database

Rural and intermediate regions not only attract less European owned firms than urban regions, but also host European firms that, on average, support fewer jobs and generate less revenue than in urban regions. European owned firms in urban regions on average have 47 employees and an operating revenue of EUR 18 million. In comparison, European owned firms in rural and intermediate regions on average have 40 and 42 employees, respectively and generate an operating revenue of EUR 8 million and EUR 12 million.

We see a similar pattern when we compare capital metropolitan regions to other metropolitan regions and non-metropolitan regions. On average, European firms support more jobs in capital metropolitan regions than in other metropolitan regions and non-metropolitan regions, but generate less revenue than in other metropolitan regions.

Comparing across different levels of development, we see that the more developed regions on average host more European firms than transition and less developed regions (340 firms compared to 100 for transition regions and 173 for less developed regions). European firms in more developed regions also on average support more jobs than in less developed regions, but fewer than in transition regions (46 in more developed regions compared to 54 in transition regions and 42 in less developed regions). Output per employee is also higher in more developed regions on average, as evidenced by higher average operating revenues.

Compared to extra-European FDI flows, there are several important differences. *First*, there are more European owned firms but they nevertheless tend to exhibit the same distributional pattern across regions as non-European owned firms. *Second*, non-European firms on average have higher output per employee in all types of regions, with the exception of transition regions. *Third*, non-European firms on average support fewer jobs than European firms in intermediate

and rural regions, in other metropolitan and capital metropolitan regions as well as in both more and less developed regions.

Overall, this suggests that both types of FDI are highly unequally distributed across different groups of regions, with the disadvantaged regions receiving the fewest investment both from within and outside of Europe. European owned firms are, however, significantly more common in these regions and support convergence in less developed regions, while non-European firms support convergence only in transition regions, where they have a larger direct impact per firm than their European counterparts.

4.2 Potential impacts of intra-European FDI

Intra-European FDI can cause productivity gains for both the investing firm itself as well as for local firms in the host regions.

While we do not quantify the impact here, research suggests that the investing firm becomes more productive as a result of engaging in FDI (e.g., Copenhagen Economics, 2010). This occurs because outward FDI allow the firm to:

















- **Access new markets**, especially in service industries where local presence is required. Via FDI, the firm is able to grow and exploit economies of scale;
- **Become more competitive** as being active in new markets means facing new competitors;
- **Increase efficiency** as the firm can place different activities in the most advantageous locations. The firms can thus place labour intensive activities in locations where wage cost are relatively low and R&D intensive activities in location where the best expertise is available (Copenhagen Economics, 2010);
- **Improve information flows** between the different stages of production, when foreign affiliates are used to serve as suppliers of specific components instead of independent suppliers (Damijan et al., 2014);
- **Learn from local firms** as knowledge spillovers can also flow from local firms to the investing firm (Damijan et al., 2014). This is, for example, likely to occur if the investing firm sets up an affiliate or acquires a local firm in an area with a large clusters and accumulated industry specific expertise.

Productivity gains for local firms in the host regions can occur via productivity spillovers from European owned firms. Productivity spillovers can accrue to local firms within the same industry (intra-industry spillovers) and to local firms in other industries (inter-industry spillovers). Productivity spillovers to local firms in the same industry occur via knowledge transfers and competition, while productivity spillovers to local firms in other industries also occur via vertical (buyer-supplier) linkages with European owned firms.

Depending on the specific channel through which this occurs, the impact of spillovers on the productivity of local firms can be both positive and negative. An overview of the various

channels and the direction of impacts are given in Figure 12. A detailed explanation of each channel is provided in the scientific report *Impacts of extra-European FDI towards Europe*.

Figure 12 Channels of productivity spillovers from FDI to local firms

		Spillovers to firms within the same sector and region (intra-industry)	Spillovers to all firms in the region (inter-industry)
Knowledge transfer	 Labour mobility Local firms can hire former employees of foreign firms	 <ul style="list-style-type: none"> Labour movements 	 <ul style="list-style-type: none"> Labour movements
	 Imitation/demonstration Local firms can learn/copy from foreign firms	 <ul style="list-style-type: none"> Imitation of foreign firms' products and production processes 	 <ul style="list-style-type: none"> Imitation of foreign firms' production processes
	 Exporting Local firms can get a foothold on export markets	 <ul style="list-style-type: none"> Learning by exporting Economies of scale 	 <ul style="list-style-type: none"> Learning by exporting Economies of scale
	 Competition Local firms are forced to become more productive or leave the market	 <ul style="list-style-type: none"> Reduction in inefficiency Faster adoption of new technology  <ul style="list-style-type: none"> Increased cost of specialised labour Dis-economies of scale 	 <ul style="list-style-type: none"> Increased cost of specialised labour
	 Vertical linkages Linkages between foreign firms and local buyers and suppliers		 <ul style="list-style-type: none"> Direct relations between foreign firms and local buyers and suppliers Economies of scale  <ul style="list-style-type: none"> Dis-economies of scale

Source: ESPON FDI (2018) based on the literature survey referenced in the scientific report, *Impacts of extra-European FDI towards Europe*

Foreign owned firms can also have both a positive and negative impact on **employment** among local firms. A *negative* impact can arise if foreign owned firms crowd out local firms via competition in the final goods market (local competitors) or via competition for labour or other inputs (all firms regardless of industry affiliation). A *positive* impact can arise if foreign firms increase the demand for locally produced inputs or if local firms begin to export or increase existing exports because of their interactions with foreign owned firms.

Finally, if positive productivity spillovers materialise, local firms may find it optimal to reduce employment as they can support the same production with fewer workers. Over time, higher productivity will improve the competitiveness of the local firms and help them gain market share, domestically as well as internationally, which may cause employment to increase. Overall, the impact of foreign owned firms on the employment in local firms turns out to be ambiguous and we will address this question empirically.

4.3 Impacts of intra-European FDI on the productivity and employment of local firms

We have used solid econometric models to assess how the presence of foreign firms affects the productivity and employment of local firms across different regions.⁸ The results indicate that intra-European FDI is associated with productivity gains among local firms within the same industry and region (intra-industry productivity spillovers) and within a given region more broadly (broader regional productivity spillovers) in most types of territories, cf. Table 5. Overall, we find that:

- Increasing the concentration of European owned firms within a given *industry and region* by one percentage point is associated with an average productivity increase of close to 0.3 per cent among local firms in the same industry and region.
- Increasing the concentration of European owned firms within a given *region* by one percentage point is associated with an average productivity increase of 0.9 per cent among local firms in the same region.

This indicates that domestic firms in Europe benefit more from productivity spillovers arising from local intra-European investments in other industries, than from local intra-European investments in their own industries. The knowledge inherent in European firms is therefore not only industry-specific, but benefits all local firms that engage with the foreign firm, e.g. local suppliers or local firms that hire employees from the foreign firm.

The equivalent results pertaining to spillovers from extra-European FDI (0.5 per cent in the case of intra-industry spillovers and 2 per cent in the case of broader spillovers) show a similar pattern and imply larger productivity spillovers than from European owned firms. Both are positive, and the small differences in magnitude may be due to differences in the sectoral composition, size of the investing company and the regional distribution of intra-and extra-European investments.

While the average productivity impacts arising from an increase in extra-European FDI may be larger than those arising from an increase in intra-European FDI, it is also important to note that there are a lot more European owned firms. Taking into consideration the much larger stock of European owned firms, local firms across Europe have enjoyed the largest productivity gains from intra-European FDI.

⁸ The methodology is described in more details in the scientific report, *Drivers and impacts of intra-European FDI*.

Table 5 Productivity spillovers from intra-European FDI to local firms in the region

	Productivity spillovers to local firms in the same industry (intra-industry spillovers)	Productivity spillovers to all firms in the region (broader spillovers)
All sectors and regions	0.3%	0.9%
Manufacturing sectors	0.1%	0.6%
Service sectors	0.5%	0.9%
Urban regions	0.3%	1.1%
Intermediate regions	0.1%	0.7%
Rural regions	0.1%	0.5%
Capital city metropolitan regions	0.1%	-
Other metropolitan regions	0.3%	0.7%
Non-metropolitan regions	0.1%	0.7%
More developed regions	0.3%	0.8%
Transition regions	-	0.2%
Less developed regions	0.1%	0.4%

Note: The table summarises the findings related to productivity spillovers from non-European owned firms to local firms in Europe across the different types of territories. More details can be found in the scientific report, *Drivers and impacts of intra-European FDI*.

Source: ESPON FDI (2018) based on data from the Amadeus database

Spillovers from intra-European FDI are generally larger for local firms in the service industry than in the manufacturing industry. Sub-sector analyses show that the spillovers in services, whether intra-industry or broader regional spillovers, especially accrue from European owned firms engaged in accommodation and food services activities, as well as in information and communication services. In the manufacturing sectors, spillovers especially accrue from European owned firms in the computer and electronic equipment industry.

Positive productivity spillovers to local firms, either within the same industry or more broadly, are found in all types of regions, but are lowest in rural, intermediate, non-metropolitan, transition and less developed regions. There could be several reasons for this. Low intra-industry spillovers found in all of these regions, with even zero spillovers in transition regions, may indicate that local firms do not have the sufficient skills to benefit from European owned firms and/or that labour mobility between local and European owned firms are limited in these regions. Low, broader regional spillovers are found especially in rural regions, and transition and less developed regions may also indicate a lack of skills among local firms to absorb non-industry-specific knowledge (e.g. management practices etc.) and/or insufficiently strong buyer-supplier linkages. Policies to improve the integration of European firms in local economies as well policies to increase the absorption capacity of local firms, such as skills-upgrading, which may also impact positively on labour mobility across local and European owned firms, will increase productivity spillovers in these regions.

Comparing with the equivalent results for extra-European FDI, the largest differences are found in:

- **Less developed regions**, where positive productivity spillovers from intra-European FDI accrue to local firms both within the same industry and region and more broadly within the same region, while no such productivity spillovers are found to arise from extra-European FDI;
- **Rural regions**, where positive productivity spillovers from intra-European FDI accrue to local firms both within the same industry and region and more broadly within the same region, while productivity spillovers from extra-European FDI accrue only to local firms within the same industry;
- **Intermediate regions**, where positive productivity spillovers from intra-European FDI accrue to local firms both within the same industry and more broadly, while no productivity spillovers from extra-European FDI accrue to local firms in the same industry and region;
- **Transition regions**, where positive productivity spillovers from intra-European FDI accrue only to local firms within the same region, but not within the same industry and region. Productivity spillovers from extra-European FDI accrue to local firms both within the same region and within the same industry and region;
- **Capital regions**, where positive productivity spillovers from intra-European FDI accrue only to local firms within the same region, but not within the same industry and region. Productivity spillovers from extra-European FDI accrue to local firms both within the same region and within the same industry and region.

European-owned firms may affect employment among local firms both positively and negatively. Employment among local suppliers can, for example, be stimulated by the presence of new and growing European-owned firms, if the presence of these firms cause the demand for locally produced inputs to increase. Negative impacts can arise if local firms lose market shares to European-owned firms and therefore have to scale down production. In the short term, increased productivity (due to productivity spillovers) may also cause employment in the local firms to fall because the firms can support the same production with less workers. Over time, however, higher productivity will improve the competitiveness of the local firms and help them gain market share – domestically as well as internationally – which will again stimulate employment.

As European owned firms may affect employment among local firms both positively and negatively, we analyse the impact empirically and find no evidence to suggest that European-owned firms affect employment levels among local firms.⁹ This means that any positive and negative impacts that these firms have on employment among local firms thus net out on average. The jobs created directly in the European owned firms do therefore not merely replace jobs in local firms. The same result was found for extra-European FDI.

⁹ See the scientific report, *Drivers and impacts of intra-European FDI*.

4.4 Concluding remarks

European owned firms amount to approximately two per cent of the total number of firms in Europe, which is approximately double the share of non-European firms. Both origins of FDI account for a disproportionately high amount of employment and production but taking into account the differences in frequency, their relative contributions to the European economy are similar.

Both European owned and non-European owned firms are distributed highly unequally across different types of regions. However, when taking account of the overall number of firms in different groups of regions, European owned firms are less unequally distributed. Urban regions thus on average host just over 500 European firms, compared to 97 for rural regions, which is equivalent to 2.7 per cent of firms in urban regions and 1.9 per cent in rural regions. In comparison, non-European firms account for more than three times the share of firms in urban regions (1.1 per cent) than in rural regions (0.3 per cent). A similar picture is found when comparing the relative presence of European and non-European firms in capital metropolitan regions versus non-metropolitan regions and more developed regions, versus less developed regions.

Non-European firms on average support fewer jobs than European firms in intermediate and rural regions, in other metropolitan and capital metropolitan regions as well as in both more and less developed regions, although the output per employee is on average greater for non-European firms.

So, although disadvantaged regions receive the fewest investment both from within and outside of Europe, European owned firms are significantly more frequent in these regions and support more jobs per firm in both rural and less developed regions.

European firms also support convergence in less developed regions, while non-European firms support convergence only in transition regions, where they have a larger direct impact per firm than their European counterparts.

The empirical analysis indicates that positive productivity spillovers from intra-European FDI to local firms, either within the same industry or more broadly, are found in all types of regions, while this is not the case for extra-European FDI from which no productivity spillovers are found in less developed regions. The differences are summarised in Figure 13.

Figure 13 Productivity spillovers from intra-European and extra-European FDI across different types of regions

	Productivity spillovers to local firms in the same industry (intra-industry spillovers)		Productivity spillovers to all firms in the region (broader regional spillovers)	
	Intra-European FDI	Extra-European FDI	Intra-European FDI	Extra-European FDI
Urban regions	✓	✓	✓	✓
Intermediate regions	✓		✓	✓
Rural regions	✓	✓	✓	
Capital city metropolitan regions	✓			✓
Other metropolitan regions	✓	✓	✓	✓
Non-metropolitan regions	✓	✓	✓	✓
More developed regions	✓	✓	✓	✓
Transition regions		✓	✓	✓
Less developed regions	✓		✓	

Note: The table shows whether intra-industry and broader regional productivity spillovers are found to arise from intra-European and extra-European FDI, across different types of regions. The sign ✓ indicates that positive productivity spillovers are found, while an empty space indicates that no evidence of productivity spillovers are found.

Source: ESPON FDI (2018) based on the empirical analyses described in the scientific reports, *Impacts of extra-European FDI towards Europe and Drivers and impacts of intra-European FDI*

In combination, the above results show that intra-European FDI supports convergence across European regions and do so to a greater extent than extra-European FDI, which is both less frequent and do not give rise to productivity spillovers in less developed regions.

As in the case of extra-European FDI, productivity spillovers arising from intra-European FDI, are the lowest in more disadvantaged regions. Policies to improve the integration of European firms in local economies as well policies to increase the absorption capacity of local firms, such as skills-upgrading, which may also impact positively on labour mobility across local and European owned firms, may increase productivity spillovers in these regions and further the convergence across European regions.

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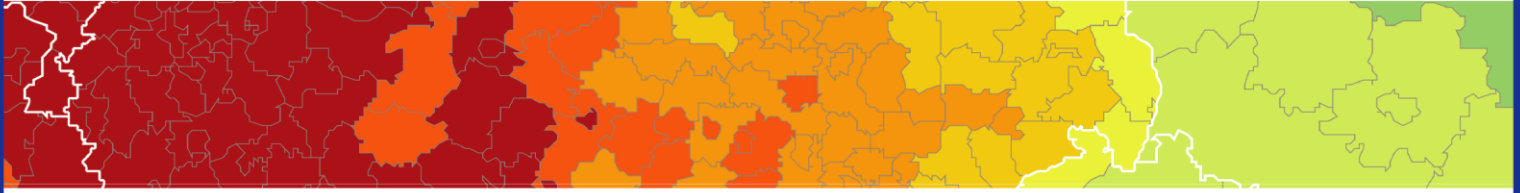
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