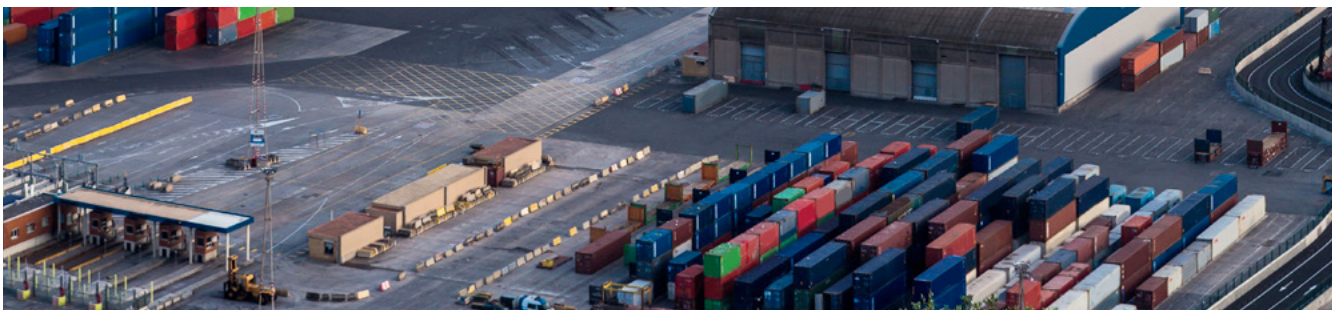




FOREIGN DIRECT INVESTMENT IN CATALONIA AND BARCELONA

Full report. February - April 2017



Catalonia &
Trade & Investment



Generalitat de Catalunya
Government of Catalonia



Ajuntament
de Barcelona

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1. Executive Summary

1.1 Methodology and Objectives

The objectives of this study are to **analyse the recent evolution of Foreign Direct Investment (FDI) in Catalonia and Barcelona**¹ and to **understand the perception that foreign companies have of Catalonia and Barcelona** as investment locations.

In order to prepare this study, both **quantitative and qualitative techniques were used**. For the quantitative analysis, several **investment statistical sources and databases were examined**, mainly UNCTAD, managed by the UN; Datainvex, by the Spanish Ministry of Economy; and fDi Markets, by the Financial Times. As for the qualitative analysis, different techniques were used: creation and gathering of a panel of **11 experts** in foreign investment, followed by **18 in-depth interviews**² and a **survey on 149 executives from foreign companies**. The most innovative aspect of this study is the fact that the **perceptions of companies that have never invested in the region** could be analysed through the in-depth interviews and the survey.

1.2 FDI Global Trends

In **open, innovative, and inter-connected territories**, FDI plays a key role as an enabler of economic growth and innovation transfer. The fact that **almost 14 million jobs were created around the world through FDI Projects**³ during the 2010-2016 period shows that investment can also become a driver for job creation and talent attraction. In this sense, **FDI is more important than ever before** and regions are in an intense competition to attract investment flows and projects to their territories. Catalonia and Barcelona need to keep making efforts to maintain the territory as a preeminent investment destination.

The study shows that **companies mostly invest abroad to access new markets**, since 65% of all respondents chose this option. The second and

third reasons to invest abroad fall far behind access to new markets, but show two specific trends: companies investing abroad to innovate in processes or products/services and **proximity to products or services demanded by their local markets**.

It is also important to understand the factors that companies analyse when deciding on an investment location. According to this study, **the most important factor for executives when deciding where to invest is the market**: its size, level of openness and its growth potential. Institutional factors and costs hold second and third positions respectively. In that sense, costs stands out as a fairly important issue to respondents. However, **established companies in Catalonia not only fail to invest in the region because of its costs** but because of other more value-added elements. Besides the top three influencing factors when deciding on a location in which to invest, an additional reason seems very relevant for most companies interviewed: human capital. In fact, certain executives pointed out the increasing relevance of talent availability as a key investment factor.

1.3 Key Findings and Conclusions

Catalonia and Barcelona are leading European regions when it comes to attraction of foreign direct investment, reaching the highest level of FDI inflows during the analysed period. FDI inflows hit a **record high** for two consecutive years, with **€4,936 million in 2015, and €5,052 million in 2016**.

Additionally, Catalonia was the **first destination for FDI Projects in Spain**, accounting for 35% of all

¹ According to fDi Markets, references to "Barcelona" or "Barcelona Area" refers to its administrative region, equivalent to the third level of the Nomenclature of territorial units for statistics (NUTS 3) of the European Union. In the case of Catalonia, it refers to the province of Barcelona

² The interviews, survey and sessions with the expert panel were conducted between February and April 2017

³ fDi Markets database

projects attracted between 2010 and 2016. These projects helped to **reduce unemployment by creating over 50,000 jobs** and boosted Catalonia's economy by generating \$20 billion of capital investment.

Catalonia and Barcelona consolidated their attractiveness to the largest economies in the world as well as to emerging countries in foreign investment. The **Top 5 investor countries** in Catalonia and Barcelona consist of three European countries (**Germany, France and the UK**) and the **US** and **Japan**. Additionally, 15.9% of all projects were from **Asian companies**, which **are the fastest-growing contributors to the world's FDI**. Catalonia was the main Spanish destination (with a 40% share) for FDI Projects coming from China, Japan and India.

Barcelona is a top-five European city in terms of foreign investment attractiveness. After London and Paris, **Barcelona had a leading position alongside Dusseldorf and Dublin** during the analysed period (2010-2016). 8.6% of all **FDI Projects in the EU-28** were in London, 4.2% in Ile-de-France (Paris region), 2.4% in Dusseldorf, 2.3% in Dublin, and **2.2% in Barcelona**.

Overall, investors perceive Catalonia and Barcelona as a very attractive place to invest. The region is rated globally at 3.7, on a scale of 1 to 5, with 5 being "very attractive to invest". **Asian companies are those that best rated the region, with 3.73 points**, followed by European and American companies, with 3.70 and 3.65 points respectively.

In terms of the location of survey respondents, **Asian and European companies have the best perception of Catalonia and Barcelona** followed by the American ones, although the difference between the grading is not significant. Asian companies' good perception is especially relevant, since the **Asian market is an important FDI contributor**. The number of projects coming from Asian companies has been increasing steadily since 2010, representing 23% of all FDI Projects in 2016.

The importance of investors' perception of a region was also stressed. Since Catalonia and Barcelona are **competing as advanced regions** within Europe, there are no major differences in key **factors such**

as costs or macro-economic or institutional factors. Therefore, the decision to invest is greatly influenced by other factors such as the attractiveness of being an important hub or cluster for a sector, or to be perceived as an innovative destination for certain economic sectors and value chain activities.

Highly innovative sectors find Catalonia and Barcelona a very attractive location for their investments. From a comparative point of view, established companies give greater importance to innovation as a factor of decision when deciding to invest abroad. The reason for this is that **Catalonia and Barcelona are more attractive to innovative companies**. In fact, Barcelona had a leading position within the EU in terms of FDI Projects in Design and Development and Testing and R&D.

Catalonia is set to become a strategic industrial pole in the process of reindustrialisation of advanced economies. In fact, the **Industry sectors led FDI attraction in Catalonia** during the period 2010-2016, representing 33.4% of the total flows with a €9,098 million investment. Among the most relevant industrial sectors, the **Food Products and Beverages, Pharmaceutical Products, Vehicles and Chemical** sectors stood out.

Companies that internationalise their **manufacturing activities** are those that have a better perception of Catalonia and Barcelona. This means that the **region is well-positioned in terms of attracting projects with a positive impact in terms of long-term investments and job creation**.

Barcelona leads the attraction of sectors and activities with a high impact in terms of jobs and long-term investments. When comparing Barcelona's five most important sectors in terms of FDI Projects received, it **had a leading position** (fifth or above in the ranking) in **the Life Sciences and Transportation** sectors, as the second and the fourth EU region with the most FDI Projects received between 2010 and 2016 respectively.

Barcelona tops the attraction tables in several sectors in Europe even though these sectors are not the most important in the region. **Barcelona led the EU ranking in terms of FDI Projects** received for the **Warehousing & Storage** sector. Likewise, Barcelona

ranked second for the Computer and Office Equipment and Textiles sectors. The other two sectors where Barcelona was within the Top 5 EU regions were the **Chemicals** and **Automotive Components sectors**.

In addition to the analysis of sectors, it is also relevant to analyse which activities companies' investments are destined for in the region. In this sense, when analysing the most important business activities in Barcelona by economic sector, it is notable that **Life Sciences, Chemicals and Automotive Components mostly attracted investment for Manufacturing activities**.

Catalonia and Barcelona's talent and education ecosystem is a strategic element for reinforcing the region's position in the global competition for talent. Catalonia and Barcelona are capable of **providing international companies with the talent they seek** by offering education and training programmes built around their needs. Currently, the fourth best-perceived factor in the region is the quality of its education system. **Human capital** offered by the region is **perceived very highly by international companies**.

Catalonia and Barcelona are key regional players for the Southern European and Mediterranean market. The **strong infrastructures network**, together with its geo-economic location can be used by established companies to **reach out to potential European and Mediterranean Basin markets**, as well as to establish corporate services near to their target markets. In addition to established companies, **half of the companies that are considering investing in Southern Europe have considered investing in Catalonia or Barcelona**.

1.4 Challenges and Opportunities for Catalonia and Barcelona

Catalonia and Barcelona have become a great location to invest. Nevertheless, there are some aspects in which the region can still improve its positioning.

Non-established companies perceive Catalonia and Barcelona as a region with leading scientific facilities, an innovative ecosystem, a significant start-up presence, local talent availability and international talent attraction capacity, head-to-business mind-set and a great quality of life, and their average rating for the region is 4 points out of 5. Therefore, Catalonia and Barcelona have great potential to attract new investments. The challenge is to attract investors that perceive the region as a pole of attraction for Southern Europe in which to establish their future projects.

Sectors such as Life Sciences, Transportation or Chemicals had a leading position in investment attraction in the region in the period 2010-2016. Nevertheless, Catalonia and Barcelona could still improve their regional positioning within the European Union in the attraction of sectors such as Software and ICT, Business Services, and Financial Services. Even though these sectors have a significant number of projects, the region is far behind London, the leading region, followed by Paris and Dublin.

Strategic sectors find top-class locations for their decision-making centres in Catalonia and Barcelona. Sectors such as Life Sciences, Business Services and Textiles are investing in the region for Headquarters activities. The region could improve its attractiveness for Headquarters activities in other sectors in which it has a leading position, for example in Chemicals or Automotive Components, where decision-making centres are not found in any of the investor companies' major activities.

Innovation, business performance and networking are key elements for attracting foreign investment in advanced economies. Catalonia and Barcelona's good positioning in these aspects should compensate the factors where Catalonia and Barcelona are **less positively perceived**, such as those related to taxation, and **costs** (rental costs and

energy costs). Although costs are the least positively perceived factors, international investors investing in Catalonia and Barcelona do not consider these factors very relevant. As such, Catalonia has to focus on fostering and consolidating itself as an innovation pole, since innovation is an important factor for companies not yet investing in the region.

The results of the study prove that Catalonia and Barcelona are among the most competitive regions in Europe in terms of FDI attraction.

Nevertheless, the study also proves that Catalonia and Barcelona can still increase FDI inflows and projects by fostering their strengths. It is a region capable of attracting industrial projects and highly innovative investments, of becoming a strategic destination for companies seeking international talent, and a great stronghold for reaching a bigger and growing market due to its proximity to European and Mediterranean Basin markets.

2. Methodology

The aim of the present study was two-fold: firstly, the objective was to analyse the trends and evolution of Foreign Direct Investment in Catalonia and Barcelona. Secondly, it was to be aware of the perception that foreign companies have of Catalonia and Barcelona as business locations in which to invest.

The first objective was approached by analysing quantitative data, whereas qualitative analysis techniques were used to gather foreign companies' perception. The sections below provide further information on the quantitative and qualitative methodologies.

Moreover, in order to fine-tune the methodology to be used, a panel of investment experts was created to validate the proposed methodological approach.

2.1.1 Quantitative methodology

The trends and evolution of FDI in Catalonia and Barcelona were analysed through quantitative data available in different databases.

The main sources of information for the quantitative analysis were: UNCTAD (United Nations), for world FDI Flows; DataInVex-Mineco (Spanish Ministry of Economy, Industry and Competitiveness), for

Spanish and Catalan FDI Flows; and fDi Markets database, for FDI Projects in Europe, Spain, Catalonia and the administrative region of Barcelona. In this case, Barcelona refers to the province which is the second-level political and administrative division in Spain. Other sources used in the study can be found in section 6.3 Sources.

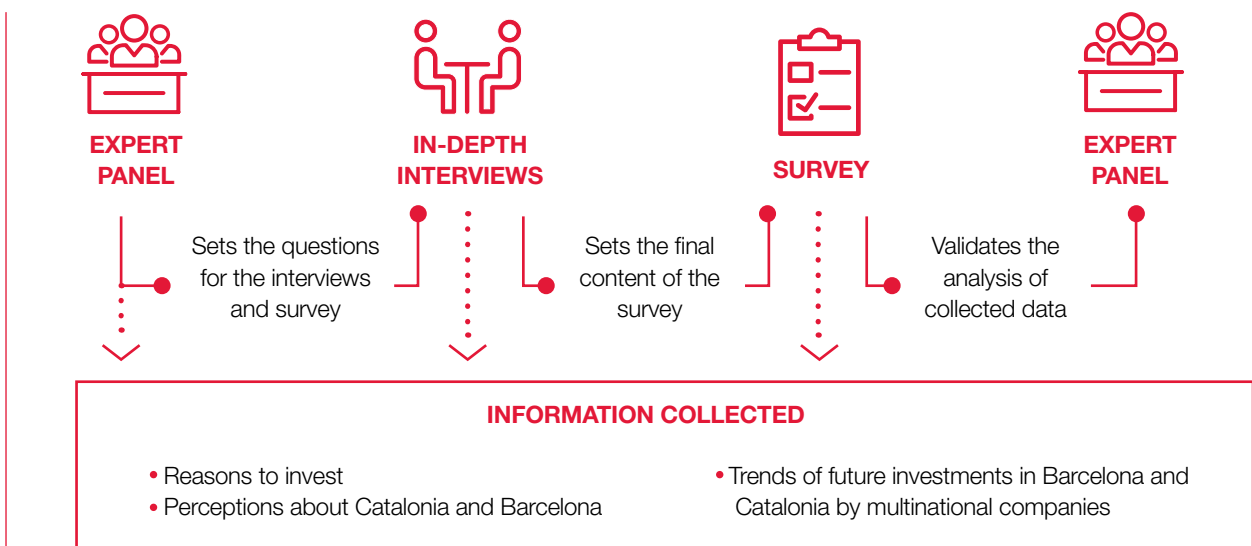
The figures and tables displayed in the quantitative analysis have been prepared using data from the abovementioned sources consulted throughout the months of March and April 2017.

2.1.2 Qualitative methodology

The main purpose of the qualitative analysis was to identify the main factors that drive foreign investment decisions and analyse the level of attractiveness of Catalonia and Barcelona to foreign investors.

To develop the qualitative analysis, the following three techniques were used: an expert panel, in-depth interviews and an online survey. These three techniques were used in chronological order so each activity helped to prepare the following one, as is shown in Figure 1. The expert panel was gathered and consulted both at the beginning of this study, to

Figure 1 - Methodology for the qualitative analysis



validate its hypothesis, and at the end to validate the final analysis, conclusions and recommendations. The first session was set to validate the methodological approach, whereas the second gathering was scheduled with the purpose of validating the preliminary results and recommendations.

Firstly, it was important to understand what companies are taking into account when deciding on where to place their investments. This means analysing the key factors that can influence the decision to invest or not in any given destination. In order to discuss these factors, a first session with a panel of experts took place at the beginning of the study. Each expert was given a predefined list of possible relevant factors that may influence the decision of where to invest. The experts analysed the predefined factors and proposed others that could be of relevance. Moreover, they discussed how these factors may affect the companies' investment decisions.

Based on the factors that were validated during the session, the panel evaluated the strong and weak points of Catalonia and Barcelona in terms of attracting foreign investment. Overall, this first session with the expert panel allowed the guidelines and questions for the in-depth interviews to be established, putting focus on the crucial aspects identified by the experts.

As a second research technique, a total of 18 in-depth interviews with executives with investment decision-making power were conducted.⁴ The interviews allowed crucial information to be retrieved about the perceptions of established and non-established companies in Catalonia and Barcelona. Additionally, the interviewers helped to narrow down the investment decision factors that had been previously discussed in the expert panel session.

Following the interviews, an online survey was sent to companies to fully understand how Catalonia and Barcelona are perceived by foreign companies. The survey was completed by 149 respondents, 46 of which were executives from companies that are already investing in Catalonia and Barcelona, whereas 103 respondents were from companies not established in Catalonia. This is the first time since the

first edition of the study that the perception of companies not established in Catalonia has been included, enriching the results obtained.

Finally, a second session with the expert panel was held to validate the results. Again, this is the first edition of this study in which an expert panel is used, both at the beginning and at the end of this study, to validate the research and the results obtained, as well as to jointly define recommendations in a collective intelligence basis.

⁴ For further information see 6.2 Acknowledgments

3. Evolution of FDI – Quantitative Analysis

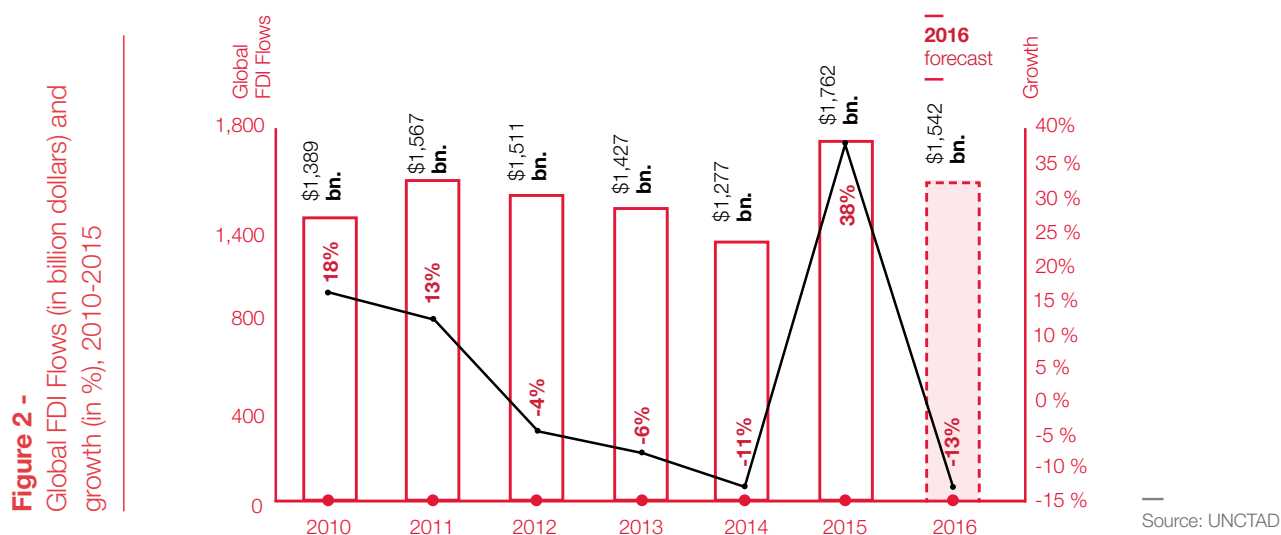
3.1 FDI Global Trends⁵

3.1.1 FDI in the world

This section provides an overview of the latest world trends on Foreign Direct Investment. Global FDI Flows are published in the *World Investment Report* by the United Nations Conference on Trade and Develop-

ment (UNCTAD). At the time of writing this study, the latest data available from UNCTAD on global investment flows was from 2015, thus the period analysed in this section ranges from 2010 to 2015. However, in the following sections, other databases were consulted where information from 2016 was available.

In terms of Global Foreign Direct Investment (FDI) flows, 2015 was a significant year where pre-crisis levels were reached, totalling \$1,762 billion⁶ of investment flows around the world. In addition, the level



of investment increased up to 38% with respect to 2014. As is shown in **Figure 2**, 2015 was a turning point, reversing the downward spiral trend that had followed the period 2010-2014. This growth was mainly driven by cross-border mergers and acquisitions (M&As).

Nevertheless, according to the *World Investment Report 2016*, Global FDI Flows are expected to decline by 10%-15% in 2016. The forecast for 2017 is more optimistic as FDI Flows are expected to resume growth at 5%-10%.

Global economic activity, measured by the Gross Domestic Product (GDP), has been growing at a steady level since 2011 and grew at 2.5% in 2015.

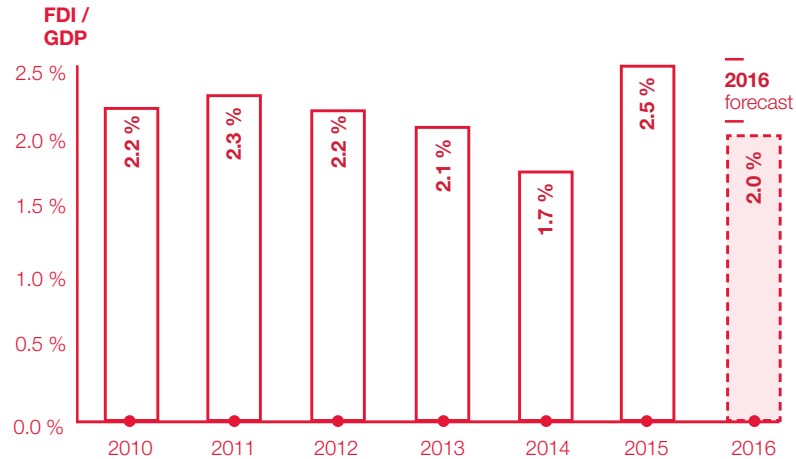
UNCTAD's forecasts expect Global GDP to grow at a similar level in 2016 with a slight upsurge in 2017, reaching a 2.8% growth rate. Despite the positive outlook for the upcoming years, the rate at which Global GDP is expected to grow is relatively low. This prediction may have an impact on future Global FDI Flows.

When analysing the evolution of Global FDI Flows as a percentage of Global GDP, **Figure 3** shows

⁵ This section has been prepared with data from the *World Investment Report 2016*, published by the United Nations Conference on Trade and Development (UNCTAD) on June 2016

⁶ One billion (bn.) refers to the American and British scale (1,000,000,000) (see Methodological note 1 in section 6.6 for more information)

Figure 3 -
Global FDI Flows as % of Global GDP,
2010-2015

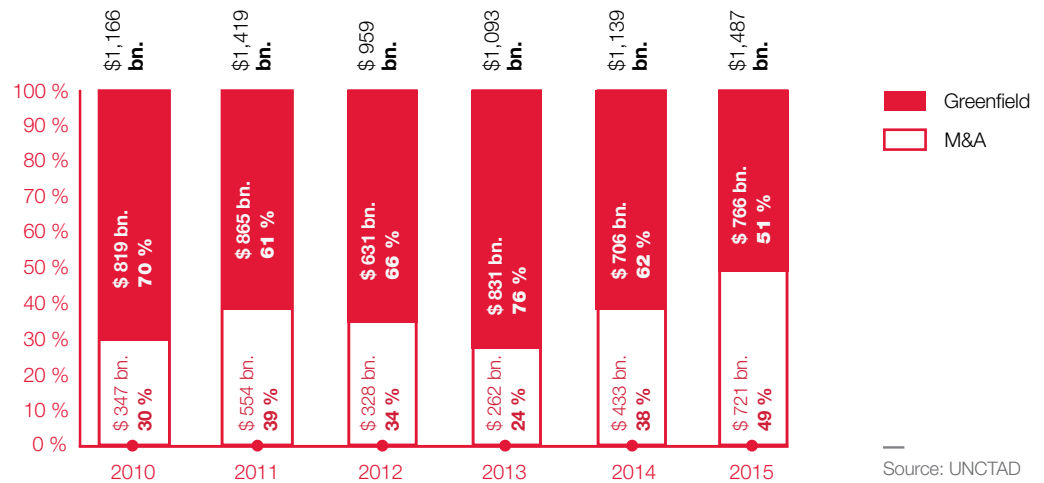


Source: UNCTAD

how, in 2015, FDI as a percentage of GDP resumed growth after a three-year decline and reached 2.5% of Global GDP, the highest figure from the previous six years. The peak in 2015, is the result of a relatively low Global GDP growth (2.5%) combined with a significant increase in Global FDI Flows.

Foreign Direct Investment can be of a different nature. The most common types of investment are the so-called greenfield (creation of new companies or business activities) and cross-border mergers and acquisitions (M&A). A greenfield investment represents

Figure 4 -
Distribution of Global FDI Flows from
greenfield and mergers & acquisitions
investments (in %) and their volume
(in billion dollars), 2010-2015



Source: UNCTAD

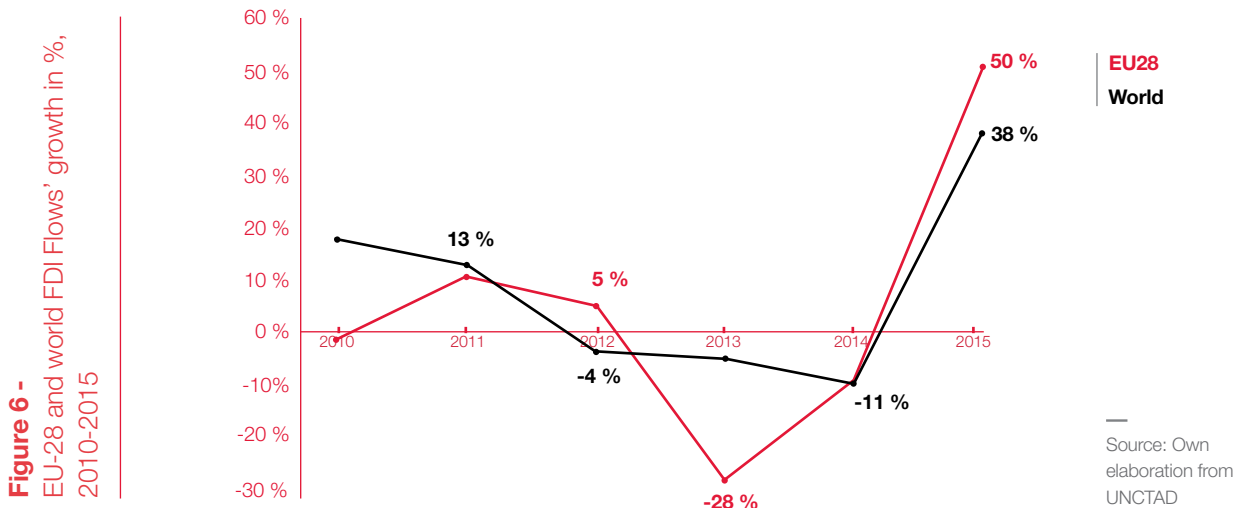
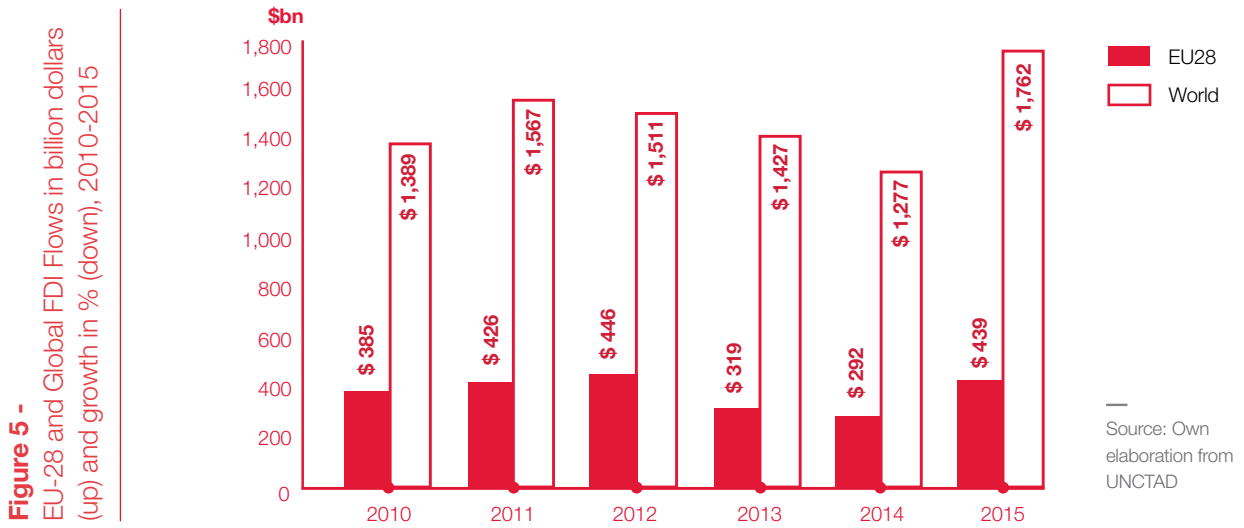
the creation of a new company or business activity in a foreign territory, with the following impact on economic activity and job creation where the investment is received. On the other hand, M&A refers to a merger or the acquisition of a company by a foreign entity, without necessarily having a positive impact on jobs and economic activity at the investment's destination country. In this respect, Figure 4 compares the volumes of these two types of investment for the period 2010-2015.

In 2010, greenfield investments accounted for 70% of total FDI Flows. Nevertheless, in 2015 their share was matched by that of M&A investments, representing 49% of total FDI Flows. On the contrary, the volume of M&A investments between 2010 and 2015 doubled from \$347 to \$721 billion. This sharp increase was led by the Manufacturing Sector, which saw its share in total M&A grow from 37% to 54% during this six-year period.

M&A foreign investments were the main contributors to the growth of Global FDI Flows in 2015. According to the *World Investment Report 2016*, foreign investment in M&A is expected to slow down in 2016, leading to a decline in the total volume of M&A. On the other hand, the volume of greenfield investments increased by \$60 billion in 2015, an 8.5% growth compared to the previous year.

3.1.2 FDI in the European Union

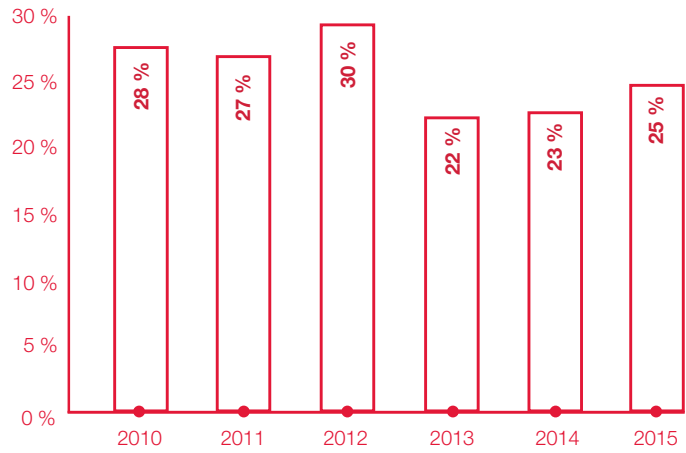
When looking at the Foreign Direct Investment flows in the European Union, **Figure 5** shows the evolution of incoming volumes into the EU for the 2010-2015 period.



FDI Flows into the European Union in 2015 totalled \$439 billion, representing a 50% increase in comparison with the volumes in 2014, reversing the negative trend experienced since 2012. In 2015, the EU's inward FDI growth rate was higher than that of the world during the same year. However, during the

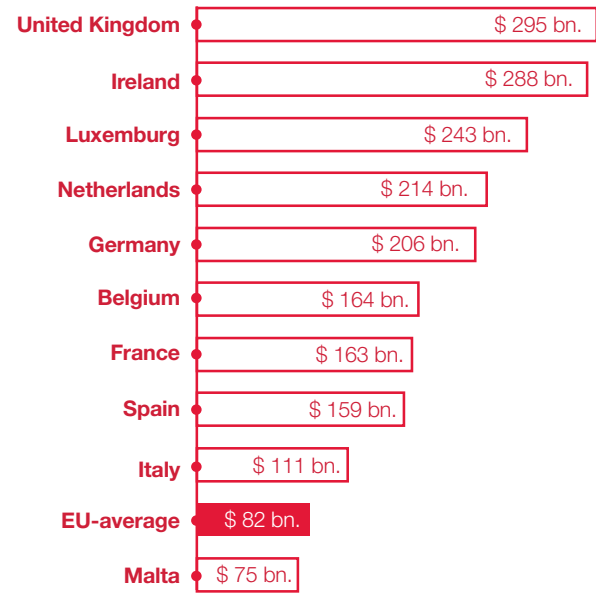
overall 2010-2015 period, the EU's FDI inward flows grew at a compound annual growth rate of 2%, which was half the global growth rate for the same period.

Figure 7 -
EU-28 FDI Flows as % of global FDI Flows, 2010-2015



Source: Own elaboration from UNCTAD

Figure 8 -
Top 10 FDI destinations in the EU (in billion dollars), 2010-2015



Source: Own elaboration from UNCTAD

As represented above in **Figure 7**, FDI Flows into the European Union as a percentage of Global FDI Flows increased in 2015, continuing the positive trend that started in 2013 and reaching up to 25% of Global GDP. Nevertheless, this percentage is still lower than those existing before 2012, where FDI Flows into the EU represented around 30% of Global FDI Flows. In addition, the EU generated 28% of Global GDP between 2010 and 2015.

The top 10 destinations of FDI Flows in the EU between 2010 and 2015 are presented in **Figure 8**.

The top five, which includes the UK, Ireland, Luxemburg, the Netherlands and Germany accounted for 54% of the total FDI received in the EU. Spain held

the eighth position with 7% of the total EU's inward FDI. In this respect, it is significant that the country with the highest share of FDI in the EU, the UK, is expected to withdraw its membership from the European Union in the coming years (i.e. "Brexit").

It is also relevant to note that countries like Ireland, Luxemburg or the Netherlands are often selected by non-European companies as investment platforms to access the European market due to the existing tax incentives offered to foreign investors. Therefore, these countries are usually ranked as top FDI Flows destination countries, although the final investment (together with its impact on job creation and economic activity) may take place in another European country.

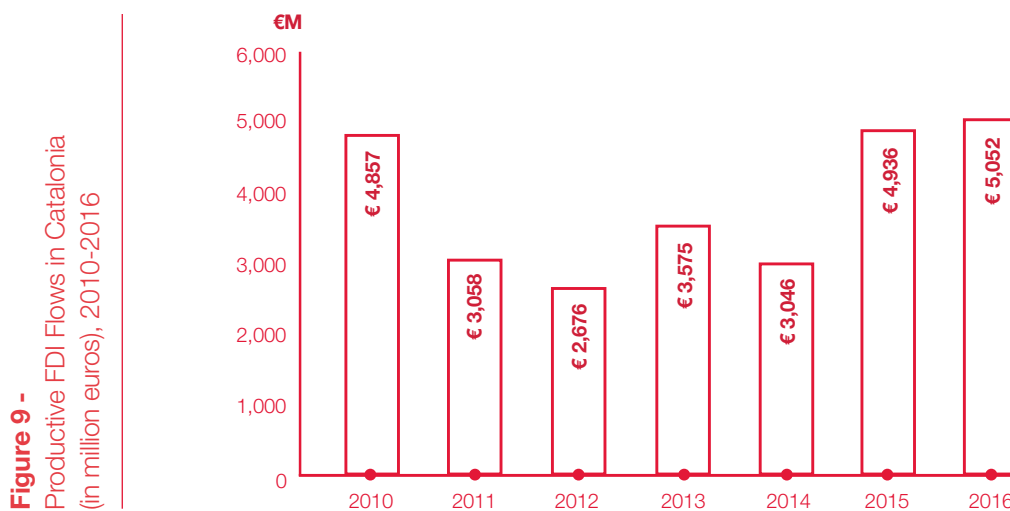
3.2 FDI in Catalonia

3.2.1 General trends of FDI in Catalonia regarding Spain

The current section⁷ focuses its analysis on productive FDI Flows into Catalonia and its comparison with the rest of Spain. Productive FDI Flows do not take into account Foreign-Securities Holding Companies (ETVEs)⁸. According to Spanish legislation, these entities have a special tax treatment for dividends and capital gains transferred to the ETVEs

from their shareholding in non-resident companies. As a result, these cross-border capital movements do not necessarily generate any activity in the country where the ETVE is located. When looking at the evolution of productive FDI Flows in Catalonia between 2010 and 2016, Figure 9 below does not show any clear growth pattern.

During this seven year period, productive FDI Flows into Catalonia reached three all-time highs since data was first recorded back in 1993. These three peak levels of FDI Flows were reached in 2010, 2015 and 2016 respectively. After four years of ups and downs, 2015 reached an all-time high, growing 62% compared to 2014. In 2016, this trend was consolidated, growing at 2.4% and reaching another



Source: DATAINVEX

all-time high with €5,052 million received. Overall, the three best years in the series (2010, 2015 and 2016) were driven by sectors such as the Food Industry, Real Estate and Warehousing and support activities for Transportation⁹.

FDI flows into Catalonia reached **all-time** highs in **2015** and **2016**, consolidating its **growing trend**

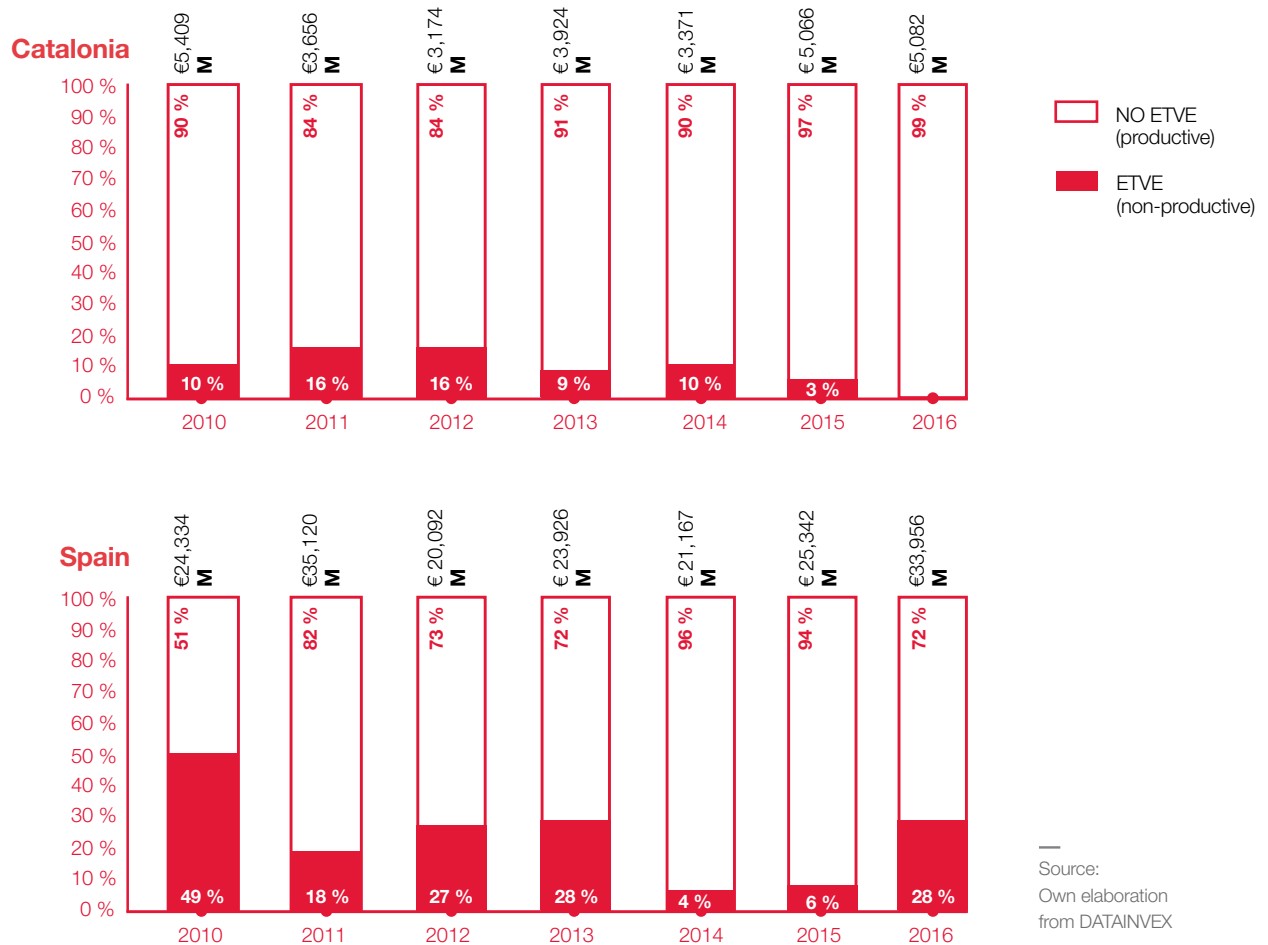
Figure 10 below shows the volumes and the distribution of the FDI received in Catalonia and Spain during the period 2010-2016, differentiating between productive and non-productive investment.

⁷ This section has been prepared with investment flows data extracted from the DATAINVEX database of the Spanish Ministry of Economy, Industry and Competitiveness. Available at <http://datainvex.comercio.es/>

⁸ In Spain, Foreign-Securities Holding Companies are known as "Entidades de tenencia de valores extranjeros" (ETVE)

⁹ Sectors defined by the Spanish Ministry of Economy, Industry and Competitiveness

Figure 10 - Distribution of FDI (ETVE – NO ETVE) in Catalonia and Spain (in %) and their volume (in million euros), 2010-2016

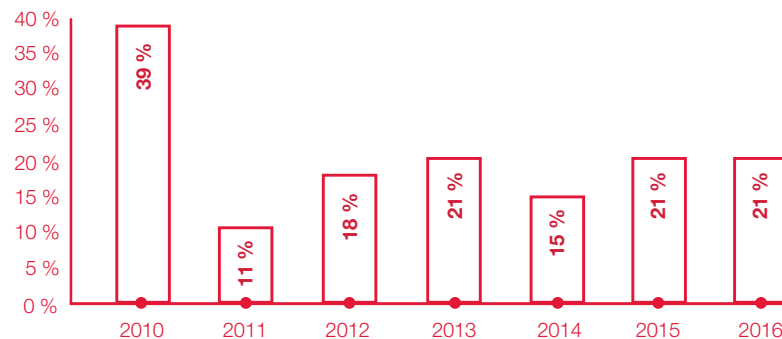


The strong growth of FDI in Spain during 2016, totalling €34 billion with a 34% increase compared to 2015, was mainly due to productive foreign investment. The performance of this type of foreign direct investment in Spain was in line with that of Catalonia, growing 2% compared to 2015. When comparing the evolution of productive foreign investment in Spain and Catalonia, the results differ. Catalonia’s foreign invest was driven mainly by productive investment between 2010 and 2016, seeing its

non-productive foreign investment decline over the past three years from 10% to 1%. Spain on the other hand, between 2014 and 2016, saw its share of productive foreign investment fall from 96% to 72%. Nevertheless, when considering the period 2010-2016, productive foreign investment increased 21 percentage points.

In the following sections of this study only productive foreign investment is taken into account.

Figure 11 - Catalonia’s productive FDI as % of the total in Spain, 2010-2016

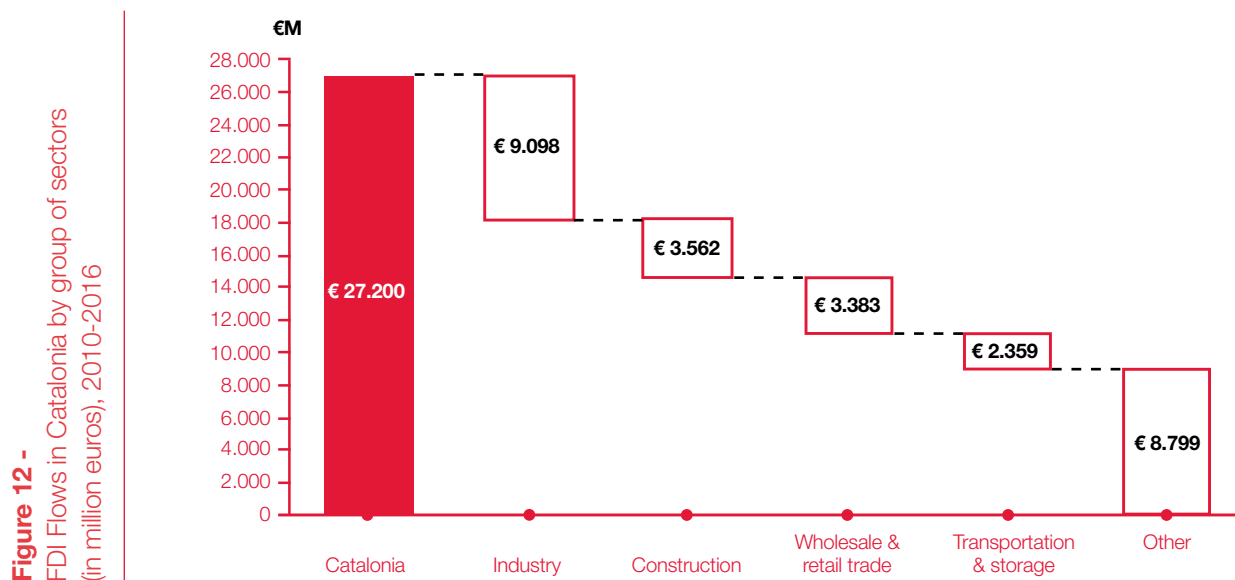


In 2016, Catalonia's productive FDI represented 21% of all productive investment into Spain. This percentage was the same as in 2015, consolidating its weight with respect to Spain. 2010 was an extraordinary year, with Catalonia representing 39% of the Spanish inward FDI. During that year, productive FDI represented only 51% of all FDI in Spain, compared to Catalonia where it represented 90%. During the period analysed, Catalonia's share of inward productive investment in Spain was, on average, around 21%.

With regard to the sectors where FDI Flows were allocated, **Figure 12** shows the distribution of FDI Flows in Catalonia by group of sectors in 2016.

FDI flows in Catalonia were led by industry sectors

The Industry sectors led the FDI attraction in Catalonia, representing 33.4% of the total flows. The most relevant industrial sectors were Food Products and Beverages (€2,944 million), Energy, Water Supply and Waste Management (€1,656 million), Pharmaceutical Products (€1,024 million), Vehicles (€615 million) and Chemical (€511 million) sectors. The next group of sectors in the ranking of FDI Flows in Catalonia in 2016 were Construction, Wholesale & Retail Trade, and Transportation & Storage with a share of 13.1%, 12.4% and 8.7% of the total respectively.



Source:
Catalonia Trade & Investment (ACCIÓ)
based on DatainveX-Mineco

3.2.2 Foreign companies in Catalonia

In 2016, there were 7,086 foreign companies established in Catalonia. In that year, there was a high concentration of foreign companies in Catalonia from only five countries. As shown in Figure 13, companies from Germany, France, the United States, Italy and the Netherlands represented over 50% of all foreign companies established in

Catalonia. When expanding the ranking and looking at the top 10 countries, this concentration becomes more acute, representing about 80% of all companies established in Catalonia.

The United States (ranking third) and Japan (ranking ninth) were the only non-European countries within the Top 15 in Catalonia. As it will be shown in section 3.3.1, the top ten countries with the highest number of foreign companies established in Catalonia

Figure 13 -
Foreign companies established
in Catalonia, 2016

Country of origin	Foreign companies established in Catalonia	% of the total
Germany	977	13.8%
France	899	12.7%
United States	814	11.5%
Italy	649	9.2%
Netherlands	597	8.4%
United Kingdom	528	7.5%
Luxembourg	460	6.5%
Switzerland	344	4.9%
Japan	197	2.8%
Belgium	169	2.4%
Portugal	143	2.0%
Denmark	141	2.0%
Sweden	99	1.4%
Austria	79	1.1%
Ireland	74	1.0%
OTHER COUNTRIES	916	12.9%
TOTAL	7,086	100%

Source:
Catalonia Trade &
Investment (ACCIÓ)

in 2016 also represented the main source of FDI Projects between 2010 and 2016.

As regards the distribution of foreign companies in Catalonia, 92% of these entities are concentrated in the province of Barcelona. The other 8% is distributed across the provinces of Tarragona, Girona and Lleida.¹⁰

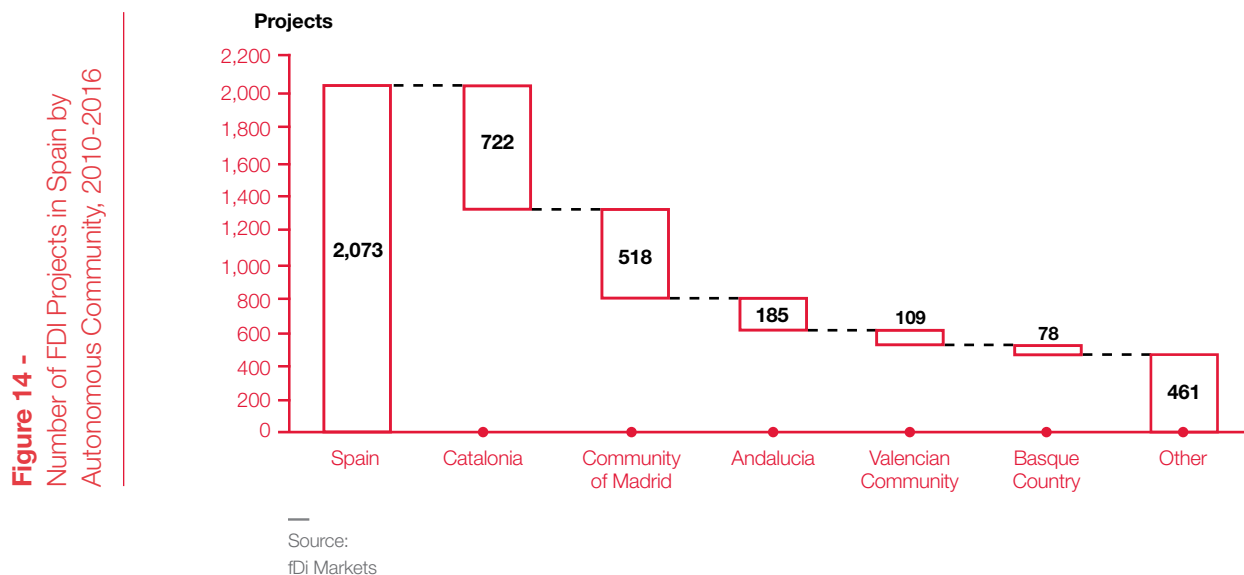
¹⁰ The first level of political and administrative division of Spain is made up of 17 Autonomous Communities and 2 autonomous cities. The second level of political and administrative division is made up of provinces. Catalonia itself is divided into four provinces: Barcelona, Tarragona, Girona and Lleida

3.3 Analysis of FDI Projects in Catalonia and Barcelona

In this section¹¹, the analysis of inward FDI in Catalonia and in the administrative region¹² of Barcelona (hereinafter referred to as “Barcelona” or “Barcelona Area”), is based on the number of FDI Projects received rather than on the volumes of FDI Flows received. The main reason for using the project data is because FDI Flows are biased towards territories that are used as investment platforms. For instance, in the EU, Member States such as the Netherlands and Luxembourg, broadly used by non-European companies as investment platforms for cross-border capital movements in the EU, may appear overrepresented. In addition, when allocating Spain’s inward FDI Flows across the Spanish regions or Autonomous Communities, the

calculation is based on the location where the foreign company has its Spanish headquarters, disregarding where the actual operations and investment is taking place. As a result, FDI Flows are often assigned as belonging to the Community of Madrid, where most companies’ headquarters are located, even if the actual investment is taking place in another Community. Considering the above limitations of FDI Flows data, FDI Projects are to be used as the source data in this study to analyse, in detail, inward investment in Catalonia and Barcelona.

From a methodological perspective, the information on FDI Projects has been elaborated with data from the fDi Markets database. This source provides data on greenfield investments for a specific territory with detailed information on the origin of each project, its economic sector, to which business activity it refers, as well as its impact on the jobs and CapEx¹³ generated.



¹¹ This section has been prepared with data extracted from the fDi Markets database

¹² The fDi Markets criteria to define “administrative region” is equivalent to the third level of the Nomenclature of territorial units for statistics (NUTS 3) of the European Union. The database defines the administrative region of Barcelona as the province of Barcelona

In this section all references to “Barcelona” or “Barcelona Area” will refer to its administrative region

¹³ CapEX or Capital investment makes reference to long-term expenditures of a non-recurring nature, resulting in the acquisition of permanent assets

Catalonia's GDP between 2010 and 2016 represented about 20%¹⁴ of Spain's GDP in the same period. As for inward investment, Catalonia received 722 FDI Projects, almost 35% of the total in Spain for the same period, ranking as the top destination for these projects among all of Spain's Autonomous Communities (AC). The second AC in the ranking was the Community of Madrid with 25% of all projects received. Overall, Catalonia and the Community of Madrid received about 60% of all FDI Projects in Spain between 2010 and 2016, representing a high concentration of all FDI received in Spain.

Catalonia is the **first destination** for foreign direct investment projects in **Spain**

3.3.1 Source of origin

Considering the overall number of 722 FDI Projects in Catalonia between 2010 and 2016, this section analyses these investments by their origin.

In **Figure 15**, the US appeared as the main contributor with 143 FDI Projects, representing about 20% of all FDI Projects during that period. Germany (16%), France (13%), the UK (9%) and Japan (7.3%) completed the top five ranking of countries of origin for FDI Projects in Catalonia. These five countries captured around 65% of all FDI Projects, showing a significant concentration of investment from few countries. In this respect, the impact that the UK's withdrawal from the European Union may have on FDI Projects in Catalonia in the following years remains unknown.

Figure 15 -
Share of FDI Projects in Catalonia by country of origin, 2010-2016

Country of origin	% of total FDI Projects in Catalonia	% of countries' FDI Projects in Catalonia from total in Spain
United States	19.8%	35.8%
Germany	15.9%	42.6%
France	13.3%	34.7%
UK	9.1%	27.6%
Japan	7.3%	47.8%
Switzerland	5.5%	48.2%
Netherlands	4.7%	29.3%
Italy	3.2%	29.1%
China	1.9%	43.8%
Sweden	1.5%	28.2%
Canada	1.4%	41.7%
India	1.4%	45.5%
Portugal	1.2%	23.7%
Belgium	1.1%	36.4%
Israel	1.1%	47.1%
OTHER COUNTRIES	11.6%	-
TOTAL	100%	-

Source:
Own elaboration from fDi Markets data

¹⁴ Source: IDESCAT (Statistical Institute of Catalonia)

Furthermore, Figure 15 also shows that over 40% of all FDI Projects in Spain originating in seven different countries was captured by Catalonia. These countries, and their percentage of FDI Projects in Catalonia from the total number of projects in Spain are Switzerland (48%), Japan (48%), Israel (47%), India (45%), China (44%), Germany (44%) and Canada (42%).

The US was the main contributor of FDI Projects in Catalonia between 2010 and 2016

3.3.2 Destination by economic sector

After analysing the origin of FDI Projects it is pertinent to look at their destination by considering the economic sector where investments are made. This is to obtain information on which sectors are strategic for Catalonia and Barcelona in terms of attractive FDI Projects.

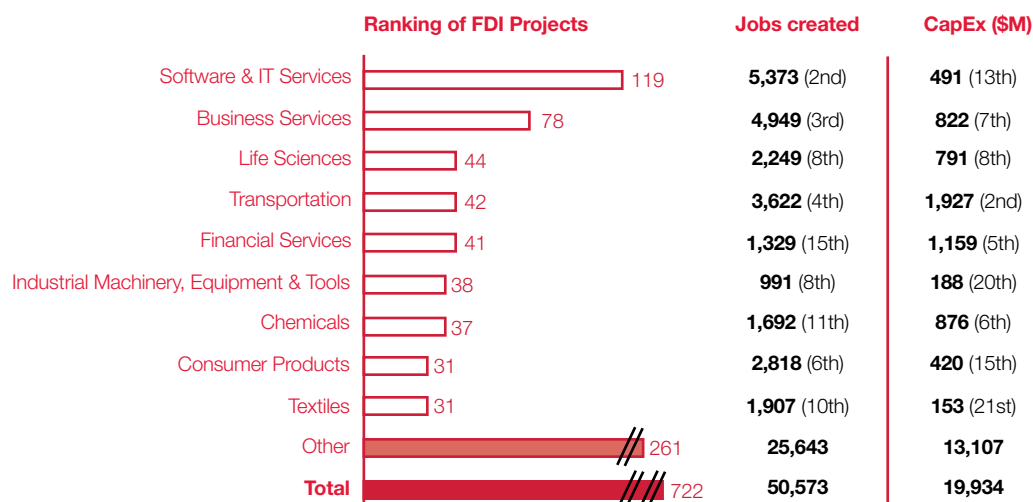
3.3.2.1 Sectors in Catalonia

By looking at FDI Projects' destination by economic sector in Catalonia, the Software & IT Services sector had a leading position between 2010 and 2016.

FDI Projects in the Software & IT Services sector had a 16% share of all FDI Projects received in Catalonia during this period, and was 3.7 percentage points higher than the previous period (2003-2009)¹⁵. Additionally, the number of FDI Projects between the two periods rose from 65 to 119 (an increase of 83%). The area of Barcelona received 95% of all Software & IT Services FDI Projects in Catalonia. In line with the above, in 2016 the Barcelona Tech City, a Digital Business Cluster whose goal is to position Barcelona as a Digital Hub, opened its new headquarters

The Software & IT Services sector attracted the most FDI Projects in Catalonia, followed by the Business Services, Life Sciences and Transportation sectors

Figure 16 - Ranking of FDI Projects by economic sector with destination in Catalonia, with jobs created and CapEx (\$M), 2010-2016



Source: FDI Markets

¹⁵ Figures for this period can be found in the Annex of this study

to initially host over 1,000 professionals and 80 companies. Additionally, since 2006, Barcelona has been hosting the Mobile World Congress (MWC), the world's largest gathering for mobile industry with over 108,000 visitors in the 2017 edition. These examples may show the high positioning of Barcelona within this sector.

The Business Service, Life Sciences¹⁶ and Transportation sectors remained as the second, third and fourth most important sectors, increasing the number of FDI Projects received by 81%, 4.8% and 17% respectively from the period 2003-2009¹⁷. Similarly, the Chemical sector kept its place in seventh position, increasing the number of FDI Projects by 48%. In this respect, Tarragona has a very important Chemical Cluster (ChemMed Tarragona), which hosts over 100 chemical companies of different sizes.

The Consumer Products sector, eighth in the ranking, received 31 FDI Projects between 2010 and 2016, a 138% increase compared to the period 2003-2009. The Textile sector, historically strategic for Catalonia, gained importance between 2010 and 2016 with respect to the previous period (2003-2009), receiving 244% more FDI Projects. Although 50% of Textiles

FDI Projects were devoted to Sales & Marketing activities, it is relevant to highlight that 10 FDI Projects from this sector (30% of the total) were dedicated to Headquarters activities.

Figure 16 also indicates the jobs created and the CapEx generated by the FDI Projects received in Catalonia. The 119 FDI Projects from the Software & IT Services sector created 5,373 jobs, surpassed only by the Real Estate sector with 7,809 jobs created (i.e. not listed in the table due to its lower number of FDI Projects received). When it comes to the CapEx generated by the FDI Projects received in Catalonia, the Transportation sector generated \$1,927 million, the second highest figure, although far from the \$4,984 million generated by the Automotive Original Equipment Manufacturer sector, which led the CapEx ranking in Catalonia (i.e. not listed also in the above table due to its lower absolute number of FDI Projects).

—
Investment projects in the Software & IT Services sector had the highest impact on job creation

3.3.2.2 Sectors in Barcelona

The increasing urbanisation of the world population is providing cities and their influence areas a preeminent role in the global economy. For this reason, FDI promotion abroad is often performed through countries' leading cities and regions and their increasingly

Figure 17 -
Top 5 Administrative Regions in the EU-28 by number of FDI Projects, 2010-2016

	Administrative Region	Number of FDI Projects	% Share in the EU
1.	Greater London	2,521	8.6%
2.	Ile-de-France	1,232	4.2%
3.	Dusseldorf	693	2.4%
4.	Dublin	679	2.3%
5.	Barcelona	641	2.2%

—
Source:
Own elaboration
from fDi Markets
data

¹⁶ In this study, the Life Science sector is the result of combining Biotechnology, Pharmaceuticals, Healthcare and Medical Devices sectors from the fDi Markets database

¹⁷ Figures for this period can be seen in the Annex of this study

powerful brands. In the case of Catalonia, Barcelona is known worldwide and is the main destination for FDI Projects. As a result, we have compared the Barcelona Area with other similar administrative regions in the European Union.

To illustrate the importance of Barcelona as an FDI destination in Catalonia, it is worth mentioning that it received 641 FDI Projects between 2010 and 2016, representing about 90% of all FDI Projects received in Catalonia during that period. On the other hand, as shown in Figure

—
Barcelona was the fifth EU destination of FDI Projects between 2010 and 2016

17, Barcelona was the fifth EU administrative region with more FDI Projects received between 2010 and 2016. The third and fourth destinations, Dusseldorf and Dublin respectively, only received a few more FDI Projects than Barcelona, thus making them direct competitors in this ranking. Greater London and Ile-de-France (the region of Paris) stood out among all cities within the EU. The French region ranked second with 1,232 FDI Projects, whereas Greater London, first in the ranking by far, received 2,521 FDI Projects with an 8.6 share of the total FDI Projects received by the EU.

Figure 18 - Barcelona's top 5 sectors in terms of FDI Projects, and their relative position in the EU, 2010-2016

	Software & IT Services	Business Services	Life Sciences	Transportation	Financial Services
1.	London 1,002 (18.8%)	London 483 (13.4%)	Freiburg 50 (3.6%)	London 54 (3.2%)	London 358 (17.0%)
2.	Paris 372 (7.0%)	Paris 219 (6.1%)	Barcelona 44 (3.2%)	Paris 42 (2.5%)	Dublin 84 (4.0%)
3.	Dublin 278 (5.2%)	Dublin 115 (3.2%)	Dublin 41 (3.0%)	Dusseldorf 41 (2.4%)	Paris 78 (3.7%)
4.	Oberbayern 171 (3.2%)	Uusimaa 108 (3.0%)	Paris 40 (2.9%)	Barcelona 37 (2.2%)	Darmstadt 77 (3.7%)
5.	Berlin 170 (3.2%)	Berlin 104 (2.9%)	London 37 (2.7%)	Madrid 33 (2.0%)	Madrid 69 (3.3%)
	Barcelona (8th) 113 (2.1%)	Barcelona (12th) 75 (2.1%)			Barcelona (9th) 37 (1.8%)
UE	5,337	3,602	1,374	1,683	2,107

Source:
Own elaboration from fDi Markets data

Following the comparison of Barcelona with other EU regions, when comparing Barcelona's five most important sectors in terms of FDI Projects received, it had a leading position (fifth or above in the ranking) in the Life Sciences and Transportation sectors, as the second and the fourth EU region with the most FDI Projects received between 2010 and 2016

respectively. Figure 18 shows the ranking of Barcelona for these five sectors by number of FDI Projects.

The Software & IT Services, Business Services, Transportation and Financial Services sectors concentrated their FDI Projects in the EU in the Greater London region. The other sector shown in

Figure 18, Life Sciences, was led by Germany with a lower concentration compared to the previous sectors, representing 3.6% of all FDI Projects received in the EU for this sector.

Nevertheless, there are other sectors in Barcelona where a lower number of FDI Projects was received but, when compared to other EU regions, Barcelona has a leading position. For this reason, Figure 19 shows five sectors where Barcelona was in the top five positions within the EU between 2010 and 2016.

Barcelona led the EU ranking in terms of FDI Projects received for the Warehousing & Storage sector with 12 FDI Projects. Similarly, Barcelona ranked second for the Business Machines & Equipment¹⁸ and Textiles sectors, receiving 16 and 29 FDI Projects respectively. The other two sectors where Barcelona was within the top five EU regions were the Chemicals (27 FDI Projects, third) and the Automotive Components sectors (20 FDI Projects, ranked fifth).

Figure 19 - 5 other sectors where Barcelona has a leading position in the EU in terms of FDI Projects, 2010-2016

	Automotive Components	Chemicals	Business Machines & Equipment	Textiles	Warehousing & Storage
1.	Lower Silesian 32 (3.2%)	Düsseldorf 33 (4.4%)	London 18 (5.6%)	Düsseldorf 35 (7.5%)	Barcelona 12 (6.0%)
2.	Silesian 32 (3.2%)	Antwerpen 33 (4.4%)	Barcelona 16 (4.9%)	Barcelona 29 (6.3%)	Antwerpen 10 (5.0%)
3.	West Midlands 29 (2.9%)	Barcelona 27 (3.6%)	Dublin 11 (3.4%)	Paris 24 (5.2%)	London 6 (3.0%)
4.	Stuttgart 27 (2.7%)	Köln 20 (2.6%)	Paris 10 (3.1%)	London 23 (5.0%)	Uusimaa 6 (3.0%)
5.	Barcelona 20 (2.0%)	Zuid Holland 17 (2.3%)	Düsseldorf 10 (3.1%)	Madrid 22 (4.8%)	Zuid Holland 6 (3.0%)
UE	997	746	324	464	201

Source:
Own elaboration from fDi Markets data

¹⁸ The Business Machines & Equipment sector, included in the top five sectors, includes Computer and Office Equipment

3.3.2.3 FDI Impact of sectors in Barcelona

Figure 20 -
Impact of FDI by sector in Barcelona, 2010-2016

Sectors		Average jobs in Barcelona per projects
1	Warehousing & Storage	104
2	Transportation	92
3	Business Machines & Equipment	82
4	Automotive Components	67
5	Business Services	64
6	Life Sciences	51
7	Textiles	45
8	Software & IT Services	40
9	Chemicals	38
10	Financial Services	33

Sectors		Average CapEx in Barcelona (\$M)
1	Warehousing & Storage	107
2	Transportation	48
3	Financial Services	28
4	Chemicals	25
5	Life Sciences	18
6	Business Machines & Equipment	17
7	Automotive Components	13
8	Business Services	11
9	Software & IT Services	4
10	Textiles	4

Source:
Own elaboration from fDi Markets data

After comparing Barcelona's sectors with other EU regions in terms of FDI Projects, [Figure 20](#) analyses the impact of FDI in terms of average jobs created as well as the average CapEx generated per FDI Project. This exercise has been carried out for the top five sectors that are attracting more projects in Barcelona, as well as for the five sectors where Barcelona has a leading position in terms of investment project attraction in the EU (that is, those previously analysed in [Figure 18](#) and [Figure 19](#) respectively). The following table includes information on these 10 selected sectors.

Overall, the average for jobs creation per FDI Project provides information regarding the labour intensity of the 10 economic

sectors selected, whereas the CapEx figures indicate how capital-intensive these sectors are.

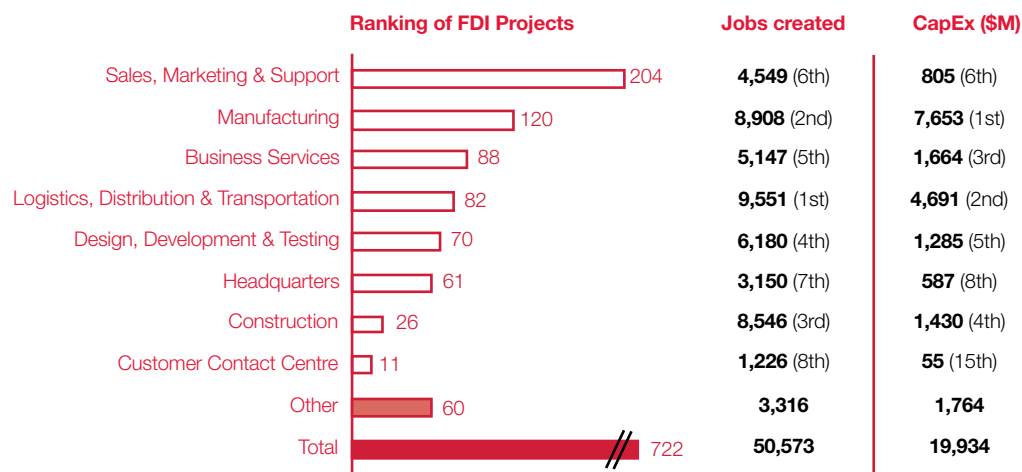
Both tables in [Figure 20](#) show that the Warehousing & Storage and Transportation sectors had the biggest impact on both job creation and CapEx generated per FDI Project between 2010 and 2016. Regarding average jobs created, the Warehousing & Storage sector led the ranking by creating an average of 104 jobs in Barcelona per investment project, followed by the Transportation sector with an average of 92 jobs. On the other hand, and despite having a much lower impact on jobs created by project compared to the other sectors (average of 40 jobs), the Software & IT Services sector generated, in absolute terms, more jobs than any other sector shown in [Figure 20](#) as a result of receiving the highest number of FDI Projects. As for the impact on capital expenditure, the Warehousing & Storage sector led the ranking, doubling the amount generated by the second sector, Transportation. The other sectors in the ranking generated a relatively low amount of CapEx per project.

Investment projects in the **Warehousing & Storage** and the **Transportation** sectors had on average the **biggest impact on job creation and CapEx**

3.3.3 Destination by business activity

The previous analysis of FDI Projects in relation to their economic sector provides a better understanding of foreign investors' needs. Nonetheless, FDI Projects are linked to a specific business activity. For this reason, this section analyses the destination of FDI Projects in Catalonia and Barcelona in terms of the companies' value chain activities, to better understand which are of interest to foreign investors.

Figure 21 - Ranking of FDI Projects by business activity in Catalonia with jobs created and CapEx (\$M), 2010-2016



Source:
fDi Markets

As shown in [Figure 21](#), the top five business activities that attracted the most FDI Projects in Catalonia for the period 2010-2016 were Sales and Marketing, Manufacturing, Business Services (i.e. back-office activities), Logistics Distribution & Transportation and Design, Development & Testing. In this respect, the first four activities are the same that attracted the most projects between 2003 and 2009¹⁹ but in a different order. Sales, Marketing & Support jumped from second to first position in the ranking, whereas the former leading business activity (Manufacturing) saw a decrease in FDI Projects.

The **value chain** activities that attracted the most investment in Catalonia are: **Sales & Marketing, Manufacturing, Business Services, Logistics and Design, Development & Testing**

3.3.3.1 Business activities in Catalonia

Similarly to the previous analysis of FDI Projects by sectors in Catalonia (3.3.2.1), this section analyses business activities in terms of FDI Projects together with the jobs and CapEx associated with them. [Figure 21](#) shows the main business activities in Catalonia sorted by number of FDI Projects for the period 2010-2016.

It is worth mentioning that among the business activities shown in [Figure 21](#), there is one which considerably increased its percentage between the two analysed periods: FDI Projects on Design, Development & Testing activities increased by 268% from 19 to 70 between 2003-2009 and 2010-2016. Furthermore, FDI Projects for Headquarters activities increased by 27.1% in 2010-2016 compared to the previous seven-year period.

When looking at the jobs created and the CapEx generated for the business activities shown in [Figure 21](#), Manufacturing and Logistics, Distribution & Transportation activities had the biggest impact in terms of jobs created and CapEx generated in absolute terms. Nevertheless, Design, Development & Testing activities consolidated as one of the main generators of employment, creating 6,180 jobs between 2010 and 2016.

¹⁹ Figures for this period can be found in the Annex of this study

3.3.3.2 Business activities in Barcelona

As with section 3.3.2.2, a comparison between Barcelona’s most relevant business activities in terms of FDI Projects has been performed by considering other regions in the EU. Therefore, Figure 22 shows the five main business activities in Barcelona between 2010 and 2016 in terms of FDI Projects together with the position of Barcelona in the ranking with other EU cities and regions.

In the business activities where Barcelona is not in a leading position (fifth or above in the EU ranking) there is a high concentration of FDI Projects in Greater London (Sales, Marketing & Support and Business Services). Nevertheless, in the activities where the concentration of FDI Projects is lower (i.e. 4.5% or less), Barcelona does have a leading position (though higher diversification indicates weak leadership). This

is the case for Manufacturing and Design, Development & Testing, where Barcelona holds second position. This also confirms that the latter activities are becoming very important in Barcelona when it comes to attracting foreign investment. Likewise, the number of FDI Projects in Logistics, Distribution & Transportation activities is higher in Barcelona than in any other EU region.

Besides the five business activities already mentioned, there are other, less relevant business activities in terms of FDI Projects where

Barcelona was the first EU investment destination in Logistics activities and had a leading position in Manufacturing, R&D, Customer Contact Centre, Technical Support Centre and Education & Training

Figure 22 - Top 5 business activities in terms of FDI Projects in Barcelona and their relative position in the EU, 2010-2016

	Sales, Marketing & Support	Manufacturing	Business Services	Logistics, Distribution & Transportation	Design, Development & Testing
1.	London 1,081 (11.9%)	Lower Silesian 92 (1.9%)	London 832 (15.4%)	Barcelona 69 (2.9%)	Dublin 80 (4.5%)
2.	Paris 525 (5.8%)	Barcelona 85 (1.8%)	Paris 281 (5.2%)	Dusseldorf 60 (2.5%)	Barcelona 60 (3.3%)
3.	Düsseldorf 365 (4.0%)	Antwerpen 70 (1.5%)	Darmstadt 169 (3.1%)	London 58 (2.4%)	Paris 59 (3.3%)
4.	Uusimaa 301 (3.3%)	Silesian 65 (1.3%)	Dublin 161 (3.0%)	Antwerpen 58 (2.4%)	London 56 (3.1%)
5.	Freiburg 270 (3.0%)	Sachsen-Anh. 65 (1.3%)	Oberbayern 143 (2,6%)	Paris 47 (2.0%)	Antrim 49 (2.7%)
	Barcelona (11th) 197 (2.2%)		Barcelona (14th) 83 (1.4%)		
UE	9,107	4,835	5,407	2,396	1,799

Source:
Own elaboration from fDi Markets data

Barcelona has a leading position within the EU. In this respect, Figure 23 shows five business activities where Barcelona ranks fifth or above in terms of FDI Projects attraction within the EU.

For Customer Contact and Technical Support centre

activities, Barcelona only received fewer FDI Projects than the first in the ranking (Dublin). With regard to Research & Development and Education & Training activities, Barcelona ranked fourth and third respectively (behind French and British regions), and the Catalan region ranked fourth for Construction activities.

Figure 23 - Five other business activities where Barcelona has a leading position in the EU in terms of FDI Projects, 2010-2016

	Construction	R&D	Customer Contact Centre	Education & Training	Technical Support Centre
1.	London 52 (6.6%)	Paris 17 (5.1%)	Dublin 14 (3.6%)	London 23 (9.1%)	Dublin 15 (8.8%)
2.	Masovian 44 (5.5%)	Rhône -Alpes 10 (3.0%)	Barcelona 11 (2.9%)	Paris 14 (5.5%)	Barcelona 8 (4.7%)
3.	Bucaresti 37 (4.7%)	London 10 (3.0%)	Tyne & Wear 11 (2.9%)	Barcelona 10 (4.0%)	Cork 8 (4.7%)
4.	Barcelona 25 (3.2%)	Barcelona 9 (2.7%)	Berlin 9 (2.3%)	Dublin 6 (3.4%)	Galway 8 (4.7%)
5.	Paris 24 (3.0%)	Dublin 7 (2.1%)	Antrim 9 (2.3%)	Berlin 6 (3.4%)	Bucaresti 6 (3.5%)
UE	793	334	385	253	171

Source: Own elaboration from fDi Markets data

3.3.3.3 FDI impact of Business activities in Barcelona

In line with the impact analysis of FDI by sectors in Barcelona (3.3.2.3), this section focuses on the impact of business activities in terms of average jobs created and CapEx generated per FDI Project. This is to understand how labour- and capital-intensive FDI Projects are dependent on the value chain activities.

As seen in the table above, Construction activities are the most labour- and capital-intensive projects, as FDI Projects dedicated to these activities led the impact of job creation and were among the main generators of CapEx between 2010 and 2016. This type of activity created 331 jobs per FDI Project, compared, for instance, to the 111 jobs created by projects in Customer Contact Centre activities. Furthermore, Construction activities generated \$56 million of CapEx, \$5 million below the amount generated by Logistics, Distribution & Transportation, second in

Figure 24 - Impact of FDI by activity in Barcelona, 2010-2016

	Activities	Average jobs in Barcelona per projects		Activities	Average CapEx in Barcelona (\$M)
1	Construction	331	1	Manufacturing	74
2	Logistics, Distribution & Transportation	120	2	Logistics, Distribution & Transportation	61
3	Customer Contact Centre	111	3	Construction	56
4	Technical Support Centre	107	4	Education & Training	33
5	Design, Development & Testing	86	5	Design, Development & Testing	19
6	Manufacturing	77	6	Business Services	16
7	Business Services	49	7	Research & Development	13
8	Education & Training	38	8	Technical Support Centre	8
9	Research & Development	25	9	Customer Contact Centre	5
10	Sales, Marketing & Support	22	10	Sales, Marketing & Support	4

Source: Own elaboration from fDi Markets data

the ranking. This type of business activity also ranked second in average jobs created in Barcelona, totalling 120 jobs per project. Barcelona is benefiting from the high impact that Logistics, Distribution & Transportation is generating, as the leading region in the EU in terms of FDI Projects. Similarly, Barcelona also has a leading position within the EU in FDI Projects for Manufacturing activities, as the activity that generated the highest average CapEx per project in Barcelona. Finally, one of the business activities with the highest growth in the past few years, Design, Development & Testing, ranked fifth in both average jobs created and average CapEx generated.

Conversely, those business activities where Barcelona does not hold a leading position within the EU are among those with the lowest impact per project. Business Services ranked seventh in average jobs created and sixth in average CapEx generated per project. Sales, Marketing & Support activities, last in both rankings, created only 22 jobs and generated €4 million of CapEx per project. Such low impact was compensated for by being the business activity with the highest number of FDI Projects received in Barcelona.

3.4 Cross-analysis of FDI Projects in Barcelona

After analysing FDI Projects from a sectorial and activity perspective, this section aims to get a better understanding of FDI Projects by comparing their destination (sectors and activities) with their origin (the countries where FDI was originated). The scope of this analysis is the Barcelona Area for the period 2010-2016.

3.4.1 Economic sectors by country of origin

This section considers the top 10 source countries in terms of FDI Projects in Barcelona for the period 2010-2016 together with the destination sectors for these projects. [Figure 25](#) shows for each of these countries the five main sectors in which they invested in Barcelona during the analysed period.

When looking at the sectors by country of origin, FDI Projects in Barcelona from the US had a significant concentration in the Software & IT Services sector. The following destinations of US investments were in the Business Services, Consumer Products, Financial Services and Textiles sectors. Germany had most of its FDI Projects in Barcelona dedicated to the Life Sciences sector, followed by Software & IT services, Business Services, Automotive Components and Electronic Components. In the German case, there is a greater diversification of projects across different sectors as opposed to the US. The other two European countries in the top five, France and the UK, included other services sectors such as Real Estate, Hotels & Tourism and Transportation in their most recurrent investment projects. On the other hand, Japan has a more diverse list of sectors when compared to the previous four countries, with a main presence of manufacturing sectors such as Business Machines & Equipment, Automotive components and Industrial Machinery.

The main sectors for the Netherlands and Switzerland are also the abovementioned for the top five countries, with the addition of the Food sector as the fifth most important for Swiss investments. The other countries in the table, Italy, China and Canada, generated a relatively low amount of FDI Projects in Barcelona.

When analysing [Figure 25](#) from a sector perspective, it is clear how the Software & IT Services sector was the main sector for investments from the United States, France, the UK, the Netherlands and Switzerland from 2010-2016. Furthermore, there is a certain level of concentration in this sector since the US generated about 40% of all Software & IT Services projects in Barcelona. There is also a certain degree of concentration in the Business Services sector, as 78% of

its FDI Projects were generated in the US, Germany, France, the UK and Japan. The Financial Services sector, also relevant for Barcelona in terms of FDI Projects, captured 57% of its investment in the United States and the UK, whereas the Textiles sector, the fifth most important sector in Barcelona by number of investment projects, received 67% of them from the United States, France and Italy. Finally, Germany, the UK, the Netherlands and Switzerland generated 70% of all Life Sciences FDI Projects in Barcelona.

Figure 25 - Top 5 economic sectors by country of origin of FDI Projects (Number of FDI Projects per country and percentage per economic sector), 2010-2016

Country of origin	TOP 1 Sector	TOP 2 Sector	TOP 3 Sector	TOP 4 Sector	TOP 5 Sector
United States (127)	Software & IT Services 31%	Business Services 13%	Consumer Products 6%	Financial Services 6%	Textiles 5%
Germany (96)	Life Sciences 16%	Software & IT Services 8%	Business Services 8%	Automotive Components 7%	Electronic Components 7%
France (89)	Software & IT Services 15%	Business Services 13%	Real Estate 11%	Textiles 7%	Transportation 6%
UK (62)	Software & IT Services 18%	Business Services 16%	Financial Services 16%	Hotel & Tourism 11%	Life Sciences 6%
Japan (50)	Business Machines & Equipment 14%	Automotive Components 12%	Business Services 10%	Industrial Machinery, Equipment, & Tools 8%	Automotive OEM 8%
Netherlands (31)	Software & IT Services 29%	Financial Services 16%	Business Services 10%	Electronic Components 10%	Chemicals 6%
Switzerland (31)	Software & IT Services 39%	Industrial Machinery, Equipment, & Tools 16%	Life Sciences 10%	Business Services 6%	Food 6%
Italy (22)	Textiles 18%	Business Services 14%	Transportation 9%	Consumer Products 9%	Financial Services 5%
China (13)	Business Services 15%	Financial Services 15%	Consumer Electronics 15%	Textiles 8%	Transportation 8%
Canada (10)	Business Services 40%	Software & IT Services 20%	Food & Tobacco 10%	Business Machines & Equipment 10%	Aerospace 10%

Source:

Own elaboration from fDi Markets data

3.4.2 Business activities by country of origin

Country of origin	TOP 1 Sector	TOP 2 Sector	TOP 3 Sector	TOP 4 Sector	TOP 5 Sector
United States (127)	Sales, Marketing & Support 38%	Headquarters 13%	Business Services 13%	Design, Development & Testing 10%	Logistics, Distribution & Transportation 7%
Germany (96)	Manufacturing 26%	Sales, Marketing & Support 21%	Business Services 13%	Logistics, Distribution & Transportation 13%	Design, Development & Testing 9%
France (89)	Sales, Marketing & Support 27%	Logistics, Distribution & Transportation 17%	Construction 15%	Manufacturing 11%	Headquarters 9%
UK (62)	Sales, Marketing & Support 37%	Business Services 18%	Design Development & Testing 15%	Construction 8%	Logistics, Distribution & Transportation 5%
Japan (50)	Manufacturing 28%	Sales, Marketing & Support 20%	Design, Development & Testing 12%	Headquarters 12%	Shared Services Centre 8%
Netherlands (31)	Sales, Marketing & Support 42%	Business Services 26%	Manufacturing 13%	Design, Development & Testing 13%	Headquarters 3%
Switzerland (31)	Sales, Marketing & Support 32%	Manufacturing 19%	Design, Development & Testing 16%	Headquarters 13%	Logistics, Distribution & Transportation 10%
Italy (22)	Sales, Marketing & Support 32%	Logistics, Distribution & Transportation 23%	Business Services 18%	Headquarters 18%	Manufacturing 9%
China (13)	Sales, Marketing & Support 46%	Headquarters 15%	Business Services 15%	Design, Development & Testing 8%	Logistics, Distribution & Transportation 8%
Canada (10)	Sales, Marketing & Support 40%	Education & Training 40%	Business Services 10%	Design, Development & Testing 10%	-

Figure 26 - Top 5 activities by country of origin of FDI Projects (Number of FDI Projects per country and percentage per activity), 2010-2016

Source: Own elaboration from fDi Markets data

In line with the previous analysis, this section also looks at the top 10 source countries in terms of FDI Projects in Barcelona for the period 2010-2016 together with the top five value chain activities where investment in Barcelona was made between 2010 and 2016.

As clearly seen in the above table, all countries in [Figure 26](#) except for Japan and Germany invested in Sales, Marketing & Support activities more than in any other activity. Overall, these eight countries generated

Sales & Marketing activities represent the **first investment destination** for the **top 10 source countries** in Barcelona except for **Germany** and **Japan** which **invest more in Manufacturing activities**

81% of all Sales, Marketing & Support FDI Projects in Barcelona. These are countries with investment projects mostly in manufacturing-related sectors (as seen in the previous section in Figure 25), which invested more in Manufacturing activities, though Sales, Marketing & Support was the second business activity with more FDI Project for these countries.

The United States, Germany, the UK and the Netherlands generated 72% of all FDI Projects for Business

Activities. Similarly, the United States, Germany, the UK, Japan and the Netherlands accounted for 82% of all Design, Development & Testing FDI Projects in Barcelona. When it comes to Headquarters activities, the United States, together with France and Japan generated 61% of FDI Projects for this activity. Finally, 71% of all FDI Projects for Logistics, Distribution & Transportation activities originated in the United States, Germany and France.

3.4.3 Business activities by economic sector

Figure 27 - Ranking of business activities in Barcelona by economic sector (Number of FDI Projects), 2010-2016

Sector	TOP 1 Activity	TOP 2 Activity	TOP 3 Activity
Software & IT services (113)	Sales, Marketing & Support 63%	Design, Development & Testing 23%	Headquarters 5%
Business Services (75)	Business Services 69%	Headquarters 11%	Education and Training 8%
Life Sciences (44)	Manufacturing 34%	Sales, Marketing & Support 18%	Headquarters 16%
Financial Services (37)	Business Services 57%	Sales, Marketing & Support 35%	Headquarters 3%
Transportation (37)	Logistics, Distribution & Transportation 57%	Sales, Marketing & Support 38%	Headquarters 5%
Textiles (29)	Sales, Marketing & Support 55%	Headquarters 34%	Logistics, Distribution & Transportation 3%
Chemicals (27)	Manufacturing 52%	Sales, Marketing & Support 15%	Research & Development 15%
Automotive Components (20)	Manufacturing 75%	Design, Development & Testing 20%	Logistics, Distribution & Transportation 5%
Business Machines & Equipment (16)	Sales, Marketing & Support 25%	Shared Services Centre 25%	Design, Development & Testing 19%
Warehousing & Storage (12)	Logistics, Distribution & Transportation 100%	-	-

Source:
Own elaboration
from fDI Markets data

In order to broaden the cross-analysis of this chapter, this section compares the most important sectors²⁰ in Barcelona, as shown in section 3.3.2.2 “Sectors in Barcelona”, with their main three business activities

²⁰ The most important sectors include the top five economic sectors in Barcelona in terms of attraction of FDI Projects as well as the five economic sectors where Barcelona has a leading position (top five) within the EU.

in terms of FDI Projects. This is to better understand which value chain activities are attracting more investment in each of the economic sectors. Figure 27 shows this relation for the period 2010-2016.

The Software & IT Services sector, the most important in Barcelona in terms of FDI Projects, attracted 63% of

— **FDI Projects** in the **Software & IT** sector are mostly **devoted to Sales & Marketing activities**, whereas the Life Science, Chemical and **Automotive Components sector** mostly attract investment for **Manufacturing activities**

its FDI Projects in Sales & Marketing & Support activities. Additionally, 23% of the FDI Projects in this sector were devoted to Design, Development & Testing activities. Sectors such as Business Services, Financial Services, Transportation and Warehousing & Storage attracted most of their FDI Projects to activities related to their core business activities. Similarly, most of the projects for the Chemicals, Life Sciences and Automotive Components sectors were destined for Manufacturing activities, followed by Sales & Marketing & Support and Design, Development & Testing activities.

Furthermore, the Business Services, Life Sciences and Textiles sectors dedicated a significant percentage of their FDI Projects to Headquarters activities. To a lesser extent, Headquarters activities were also dedicated to projects for Software & IT Services, Financial Services and Transportation sectors. FDI Projects in other activities such as Research &

— **Barcelona attracts several investment projects in Headquarters activities for the Business Services, Life Sciences and Textiles sectors**

Development and Education & Training were carried out by the Chemicals and the Business Service sectors respectively.

4. Perception of Catalonia and Barcelona – Qualitative Analysis

The aim of the qualitative study was to understand the behaviour of international investors by analysing the following items:



Why do international companies decide to invest abroad?



How do international companies decide where to invest?



What is international companies' **perception** of Catalonia and Barcelona as business locations?

This section presents the results of the qualitative analysis that followed the methodology explained in 2.1.2 of this document.

Throughout the analysis, companies are divided into two categories: established and non-established companies. **Established companies** are those that have already invested in Barcelona or Catalonia, whereas **non-established companies** are international companies that have not yet invested in Barcelona or Catalonia.

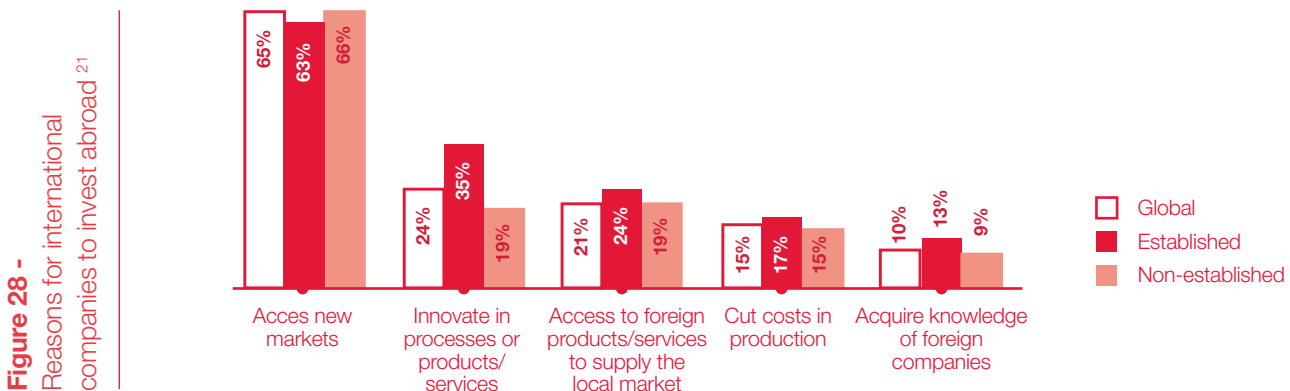
4.1

Why do international companies decide to invest abroad?



The first element when analysing the perceptions of international companies regarding a specific territory is to understand why these entities invest in foreign countries. Below are the main reasons that guide their decision to internationalise their activities.

As shown in [Figure 28](#), companies mostly invest abroad to access new markets, since 65% of all respondents chose this option. The second and third



²¹ More than one reason could be selected by survey respondents

reason to invest abroad fall far behind access to new markets, but show two specific trends: investing abroad to innovate in processes or products/services and proximity to products or services demanded by their local markets.

From a comparative point of view, the importance of innovation for established companies stands out, while non-established ones equally value innovation and the existence of local products or services that can be exported.

—
Established companies value innovation in processes, products and services 16% more than non-established

second leading position in the ranking of Design, Development & Testing (Figure 22) activities in terms of FDI Project attraction for the period or the fourth position in R&D project investment attraction as shown in the Figure 23.

A possible reason for established companies to give significantly greater weight to innovation could be that Catalonia and Barcelona are more attractive to innovative companies. This also matches with the fact that Barcelona is the

4.2

How do international companies decide where to invest?



After understanding the reasons that drive the decision to internationalise business activities, it is relevant to understand the factors that companies analyse when deciding on an investment location.²²

Figure 29 shows the factors considered when making that decision, arranged by the ranking attributed globally. This ranking is also compared with the ranking for established and non-established companies.

According to the above data, the most important factor for executives when deciding where to invest is the market: its size, level of openness and its growth potential.

Institutional factors and costs hold second and third positions respectively. In that sense, costs stand out as a fairly

—
The most important factor when deciding where to invest is the **market potential** of the region followed by **institutional factors**

Figure 29 - Influencing factors when deciding on a location in which to invest (ranking by importance)

Factors	Global ranking	Ranking for established companies	Ranking for non-established companies
Market Potential	1 st	1 st	1 st
Institutional factors	2 nd	2 nd	3 rd
Costs	3 rd	6 th	2 nd
Macroeconomic factors	4 th	3 rd	5 th
Geo-economic location	5 th	4 th	7 th
Innovation factors	6 th	5 th	4 th
Human Capital	7 th	8 th	6 th
Infrastructures	8 th	7 th	9 th
Professional networks	9 th	10 th	8 th
Knowledge of the region	10 th	11 th	10 th
Lifestyle	11 th	9 th	11 th

²² See Methodological note 2 in Section 6.6

“ Factories have similar performance anywhere in Europe, **what really makes the difference is the talent that the region has to offer**

CEO - Food & Beverages company

costs that important. In fact, costs are only the sixth most important factor for established companies, three positions below in the ranking for non-established ones. This could mean that established companies do not only not invest in the region because of its costs but because of other more value-added elements.

Besides the top three in the ranking, an additional factor seems very relevant for most companies interviewed: human capital. In fact, during the interviews, certain executives pointed out the increasing relevance of talent availability as a key investment factor.

Comparing the three rankings, market potential remains the main factor, but institutional factors,

important issue to respondents. This result shows that even though cutting costs is not the main reason to internationalise a company (see [Figure 28](#)), it is one of the main factors when deciding where to invest. That is true for non-established companies, but companies investing in Catalonia and Barcelona do not consider

—
Geo-economic location is a crucial factor for companies established in Catalonia and Barcelona

macro-economic factors, and geo-economic location appear to be much more important for established companies than for non-established ones. This could indicate that knowing Catalonia and Barcelona allows companies to be more aware of their privileged geo-economic position. This fact highlights the importance of the regional context for those already in the region and points towards the need to reinforce the geo-economic location and institutional support for businesses in the region to promote further investment.

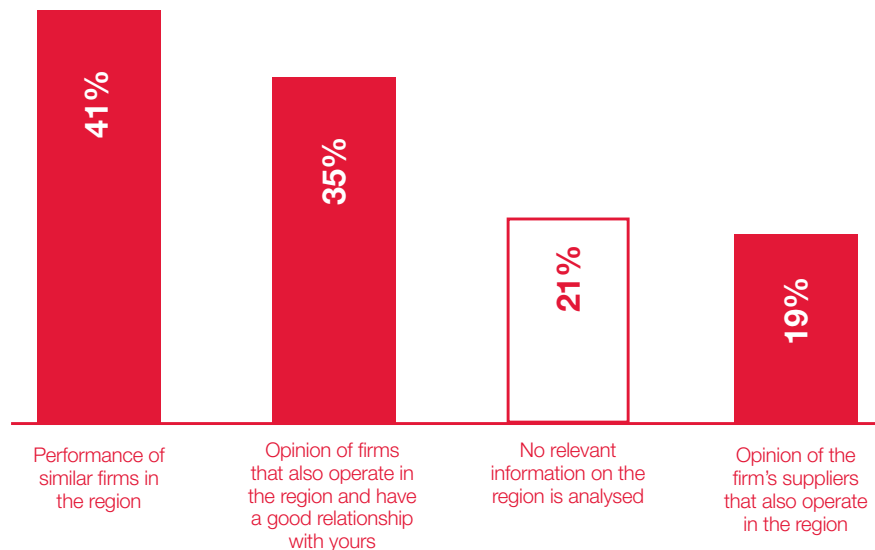
Besides specific investment factors, respondents were asked about the influence that other firms' behaviour could have on their decisions when choosing an investment destination. Overall, three out of four companies consider that their investment decisions are influenced by the performance and opinion of other companies.

“ **Before investing** in any country, I always **meet** with suppliers operating in the **region** to investigate about the **market, culture**, etc.

CEO - Transport & Logistics company

From the results of [Figure 30](#), it seems clear that companies take into consideration the performance of similar firms in a specific region (41%), as well as the opinions of their business network (35%) prior to deciding on whether to invest in that territory.

Figure 30 - Information analysed by companies before investing in a specific region



In the in-depth interviews, interviewees from established companies emphasised the importance of the performance of local branches of international companies and their positive perception of the territory in which they are located. This additional factor was highlighted as one that can potentially replace the relevance of other investment factors when a company decides to increase its presence in a specific territory.

— **Already established companies act as advisors for other businesses seeking to invest in their region**

Additionally, the expert panel stressed the importance of the investors’ perception of a region. Since Catalonia and Barcelona are competing as advanced regions within Europe, there are no major differences in key factors such as costs or macro-economic or institutional factors.

— **Individual executives can highly influence multinational companies’ investment decisions...**

Their preference for specific territories can play a decisive role

Therefore, the decision to invest is greatly influenced by other factors such as the attractiveness of being an important hub or cluster for a sector, or to be perceived as an innovative destination for certain economic sectors and value chain activities.

Moreover, perception can also be built through local ambassadors within international companies that

can leverage decisions when choosing an investment location. Some of the interviewed executives affirmed that the presence of their companies in Catalonia and Barcelona was driven by their intense campaigning for the region.

“ Investors come to **Barcelona** because of its **solid IT ecosystem** and the **perception of the city as where things happen**

CEO - Technological company

4.3 What is international companies’ perception of Catalonia and Barcelona as business locations?



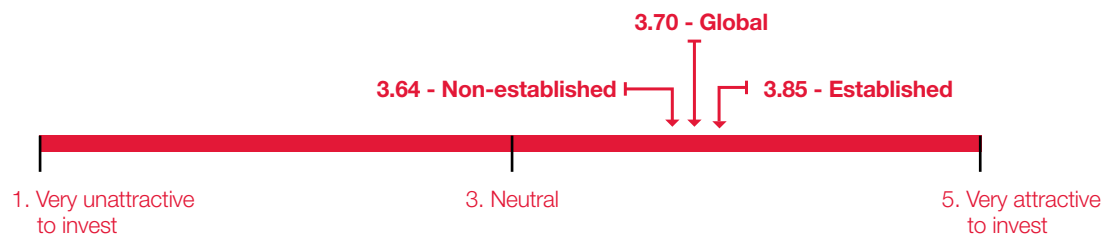
Respondents of the survey were asked to grade Catalonia and Barcelona in terms of attractiveness on a scale of 1 to 5, with 1 being “Very unattractive to invest”, and 5 being “Very attractive to invest”. Figure 31 shows the position of Catalonia and Barcelona in this scale.

The results of the survey indicate that investors, overall, perceive Catalonia and Barcelona as a good place to invest. The region is rated globally at 3.7.

The difference in perception between established and non-established companies is not significant but, on average, established com-

— **Catalonia and Barcelona is an attractive region to invest for companies, with a grading of 3.7 out of 5**

Figure 31 - Overall rating of Catalonia and Barcelona as a place to invest by established and non-established companies



panies grade the region better than non-established companies. This indicates the importance of fostering the international reputation and positioning of the region to attract more investment.

—
Asian companies,
which are one of the
most important world
FDI contributors, **have**
a better perception
of the region

Catalonia and Barcelona than American ones, as can be seen in [Figure 32](#), although the difference between the grading is not significant.

The Asian companies' good perception is especially relevant, since the Asian market is an important FDI contributor. The number of projects from Asian companies has been increasing steadily since 2010, representing 23% of all FDI Projects in 2016. Being so well perceived by these companies represents a great opportunity for Catalonia and Barcelona to keep up the strong FDI trends.

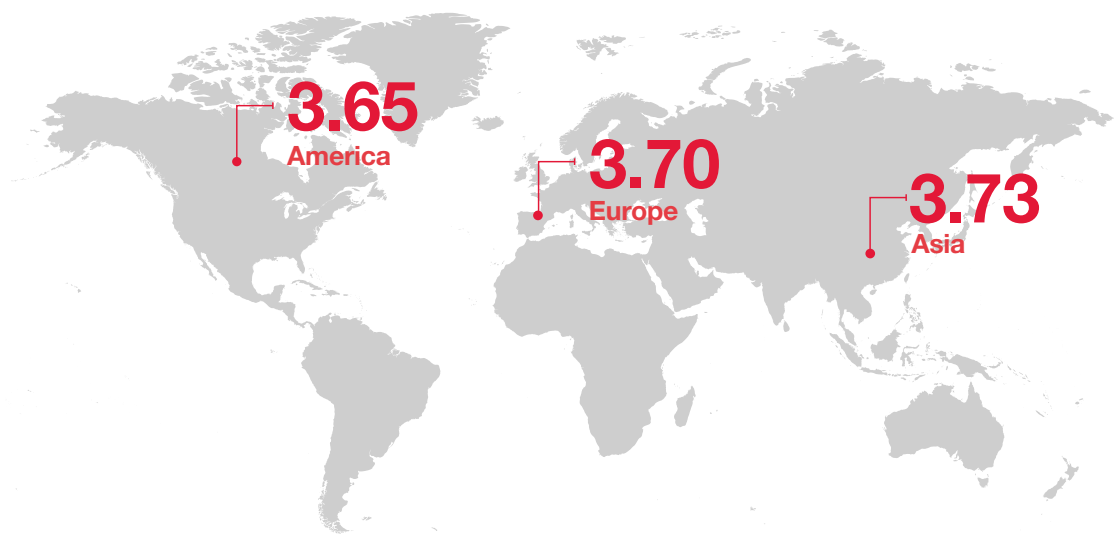
In terms of the location of survey respondents, Asian and European companies have a better global perception of

Besides the geographical dimension, it is also interesting to see how different types of companies perceive Catalonia and Barcelona. As can be seen in [Figure 33](#), differences between companies based on the activities they internationalise are not huge, but Logistics and Manufacturing are those that have a better perception of the region. The results are aligned with the quantitative analysis, where Barcelona had a leading position in terms of FDI Projects received in the EU for Logistics (first in the EU ranking) and Manufacturing (second in the EU ranking) as shown in [Figure 22](#).

It is interesting to see that the two activities with a major impact on CapEx and job creation, also Manufacturing and Logistics ([Figure 21](#)), are those that have a better perception of Catalonia and Barcelona. This means

—
Catalonia and
Barcelona are well
positioned to attract
FDI Projects with a
positive impact in terms
of job creation and
long term investment

Figure 32 -
Average rating of Catalonia and Barcelona
by origin of the company



Grading scale:
1. "Very unattractive to invest" - 5. "Very attractive to invest"

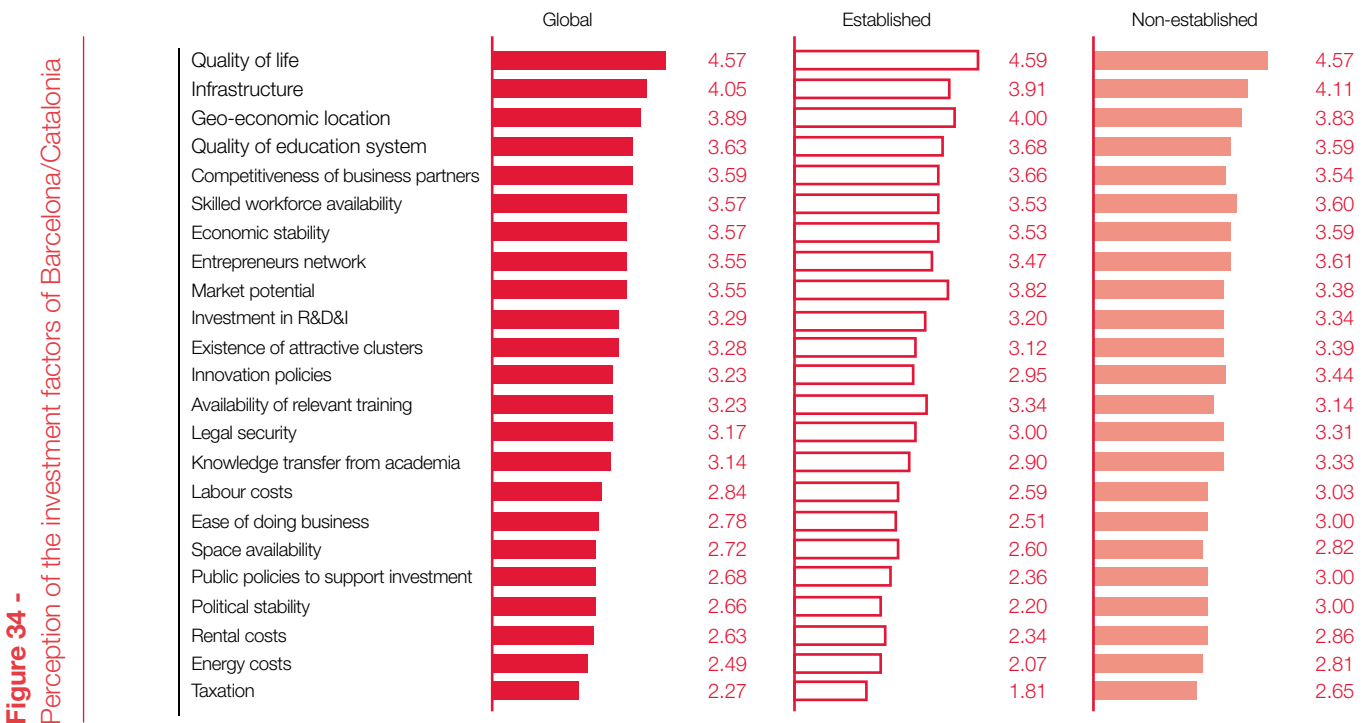
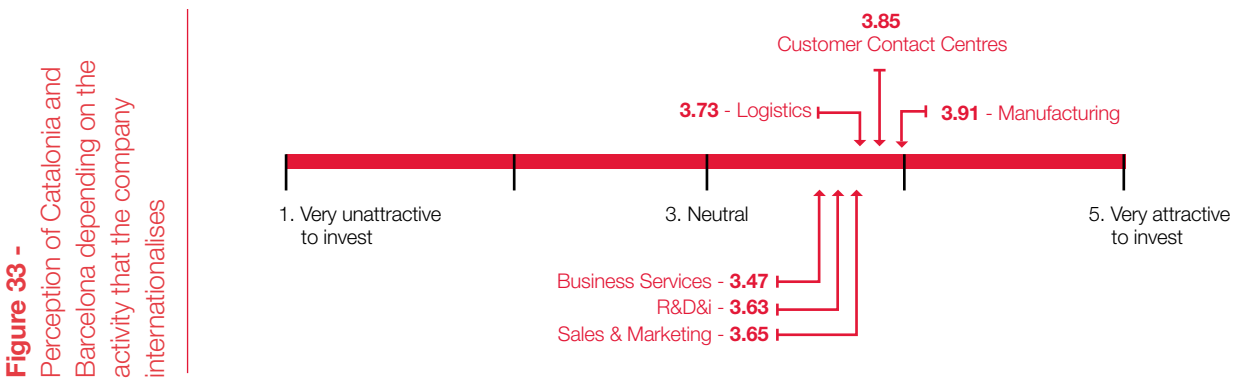
that the region is well-positioned in terms of attracting projects with a positive impact.

rental costs, political stability, and public policies to support investment).

Additionally, survey respondents were asked to grade different aspects of Catalonia and Barcelona as business locations on a scale of 1 to 5, with 1 being “Poor” and 5 being “Excellent”.

In this section we are going to analyse the five best perceived factors (quality of life, infrastructures, geo-economic location, quality of the education system, and the competitiveness of business partners), and the five least appreciated ones (taxation, energy costs,

Quality of life, infrastructures, geo-economic location, quality of education system, and competitiveness of business partners are the best perceived factors of Catalonia and Barcelona



Grading Scale 1. Poor - 5 Excelent

4.3.1 Which are the most positively perceived factors?



A.

The best perceived factor for Catalonia and Barcelona is quality of life (4.57). In the in-depth interviews, the quality of life in Catalonia and Barcelona also emerged as one of the most attractive aspects of the region. Although quality of life itself is not one of the most relevant factors (Figure 29), it acts as a good attractor of international talent. Most of the business people interviewed said that finding people within their international companies that wanted to move to Barcelona was rather easy. This means that the region's quality of life could actually be a key element to ease the processes of hiring and retaining talent from national and international companies, thus reducing the costs of recruiting. The strong positioning of Catalonia and Barcelona as good places to live makes them very attractive for global meetings between international companies (i.e. Mobile World Congress), which also helps in the positioning of the region.

“ It is very **easy for us to ask anyone within our global company to work here** in Barcelona, positions here are filled rapidly with people from all over the world

CEO - Technological company



B.

The second best perceived factor of Catalonia and Barcelona is its infrastructure (4.05). The favourable perception of Catalan infrastructures was also confirmed with the in-depth interviews, as most business people interviewed signalled Barcelona's airport as a first-class infrastructure. The airport stands out as very well-connected with Europe, with a great offer of daily flights to all the European capitals and other important cities within the region. In addition to being well-connected with Europe, the

airport is well-connected to the city. Getting to the city centre in less than 30 minutes is something of value for business people. There are two elements that will increase the good perception of Catalan infrastructures: more intercontinental

connections in Barcelona airport, and the Mediterranean Corridor. The good positioning of Catalan infrastructures acts on two levels. On the one hand, it improves the geo-economic positioning of the region, bringing it closer to other territories and facilitating cross-border trade. On the other hand, being well connected to Europe also facilitates the attraction of international workers who would be more inclined to live in Catalonia if they could easily return to their home countries.

“ I know **people working in other European cities** that have family living in Catalonia, and they come and go each weekend **thanks to the airport's good connections**

CEO - Medical devices company



C.

The third best factor for Catalonia and Barcelona is its geo-economic location (3.89). The positive geo-economic location of Catalonia and Barcelona is a key investment attraction element. A positioning of the territory promoting its strategic geo-economic location that allows big nearby markets, not just European, but also Mediterranean, to be reached and served, can compensate the potential perception of foreign companies that the local market is rather small. Catalonia and Barcelona should enhance their positioning as the economic capital of Southern Europe, being able to present itself as not only a decision-making place for companies operating in the region, but also as a logistic hub to access other regions for Asian and American companies. Proximity to bigger markets can attract projects focused on local market sales activities but also projects on business activities and services based on efficiency and focused on serving the nearby countries.

**D.**

The fourth best perceived factor in the region is the quality of its education system (3.63). The region stands out as a place of talent. This factor should be analysed together with skilled workforce availability (3.57), and availability of relevant training (3.23). Catalonia and Barcelona are capable of offering international companies the talent they seek and an ecosystem of education and training to help them develop this talent. Interviewed executives also appeared to be satisfied with Catalan talent, which is similar to that of other European countries and at a better cost. Of all the talent factors (education system, skilled workforce availability, and relevant training), the latter is the one that presents a more important difference between established and non-established companies. Companies already operating in Catalonia and Barcelona have a better perception of the offer of relevant education for their workers.

“ We hire graduates from Catalan universities and technical schools for their **good skills, and productivity** ”

CEO - Manufacturing company

**E.**

The last highlighted factor is the competitiveness of business partners (3.59). International companies perceive Catalonia and Barcelona as a place where they can find providers and associates to help in their businesses. In the in-depth interviews, executives also signalled that the ecosystem

“ We use legal and other **corporate services from local providers** and they always **meet our expectations** ”

CEO - Retail company

of companies in Catalonia and Barcelona offers them what they need and it shows that local companies are used to working with international ones.

—
The competitiveness of local companies allows **Catalonia and Barcelona to become a first-class hub for strategic operations**

4.3.2

Which are Barcelona & Catalonia's less positively perceived factors?

**A.**

The least positively perceived factor for executives is taxation, with a lower rating for established companies (i.e. those that actually pay taxes in the territory). The more detailed analysis provided by the interviews shows that of all taxes those perceived as especially high are personal income taxes for executives. Additionally, Spanish law does not allow the compensation of executives via stock-options, which is perceived as a competitive disadvantage against other territories in terms of senior talent attraction. Offering a more attractive taxation system for senior talent also means being able to attract more strategic operations.

**B.**

The second less positively graded factor of Catalonia and Barcelona is its energy costs (2.49). According to Eurostat, Spain is the European country (EU-28) with the fifth highest household electricity prices and the 10th for industrial consumers²³. This is a relevant finding because energy costs do not generally arise in the public debate. Although non-established companies have a better perception of the energy costs in Catalonia and Barcelona, it is still a fairly low grading

²³ Eurostat Energy Price Statistics (2016) http://ec.europa.eu/eurostat/statistics-explained/index.php/Energy_price_statistics

(2.86). Considering that this is a very specific factor, this poor perception by companies not investing in the region means that it is widely known that operating in the region means high energy prices. Regardless of this perception, Barcelona led the attraction of Manufacturing projects during the 2010 – 2016 period (Figure 22), which are, by nature, energy-intensive projects. In that sense, quantitative data seems to indicate that the perception of energy costs does not affect the attraction of projects.



C.

The third less positively perceived element is rental costs (2.63). This not so strong perception by companies confirms the importance of the increase of rental costs, especially in Barcelona. Spain was heavily affected by the real estate crisis from 2008 up to 2014, with a stop in the demand for houses, office spaces and industrial premises. The reactivation of economic activity in Catalonia and Barcelona is producing a rapid increase in the demand for real estate, which is still not met by the new offer of space. Actually, space availability also appears to be one of the least positive elements of Catalonia and Barcelona (2.72) especially for established companies (2.6). The gradual increase in office space availability should help reduce prices and thus the perception by international companies.

“ There is a **tendency in global companies to follow nearshoring strategies and Catalonia and Barcelona are certainly well positioned to attract these kind of services** ”

CEO - Financial Services



D.

Political stability is the fourth less positively perceived factor of Catalonia and Barcelona, with a grading of 2.66. In this case, the difference between established and non-established companies is especially important. In fact, the perception by

non-established companies is 3.0, which means a neutral perception of the political stability of the region.



E.

The last factor to be analysed was public policies to support investment (2.68). As in the case of political stability, established companies have a worse perception than non-established ones, which have a “neutral” view of the public policies to support investment. The in-depth interviews shine some light on the survey results. Interviewed companies did not have a bad perception of the proactive policies to attract investment. In fact the Catalonia Trade and Investment Agency and the City Promotion department at Barcelona City Council were awarded in the fDi Strategy Awards 2016 (fDi Intelligence – Financial Times Group). The City Promotion department was awarded IPA (Investment Promotion Agency) of the Year, and Catalonia Trade and Investment was acknowledged for its support to R&D for companies. What businesspeople understood as policies to support investment was the lack of flexibility of bureaucracy when trying to establish their companies in the region. This lack of flexibility becomes a comparative disadvantage when compared with what happens in other European regions, where laws and regulations are more easily adapted to attract specific projects.

4.4

Perception of Potential Investors

Non-established companies were asked if they were considering increasing their international operations. Of all non-established companies, 84% indicated that they were considering increasing their investments abroad. Of these, half of them were considering doing so in Southern Europe. For these companies the global perception of Catalonia and Barcelona is higher than the average for non-established companies, rating it at 3.9. Additionally, 51% of all companies that are considering investing in Southern Europe have considered investing in Catalonia or Barcelona. Their average rating of the region is 4 points out of 5.

Below is the perception of investment factors in Catalonia and Barcelona by companies considering investing in the region. **Figure 35** enables the understanding of why these companies are considering investing in Catalonia and Barcelona.

In general, these companies have a better perception of Catalonia and Barcelona than the overall perception

Half of the companies that are considering investing in Southern Europe are considering doing so in Catalonia and Barcelona

of non-established companies. The overall perception of the investment factors

in Catalonia and Barcelona is similar to that of companies that are considering investing in the region. These investment factors are quality of life, infrastructures, investment in R&D&i, economic

stability, competitiveness of business partners and geo-economic location, all rated 4 out of 5 or higher.

The case of R&D&i is especially relevant for companies considering investing in Catalonia and Barcelona since they grade the factor 4.1, 0.73 points higher compared to global perception. Similarly, the R&D&i factor jumps from 10th to third position in the ranking when comparing the overall perception with that of companies considering investing in the region. This finding, along with the fact that a greater number of established companies invest abroad to innovate in products and processes (**Figure 28**) implies that Catalonia and Barcelona are attractive regions for highly innovative companies.

Companies considering investing in Catalonia and Barcelona percieve quality of life, infrastructures, investment in R&D&I, economic stability, competitiveness of business partners and geo-economic stability, competitiveness of business partners and geo-economic location the best factors of the region

Figure 35 - Perception of Catalonia and Barcelona's investment factors for those companies considering investing in Catalonia and Barcelona



Grading Scale 1. "Poor" - 5 "Excelent"

4.5 Likeliness to Invest

In order to showcase the competitive advantages of the region, non-established companies were asked to indicate how likely they would be to invest in a region with the following characteristics:

- Leading scientific facilities
- Innovative ecosystem
- A significant start-up presence
- Local talent availability
- International talent attraction
- Head to business mind-set
- Great quality of life

The response from non-established companies was very positive, 77.78% of the respondents said their companies would be likely or extremely likely to invest in such a region. Only 4.17% of non-established companies said it was very unlikely they would invest in that region.

An interesting finding can be drawn when contrasting the degree of likeliness of a company to invest in a region with the described characteristics and the global perception they have of Catalonia and Barcelona. Non-established companies who would be likely or extremely likely to invest in the ideal region described above grade Catalonia and Barcelona as

attractive regions in which to invest. On the other hand, non-established companies who show a lower degree of likeliness to invest in the ideal region have a neutral opinion of the attractiveness to invest in Catalonia and Barcelona. Therefore, non-established companies associate these characteristics of the ideal region with that of Catalonia and Barcelona.

—
Catalonia and Barcelona are perceived by non-established companies as regions with leading scientific facilities, an innovative ecosystem, an important presence of start-ups, local talent availability and international talent attraction capacity, head-to-business mindset and a great quality of life

Figure 36 - Likeliness to invest in an ideal region ⁽¹⁾ by non-established companies compared with the overall rating that those companies give to Catalonia/Barcelona as places to invest

Non-established companies 'likeliness to invest in "an ideal region"		Global ranking of Catalonia and Barcelona for each group of non-established companies
Degree of likeliness	% of respondents	Grading scale: 1- Very unattractive to invest, 5 - very attractive to invest
Extremely likely	27,78%	4.00
Likely	50.00%	3.61
Neutral	18.05%	3.00
Very unlikely	4.17%	3.00

(1) The ideal region was described by the following characteristics: Leading scientific facilities, an innovative ecosystem, an important presence of start-ups, local talent availability and international talent attraction capacity, head to business mindset and a great quality of life.

5. Conclusions

In this section, the main key findings in conjunction with the conclusions resulting from the conducted research are described.

1.

Catalonia and Barcelona, leading European regions in attracting foreign direct investment.

Catalonia and Barcelona are top-class regions in which to invest. Proof of that is that Catalonia's productive FDI inflows hit a record high for two consecutive years, with €4,936 million in 2015, and €5,052 million in 2016. These results are in line with how foreign companies perceive Catalonia and Barcelona as attractive regions in which to invest, rating them 3.7 out of 5 on the scale of attractiveness.

Catalonia was the first destination for FDI Projects in Spain, accounting for 35% of all projects attracted between 2010 and 2016. These projects helped to reduce unemployment by creating over 50,000 jobs and boosted Catalonia's economy by generating \$20 billion of capital investment.

After London and Paris, with an investment market share of 8.6% and 4.2% respectively, Barcelona holds a leading position in Europe in terms of attraction of FDI Projects alongside Dusseldorf and Dublin during the analysed period (2010-2016). Barcelona is the fifth region, with a 2.2% market investment share after Dusseldorf (2.4%), and Dublin (2.3%).

2.

Catalonia and Barcelona have consolidated its attractiveness to the largest economies in the world and to emerging countries in foreign investments.

The main contributors to FDI Projects in Catalonia are among the largest economies in the world. The top five consists of three European countries (Germany, France and the UK) and two of the world's most

powerful economies (the US and Japan). Of all the projects received in Catalonia, 19.8% were from the United States, 15.9% from Germany, 13.3% from France, 9.1% from the UK, and 7.3% from Japan.

Asian companies are the fastest-growing contributors to the world's FDI. Catalonia was the main Spanish destination (with a 40% share) for FDI Projects coming from China, Japan and India.

Asian companies are those with a better perception of the region, with a grading of 3.73 points, followed by European and American companies with 3.70 and 3.65 points respectively.

3.

Catalonia and Barcelona a strategic industrial pole in the process of reindustrialisation of advanced economies.

Catalonia's manufacturing sectors had a leading position in FDI Projects attracted in the region, as the main ones in traditional sectors such as Chemicals, Textiles or Business Machines and Equipment. As a result, Catalonia is consolidating its positioning as a strategic destination to relocate manufacturing activities in a context of reindustrialisation of the European economy. Catalonia has become a pole of attraction for Manufacturing companies, with Barcelona ranking as the European region with the second most FDI Projects received for these activities between 2010 and 2016.

4.

Highly innovative sectors find in Catalonia and Barcelona a very competitive location for their investments.

Catalonia and Barcelona are more attractive to innovative companies, in this sense established companies give significantly greater weight to innovation. Barcelona had a leading position in

FDI attraction in the EU for the Life Science and Transportation sectors. These were also the sectors with the highest impact in terms of job creation and capital investment generation per project. The Life Sciences sector, which is very strategic for the region, invests mainly in Manufacturing activities. Additionally, international companies from this sector find Barcelona attractive for Headquarters activities, increasing the added value of investments destined for the Life Sciences sector. The Software & IT Services sector attracted the most FDI Projects in Catalonia (16% of total projects). This sector is highly reliant on skilled workers who can adapt to constant changes.

5.

Catalonia and Barcelona's talent and education ecosystem is a key element to reinforce the positioning of the region in the global competition for talent.

Catalonia and Barcelona are capable of providing international companies with the talent they seek by offering education and training programmes built around their needs. The human capital offered by the region is perceived very highly by international companies. To be more specific, the education system, skilled workforce availability and the existence of relevant training programmes for workers are among the best perceived factors by international companies. Additionally, the great quality of life in the region helps companies attract international talent.

The attractiveness of Catalonia and Barcelona in terms of talent and education is very important for investment attraction, since talent has become the most important asset for companies in the context of a digital and knowledge economy.

6.

Catalonia and Barcelona are key regional players for the Southern European and Mediterranean market.

The good perception of Catalonia and Barcelona's infrastructures is linked to the high perception that international companies have of their geo-economic

location. Catalonia and Barcelona are perceived as key regional players in the Southern European and Mediterranean markets.

Barcelona is, in fact, the first EU region in terms of attraction of Transportation and Logistics FDI Projects. This reinforces the idea that Catalonia and Barcelona are very well-connected with Europe and other world regions through their first-class infrastructures, the second best perceived factor in the region. FDI Projects destined to the Transportation sector are among those with the highest impact in terms of job creation and long-term investment. These projects created 9,551 jobs and generated a CapEx of \$4,691M between 2010 and 2016.

The high quality of the infrastructures network, in conjunction with the geoeconomic location of Catalonia and Barcelona can be used by established companies to reach out to potential European and Mediterranean markets as well as to establish corporate services near their target markets.

Increasing airline routes at Barcelona's airport and connecting the Mediterranean Corridor with a freight network will contribute to continually improve the good perception of the region's infrastructures.

7.

Innovation, business performance and networking are key elements for attracting foreign investment in advanced economies.

Since Catalonia and Barcelona are competing as advanced regions within Europe, there are no major differences in key factors such as costs or macro-economic or institutional factors. Therefore, the decision to invest is greatly influenced by other factors such as the attractiveness of being an important hub or cluster for a sector, or to be perceived as an innovative destination for certain economic sectors and value chain activities.

International companies perceive there is a large and competitive network of suppliers and providers in Barcelona, making the city attractive for doing business and creating synergies. The competitiveness of local companies is allowing Catalonia and Barcelona to become a first-class hub for strategic operations.

The perception of a region by companies is multi-factorial and should be analysed and worked upon taking this into consideration. In this regard, it is important to analyse investment opportunities taking into account hard factors as well as soft factors, with the latter determined by the established companies' own experiences.

Established companies are, themselves, an attraction factor for foreign direct investment. Positive performance increases their internal strategic positioning within their company group and against other local branches. This, together with a positive perception of the region where the branch is located, can significantly help to attract further investments from their parent companies.

8.

Strategic sectors find in Catalonia and Barcelona top-class locations for their decision-making centres.

Life Sciences, Business Services and Textile sectors are investing in the region for Headquarters activities. Promoting investment for decision-making centres of international companies helps position the region as an attractive location for other strategic sectors such as IT or Transportation.

As a result of receiving foreign investment for business headquarters, more and better investment opportunities arise around companies' headquarters. On the other hand, Headquarters investments tend to be more stable than investments in other activities which are more reliant on market fluctuations.

9.

Innovation and start-up ecosystems as a way to attract potential investment.

International companies have a good perception of R&D&i investment in the region, since they rate the factor 4.1 out of 5. This finding, along with the fact that a greater number of established companies are investing in Catalonia and Barcelona to innovate in

products and processes, implies that Catalonia and Barcelona are attractive regions for highly innovative companies.

Barcelona is currently developing a strong start-up ecosystem. In a global context of Digital Transformation, large companies refer to start-ups as key players to foster their own transformation. As a consequence, the entrepreneur network of a region becomes an incentive for FDI attraction.

Catalonia and Barcelona, which are among the most innovative regions in Europe, are set to become innovation hubs. This favourable environment promotes the interest of international companies that are planning to invest abroad.

10.

Catalonia and Barcelona are a hotspot for potential investment opportunities.

Non-established companies perceive Catalonia and Barcelona as regions with leading scientific facilities, an innovative ecosystem, and important presence of start-ups, local talent availability and international talent attraction capacity, head-to-business mind-set and a great quality of life. In fact, half of the companies considering investing in Southern Europe are considering doing so in Catalonia and Barcelona.

6. Appendix

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6.2

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- **Oriol Vidal-Barraquer**
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- **Alejandro Mitjana**
(Consultant)

²⁴ In-depth interviews were also performed with three executives who requested not to be publicly mentioned in this study

6.3 Sources

The following sources were used²⁵ to put together the quantitative analysis:

- The United Nations Conference on Trade and Development (UNCTAD) is a database that provides information about FDI Flows and FDI Stocks worldwide as well as at national level. It also provides information about greenfield and M&A investments.
- DataInveX-Mineco is a database that provides information about FDI Flows and FDI Stocks in Spain and its Autonomous Communities²⁶. This database is managed and supported by the Spanish Ministry of Economy, Industry and Competitiveness.
- Catalonia Trade & Investment (ACCIÓ) data was used to estimate the number of foreign companies established in Catalonia. Additionally, ACCIÓ provided data about the FDI Flows in Catalonia by sector based on the DataInveX-Mineco database.
- The fDi Markets database (Financial Times) provides broad information about FDI Projects. Projects can be filtered by country, state, administrative region and city.
- ESADE (2012) Foreign Direct Investment in Barcelona: A city focused on growth, ESADE Business School
- OECD (2008) Benchmark Definition of Foreign Direct Investment, Fourth Edition
- EUROSTAT (2016) Energy Price Statistics

6.4 References

The following references were used for this study:

- UNCTAD (2016) World Investment Report 2016; Geneva: United Nations
- fDi Magazine (2016) fDi European Cities and Regions of the Future 2016/17 Rankings, London: The Financial Times
- UNCTAD (2014) World Investment Prospects Survey 2014-2106, New York and Geneva: United Nations
- IESE (2014) Foreign Investment in the Barcelona Area, IESE Business School

6.5 Glossary of terms

Autonomous Community

- Autonomous Communities are the first level of political and administrative division of Spain.

Barcelona

- Barcelona refers to the province of Barcelona, which includes the following counties: Alt Penedès, Anoia, Bages, Baix Llobregat, Barcelonès, Garraf, Maresme, Vallès Occidental and Vallès Oriental. It also partially includes the following counties: Berguedà, Osona and La Selva.

CapEx

- CapEx or capital expenditure makes reference to long-term expenditures of a non-recurring nature, resulting in the acquisition of permanent assets.

FDI

- Foreign Direct Investment (FDI) is a type of investment in the form of a controlling ownership in one country by a direct investor based in another country. The direct investor needs to have a significant influence over the company (10% or more of voting stock). This level of influence may vary depending on the size of the company (i.e. less than 10% voting stock).
- There are two ways in which FDI can take place: by starting a new activity or expanding an already existing one and through mergers or acquisitions of existing companies.

²⁵ All sources were consulted throughout the months of March and April 2017

²⁶ Autonomous Community is the first level and administrative division in Spain

ETVE

- Foreign-Securities Holding Companies, known as “Entidades de tenencia de valores extranjeros” (ETVEs) in Spain, are entities that have a special tax treatment for dividends and capital gains transferred to the ETVEs from its shareholding in non-resident companies.

GDP

- Gross Domestic Product (GDP) measures the market value of all final goods and services produced in an economy within a given period of time.

Greenfield investments

- Greenfield investments are a type of investment in which a parent company begins a new venture in another country. They involve constructing new facilities as well as creating new jobs.

Mergers & Acquisitions

- The term “merger” refers to the combination of two or more companies to form one, while “acquisition” refers to one company taken over by the other.

6.6

Methodological notes

1. In this study, \$1 billion refers to the American and British scale which is \$1,000,000,000. In this sense, commas (,) have been used to separate groups of thousands whereas full stops (.) have been used for decimal separators.

2. Survey respondents were asked to choose from a list of factors that they consider relevant when analysing a potential location for their investments. The chosen factors were then ranked by order of importance, thus making it possible to grade each factor, with 100 being the maximum grade possible. Considering the order given by each respondent, the first factor was assigned a grade of 100, the second 100/2, the third 100/3, and so on. The overall grade for each factor is the average of the grades assigned by each individual respondent. Each factor was accompanied by a detailed explanation in brackets:

- Macroeconomic factors (exchange rate, growth, expectations, credit risk, etc.)

- Administration/Institutional factors (political stability, ease of doing business)
- Market factors (market size, openness of the market, market growth potential, etc.)
- Costs (labour costs, transportation costs, etc.)
- Infrastructure and real estate factors (transportation and logistics, ICT, availability of space, etc.)
- Human capital (education, research, skilled workers, etc.)
- Professional network factors (business ecosystems, clusters, etc.)
- Geographical factors (geo-economic location, ease of travelling to the home country, geopolitical risk, etc.)
- Innovation factors (R&D&i, access to local advanced knowledge, etc.)
- Attractive lifestyle factors (quality, image of the city/region, etc.)
- Knowledge of the region (market, culture, etc.)
- Other: _____

3. In the survey, each factor was accompanied by a brief explanation in brackets. For market factors, the description was: market size, openness of the market, market growth potential, etc. On the other hand, for geographical factors the description was: geo-economic location, ease of travelling to home country, geopolitical risk, etc. This ambiguity between the two aspects might have produced a certain confusion by respondents. In this way, when rating the geo-economic location of Catalonia and Barcelona, companies could also be rating market factors, not of the internal market, but of its capacity to access surrounding markets (e.g. South Europe). On the other hand, when rating the market factors respondents were probably considering only the local market (e.g. Catalonia and Barcelona). This may explain why the rating of the geo-economic location of Catalonia and Barcelona is 3.83, one of the best-rated factors.

4. The analysis was done only in those categories where more than 12 answers were obtained. We have considered categories with fewer than 12 answers irrelevant.

6.7 Equivalences of Factors and Elements of Attraction

Several answers to questions from the survey were aggregated in order to analyse how companies perceive the most relevant factors. The first question was the one presented in Figure 29, which offered respondents the possibility to choose and rank 12 factors of investment, that is, elements that they analyse to decide where to invest. This question was combined with the answers to the 24 questions where different elements of Catalonia and Barcelona were ranked from 1 to 5. The Figure 37 below shows how each element of attractiveness was assigned to the relevant factors, and how the aggregated grading was calculated:

Figure 37 -
Equivalence table of factors and variables of attraction

Factor	Variable
Attractive lifestyle	Quality of life
Infrastructures	Infrastructures
Professional network factors	Competitiveness of Business partners Existence of attractive clusters
Innovation factors	Entrepreneur network Policies to foster innovation Investment in R&D&i Knowledge transfer from academia to businesses
Market factors	Market potential
Administration/Institutional factors	Ease of doing business Legal security Public policies to support investment and business activities Taxation Political stability
Costs	Labour costs Energy costs Rental costs General operating costs
Geographical factors	Geo-economic location
Human Capital	Quality of education system (schools and universities) Skilled workforce availability Availability of relevant training and education programmes
Macroeconomic factors	Economic stability

6.8 Survey data

6.8.1 Survey

The survey answered by decision makers from international companies was done via an online survey platform (Surveygizmo) that allowed the logic of questions to be programmed depending on the answers provided.

This section presents the survey questions:

1. Does your company have any international operations?

- Yes
- No

2. (If answered “No” in “Does your company have any international operations?”) **Is your company planning to invest abroad in the future?**

- Yes
- No

3. (If answered “Yes” in “Does your company have any international operations?”) **Does your firm have any investments in Spain?**

- Yes
- No

4. (If answered “Yes” in “Does your firm have any investments in Spain?”) **Does your firm have any investments in Barcelona or Catalonia?**

- Yes
- No

5. (If answered “Yes” in “Does your firm have any investments in Barcelona or Catalonia?”) **Please choose which of the following activities your company is carrying out in Barcelona/ Catalonia**

- Business services
- Contact centres
- Design
- Headquarters
- Logistics
- Production
- R&D&i
- Retail trade
- Sales and marketing
- Shared services (Back-office activities)
- Other

6. (If answered “No” in “Does your firm have any investments in Barcelona or Catalonia?”, “No” in “Does your company have any investments in Spain?” or “Yes” in “Is your company planning to invest abroad in the future?”) **Are you established in Europe?**

- Yes
- No

7. (If answered “No” in “Does your firm have any investments in Barcelona or Catalonia?”, “No” in “Does your firm have any investments in Spain?” or “Yes” in “Is your company planning to invest abroad in the future?”) **Have you ever been to Barcelona/Catalonia?**

- No
- Yes, as a tourist
- Yes, on a business trip
- Yes, both as a tourist and on a business trip

8. Please select which of the following factors you consider to be relevant when choosing Business Location (choose at least three)

- Macroeconomic factors** (Exchange rate, growth, expectations, credit risk, etc.)
- Administration / Institutional factors** (Political stability, ease of doing business)
- Market factors** (market size, openness of the market, market growth potential, etc.)
- Costs** (Labour costs, rental costs, etc.)
- Infrastructure and real state factors** (Transportation and logistics, ICT, availability of space, etc.)

- **Human Capital** (Education, research, skilled workers, etc.)
- **Professional network factors** (Business ecosystems, clusters, etc.)
- **Geographical factors** (Geo-economic location, ease of travelling to the home country, geopolitical risk, etc.)
- **Innovation factors** (R&D&i, access to local advanced knowledge, etc.)
- **Attractive lifestyle factors** (Quality, image of the city / region, etc.)
- **Knowledge of the region** (Market, culture, etc.)
- Other: _____

9. Please rank the factors you have previously selected in terms of importance when choosing a Business Location

10. Additionally, when deciding where to invest, which of the following factors do you take into consideration?

- Performance of similar firms in the region
- Opinion of some of the firm's suppliers that also operate in the region
- Opinion of some other firms that also operate in the region and have good relationship with yours
- None of above

11. How would you rank the potential of the Catalan Market? (1 - Poor, 3 – Neutral, 5 - Excellent)

12. How would you rate Barcelona/Catalonia in terms of infrastructures? (1 - Poor, 3 – Neutral, 5 - Excellent)

13. How would you rate the following aspects of Barcelona/Catalonia related to professional (or business) network factors? (1 - Poor, 3 – Neutral, 5 - Excellent)

- _ Competitiveness of Business Partners
- _ Entrepreneur network
- _ Existence of attractive clusters

14. How would you rate the following aspects of Barcelona/Catalonia related to professional (or business) innovation factors? (1 - Poor, 3 – Neutral, 5 - Excellent)

- _ Investment in R&D&i
- _ Knowledge transfer from academia to business
- _ Policies to foster innovation

15. How would you rate the Quality of life (lifestyle) of Barcelona/Catalonia? (1 - Poor, 3 – Neutral, 5 - Excellent)

16. How would you rate the following aspects of Barcelona/Catalonia related to Administration / Institutional factors? (1 - Poor, 3 – Neutral, 5 - Excellent)

- _ Ease of doing business
- _ Legal security
- _ Public policies to support investment and business activities
- _ Taxation
- _ Political stability

17. Do you think that political instability in Catalonia and Spain could affect your perception of Barcelona/Catalonia?

- It doesn't have any impact on my perception of Barcelona/Catalonia
- Only if Catalonia were to leave the EU that would make me change my mind about Barcelona/Catalonia
- We would have to analyse the situation as it goes
- It is impossible that the process affects the attractiveness of the region in terms of investment
- The current political instability is already making the region unattractive to investment
- Other
- Don't know/No opinion

18. How would you rate the following aspects of Barcelona/Catalonia related to Cost factors?

(1 - Poor, 3 – Neutral, 5 - Excellent)

- Labor costs
- Energy costs
- Rental costs
- Space availability

19. How would you rate the Geo-economic location of Barcelona/Catalonia?

(1 - Poor, 3 – Neutral, 5 - Excellent)

20. How would you rate the following aspects of Barcelona/Catalonia related to Human Capital factors?

(1 - Poor, 3 – Neutral, 5 - Excellent)

- Quality of the education system (schools and universities)
- Skilled workforce availability
- Availability of relevant training and education programs

21. How would you rate the Economic stability of Barcelona/Catalonia (exchange rate, inflation, interest rate, etc.)

(1 - Poor, 3 – Neutral, 5 - Excellent)

22. Overall, do you think Barcelona/Catalonia is an attractive investment location?

(1 – Very unattractive, 3 – Neutral, 5 – Very attractive)

23. (If answered “No” in “Does your firm have any investments in Barcelona or Catalonia”, “No” in “Does your firm have any investments in Spain” or “Yes” in “Is your company planning to invest abroad in the future?”) Has your company ever considered investing in Barcelona/Catalonia?

- Yes
- No

24. (If answered “No” in “Does your firm have investments in Spain?”, “No” in “Does your firm have any investments in Barcelona or Catalonia?” or “Yes” in “Is your company planning to invest abroad in the future?”) Is your firm planning on increasing its investment abroad in the future?

- Yes
- No

25. (If answered “Yes” in “Is your firm planning on increasing its investment abroad in the future?”) Is your firm planning or increasing its investment in Southern Europe in the future?

- Yes
- No

26. (If answered “Yes” in “Is your firm planning on investing or increasing its investment in Southern Europe in the future?”) If so, where?

27. (If answered “Yes” in “Does your firm have any investments in Barcelona or Catalonia”) Is your company planning on increasing its investment in Barcelona/Catalonia in the future

- Yes
- No

28. (If answered “Yes” in “Is your firm planning on increasing its investment abroad in the future?”) In which of the following activities is your firm planning to invest in the future?

- Business Services
- Contact Centres
- Design
- Headquarters
- Logistics
- Production
- R&D&i
- Retail Trade
- Sales and Marketing
- Shared Services (Back-office)
- Other: ____

29. (If answered “Yes” in “Is your company planning on increasing its investment in Barcelona/Catalonia in the future?”) **In which of the following activities is your firm planning to invest in Barcelona/Catalonia in the future?**

- Business Services
- Contact Centres
- Design
- Headquarters
- Logistics
- Production
- R&D&i
- Retail Trade
- Sales and Marketing
- Shared Services (Back-office)
- Other: _____

30. (If answered “Yes” or “No” in “Is your company planning to invest abroad in the future?”, “No” in “Does your firm have any investments in Spain?” or “No” in “Does your firm have any investments in Barcelona or Catalonia?”) **How likely would your company be to invest in a region with the following characteristics: Leading scientific facilities, and innovative ecosystem, an important presence of start-ups, local talent availability and international talent attraction capacity, head to business mind-set and a great quality of life**

- Very unlikely
- Unlikely
- Neutral
- Likely
- Extremely likely

31. (If answered “Very unlikely” “Unlikely” “Neutral” in “How likely would your company be to invest in a region with the following characteristics: Leading scientific facilities, an innovative ecosystem, an important presence of start-ups, local talent availability and international talent attraction capacity, head to business mind-set and a great quality of life?”) **Why?**

32. (If answered “No” in “Does your firm have any investments in Spain?” or “No” in “Does your firm have any investments in Barcelona or Catalonia?”) **Which of the following strategies has your firm used to invest abroad?**

- Entrepreneurship
- Vertical investment (part of a service or production process)
- Horizontal investment (same activities as at home)
- Conglomerate (Foreign takeover)

33. (If answered “No” in “Is your company planning on increasing its investment in Barcelona/Catalonia in the future?”) **Why not?**

- Reinvesting in Barcelona/Catalonia is not aligned with the company’s strategy
- Due to some negative factors related to Barcelona/Catalonia, the firm is considering taking its investments elsewhere
- Other: _____

34. (If answered “Due to some negative factors related to Barcelona/Catalonia, the firm is considering taking its investments elsewhere” in “Why not?”) **What are these factors?**

35. (If answered “No” in “Is your company planning to invest abroad in the future?”) **What would you say are the main reasons for your firm to invest abroad?**

- Access to new markets
- Cut costs in production
- Innovative in processes or products/services
- Acquire knowledge of foreign companies that we can apply in our local market
- Sell products produced abroad to our market

36. **Which of the following best describes the main sector of your organization?**

- Aerospace & Defence
- Automotive

- Biotechnology
- Business & Financial Services
- Chemicals
- Construction & Manufacturing Materials
- Electronics
- Engines & Turbines
- Food, Tobacco & Beverages
- Hotels & Tourism
- Leisure, Entertainment & Media
- Life Sciences
- Machinery, Equipment & Tools
- Paper, Printing & Packaging
- Plastics
- Real Estate
- Retail & Consumer products
- Software & ICT
- Textiles
- Transport & Logistics
- Utilities, Energy & Extraction
- Other: _____

37. In which country is your firm's Global HQ located?

38. How many people is your company currently employing globally?

- Less than 10 people
- Between 10 and 50 people
- Between 51 and 250 people
- Between 251 and 500 people
- Between 501 and 1000 people
- Between 1001 and 5000 people
- Between 5001 and 10000 people
- More than 10000 people

39. (If not answered "No" in "Is your firm planning to invest abroad in the future?") Name the top 3 foreign cities in which your firm is currently investing

- City 1:
- City 2:
- City 3:

40. (If answered "Yes" in "Does your firm have any investments in Barcelona or Catalonia?") For how long have you been operating in Barcelona/Catalonia

- Less than a year
- Between 1 and 3 years
- Between 3 and 6 years
- Between 6 and 12 years
- Between 12 and 24 years
- More than 24 years

41. (If answered "No" in "Does your firm have any investments in Spain?" or "No" in "Does your firm have any investments in Barcelona or Catalonia?") For how long has your firm had international operations?

- Less than a year
- Between 1 and 3 years
- Between 3 and 6 years
- Between 6 and 12 years
- Between 12 and 24 years
- More than 24 years

42. (If answered "Yes" in "Does your firm have any investments in Barcelona or Catalonia?") Were you operating in the Spanish market before investing in Barcelona/Catalonia?

- Yes, we were already operating in the other Spanish regions
- No, Barcelona/Catalonia was our first location within Spain
- I do not know/No answer

43. (If answered "Yes" in "Does your firm have any investments in Barcelona or Catalonia?") Are your Spanish HQ located in Barcelona?

- Yes
- No

6.8.2 Survey respondents

Figure 38 below provides information on the distribution and profile of the survey respondents.

Figure 38 -
Profile of the respondents to the survey of executives from foreign companies

Origin of the survey respondents	Number of survey respondents	% of the total
Companies established in Catalonia		
Europe	28	61%
America	6	13%
Asia and Oceania	12	26%
TOTAL	46	100%
Companies not established in Catalonia		
Europe	48	47%
America	18	17%
Asia and Oceania	37	36%
TOTAL	103	100%

—
Source:
Own elaboration from fDi Markets data

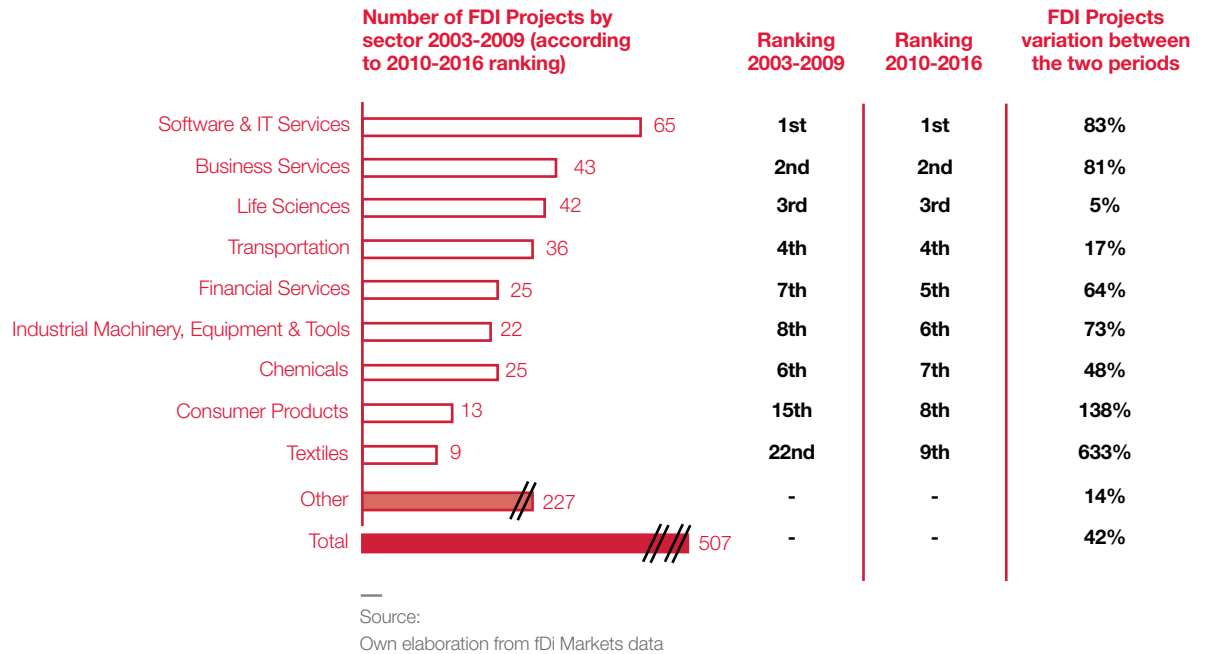
6.9 Annex: Additional data

In order to complete the information provided in the quantitative analysis, this Annex includes data on the destination of FDI Projects in Catalonia for the period 2003-2009, as compared to the 2010-2016 period analysed throughout the study. This Annex firstly provides data on FDI Projects by economic sector (as shown in section 3.3.2.1) and secondly by economic activities (in line with section 3.3.3.1).

The tables below include the total number of FDI Projects by sector/activity according to the 2010-2016 ranking (as shown in sections 3.3.2.1 and 3.3.3.1). Additionally, it shows the position of each sector/activity in the 2003-2009 ranking as well as the percentage variation between the two periods in terms of FDI Projects.

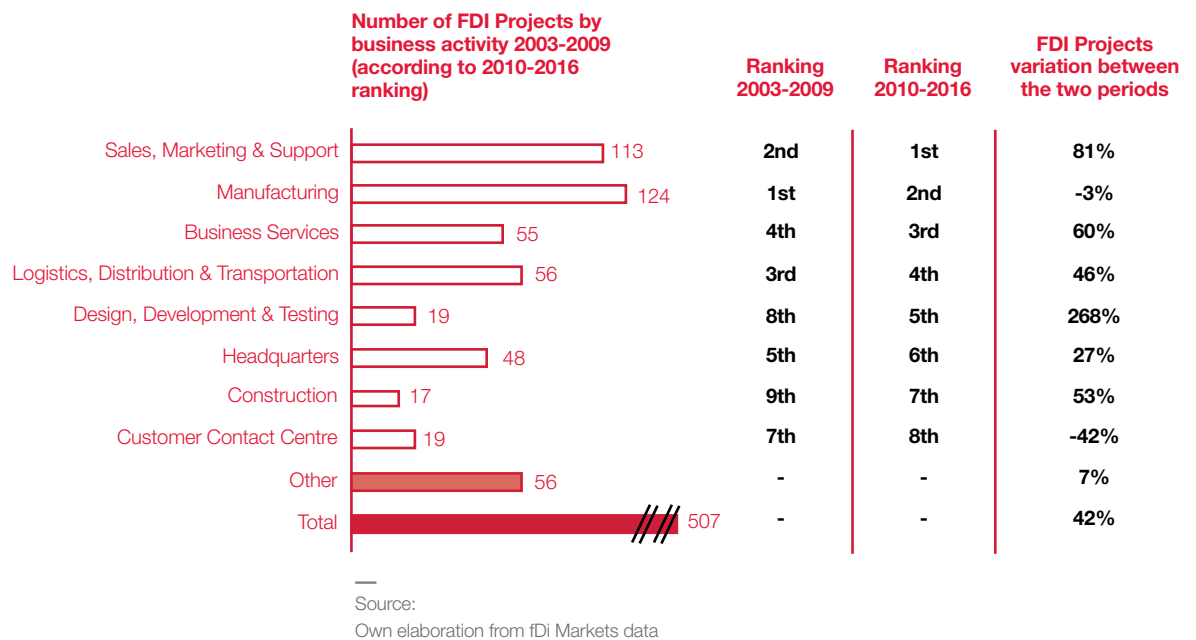
6.9.1 Sectors in Catalonia (2003-2009)

Figure 39 -
Number of FDI Projects by sector and their relative position in Catalonia, 2003-2016



6.9.2 Business activities in Catalonia (2003-2009)

Figure 40 -
Number of FDI Projects by business activity and their relative position in Catalonia, 2003-2016



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