



## Foreign direct investment in Spain: Regional distribution and determinants

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### ABSTRACT

The purpose of this paper is to analyse the regional distribution of foreign direct investment (FDI) in Spain and its main determinants between 1995 and 2005/2008. By means of using different indicators, the paper reveals the major traits of this distribution, among which its highly geographical concentration stands out. Afterwards, the paper performs an explanatory factor analysis to reduce to a manageable number of factors the vast array of FDI determinants considered in the literature. The econometric analysis carried out reveals that factors such as *economic potential*, *labour conditions* and *competitiveness* are important for attracting FDI both at aggregate and sectoral levels; on the contrary, *market size* is not relevant at all as booster of FDI. Finally, the analysis is extended to take account of the presence of spatial effects, the results showing the existence of negative geographical spillovers associated to the *economic potential* and *competitiveness* factors.

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### 1. Introduction

Over the last 40 years, Foreign Direct Investment (FDI) has been a prominent driver of the Spanish economic growth (Bajo, Díaz-Mora, & Díaz-Roldán, 2009).<sup>1</sup> FDI began to come to Spain during the 1960s, playing an important role in Spain's transition to a much more open, market oriented economy. This process continued at an even higher pace over the 1970s and early 1980s, but it was not until around mid eighties, as a result of the entry into the EU and the ensuing macroeconomic and political stability, that Spain became a really highly attractive host country for FDI. Notwithstanding the difficulty of international comparisons, this attractiveness is clearly reflected in the UNCTAD's *Inward FDI Performance Index* (UNCTAD, 2002), as it happens that, relative to its size (proxied by GDP), the Spanish economy is, for instance, more successful than the French, American or Italian economies in attracting FDI.

A number of studies have analysed the characteristics, dynamics, determinants and economic implications of FDI in Spain (Bajo et al., 2009; Bajo & López, 2002; Bajo & Sosvilla, 1994; Barrios, Dimelis, Louri, & Strobl, 2004; Barrios & Strobl, 2002; Martín & Velázquez, 1997). However, this piece of applied research has mainly adopted a national perspective and paid scant or none attention to the analysis of the spatial (notably regional) distribution of FDI, the most relevant exceptions being Egea and López (1991), Pelegrín (2002, 2003), Díaz-Vázquez (2003a, 2003b), Fernández-Otheo and Myro (2004), Rodríguez (2005) and Rodríguez and Pallás (2008). But, as regional economic realities in Spain are far from being homogeneous and FDI is highly unevenly distributed across regions, it seems to be appropriate to pose and try to solve at least two questions: (a) how

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<sup>1</sup> Although the theoretical impact of FDI on economic growth in the host economy goes through various ways, the most relevant tend to be the increase in financial and physical capital and the improvement in technology and know-how. However, empirical evidence documenting these effects is not conclusive. Lim (2001) offers an interesting survey of the literature on the relations between FDI and growth.

attractive are the Spanish regions to FDI? and (b) which are the main determinants of this attractiveness? More specifically, the paper attempts to contribute in four ways: first, and to get more insight about the regional distribution than in previous papers, it employs different indicators of inward FDI; secondly, it uses factor analysis to reduce the huge number of variables potentially explaining the regional distribution of FDI to just a few of them called factors; thirdly, the paper carries out estimates of an FDI equation not only at aggregate but also at sectoral level; and fourthly, it explores the existence of spatial spillovers in the attracting factors to assess whether regions compete or not for FDI.

The remainder of the paper is organised as follows. In Section 2 a review of the regional distribution of FDI in Spain is developed. Afterwards, Section 3 offers a brief literature survey on intra-country FDI determinants, mainly with relation to the Spanish case. Drawing from this literature, Section 4 proceeds in two steps: first, it performs the aforementioned exploratory factor analysis, and second, it specifies the model employed, estimates it and presents the main results. Section 5 enlarges the previous model by including spatial lags of FDI attraction factors. Finally, some concluding remarks and policy implications are offered in Section 6.

## 2. The regional distribution of FDI in Spain

In this section the regional distribution of FDI in Spain is analysed. The sample comprises 17 regions or autonomous communities. The data about inward FDI, provided by the Department of Trade and Investment of the Spanish Ministry of Industry, Tourism and Trade, refer to gross FDI. As for the rest of the variables employed in the paper (see Appendix A), the main data source is Cereijo, Turrión, and Velázquez (2007), although some of them have been directly drawn from the Spanish Statistical Institute (INE) website. For reasons of data availability the period of analysis goes from 1995 to, depending on the specific issue at hand, 2005 or 2008. Finally, it is important to note that all monetary variables are expressed in constant euros of 2000.

Different characteristics typify the regional distribution of cumulative FDI in Spain. In particular, the first three columns of Table 1 unveil two main features:

- FDI is highly concentrated in just a few regions. Madrid and Cataluña received, on average, 79% of total FDI, although it must be highlighted that the volume of the first region is four and a half times bigger than that of the second.
- By splitting the whole period into three subperiods it is observed that there is a remarkable persistence in the ranking of FDI regional distribution.

Although interesting, this information does not actually offer any clue about how well a region performed relative to the others. To deal with this issue the paper employs the two indices introduced by UNCTAD's World Investment Report for 2002 to benchmark success in attracting FDI: the *Inward FDI Performance Index* and the *Inward FDI Potential Index*. The *Performance Index*, or location index, simply consists in scaling FDI inflows by GDP; according to the information displayed in the middle columns of Table 1 for the period 1995–2005, only Madrid has a *Performance Index* consistently greater than one. Generally speaking, these results are in line with those previously offered: Madrid gets a share of Spanish FDI much greater (three and a half times) than its share of GDP; the rest of the regions, including Cataluña, get less than expected FDI inflows according to their respective GDP.

**Table 1**  
Accumulated inward FDI in Spanish regions.

Regions	Percentage distribution				Performance index			Potential index		
	1995–2000	2001–2005	2006–2008	1995–2008	1995–2000	2001–2005	1995–2005	1995–2000	2001–2005	1995–2005
Andalucía	2.1	1.6	1.9	1.9	0.157	0.118	0.135	0.336	0.338	0.337
Aragón	0.8	5.5	0.7	2.7	0.234	1.771	1.069	0.543	0.588	0.563
Asturias	1.3	2.1	0.1	1.3	0.559	0.955	0.770	0.388	0.405	0.396
Baleares	1.2	0.8	1.0	1.0	0.477	0.333	0.397	0.284	0.236	0.262
Canarias	4.0	2.7	1.2	2.8	1.009	0.667	0.818	0.365	0.336	0.352
Cantabria	0.0	0.0	0.2	0.1	0.039	0.030	0.034	0.411	0.413	0.412
Castilla y León	0.3	0.4	0.2	0.3	0.049	0.081	0.066	0.372	0.447	0.406
Castilla-La Mancha	0.2	0.4	0.5	0.3	0.046	0.122	0.088	0.337	0.387	0.360
Cataluña	16.5	15.7	11.1	14.8	0.867	0.830	0.846	0.545	0.590	0.566
C. Valenciana	2.3	5.0	5.8	4.3	0.244	0.515	0.396	0.409	0.392	0.401
Extremadura	0.1	0.1	0.0	0.1	0.071	0.078	0.075	0.320	0.347	0.332
Galicia	0.3	1.4	0.2	0.7	0.058	0.271	0.172	0.364	0.404	0.382
Madrid	65.5	58.9	71.3	64.2	3.795	3.316	3.532	0.615	0.625	0.620
Murcia	0.2	1.0	0.4	0.6	0.104	0.416	0.282	0.406	0.441	0.422
Navarra	0.5	0.1	0.3	0.3	0.317	0.074	0.183	0.622	0.684	0.651
País Vasco	4.6	3.9	5.2	4.5	0.729	0.636	0.678	0.638	0.658	0.647
Rioja (La)	0.1	0.1	0.0	0.1	0.147	0.137	0.141	0.439	0.442	0.441
Spain	100.0	100.0	100.0	100.0						

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