



INNOVATION AND UNIVERSITY-INDUSTRY COOPERATION

Universities are a key agent for the socioeconomic development of the territory. Therefore, knowledge transfer, recognised as the third university mission, becomes a fundamental feature of development as it means that the knowledge generated can be transferred to the economic fabric.

Universities promoting the third mission, through encouraging the processes for valuing the results of research and public-private collaboration in R&D activities, are an example of their commitment to society.

The main available indicators associated to knowledge transfer are principally those related to the creation of patents, the generation of technology-based companies or spin-offs and university-enterprise chairs. These three indicators enable us to see an important part of the effort that universities are currently making to promote the third mission.

The first indicator that is shown in this chapter is the number of applications for priority patents requested in 2011, independently of the country, and not just the patents requested from the OEPM (the Spanish Patent and Trademark Office), as given in the 2012 report. This indicator has been showing a downward trend since 2008, when a maximum of 98 patents were obtained in one year.

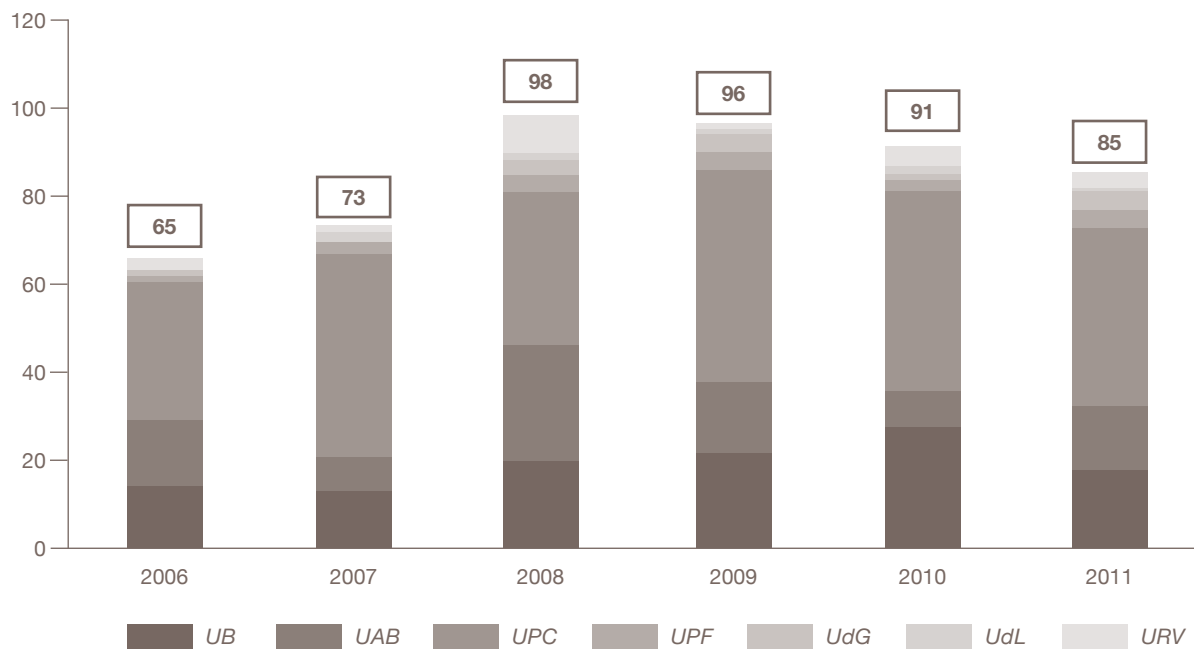
The second indicator shows the international extensions via the PCT. Here it can be seen that although Catalan universities represented 14% of all university priority applications from Spain in 2011 (the same as for 2010) the worldwide extensions via PCT represented 23%.

In 2011, 24 new companies based on university technology were created, making an accumulated number of 154 active companies directly derived from the university area. This information shows that universities are continuing to favour the creation of technology-based companies as an instrument for knowledge transfer and generating wealth for the territory.

The organisation of the system of innovation has based its strength on the creation of university-enterprise collaboration infrastructures such as the offices for the transfer of research results from universities or science and technology parks (areas in which research centres, transfer structures, technology centres and enterprises live together) many of which were motivated or created by universities. In this context, by adding on the non-competitive funds of the universities and of their attached bodies, the resources obtained in 2011 exceeded €100 million.

3.1 PATENTES Y LICENCIAS

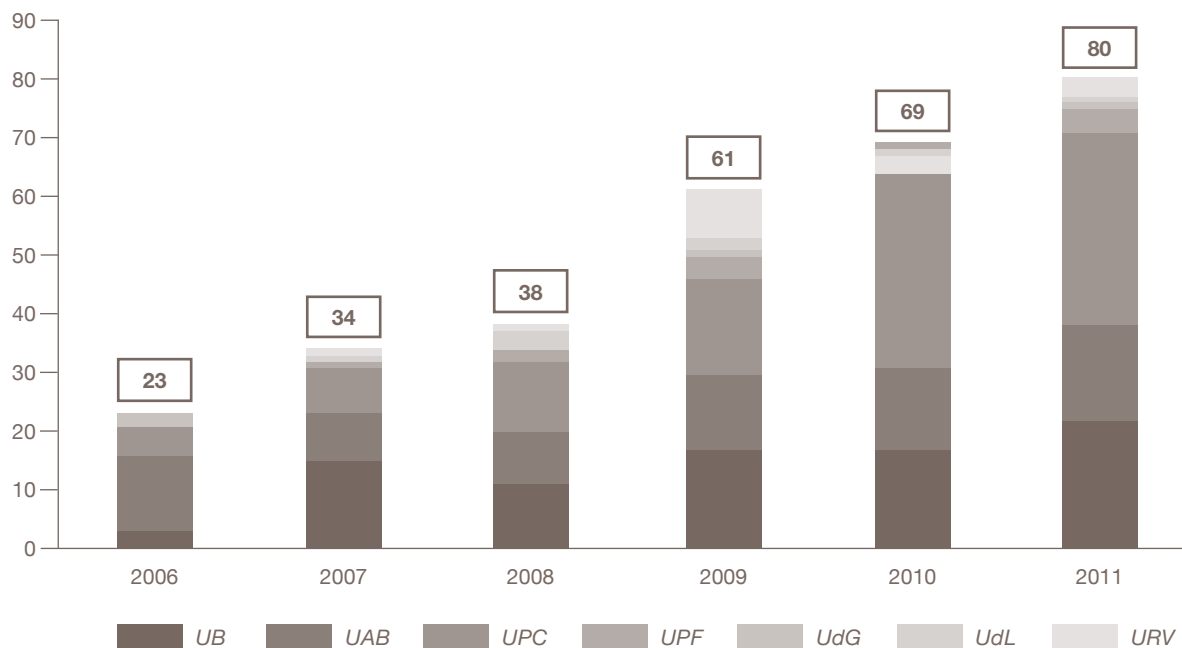
Figure 13. Evolution of priority patent applications submitted or participated in by on-campus Catalan public universities



Font: Elaboració pròpia a partir de l'Informe de l'enquesta d'investigació i transferència de coneixement de les universitats espanyoles, RedOTRI-CRUE. Diversos anys.

“ During the 2006-2011 period, Catalan public universities were involved in 508 of the priority patents submitted. ”

Figure 14. Evolution of international extensions of patent by the Patent Cooperation Treaty (PCT) channel (2006-2011).



Font: Elaboració pròpia a partir de l'Informe de l'enquesta d'investigació i transferència de coneixement de les universitats espanyoles, RedOTRI-CRUE. Diversos anys.

Table 7. Technical personnel involved in knowledge transfer at public universities, 2011

Àmbit	Personal tècnic
Universitats de l'ACUP	78
Universitats de l'Estat	396
Universitats de l'ACUP/Universitats Estat (%)	20%

Font: Elaboració pròpia a partir de l'Informe de l'enquesta d'investigació i transferència de coneixement 2011 de les universitats espanyoles, RedOTRI-CRUE.

3.2 TECHNOLOGY-BASED ENTERPRISES AND CHAIRS

Table 8. Active spin-offs and university-industry chairs, 2011.

Universitat	Spin-off	Càtedres
Universitat de Barcelona	22	5
Universitat Autònoma de Barcelona	52	6
Universitat Politècnica de Catalunya	50	19
Universitat Pompeu Fabra	4	5
Universitat de Girona	13	9
Universitat de Lleida	4	5
Universitat Rovira i Virgili	11	8
Universitat Oberta de Catalunya	--	0
TOTAL	156	57

“ In 2011 Catalan universities generated 21% of the total income for all Spanish universities from technology transfer. ”

Font: Elaboració pròpia. Per a les Spin-off amb dades UNEIX i per a les Càtedres amb dades facilitades per les universitats.

Table 9. Revenue according to transfer activity in Catalan and Spanish public universities, 2011.

	Universitats de l'ACUP	Universitats d'Espanya	Universitats ACUP / Universitats Espanya (%)
Import contractes d'R+D i consultoria (M€)	55,33	331,76	17%
Import projectes de finançament públic de col·laboració amb empreses (M€)	36,76	143,37	26%
Import facturat per prestacions de servei (M€)	15,71	31,14	50%
Ingressos per llicències (M€)	0,51	2,21	23%
TOTAL INGRESSOS (M€)	108,31	508,48	21%

Font: Elaboració pròpia a partir de l'informe de l'enquesta d'investigació i transferència de coneixement 2011 de les universitats espanyoles, RedOTRI-CRUE.

3.3 SCIENCE AND TECHNOLOGY PARKS

Table 10. Indicators of Catalan science and technology parks, 2011

Parcs	24
Treballadors	104.007
% treballadors en R+D	50%
Empreses innovadores instal·lades	2.653
% empreses petites i microempreses	90%
Centres d'R+D i centres tecnològics instal·lats	200
Incubadores	28
Empreses en incubadores	348

Font: XPCAT. Memòria 2011.

“ Catalan universities have been instrumental in creating and supporting science and technology parks in order to promote knowledge transferrin conjunction with the private sector. ”

Mapa 3. Catalan science and technology park network, 2011



1. La Salle Technova Barcelona
2. Parc UPC. Parc de la Recerca i Innovació de la UPC
3. Parc Científic de Barcelona
4. BZ. Barcelona Zona Innovació
5. Barcelona Activa. Parc Tecnològic Barcelona Nord
6. PRBB. Parc de Recerca Biomèdica de Barcelona
7. Parc de Recerca UPF
8. 22 @ Barcelona
9. b_TEC. Barcelona Innovació Tecnològica



Font: XPCAT. Memòria 2011.

Figure 15. Non-competitive funding obtained by Catalan public universities and associated entities, 2011.

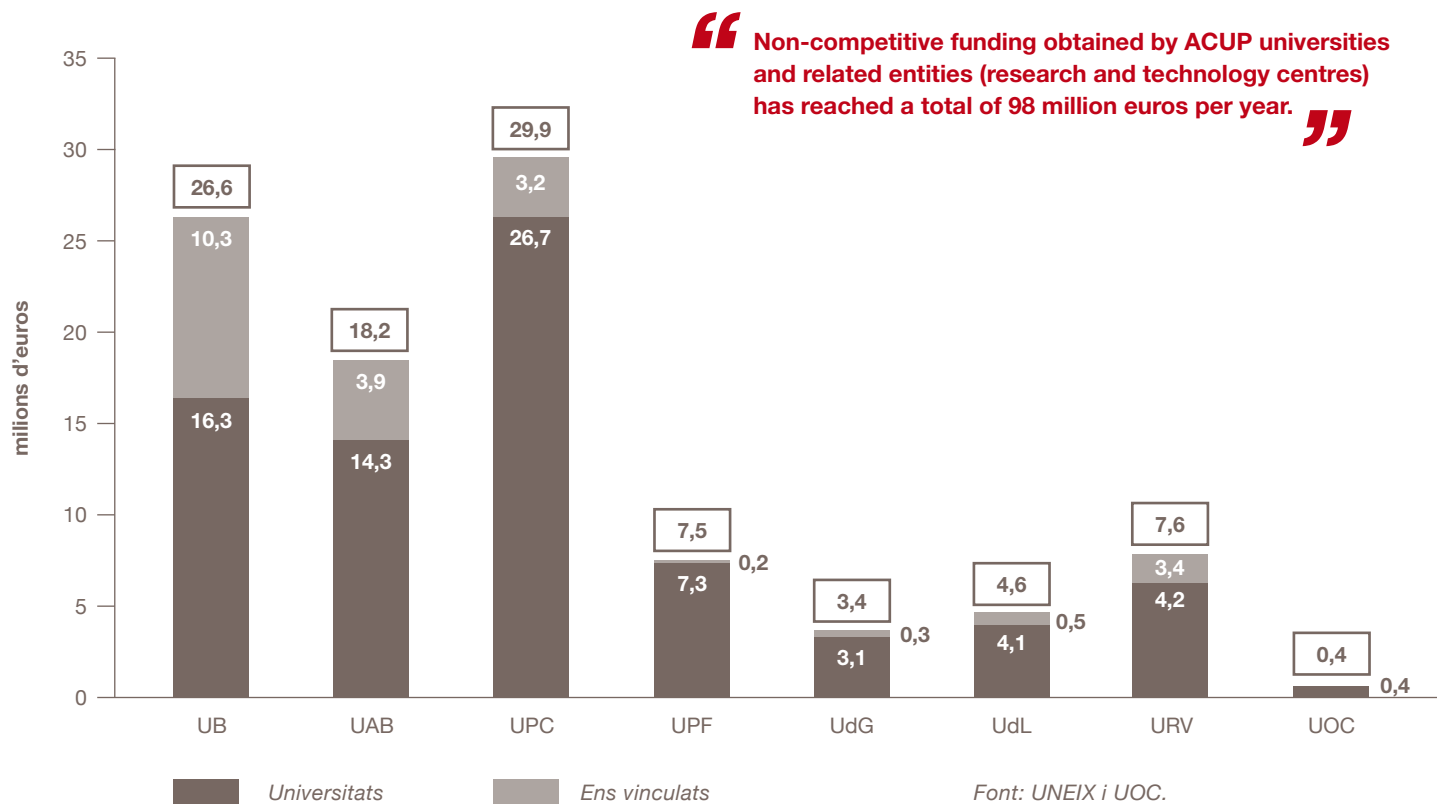


Figure 16. Evolution of non-competitive funding obtained by traditional Catalan public universities and associated entities

