



# Regional Focus

A series of short papers on regional research and indicators  
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## Public investment in Spain

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### Main findings

Regional and local authorities play an increasingly key role in the expenditure decisions of the public sector. In the context of the multi-level governance system, many decisions regarding Cohesion Policy and national equivalent expenditure take place at sub-national level. As a consequence, information about the expenditure of the different government levels is essential to understand the impact of public expenditure decisions in the economy.

This Regional Focus examines the role of public expenditure in Spain. The main findings can be summarised as follows:

- Total public expenditure in Spain was about EUR 380 billion in 2006 which accounts for 38% of the national GDP.
- The size of the public sector shrank in Spain over the period 1995-2007 from 44.4% to 38.8%. Most of this reduction in public expenditure happened in the second half of the 1990s and was in line with the decline observed in the rest of the EU in the years prior to the achievement of Monetary Union in 1999. The public sector in Spain is now among the smallest public sectors in the EU in terms of GDP.
- The total expenditure of the sub-national levels was over EUR 200 billion in 2006. Public finances have been decentralised over time in Spain in parallel with a gradual process of devolution of powers to the regions. As a result, Spain is now the most decentralised country in the EU in terms of public expenditure managed by the sub-national levels of government compared to the total expenditure of the public sector. Over the reference period, the trends of financial decentralisation were much more intense than the EU average.
- Public investment followed the same process of decentralisation until 1999, before coming to a halt. Almost two thirds of the EUR 58 billion of total capital expenditure in 2006 happened at sub-national level.
- Though total capital expenditure was not particularly concentrated on the less developed regions of the country in per head terms, it was so when measured in terms of share of regional GDP.

- The ERDF and the Cohesion Fund (CF) account for at least 15% of total capital expenditure (even over 20% in some cases) in Convergence Objective and 'phasing-out' regions. The two Funds also account for an important part of the capital expenditure (around 25%) undertaken by the regional governments in some of the most prosperous regions of the country (e.g. Madrid, Catalunya, Basque Country).
- Expenditure in research, development and innovation is highly concentrated in four regions (Madrid, Catalunya, Basque Country and Navarra). On average, ERDF accounts for 23% of the total public effort in research and development in Spain and is over 20% in some non-Convergence Objective regions as well.

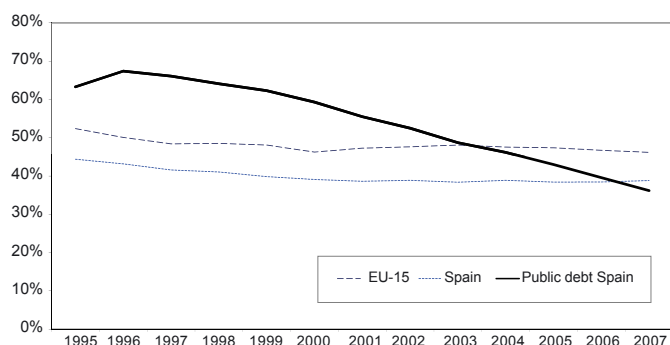
### 1. Public expenditure

Public expenditure in Spain stood at about EUR 380 billion in 2006 (i.e. around EUR 8 500 per capita). It accounted for about 38% of total GDP, confirming that the relative size of the public sector in the economy is significantly smaller in Spain than the EU average (around EUR 11 000 per capita and almost 47% of the EU GDP).

The percentage has shrunk gradually over the last twelve years from almost 45% of GDP in 1995 to 39% in 2007. Most of this process occurred in the period 1995-2000 as a result of the adjustments necessary to join the Monetary Union. Afterwards, the weight of the public administration compared to the size of the national economy remained stable. The size of the public sector in 2000 was already just 39.1% of GDP. This was in line with the trends observed in the EU-15 over the same period. Indeed, total public expenditure in the EU moved from 52.4% of GDP in 1995 to 46.2% in 2007 with most of this reduction happening in the second half of the 1990s. Over the reference period 1995-2007 there has consistently been a gap between Spain and the rest of the EU-15 which varies between 7 and 8 percentage points of GDP.

In parallel, public debt fell from more than 60% of GDP in 1995 to less than 40% in 2008. This swift reduction was due to government decisions, robust GDP growth rates over the reference period, and to the gradual drop in interest debt payments. Indeed, Spain stands out in its reduction of public debt compared to the EU-15 average, where reduction was just 10 percentage points of GDP. However, Spanish public debt is expected to exceed 60% in 2010 as a result of the effects of the economic crisis.

**Graph 1 - Total public expenditure and public debt as a % of GDP**



Source: EUROSTAT

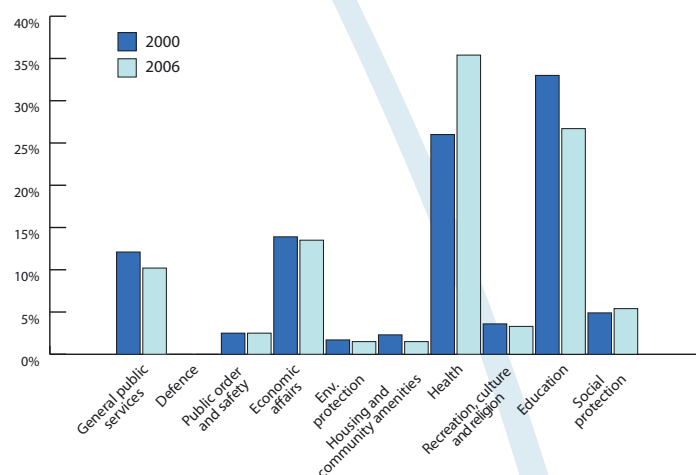
The aggregate budget of the different bodies that make up the sub-national Spanish public sector (mainly, Comunidades Autónomas, Diputaciones provinciales and Municipios) amounts to over EUR 200 billion every year, meaning that around one half of the public expenditure in Spain is decentralised.

The evolution of public finances, from the expenditure side, reflects the process of decentralisation observed in Spain in the last fifteen years. Even though this process was relatively homogeneous over time, it peaked in 2002 as a result of responsibility for healthcare being handed over to many regions. Figures suggest that it is mostly the regional level which has benefited from financial decentralisation within a context of gradual devolution of powers. The relative weight of the regional level has indeed evolved from 22% to almost 37% of total public expenditure. This happened principally at the expense of the Central Government (from 34% to 20%), while the level of expenditure at the local level has remained fairly stable.

The speed of financial devolution occurred much faster in Spain than in the rest of the European Union. While the increase in the resources managed by the sub-national level was just slightly more than 1% in terms of total public expenditure (from 27% in 1999 to 28.2% in 2007), it was about 13% in Spain (from 31.7% in 1999 to 44.5% in 2007).

The process of devolution of powers is clearly reflected in the composition of the public expenditure of the regions. The transfer of education and health to the regional level resulted in more than one half of their financial resources being devoted to these domains. Even though expenditure in other areas is significantly lower, the category 'economic affairs', which includes most of the investments in basic infrastructure, accounts for almost 15% of total regional expenditure. A distinct trend observed in the period 2000-2006 is the progressive increase of expenditure in health and a relative decline of expenditure in education (including most of the human capital related investments).

**Graph 2 - Total expenditure\* of Regional Governments by area**



\* The categories are presented according to the United Nations Classification Of the Functions Of Government (COFOG).  
Source: EUROSTAT

## 2. Public investment

Total capital expenditure is the total amount of public resources devoted to investment and, therefore, will be used as a synonym of public investment throughout this report. Capital expenditure<sup>1</sup> is that part of the financial resources which is not consumed within the same year, but whose assets are used repeatedly in production processes over more than one year.

Total public investment in Spain reached more than EUR 50 billion in 2006 (i.e. EUR 1 150 per head). This amount represents around 13.4% of total public expenditure and about 5.2% of Spanish GDP in 2006. It ranks second among EU-15 countries but below most of the new Member States.

**Table 1: Public investment in Spain (2006)**

	Million EUR	EUR per head	% of GDP	% of public expenditure	% of public investment
National	16 684	379	1.7%	4.4%	32.9%
Regional	21 187	481	2.2%	5.6%	41.8%
Local	12 792	290	1.3%	3.4%	25.2%
<b>Total</b>	<b>50 663</b>	<b>1 150</b>	<b>5.2%</b>	<b>13.4%</b>	<b>100.0%</b>

Source: EUROSTAT and Ministry of Finance

While it went through a sharp reduction of around 1 percentage point of GDP in 1996, public investment remained relatively stable afterwards and was therefore barely affected by the reduction of total public expenditure.

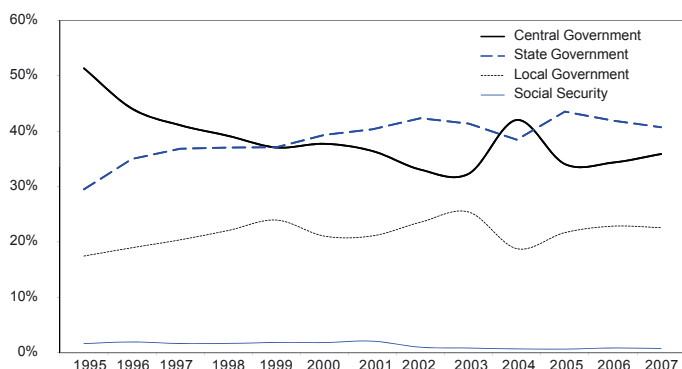
Public investment followed the same trend of decentralisation observed in total public expenditure. The extent of decentralisation is even more remarkable (about 67% of the total) compared to the overall decentralisation of public expenditure. This is a feature shared by the majority of the EU Member States. Indeed about two out of every three euros devoted to public investment in the EU are spent by sub-national levels of government.

<sup>1</sup> Capital expenditure is defined as P51 (Gross Fixed Capital Formation) and D9 (Capital Transfers Consolidated) adhering to the nomenclature used by the European System of Accounts (ESA-95).

Regions and municipalities have played an increasingly important role for investment in Spain. More than two thirds of capital expenditure happens at sub-national level which puts Spain in the seventh place in the EU behind Belgium, Italy, Ireland, Germany, France and Austria. In addition, capital expenditure accounts, on average, for almost 15% of regional public expenditure in the country.

Trends observed for capital expenditure in the period 1995-2007 are similar to those outlined for total public expenditure. That is, the relative weight of Central Government declines over time (with the exception of the peak in 2004) to the benefit of the regions. They account already for more than 40% of the total capital expenditure of the public sector. Again, the importance of the local public sector remains fairly stable.

**Graph 3 - Capital expenditure per level 1995-2007**

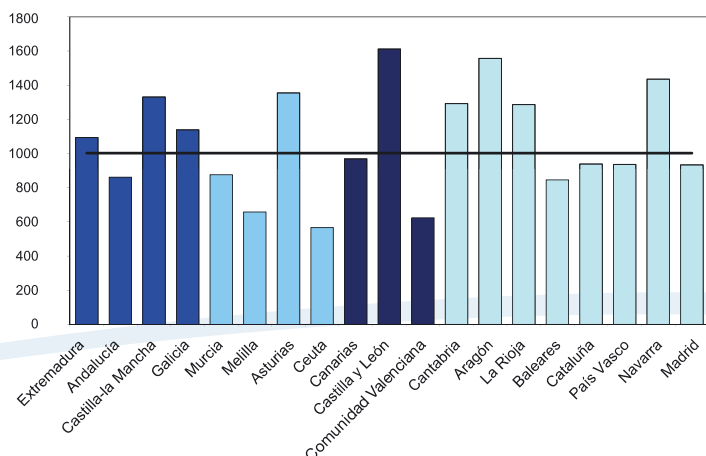


Source: EUROSTAT

Graph 4 shows the average estimated capital expenditure per year in the different Spanish regions over the period 2002-2006<sup>2</sup>.

The graph does not indicate a clear co-relation between the prosperity of a region and the capital expenditure undertaken by the public sector. Variations between regions in the level of expenditure are significant. They vary from more than EUR 1600 per head in Castilla y León to barely EUR 600 in the Comunidad Valenciana. Average national expenditure over the period 2002-2006 is represented by the thick, black line (EUR 1 002).

**Graph 4 - Average capital expenditure per head per year 2002-2006 (in EUR)**

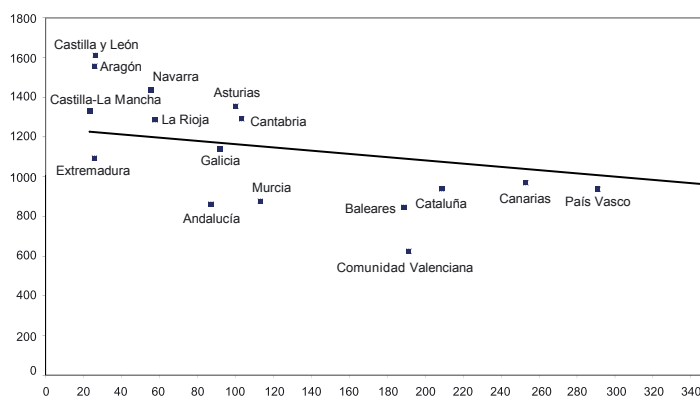


Source: Ministry of Finance and DG REGIO calculations

Nine regions are above the national average while ten are below it, suggesting that, in general, there is not a high concentration of public investment. All the Convergence regions enjoy levels of expenditure higher than the average except Andalucía, which is the most populated in the country, accounting for about 57% of the total population living in the four Spanish Convergence regions. The five regions and two autonomous cities under transitional arrangements in EU Cohesion Policy ('phasing-out' and 'phasing-in') tend to benefit from lower levels of public investment than the national average with the exceptions of Asturias and Castilla y León, which is the region with the highest level of public investment per head in the country. This is the group in which differences between regions are the highest. Finally, the four smallest regions, which are among the eight most prosperous in the country, enjoy rates of public investment higher than the national average.

Distribution of public investment across regions suggests, however, some correlation with the density of population. Disparities in population density between regions are significant in Spain. Apart from the cases of the autonomous regions of Ceuta and Melilla, they vary between 23 inhabitants per square kilometre in Castilla-la-Mancha (26 in Aragón, Castilla y León and Extremadura) and more than 700 in the capital region Madrid which is, apart from Ceuta and Melilla, by far the most densely populated. Lower levels of population density often mean higher unitary costs in the provision of public goods and services such as health or education. Graph 5<sup>3</sup> shows that public investment per head in Spain tends to be higher in those regions with lower levels of population density.

**Graph 5 - Public investment in EUR per head (Y) and density of population in inhabs/Km<sup>2</sup> (X)**



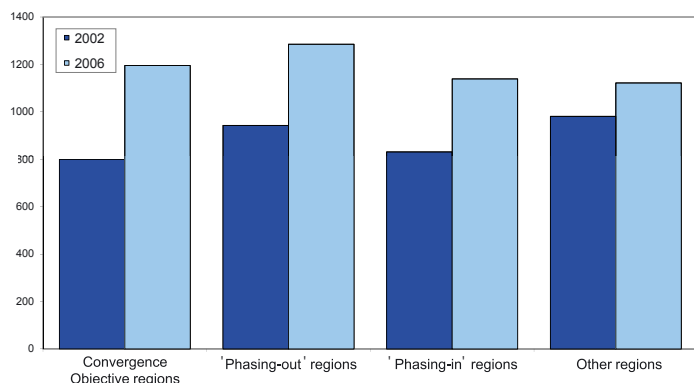
Source: EUROSTAT and Ministry of Finance

<sup>2</sup>The regions are listed in the graph according to their GDP per head in PPS in 2004.

<sup>3</sup>Madrid, Ceuta and Melilla do not feature as their density of population is higher than 500 inhabitants per km<sup>2</sup>.

Graphs 6 and 7 confirm that there is no particular concentration of public expenditure in the regions according to their levels of GDP per head. While there may be significant differences of expenditure within each group (as shown by Graph 5), public investment over the period 2002-2006 is evenly distributed across the different groups of regions, when classified according to their 'status' under EU Cohesion Policy. On average, yearly capital expenditure per head was very similar in the four groups of regions (between EUR 1 066 in 'phasing-out' regions and EUR 975 in 'phasing-in' regions).

**Graph 6 - Capital expenditure per head (in EUR)**



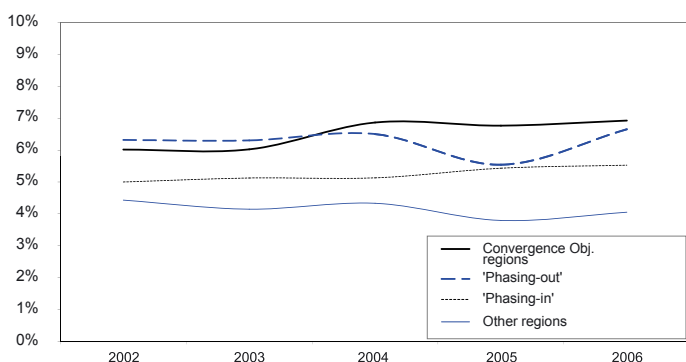
Source: Ministry of Finance and DG REGIO calculations

The trends observed throughout the period reveal that, in a context of significant increase of capital expenditure per head in the country in the last years of the period 2002-2006, Convergence regions and the transition regions tended to be favoured over time at the expense of the richest regions. In fact, these regions benefited less than others from the increased ratios of public investment per head. While the increase, in nominal terms, was almost 50% in the Convergence regions and more than 35% in transition regions between 2002 and 2006, it was just 14% in the other regions of the country.

Let's look now at the result in terms of GDP. Capital expenditure in Spain accounted, on average, for 5% of national GDP over the period 2002-2006. Distinct distributive policies should allocate a higher proportion of resources to the less developed regions compared to the size of the regional economies.

The graph below suggests some concentration of public investment in less developed regions in terms of GDP. All the Convergence Objective regions 2007-2013 enjoyed higher levels of capital expenditure than the national average.

**Graph 7 - Capital expenditure as a % of GDP 2002-2006**



Source: Ministry of Finance, EUROSTAT and DG REGIO calculations

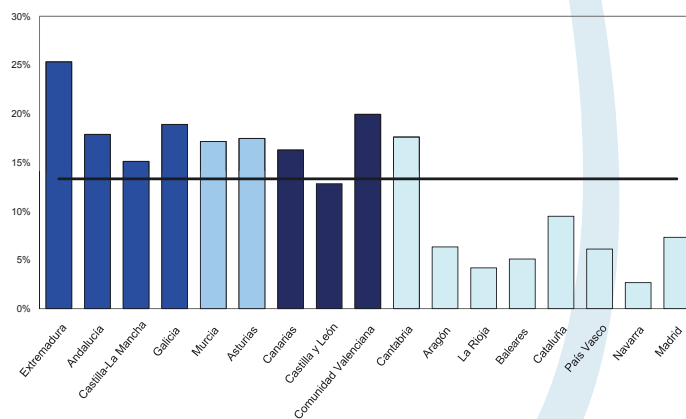
Moreover, it reveals that the concentration of public investment in the less developed regions of the country was improved over time. In 2006 capital expenditure accounted for almost 7% of GDP in both Convergence and 'phasing-out' regions.

This proportion compares to about 5.5% in 'phasing-in' regions and barely 4% in the other regions of the country. In conclusion, empirical evidence shows that when analysing public investment in terms of GDP, there is some inverse correlation between the total public resources invested in a region and its relative level of wealth. This co-relation is, however, barely observed when data on public investment are expressed in per head terms.

### 3. EU Cohesion Policy in public investment

On average, ERDF and CF represented more than 13% of total capital expenditure in Spain over the period 2002-2006. The relative weight of ERDF and CF in total capital expenditure is, as one could expect, substantially higher in Convergence Objective and 'phasing-out' regions. In most of them, ERDF and CF account for at least 15% of total capital expenditure undertaken in these regions, and even more than 25% in Extremadura.

**Graph 8 - ERDF and CF in total capital expenditure 2002-2006**

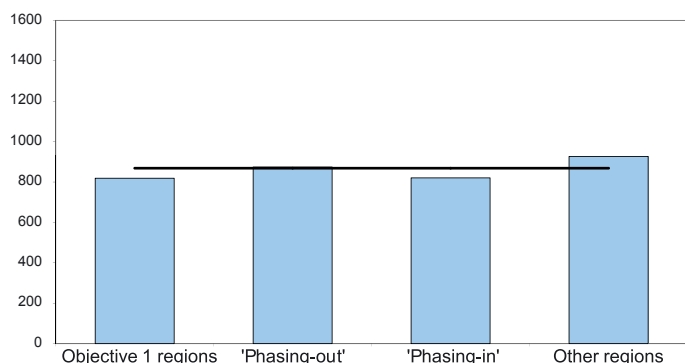


Source: Ministry of Finance, EUROSTAT and DG REGIO calculations

It is worth taking a look at what the situation would be like in the absence of EU Cohesion Policy. The following graph shows the national capital expenditure in the four groups of regions excluding the allocations of EU Cohesion Policy. If we compare the results with Graph 8, the conclusion is that EU Cohesion Policy offsets, in favour of the Objective 1 regions, the weak concentration of public investment in the less developed regions of the country, per head, over the period 2000-2006. National public investment is indeed, on average, more than EUR 100 per head lower in Objective 1 regions (EUR 819) than in the most prosperous regions of the country (EUR 927).

Finally, the ERDF and the CF account for about 32% of capital expenditure undertaken at regional level in the country (that is, funds managed by the Regional Governments). It is more than 30% in all Convergence and 'phasing-out' regions, over 60% in Comunidad Valenciana (due to the low national investment in this region compared to the average) and about one half in Extremadura. As expected, this proportion is less significant in non-Objective 1 regions but, nevertheless, still important in some

**Graph 9 - Total capital expenditure per head per year excluding EU Cohesion Policy 2000-2006**



Source: Ministry of Finance, EUROSTAT and DG REGIO calculations

prosperous regions such as Catalunya (26%), Madrid (23%) and the Basque Country (24%) in which the policy represents about one out of every four euros invested by the regional governments.

#### 4. Research and Development as a strategic component of public investment

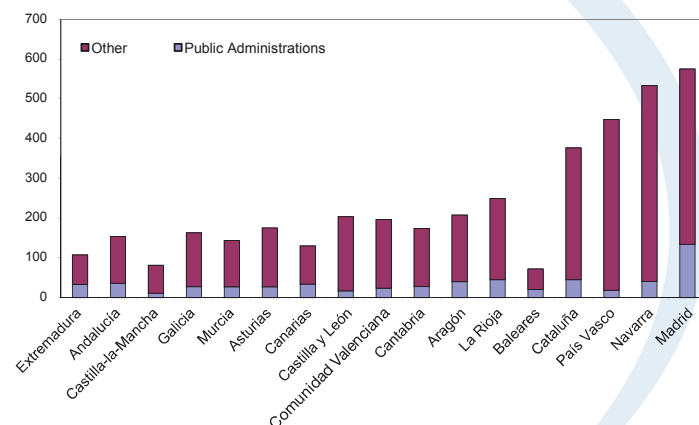
Expenditure in research and innovation is one of the key strategic types of expenditure for regional competitiveness over the medium and long term. Most of the responsibility for this policy has been delegated to the regional governments.

Total expenditure for research and development (both public and private) accounted for about EUR 11.8 billion in Spain in 2006 (1.2% of national GDP). Graph 10 shows that total investment in this area correlates closely with the relative prosperity of the region (they are classified according to their level of GDP per head). It is worth noting that investment in R&D is markedly concentrated in a few regions. Only four are above the national average, including Madrid and Catalunya which hold the two biggest metropolitan areas of the country. These four regions account for more than 60% of total expenditure in R&D whereas their population represents just 30% of the total.

The role of public administration in supporting research and development is somewhat less than 17% of total expenditure in this area. The greater part, more than half, comes from the private sector. The remaining expenditure is undertaken by the higher education institutions.

The relative importance of public sector support to expenditure in research and development tends to be less in regions with the highest levels of GDP per head. However, this co-relation is not constant. There are significant exceptions, such as Madrid, where the relative share of public expenditure in the total is well above the national average.

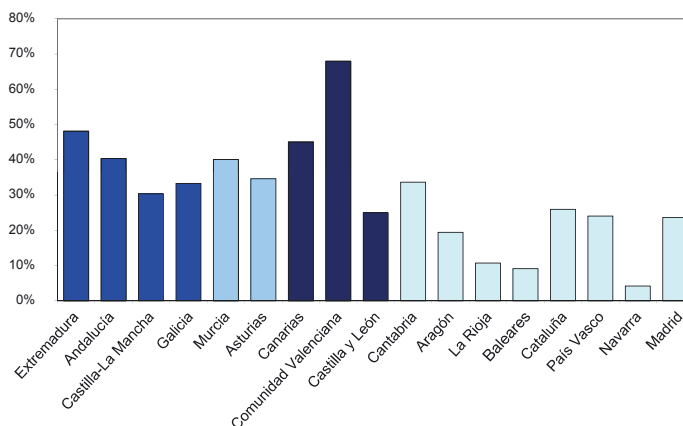
**Graph 10 - Total expenditure per head in R&D in 2006 (in EUR)**



Source: National Institute for Statistics and DG REGIO calculations

An interesting finding is that total ERDF allocations (CF is excluded in this case) account for an important part of public expenditure on R&D undertaken at regional level (23% on average). It is also worth noting that ERDF expenditure in R&D also accounts for a very significant part of the public effort also in some non-Convergence Objective regions, notably Comunidad Valenciana and Cantabria. In other words, EU Cohesion Policy seems to be essential in relatively prosperous regions to sustain public investment in R&D, a key strategic area for regional development over the medium term.

**Graph 11 - ERDF and CF in regional capital expenditure (average 2002-2006)**



Source: Ministry of Finance, EUROSTAT and DG REGIO calculations

## METHODOLOGICAL CONSIDERATIONS

**Data:** The sources of statistical data are the 'Ministerio de Economía y Hacienda' and the 'Presupuestos Generales del Estado' and 'Informes Económicos y Financieros de los PGE' for expenditure at national level. Data collected between November and December 2008 form the basis for the analysis. The main links to relevant information are the following:

<http://www.sgpg.pap.meh.es/sitios/sgpg/en-GB/Presupuestos/PresupuestosEjerciciosAnteriores/Paginas/PresupuestosEjerciciosAnteriores.aspx>

<http://www.sgpg.pap.meh.es/sitios/sgpg/en-GB/Presupuestos/PresupuestosCCAA/Paginas/PresupuestosCCAA.aspx>

<http://www.sgpg.pap.meh.es/sitios/sgpg/en-GB/Presupuestos/PresupuestosEntidadesLocales/Paginas/PresupuestosEntidadesLocales.aspx>

Data for national expenditure in research and development were collected from the National Institute for Statistics: <http://www.ine.es>

Data on expenditure undertaken at the national level (public administration and other bodies) in the different regions were obtained from the General Budget adopted by the Spanish Parliament every year. As the actual payments by region are not included in the report, which summarises the implementation

of the budget (ex-post), the average rate of execution stated in the report was applied to every region.

Data on expenditure at the regional and local levels were obtained from the website of the Ministry of Economy and Finance (see links above). These data are founded on the information submitted by the regional and local authorities to this Ministry.

The source of statistical data on EU Cohesion Policy is DG REGIO. Data at regional level are allocations (and not payments!) from the European Regional Development Fund (ERDF) and the Cohesion Fund granted in the period 2000-2006. Data on ESF were not included as comparable and reliable data on national equivalent expenditure are very difficult to collect.

**Time series:** For the national data the period is 2002-2006. There are no consolidated, fully reliable, comparable data at regional level before these dates. The figures corresponding to the allocations EU Cohesion Policy correspond to the period 2000-2006. For this reason, comparisons between national expenditure and EU expenditure are always in the context of average expenditure per year.

**Public investment or capital expenditure:** Real investments (roughly equivalent to the public Gross Fixed Capital Formation) and capital transfers.



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