

R&D
ACTIVITIES REPORT

I+D+i+E

UNIVERSIDADE
DE SANTIAGO DE
COMPOSTELA

Year 2010



Introduction

The current financial crisis is having a significant impact in the universities' R&D activities. On the one hand, public funding from national and regional administrations has been reduced and, on the other hand, less R&D contracts with companies and other institutions have been signed.

According to INE's figures, spending in R&D in Spain dropped by 1.7% in 2010, in addition to the 0.8% in 2009. This reduction was more severe in R&D investment from the private sector, with 2.9% less in 2010 in addition to 6.3% in 2009. In relation to our region, the reduction in 2009 was considerably higher, close to 10.3% with a 15% drop in R&D investment from the private sector. Even though INE's figures for Galicia for 2010 haven't been released yet, a significant reduction in R&D investment has been predicted.

SUG's universities aren't spare from this tendency, and cuts will affect national and regional calls as well as activities in collaboration with companies, public administration and social agents. In fact, in 2010, significant cuts in regional public funding towards Human Resources programs have taken place, as well as a steady reduction in R&D contractual services and collaborations, in particular with the Xunta de Galicia.

However, USC has increased its participation in national calls, and, in particular, international calls, allowing to maintaining and good level of fundraising.

In despite of the financial difficulties, USC has reached the same level of scientific production in 2010 as it did in previous years, increasing the international projection of its publications as well as the number of registered patents.

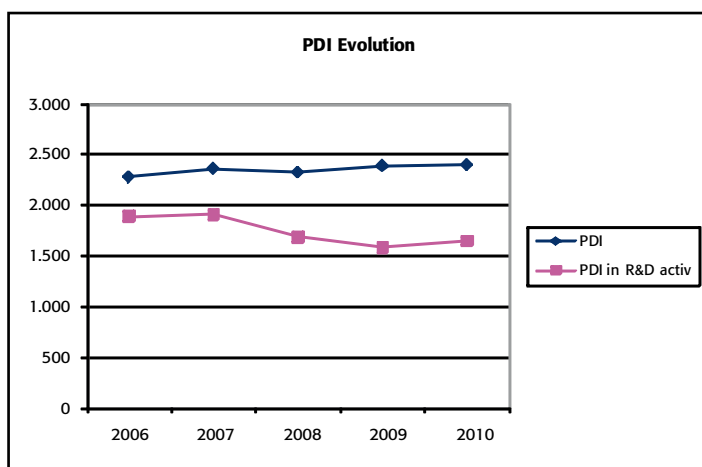
To summarise, during 2010, USC made nearly 70 M€ towards R&D from private and public funding sources consolidating the trend of recent years. Furthermore, from the number of indicators included in this Report, USC is maintaining its position as leader in scientific production and R&D in Galicia, with a performance comparable to some of the best universities in Spain.

USC RESEARCH STAFF AND R&D STRUCTURE

R&D Staff at 31st December 2010

USC R&D Staff		TOTAL	% Female	% Male
Academic & Research Staff (PDI) (1)		2.395	39%	61%
	PDI in R&D activities (2)	1.646	40%	60%
Hired staff under R&D HR programs		TOTAL	% Female	% Male
	Post-doctoral (3)	59	49%	51%
	Pre-doctoral (4)	394	59%	41%
	Technicians (5)	70	60%	40%
Hired staff under R&D activities				
	Hired	1.005	56%	44%
	Internships	148	59%	41%
Research support staff in central services				
	Scientific Infrastructures	28	54%	46%
	Administration and Valuation	37	59%	41%
	TOTAL	4.136	46%	54%

- (1) Academic and Research Staff (PDI) on 31st December 2011: Includes public sector, hired and provisional staff
 (2) PDIs who took part in any activity during 2010 (projects, contracts, agreements, courses, scientific meetings, technical services and consultancy)
 (3) Post-doctoral programs: Juan de la Cierva, Ánxeles Alvariño and Marie Curie
 (4) Pre-doctoral programs: FPI, FPU, FIS, María Barbeito and USC hired pre-doctorates
 (5) Technicians: Technical support staff program, Isabel Barreto and Lucas Labrada programs for technicians



Distribution of research groups and principal investigators by greater area

RG and PI distribution by Greater Area	No RGs	%RG	No PIs	%PI
Experimental Science (ACE)	96	26%	518	22%
Health Science (ACS)	87	24%	644	27%
Social and Justice Science (ACX)	87	24%	646	27%
Technical Teaching (AET)	29	8%	209	9%
Humanities (AHU)	67	18%	378	16%
TOTAL	366		2.395	

Notes:

RG: research group as outlined in the USC group catalogue regulations <http://imaisd.usc.es/seccion.asp?s=-2-26-148>
 PI= principal investigator, doctors employed by the USC (public sector, hired or temporary academic and research staff and researchers employed under the Ramón y Cajal, Isidro Parga Pondal, Juan de la Cierva and Ánxeles Alvariño programs)
http://imaisd.usc.es/ftp/oit/documentos/353_gl.pdf

R&D EXTERNAL FUNDING

Amount of externally funded actions. Period 2007 – 2010

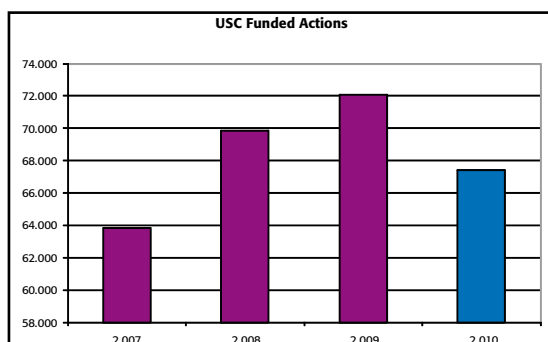
ACTIONS FUNDED BY COMPETITIVE CALL	2007		2008		2009		2010	
	No.	Quantity	No.	Quantity	No.	Quantity	No.	Quantity
International projects/actions	5	285	18	2.205	23	3.511	23	5.252
National projects/actions	139	13.204	155	10.160	178	13.875	205	13.605
Reginal projects/actions	211	11.119	258	13.912	276	13.595	258	12.694
R&D Human Resources program		11.686		11.762		10.660		7.266
Other actions in competitive calls		487		580		208		266
TOTAL		36.781		38.619		41.849		39.083
(1) % funded by competitive call		61%		66%		74%		72%
ACTIONS FUNDED BY CONTRACTS AND AGREEMENTS								
With Public Bodies	181	10.350	129	8.023	72	4.044	92	3.526
With Companies/Organisations	229	9.713	229	8.266	186	7.080	196	7.912
Technical Services and Consultancy		3.169		3.895		3.924		3.407
TOTAL		23.232		20.184		15.048		14.845
(1) % funded by competitive call		39%		34%		26%		28%
INSTITUTIONAL ACTIONS								
Research support		1.580		2.935		5.860		8.428
Scientific Infrastructure support		879		7.626		7.897		1.258
Promotion and Transfer support		1.358		481		1.447		3.800
TOTAL		3.817		11.042		15.204		13.486
TOTAL R&D EXTERNALLY FUNDED ACTIONS		63.830		69.845		72.101		67.414

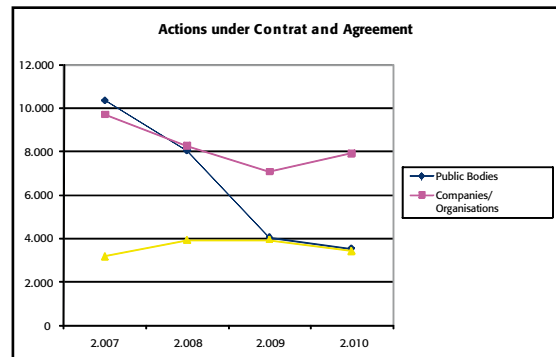
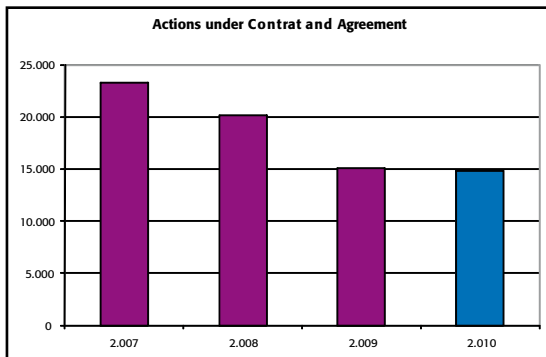
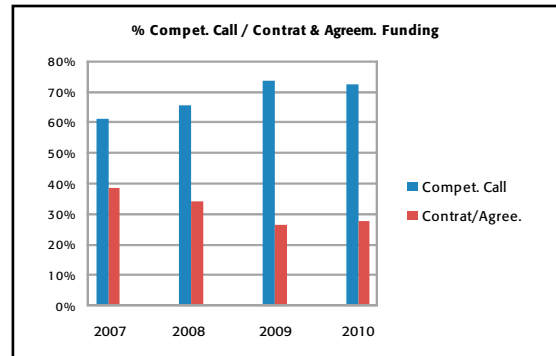
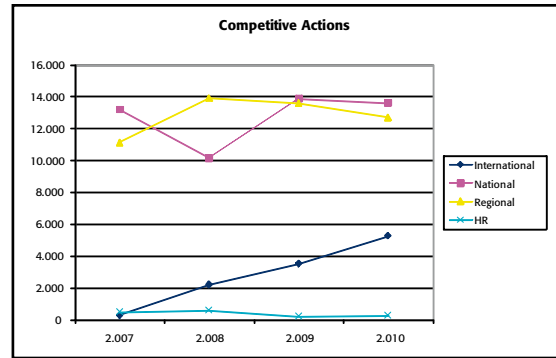
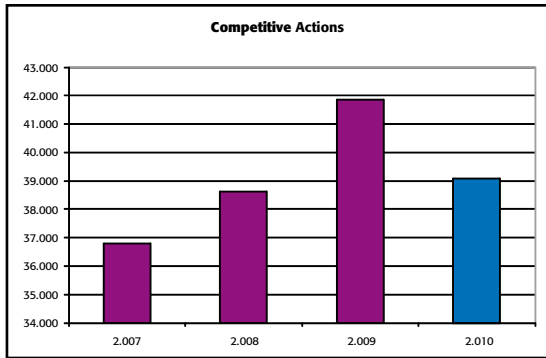
Amounts in thousands €

(1) Total percentage of externally funded actions excluding institutional actions.

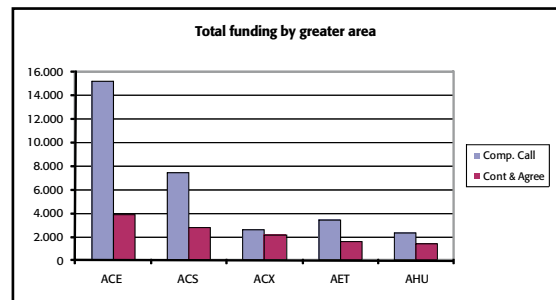
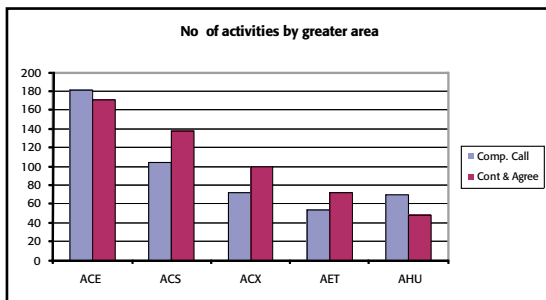
Evolution of results of USC actions funded by European programmes

	FP4 (1994-1998)	FP5 (1998-2002)	FP6 (2002-2006)	FP7 (2007-2010)
Projects	2.845	3.171	3.603	7.441
Other actions		343	357	443
PEOPLE	522	995	721	785
INFRAS		248	187	205
EURATOM		147	55	90

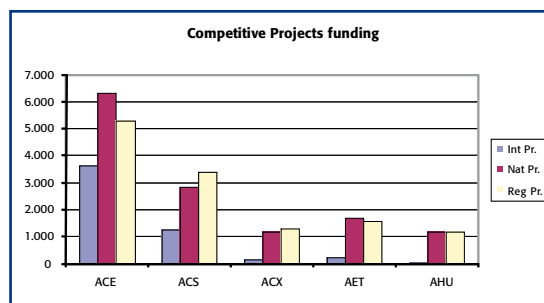
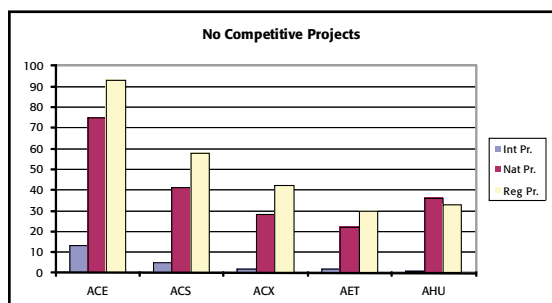




Distribution of Externally Funded Actions by Greater Area. Year 2010



ACE: A. Experimental Science
 ACS: A. Health Science
 ACX: A. Social and Justice Science
 AET: A. Technical Teaching
 AHU: A. Humanities



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Average external fundraising by activity

Greater Area	2007-2010 Competitive calls - Average number or activities	2007-2010 Contracts & Agreements - Average number of activities
Experimental Science (ACE)	67.926	27.955
Health Science (ACS)	70.516	40.139
Social and Justice Science (ACX)	25.569	22.422
Technical Teaching (AET)	57.936	22.879
Humanities (AHU)	27.219	27.459
TOTAL	49.833	28.171

Note: Amounts in €

HUMAN RESOURCES CALLS

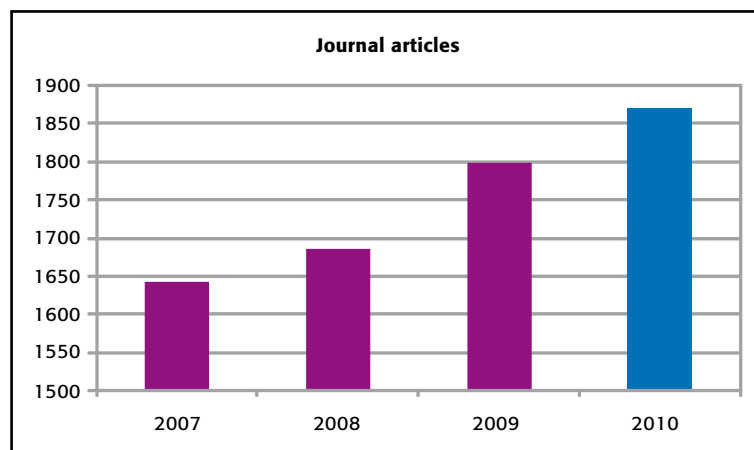
EUROPEAN CALLS	Total	2010		2007-2009		
		% Fem.	% Male	Total	% Fem.	% Male
Marie Curie	3	33%	67%	4	25%	75%
NATIONAL						
Ramón y Cajal	5	40%	60%	16	19%	81%
Juan de la Cierva	4	0%	100%	11	55%	45%
Technicians	4	25%	75%	11	36%	64%
FPI/FPU	63	63%	37%	189	60%	40%
	76	57%	43%	227	56%	44%
REGIONAL						
Isidro Parga Pondal	12	42%	58%	38	34%	66%
Ánxeles Alvariño	12	8%	92%	50	38%	62%
María Barbeito	46	57%	43%	136	60%	40%
I. Barreto/L. Labrada	34	62%	38%	101	60%	40%
	104	51%	49%	325	54%	46%
TOTAL	183	53%	47%	556	54%	46%

R&D RESULTS. PERIOD 2007 – 2010.

Scientific production by Greater Area

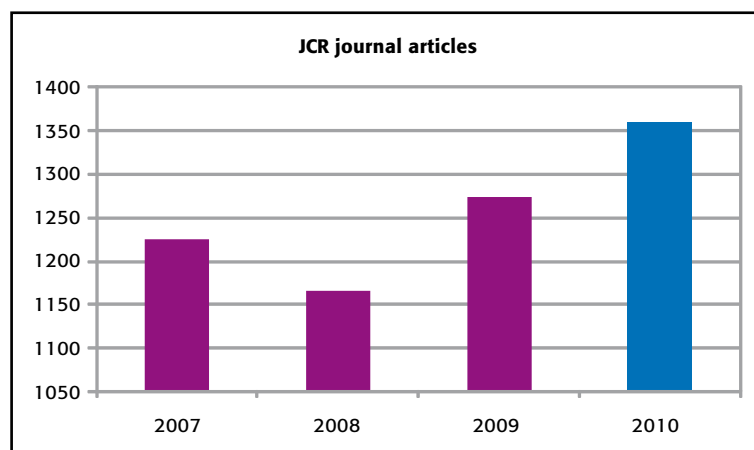
Journal articles

YEAR	TOTAL	ACE	ACS	ACX	AET	AHU
2007	1643	650	422	319	114	138
2008	1686	611	433	315	120	207
2009	1798	687	439	332	153	187
2010	1871	672	542	326	138	193



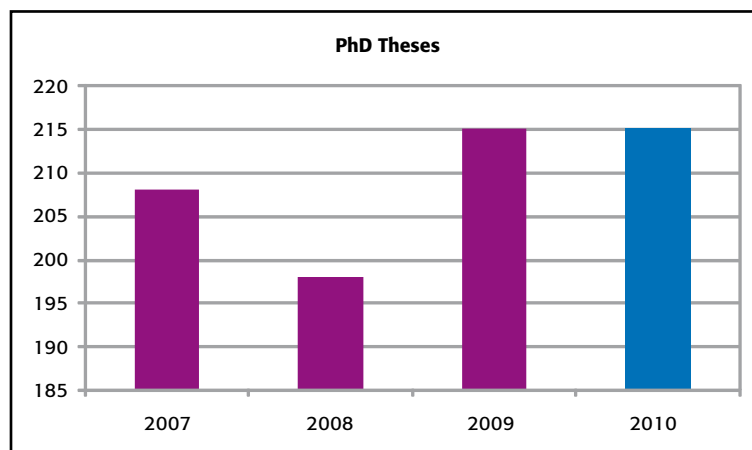
JCR (Journal Citation Report) journal articles

YEAR	TOTAL	ACE	ACS	ACX	AET	AHU
2007	1225	648	419	42	112	4
2008	1166	597	425	28	116	0
2009	1274	672	431	27	142	2
2010	1360	666	527	36	128	3



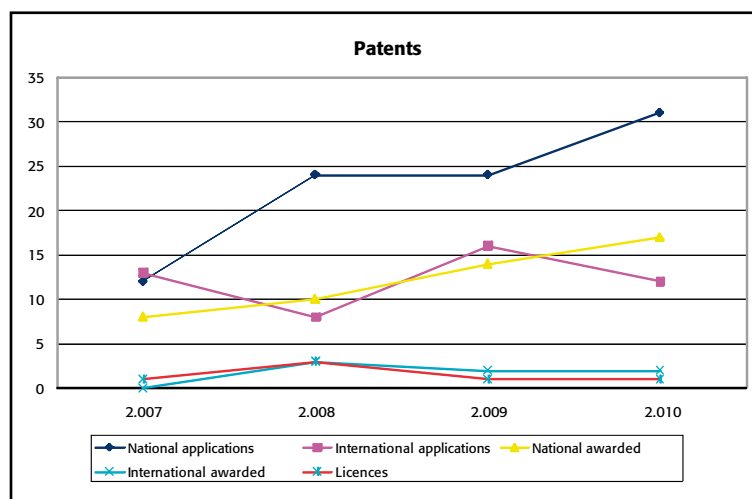
PhD theses by Greater Area

YEAR	TOTAL	ACE	ACS	ACX	AET	AHU
2007	208	60	51	54	18	25
2008	198	59	55	47	13	24
2009	215	91	50	35	13	26
2010	215	55	66	48	17	29



Patents

	2.007	2.008	2.009	2.010
Industrial Prop Patents				
National applications	12	24	24	31
International applications	13	8	16	12
National awarded	8	10	14	17
International awarded	0	3	2	2
Licences	1	3	1	1



SPIN-OFF COMPANIES CREATED FROM R&D RESULTS OR USC OWN KNOWLEDGE

Year	Company	Sector of activity
2010	CILENIS, S.L.	Linguistics
	BIOVÍA, S.L.	Enviroment
2009	HOLÍSTICA, S.L.	Cultural manager
2008	PARALAXE MULTIMEDIA AND VIRTUAL SYSTEMS, S.L.	Virtual reality
	DEINAAL, S.L.	Funcional foods
2007	AMALLÓS CONSULTORÍA, S.L.N.E.	Sports psycology
	ENERMILK, S.L.	Dairy industry
	XENOTECHS LABORATORIOS, S.L.	Food analisys

POSITIONING OF USC'S R&D IN THE UNIVERSITY SYSTEM

National and regional positioning of USC in R&D competitive calls funding actions.

National basic research program

Position	UNIVERSITY	Projects Awarded	Amount Total
1	BARCELONA	148	15.763
2	COMPLUTENSE DE MADRID	158	14.552
3	AUTÓNOMA DE BARCELONA	127	12.413
4	AUTÓNOMA DE MADRID	89	11.355
5	SEVILLA	96	10.502
6	ZARAGOZA	90	9.633
7	SANTIAGO DE COMPOSTELA	99	9.597
8	VALENCIA	94	9.459
9	GRANADA	120	8.832
10	PAIS VASCO	92	8.766
11	POLITÉCNICA DE CATALUÑA	87	8.350
12	POLITÉCNICA DE VALENCIA	84	7.823
13	POLITÉCNICA DE MADRID	73	7.122
14	OVIEDO	65	6.757
15	CANTABRIA	43	5.559

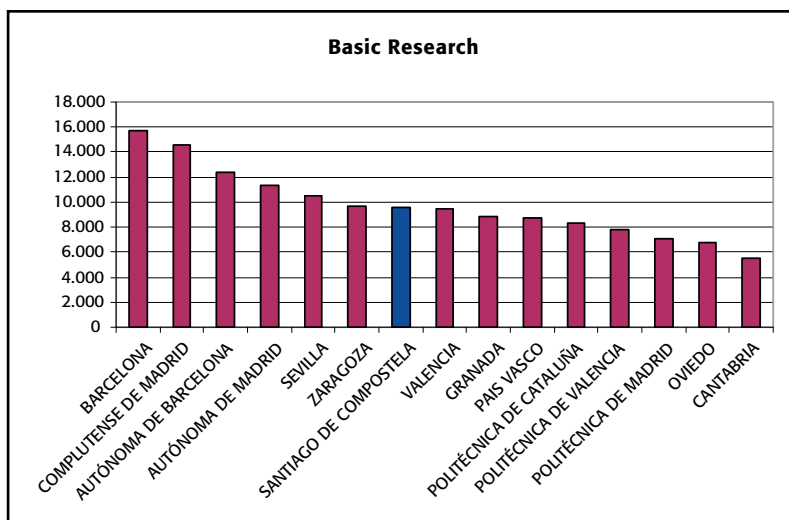
Amount in thousand €

Source: MICINN

Position	UNIVERSITY	Projects Awarded	Amount Total	% Amount
1	SANTIAGO DE COMPOSTELA	99	9.597	57,94%
2	VIGO	41	4.429	26,74%
3	A CORUÑA	33	2.537	15,31%

Amount in thousand €

Source: MICINN

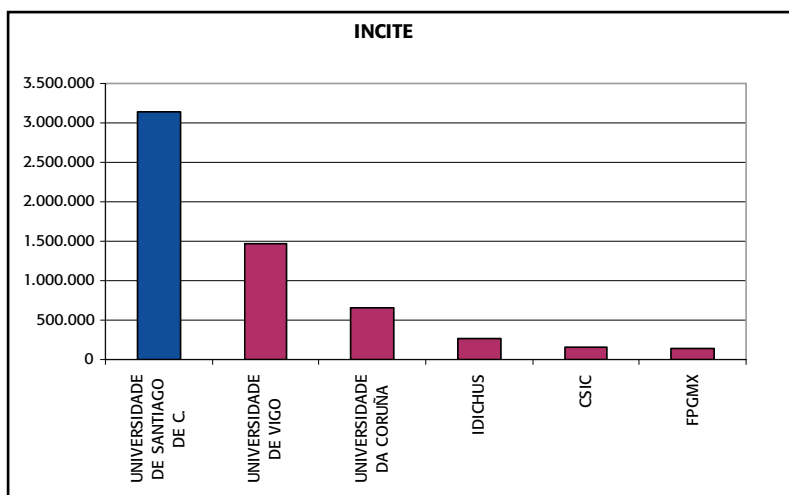


Regional Program for the Promotion of Research (INCITE). Year 2010

Position	UNIVERSITY	Projects Awarded	Amount Total	% Amount
1	UNIVERSIDADE DE SANTIAGO DE C.	58	3.142.815	54%
2	UNIVERSIDADE DE VIGO	31	1.472.291	25%
3	UNIVERSIDADE DA CORUÑA	17	659.862	11%
4	IDICHUS	7	264.984	5%
5	CSIC	4	153.150	3%
6	FPGMX	3	132.952	2%

Amount in thousand €

Source: Consellería de Economía e Industria

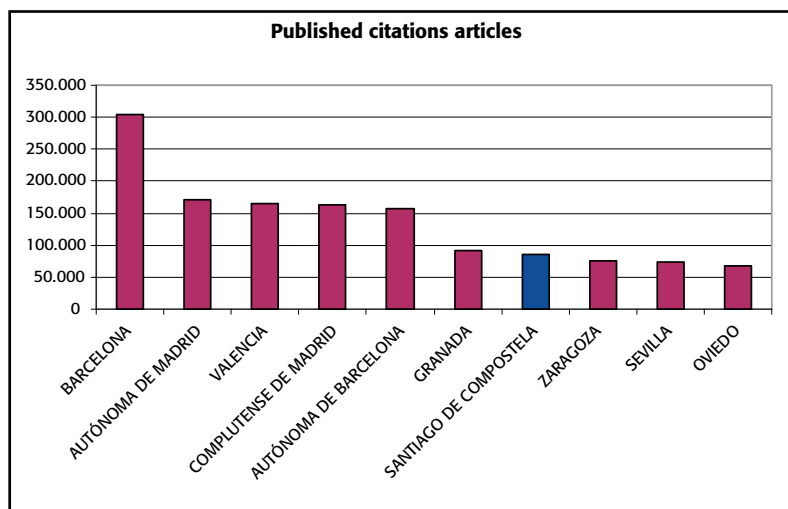


USC positioning in relation to journal articles and citations

Position	UNIVERSITY	Doc	Citations	Citations /Doc
1	BARCELONA	22.080	304.254	13,78
2	AUTÓNOMA DE MADRID	12.909	171.528	13,29
3	VALENCIA	14.165	165.757	11,71
4	COMPLUTENSE MADRID	16.563	163.370	9,86
5	AUTÓNOMA DE BARCELONA	14.622	157.521	10,77
6	GRANADA	10.832	91.345	8,43
7	SANTIAGO DE COMPOSTELA	9.061	85.701	9,46
8	ZARAGOZA	8.558	76.167	8,91
9	SEVILLA	9.185	73.265	7,98
10	OVIEDO	7.056	66.674	9,45

Database: Thomson Reuters. Period 2000 - 2011 (April)

Source: ISI Web of Science



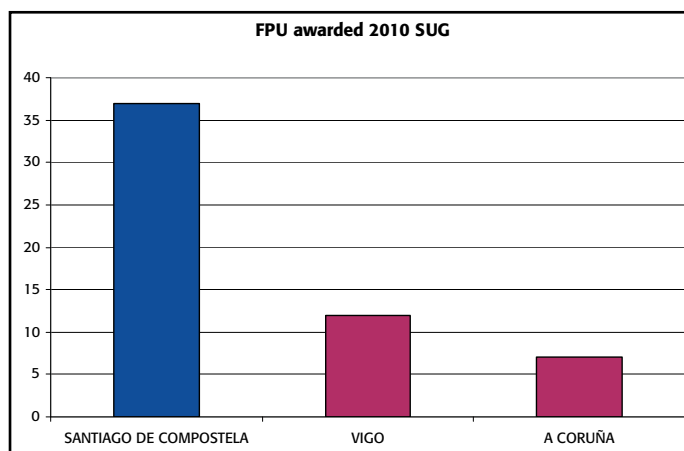
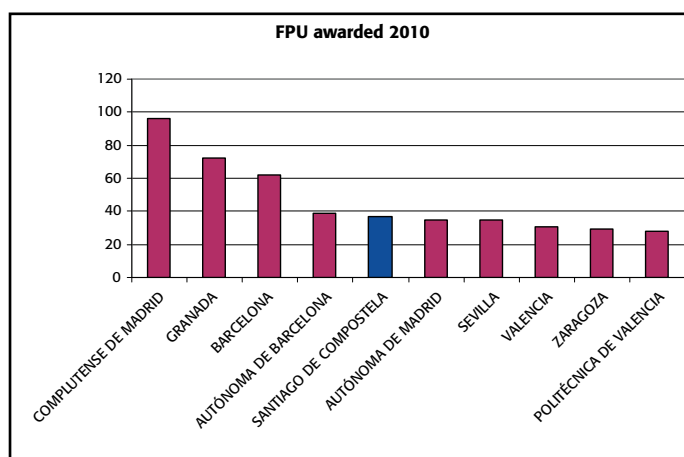
USC positioning at national level in relation to R&D Human Resources Programs awarded applications

Position	UNIVERSITY	FPU awarded 2010 Call
1	COMPLUTENSE MADRID	96
2	GRANADA	72
3	BARCELONA	62
4	AUTÓNOMA BARCELONA	39
5	SANTIAGO DE COMPOSTELA	37
6	AUTÓNOMA MADRID	35
7	VALENCIA	35
8	SEVILLA	31
9	ZARAGOZA	29
10	POLITÉCNICA VALENCIA	28

Source: MICINN

Position	UNIVERSITY	FPU awarded 2010 Call
1	SANTIAGO DE COMPOSTELA	37
2	VIGO	12
3	A CORUÑA	7

Source: MICINN



Position	UNIVERSITY	FPI awarded 2010 Call
1	COMPLUTENSE DE MADRID	55
2	BARCELONA	55
3	AUTONOMA DE MADRID	38
4	VALENCIA	38
5	AUTÓNOMA DE BARCELONA	36
6	ZARAGOZA	31
7	POLITECNICA DE CATALUNYA	30
8	SEVILLA	27
9	POLITECNICA DE VALENCIA	27
10	GRANADA	23
11	POMPEU FABRA	23
12	SANTIAGO DE COMPOSTELA	22

Source: MICINN

Position	UNIVERSITY	FPI awarded 2010 Call
1	SANTIAGO DE COMPOSTELA	22
2	VIGO	14
3	A CORUÑA	9

Source: MICINN

