

# 1

## FINANCIAL RESOURCES FOR RESEARCH AND INNOVATION



In the analysis of research and development (R&D) in Catalan higher education institutions, the acquisition of funding and expenditures on scientific activities must be considered as one of the key indicators. This section analyses university funding of R&D in Catalonia with comparisons to both Spain and Catalonia's closest European neighbours.

The analysis below examines the capacity of Catalan universities to attract funding for research, the majority of which comes from the participation of universities in public or private calls for proposals. In 2010 this accounted for 64% of funding, demonstrating the Catalan public university system's excellence through its capacity to attain considerable resources in competitive funding processes that evaluate these indicators. This has resulted in a substantial amount of research funds in relation to the total number of teaching and research staff at Catalan universities: €46,693 per researcher on average.

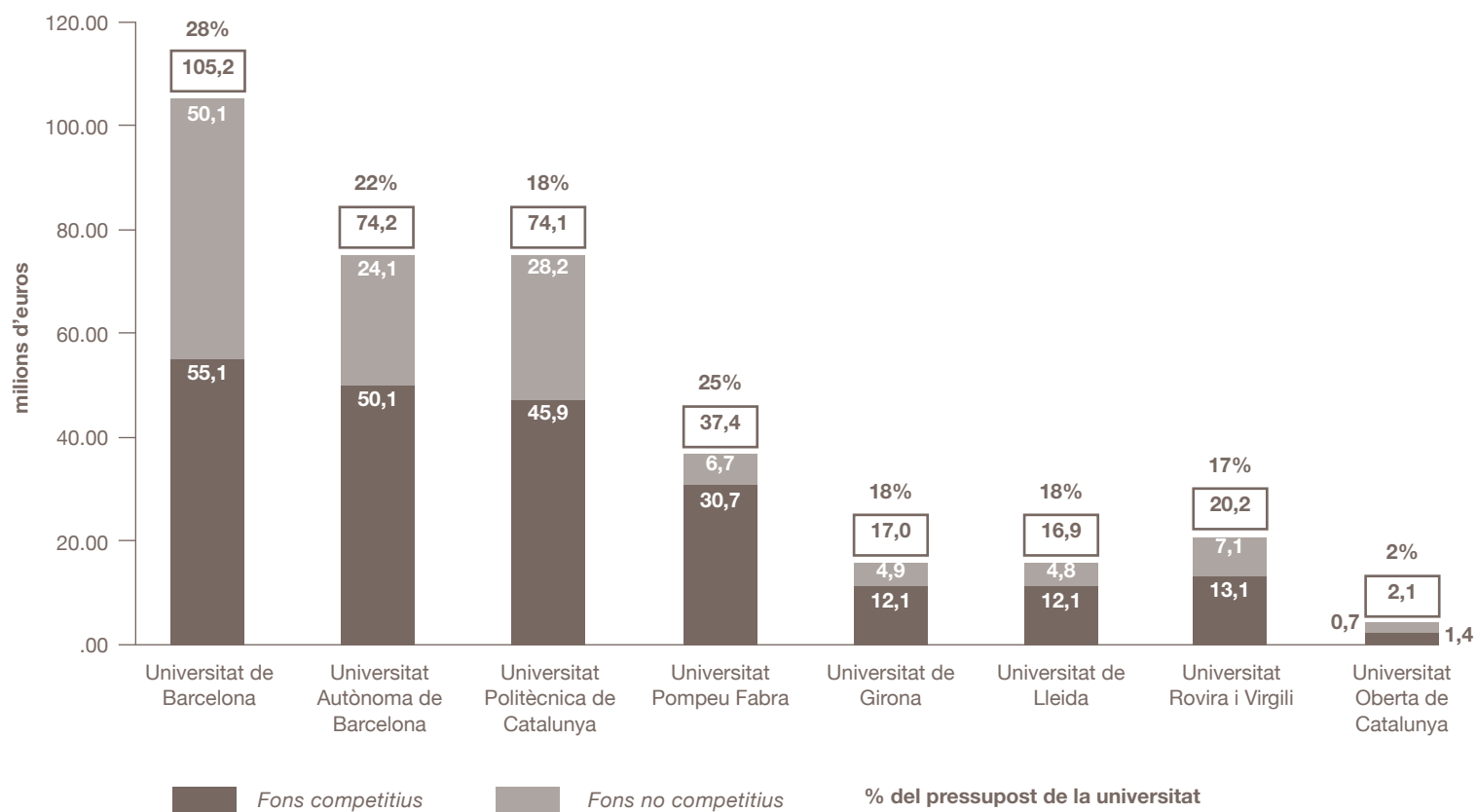
The total amount of resources obtained through competitive and non-competitive channels for public universities in 2010 was €347 million (€221 million from public and private calls for proposals and €126 million from non-competitive sources), which is equivalent to 20% of the total university budget. As for the significance of obtaining this research and development funding, according to the 2011 CYD report, in 2010 Catalonia spent a total of €755 million, 18% of total national expenditure in Spain. So for every euro obtained by public universities in Catalonia via the different avenues of R&D funding (347 million euros), Catalonia has invested twice as much to carry out this research (755 million euros). This shared responsibility of public higher education in Catalonia provides solid evidence of its firm commitment to research and development.

In 2010 funds obtained from European sources accounted for 22% of total funding, with the remaining 78% coming mainly from Spanish calls for proposals and funding provided by the Government of Catalonia. In general, the position of Catalonia in Spain has always been outstanding. Specifically, in terms of the 7th Framework Programme in the period from 2007 to 2010, Catalonia made significant strides forward, taking second place (with 29% of the total) after the Autonomous Community of Madrid (31% of the total), and first place in leadership of R&D activities (396), accounting for 38% of total activities headed by the autonomous communities of Spain. In all, in the first four years of the European Union's 7th Framework Programme, Catalan universities managed to obtain 168 million euros in funding. Furthermore, in terms of human resources, in the period from 2007 to 2010, Catalonia was awarded 51 concessions (19 of these for public universities) from European Research Council (ERC) calls for proposals aimed at both junior and senior researchers (Starting Grants and Advanced Grants, respectively) which have been instrumental in Catalonia's leading research. This figure represents 57% of the total for all of Spain and places Catalonia in the fourth position for all of Europe.

So over the last fifteen years Catalan public universities have received core funding primarily from Spanish governmental programmes complemented by subsidies for infrastructure, projects, and consolidated research groups of the Government of Catalonia. This has allowed the Catalan public university system to position itself among the top in Spain, leading to a new era of successful financing from the European Union, as reflected in the data presented here.

## 1.1 PUBLIC FUNDING OF RESEARCH

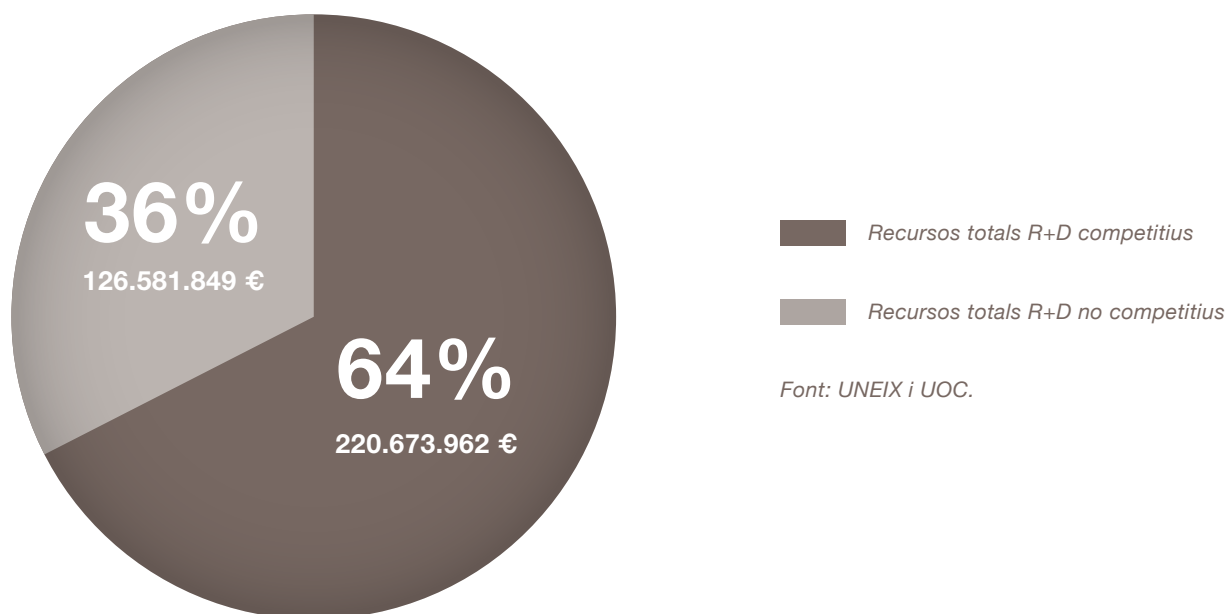
Figure 1. Competitive and non-competitive funding by university and percent of annual budget, 2010



Font: UNEIX i UOC.

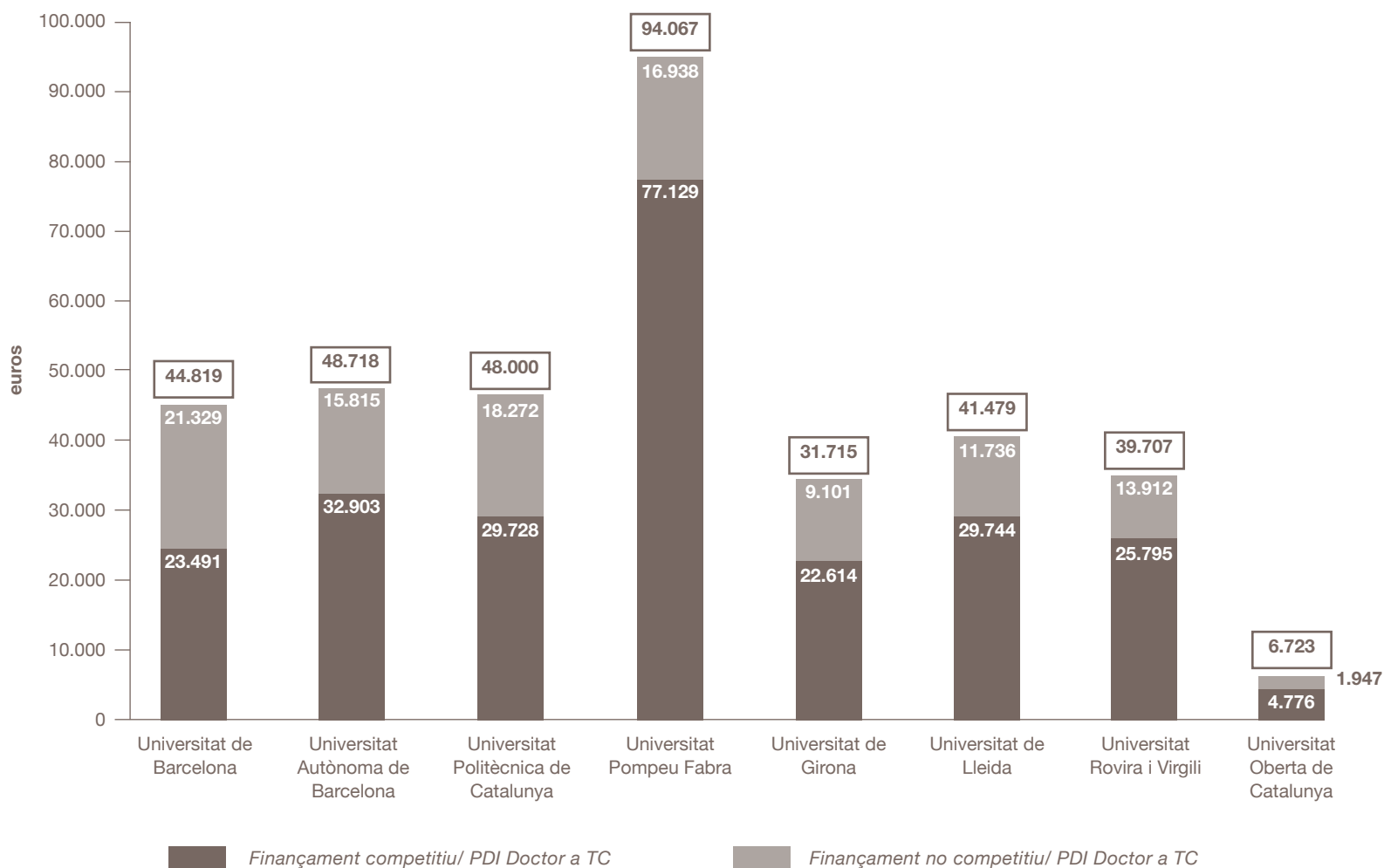
**“ In 2010 catalan public universities raised 347 million euros in funding for research and innovation ”**

Figure 2. Competitive and non-competitive funding of Catalan public universities, 2010



**“ 64% of funding acquired by Catalan public universities comes from competitive calls for proposals ”**

Figure 3. Resources obtained for R&amp;D&amp;i as a proportion of doctoral teaching and research staff, 2010



Font: UNEIX i UOC.

“ The high level of external funding and research potential attracted an average of €46,693 per researcher in 2010 ”

Table 1. Sources of competitive funding of Catalan public universities, 2010

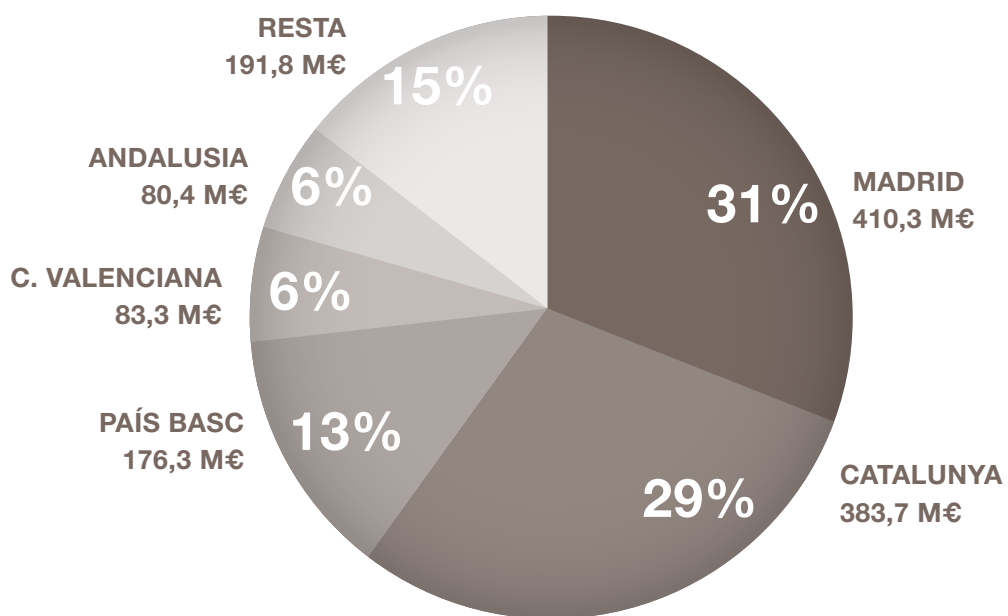
| Universitat                          | Fons autonòmics i estatals |            | Fons europeus     |            | TOTAL              |
|--------------------------------------|----------------------------|------------|-------------------|------------|--------------------|
|                                      | Import (€)                 | %          | Import (€)        | %          | Import (€)         |
| Universitat de Barcelona             | 48.155.973                 | 87%        | 6.976.347         | 13%        | 55.132.320         |
| Universitat Autònoma de Barcelona    | 37.249.476                 | 74%        | 12.894.593        | 26%        | 50.144.068         |
| Universitat Politècnica de Catalunya | 35.360.232                 | 77%        | 10.539.856        | 23%        | 45.900.087         |
| Universitat Pompeu Fabra             | 19.629.007                 | 64%        | 11.068.153        | 36%        | 30.697.160         |
| Universitat de Girona                | 10.033.588                 | 83%        | 2.110.196         | 17%        | 12.143.784         |
| Universitat de Lleida                | 11.734.556                 | 97%        | 400.801           | 3%         | 12.135.357         |
| Universitat Rovira i Virgili         | 10.014.189                 | 76%        | 3.115.288         | 24%        | 13.129.477         |
| Universitat Oberta de Catalunya      | 982.018                    | 71%        | 409.690           | 29%        | 1.391.708          |
| <b>TOTAL</b>                         | <b>173.159.038</b>         | <b>78%</b> | <b>47.514.924</b> | <b>22%</b> | <b>220.673.962</b> |

Font: UNEIX i UOC.

**“ 22% of competitive funding comes from Europe, a figure in line with international standards ”**

## 1.2 THE CATALAN SYSTEM IN THE EUROPEAN CONTEXT

Figure 4. 7th Framework Programme subsidies by autonomous community, 2007-2010



Font: CDTI (2011).

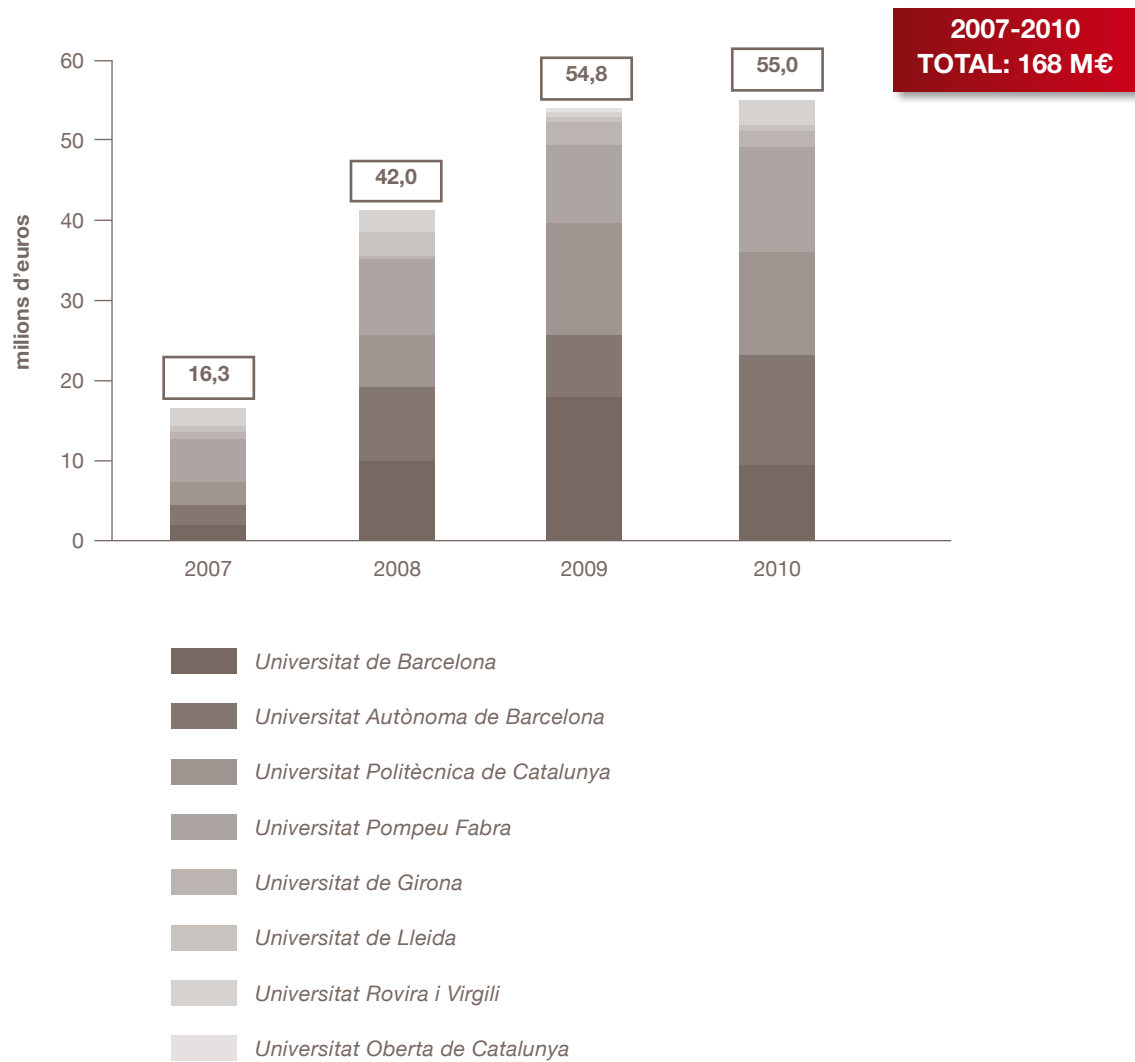
“ Catalonia, the number one state in leadership of EU 7th Framework Programme projects, and second in funding received ”

Table 2. Projects awarded in the 7th Framework Programme, 2007-2010, by autonomous community

| Comunitat         | Activitats*  |        |              |
|-------------------|--------------|--------|--------------|
|                   | Líder        | %      | Nre.         |
| Catalunya         | 396          | 38,40% | 1.047        |
| Madrid            | 271          | 26,30% | 1.055        |
| País Basc         | 90           | 8,70%  | 406          |
| C. Valenciana     | 73           | 7,10%  | 292          |
| Andalusia         | 66           | 6,40%  | 234          |
| Galícia           | 27           | 2,60%  | 108          |
| Navarra           | 18           | 1,70%  | 69           |
| Aragó             | 18           | 1,70%  | 73           |
| Castella i Lleó   | 17           | 1,60%  | 89           |
| Castella-La Manxa | 11           | 1,10%  | 42           |
| Rioja (La)        | 11           | 1,10%  | 51           |
| Múrcia            | 10           | 1,00%  | 45           |
| Astúries          | 9            | 0,90%  | 50           |
| Balears           | 7            | 0,70%  | 24           |
| Canàries          | 6            | 0,60%  | 28           |
| Extremadura       | 1            | 0,10%  | 10           |
| Cantàbria         | 0            | 0,00%  | 70           |
| <b>TOTAL</b>      | <b>1.031</b> |        | <b>2.877</b> |

\* *Total consolidat*

Figure 5. 7th Framework Programme funding by university, 2007-2010



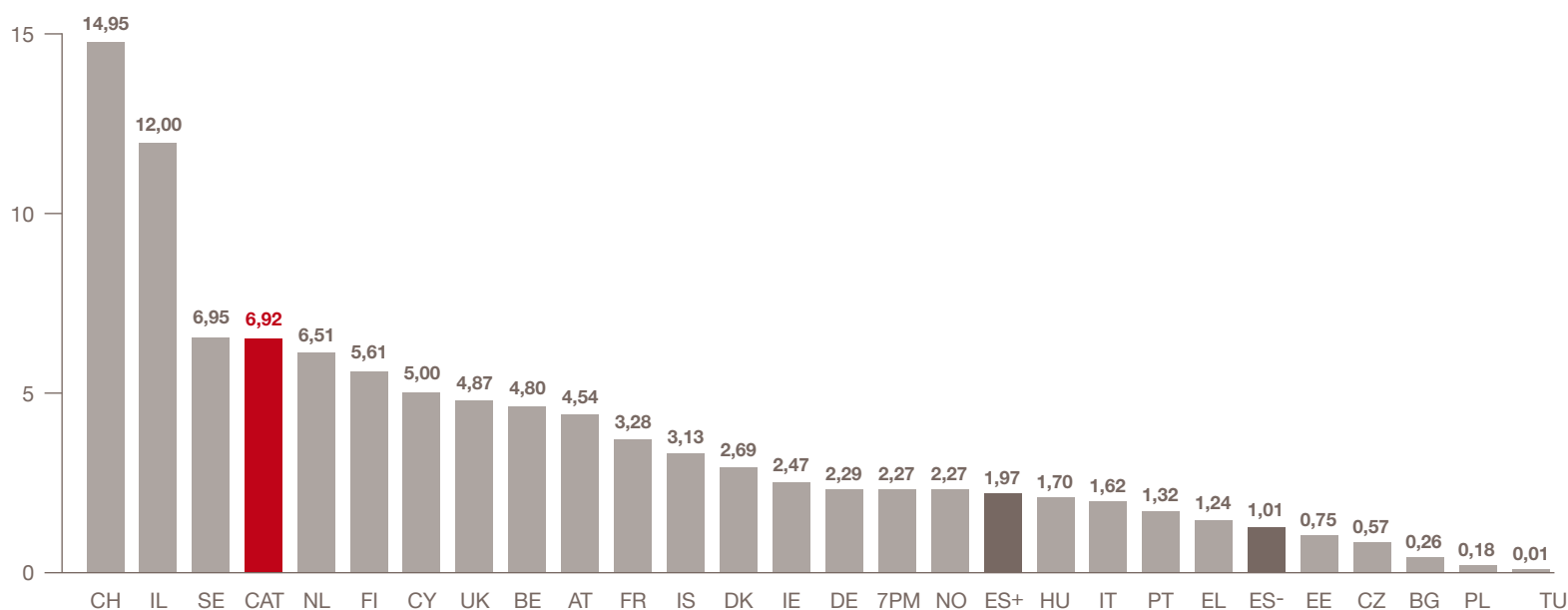
Font: UNEIX. Informes preliminars 2010 i UOC.



## Convocatòries de l'European Research Council (ERC) adreçades a joves investigadors o investigadors sènior (Starting Grants i Advanced Grants)

Figure 6. ERC grants awarded / million inhabitants 2007-2010

### ERC Grants (Concessions / milió d'habitants)

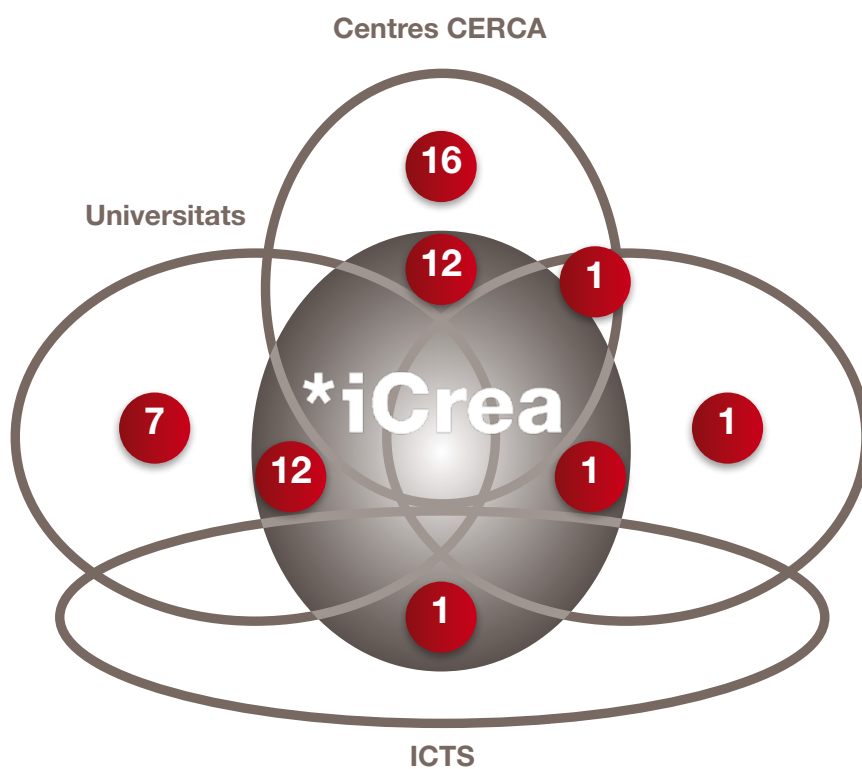


**CH:** Suïssa    **IL:** Israel    **SE:** Suècia    **CAT:** Catalunya    **NL:** Països Baixos    **FI:** Finlàndia    **CY:** Xipre    **UK:** Regne Unit    **BE:** Bèlgica  
**AT:** Àustria    **FR:** França    **IS:** Islàndia    **DK:** Dinamarca    **IE:** Irlanda    **DE:** Alemanya    **7PM:** Conjunt de països participants al 7è PM  
**NO:** Noruega    **ES+:** Estat espanyol    **HU:** Hongria    **IT:** Itàlia    **PT:** Portugal    **EL:** Grècia    **ES-:** Estat espanyol (exclou Catalunya)  
**EE:** Estònia    **CZ:** Txèquia    **BG:** Bulgària    **PL:** Polònia    **TU:** Turquia

Font: Comissió Interdepartamental de Recerca i Innovació. Generalitat de Catalunya.

“ Catalonia, fourth in the EU in ERC Grants as a proportion of population, 51 concessions, 19 to universities and 29 to research centres 24 of which are managed by the ICREA programme ”

Figure 7. ERC grants awarded by type, 2007-2010



Font: Comissió Interdepartamental de Recerca i Innovació. Generalitat de Catalunya.

Map 1. ERC grants awarded by country, 2007-2010



Font: Comissió Interdepartamental de Recerca i Innovació. Generalitat de Catalunya.