



Agencia Andaluza del Conocimiento
CONSEJERÍA DE ECONOMÍA, INNOVACIÓN, CIENCIA Y EMPLEO



ANDALUSIAN KNOWLEDGE SYSTEM INDICATORS

-2012-

Andalusian Knowledge Agency
Technology & Foresight Studies Department
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■ ■ ■ INTRODUCTION

The aim of this report is to provide a preview the state of the Andalusian Science and Technology System in 2012¹.

In order to achieve this purpose, the Andalusian Knowledge Agency has:

- Compiled, tabulated and graphically represented all the indicators and statistics delivered by the most relevant international, national and regional official entities;
- Developed statistics on the Andalusian researchers 'participation in the Seventh Framework Programme calls for RDI (FP7), the R&D&I National Plan and the Andalusian Research, Development and Innovation Plan 2007-2013 (PAIDI Plan);
- Graphically represented the most relevant variables temporary evolution and, when possible, displayed regionalised information by Autonomous Communities to facilitate comparative analysis.

The information contained in this report is organized into five major sections:

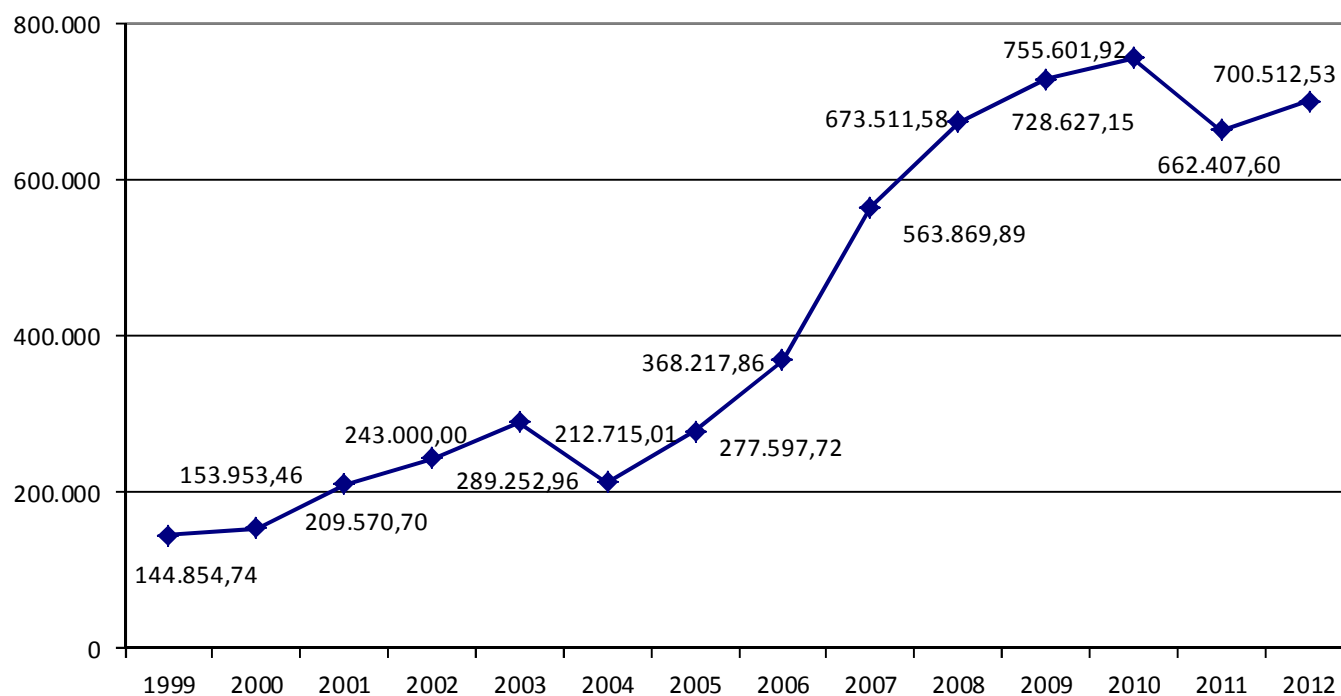
- Financial Resources: Figures reported on public funding provided by the Andalusian Regional Government R&D Budget as well as the R&D internal expenditure by sectors, both in absolute and inter-annual variation rates.
- Human Resources devoted to scientific-technological activities: data offered according to sectors, occupation, academic qualification and gender.
- PAIDI Actions: a set of indicators showing actions undertaken within the frame of the PAIDI Plan, which display the policies and adopted actions evolution.
- Innovation: expenditure on innovative activities; R&D companies regarding its technological level and the number of innovative companies by type, size and intensity of innovation.
- Tangible Outputs: results of R&D&I activities provided by the industrial property registries, by indexed scientific articles as well as by the participation in national and international R&D&I programmes.
- High Technology: indicators shown are R&D internal expenditure, personnel employed to R & D, personnel employed and turnover.
- Biotechnology: R&D internal expenditure by sector of employment and personnel employed to R & D dedicated to biotechnological activities.

The information sources used to develop the aforementioned indicators mainly come from official entities such as: the National Statistics Institute (INE); the Spanish Patent and Trademark Office (OEPM); the Ministry of Economy and Competitiveness (MINECO); the Andalusian Regional Government Budget Economic and Financial Report (Andalusian Regional Ministry for Finance and Public Administration); the General Direction for Research, Technology and Enterprise (DGIT) under the Andalusian Regional Ministry for Economy, Innovation, Science and Employment (CEICE); the Industrial Technological Development Centre (CDTI) and the Institute for Scientific Information (ISI).

¹ At the close of this report, some calls have not been resolved for which we considered the latest available to date 2011.

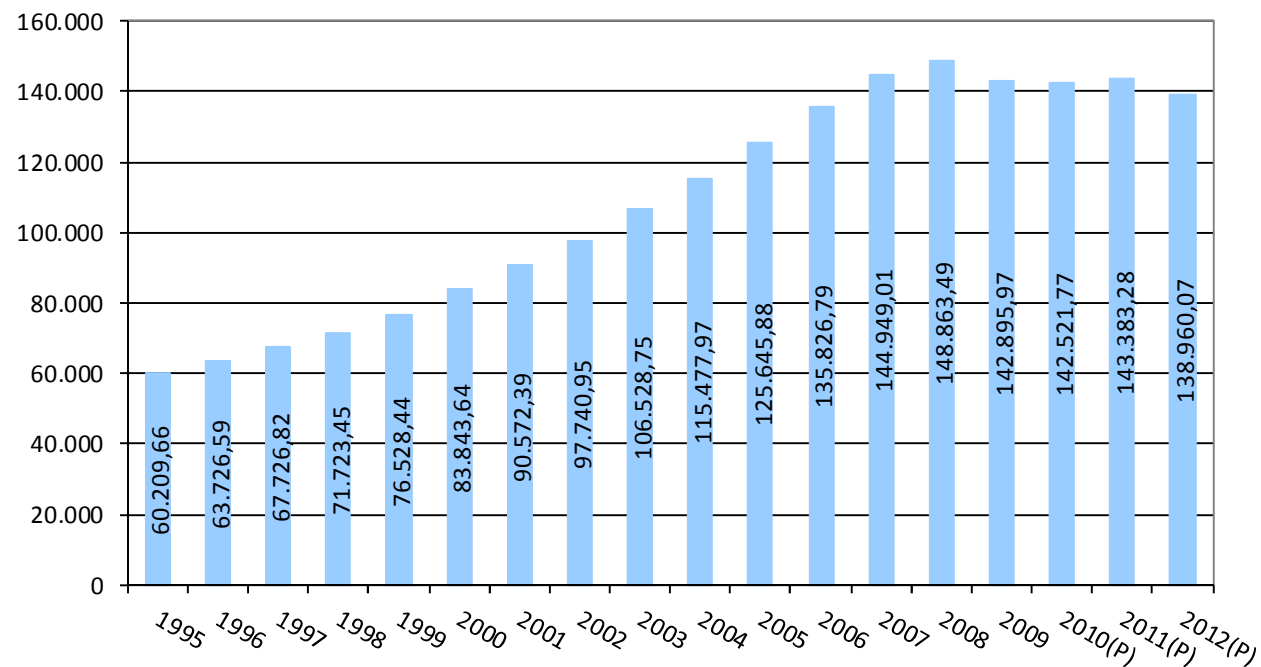
FINANCIAL RESOURCES

□ Andalusian R&D Own funds (thousand €). 1999-2012



Note: In 2004 and 2005, the publications of the Economic and Financial Reports differ, according to the budgetary programmes reallocation policies.
Source: Economic and Financial Reports. Andalusian Budget and own compilation.

□ GDP mp (base 2008) in Andalusia (million €). 1995-2012



Note: (P) Provisional data

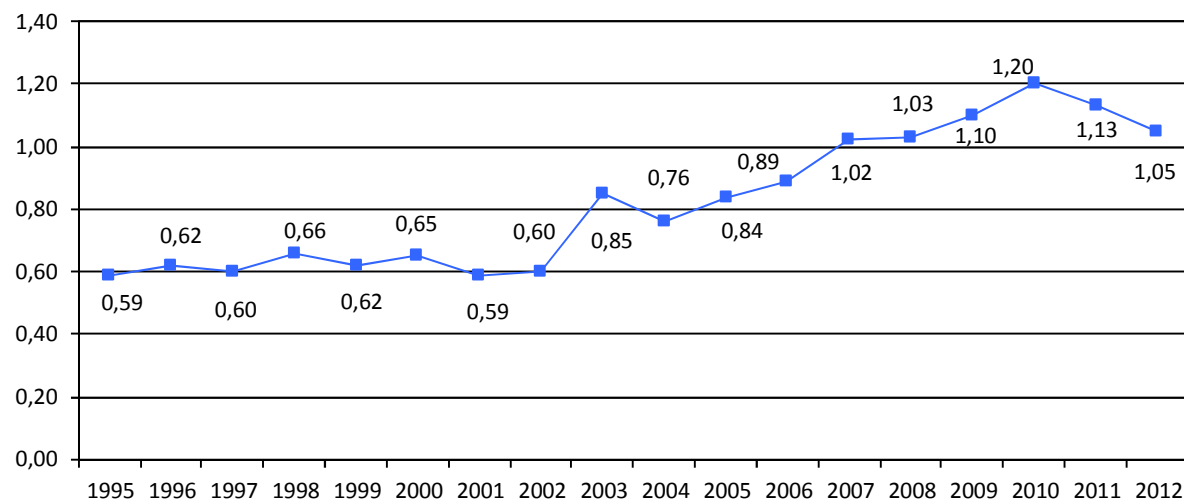
From the year 1995 up to 2000: GDP mp base 1995

From the year 2000: GDP mp base 2000

From the year 2008: GDP mp base 2008

Source: INE and own compilation

□ R&D internal expenditure percentage in Andalusia on regional GDP. 1995-2012



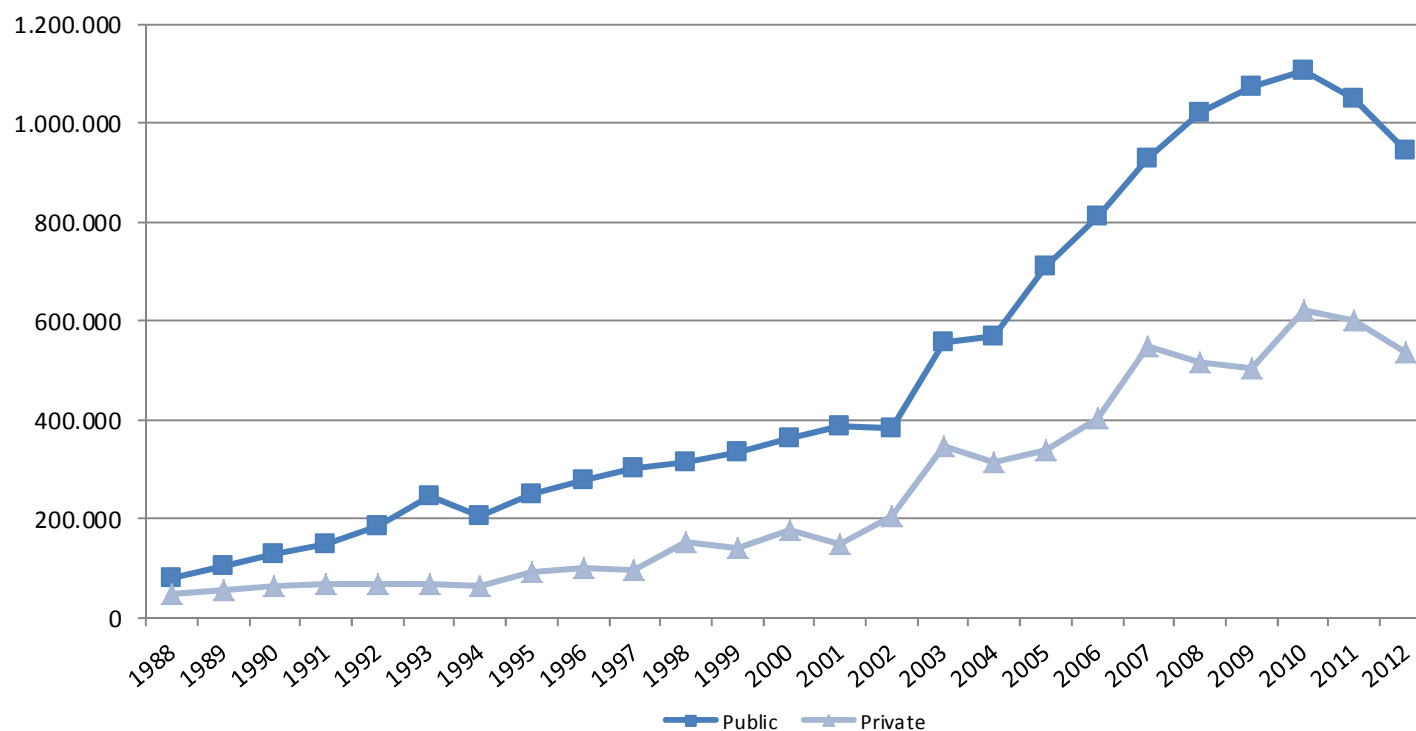
Source: INE and own compilation

□ R&D internal expenditure by sectors of performance in Andalusia (thousand €). 1988-2012

| AÑO | UNIVERSITY | | PUBLIC ADMIN | | COMPANIES | | P.N.P.I | | TOTAL |
|------|------------|-------|--------------|-------|------------|-------|----------|------|--------------|
| | Amount | % | Amount | % | Amount | % | Amount | % | |
| 1988 | 41.853,52 | 32,1% | 39.430,61 | 30,3% | 48.965,29 | 37,6% | 0,00 | 0,0% | 130.249,41 |
| 1989 | 60.932,78 | 38,2% | 42.889,45 | 26,9% | 55.872,34 | 35,0% | 0,00 | 0,0% | 159.694,57 |
| 1990 | 79.314,47 | 41,6% | 47.606,54 | 25,0% | 63.684,55 | 33,4% | 0,00 | 0,0% | 190.605,56 |
| 1991 | 93.852,90 | 43,8% | 53.838,14 | 25,1% | 66.717,91 | 31,1% | 0,00 | 0,0% | 214.408,95 |
| 1992 | 131.358,05 | 52,5% | 51.903,36 | 20,8% | 66.850,04 | 26,7% | 0,00 | 0,0% | 250.111,45 |
| 1993 | 188.780,15 | 60,1% | 56.787,21 | 18,1% | 68.302,41 | 21,8% | 111,19 | 0,0% | 313.980,95 |
| 1994 | 148.863,25 | 54,9% | 56.238,28 | 20,8% | 65.772,72 | 24,3% | 109,34 | 0,0% | 270.983,58 |
| 1995 | 178.006,33 | 51,6% | 73.722,48 | 21,4% | 91.887,83 | 26,7% | 1.064,19 | 0,3% | 344.680,83 |
| 1996 | 199.445,87 | 52,6% | 78.606,37 | 20,7% | 99.960,33 | 26,4% | 1.129,90 | 0,3% | 379.142,48 |
| 1997 | 228.351,45 | 57,7% | 72.399,09 | 18,3% | 94.075,91 | 23,8% | 1.029,88 | 0,3% | 395.856,34 |
| 1998 | 227.240,58 | 48,8% | 86.094,11 | 18,5% | 150.869,38 | 32,4% | 1.198,40 | 0,3% | 465.402,47 |
| 1999 | 240.496,55 | 50,7% | 95.258,05 | 20,1% | 137.475,62 | 29,0% | 1.496,11 | 0,3% | 474.726,34 |
| 2000 | 259.897,00 | 47,9% | 103.092,99 | 19,0% | 177.431,00 | 32,7% | 1.735,00 | 0,3% | 542.155,99 |
| 2001 | 269.030,00 | 50,0% | 119.113,00 | 22,1% | 149.510,00 | 27,8% | 678,00 | 0,1% | 538.331,00 |
| 2002 | 275.261,65 | 47,0% | 106.936,35 | 18,3% | 203.100,65 | 34,7% | 368,35 | 0,1% | 585.667,00 |
| 2003 | 403.997,00 | 44,7% | 154.231,00 | 17,1% | 344.246,00 | 38,1% | 678,00 | 0,1% | 903.152,00 |
| 2004 | 390.418,00 | 44,2% | 179.568,00 | 20,3% | 312.062,00 | 35,3% | 865,00 | 0,1% | 882.913,00 |
| 2005 | 467.762,00 | 44,5% | 243.434,00 | 23,2% | 338.761,00 | 32,2% | 1.071,00 | 0,1% | 1.051.028,00 |
| 2006 | 527.245,00 | 43,4% | 283.184,00 | 23,3% | 402.995,00 | 33,2% | 392,00 | 0,0% | 1.213.816,00 |
| 2007 | 592.828,00 | 40,1% | 336.946,00 | 22,8% | 548.041,00 | 37,1% | 730,00 | 0,0% | 1.478.545,00 |
| 2008 | 661.049,00 | 43,0% | 361.330,00 | 23,5% | 515.612,00 | 33,5% | 955,00 | 0,1% | 1.538.946,00 |
| 2009 | 683.680,00 | 43,3% | 390.855,00 | 24,8% | 501.471,00 | 31,8% | 2.079,00 | 0,1% | 1.578.085,00 |
| 2010 | 723.401,00 | 41,9% | 382.958,00 | 22,2% | 619.489,00 | 35,9% | 917,00 | 0,1% | 1.726.765,00 |
| 2011 | 708.973,00 | 43,0% | 340.204,00 | 20,6% | 598.228,00 | 36,3% | 1.066,00 | 0,1% | 1.648.471,00 |
| 2012 | 626.914,00 | 42,3% | 316.838,00 | 21,4% | 534.765,00 | 36,1% | 1.943,00 | 0,1% | 1.480.460,00 |

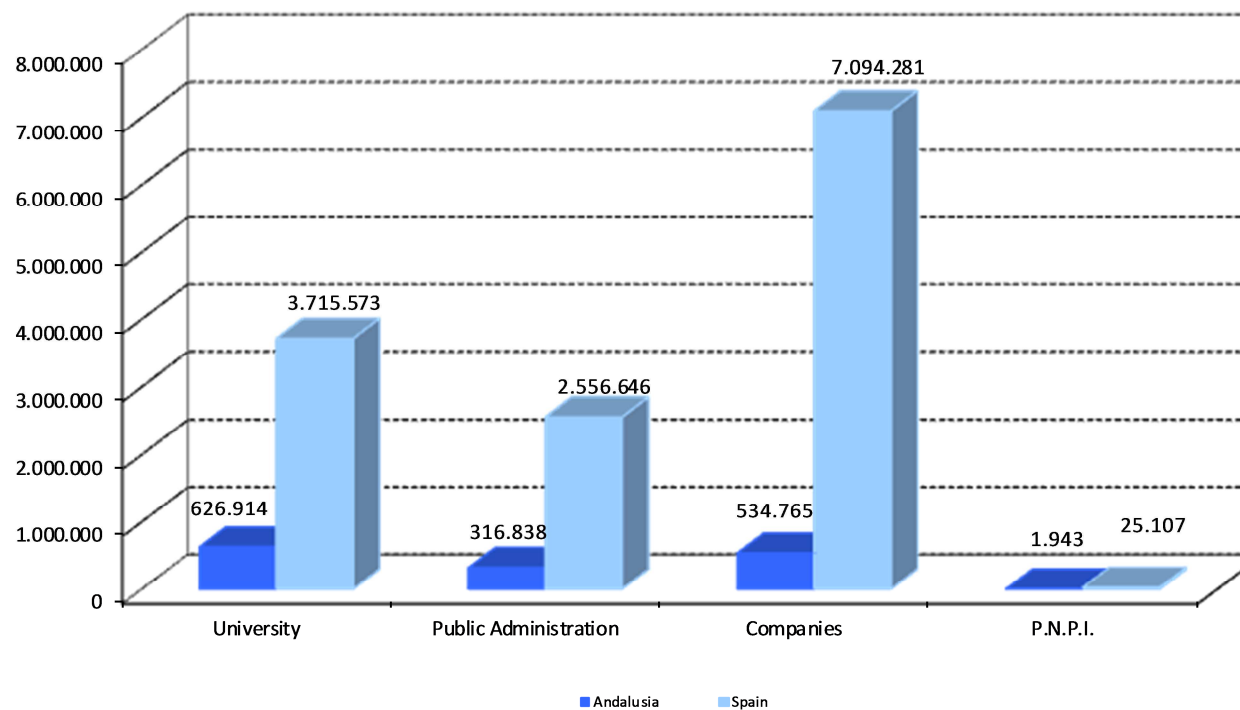
Source: INE and own compilation

□ R&D Internal expenditure by public and private sectors in Andalusia (thousand €). 1988-2012



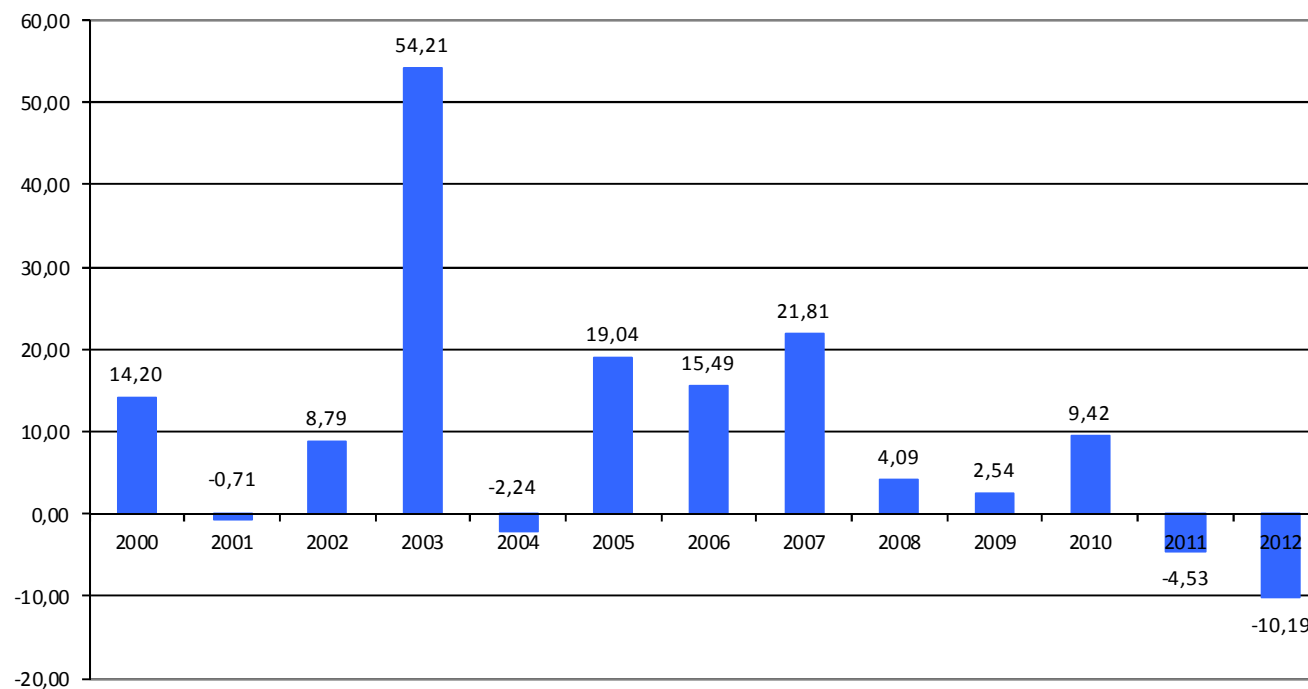
Source: INE and own compilation

□ R&D Internal expenditure by sectors of performance in Andalusia and Spain (thousand €). 2012



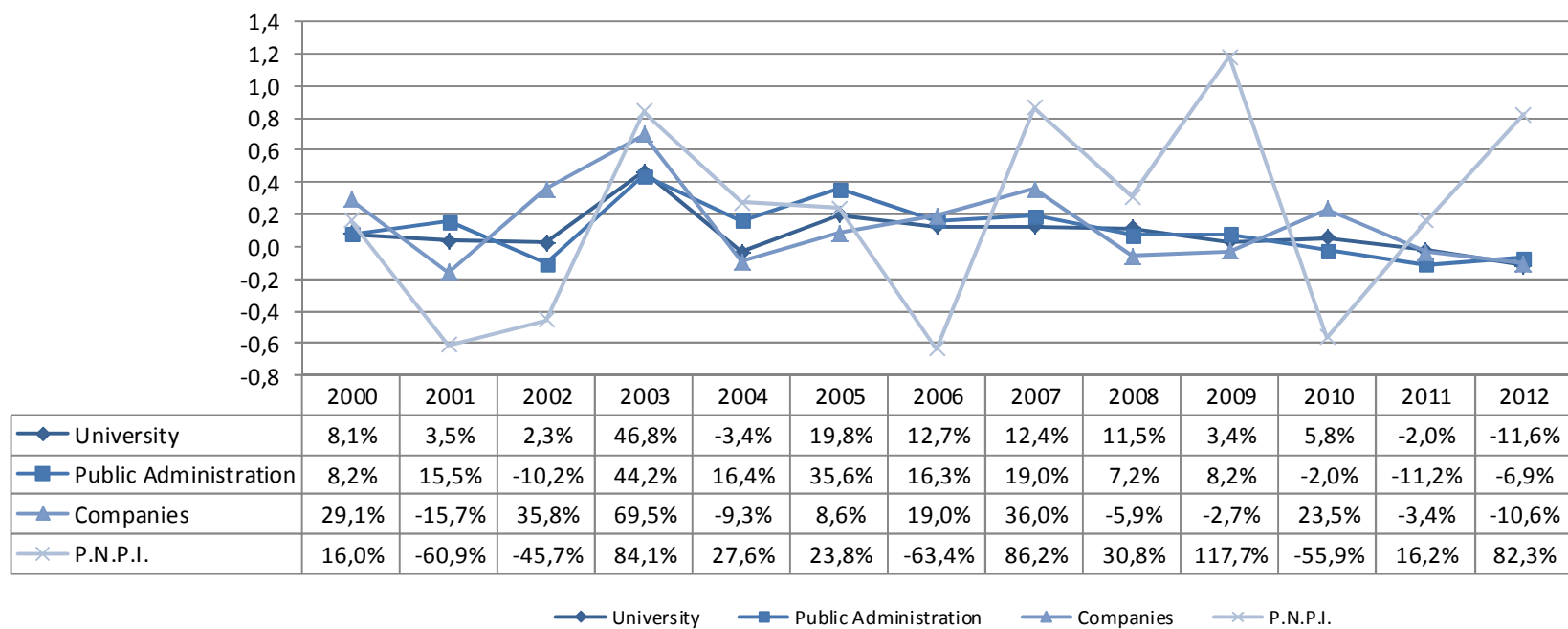
Source: INE and own compilation

□ Inter-annual variation rate of R&D expenditure in Andalusia. 2000-2012



Source: INE and own compilation

□ Inter-annual variation rate of R&D expenditure by sectors of performance in Andalusia. 2000-2012



Source: INE and own compilation

HUMAN RESOURCES

□ R&D personnel (FTE) employed by sectors of performance in Andalusia. 1997-2012

| YEAR | UNIVERSITY | | PUBLIC ADMIN. | | COMPANIES | | P.N.P.I. | | TOTAL | PUBLIC SECTOR / PRIVATE SECTOR |
|------|------------|-------|---------------|-------|-----------|-------|----------|------|-----------|--------------------------------|
| | No. | % | No. | % | No. | % | No. | % | | |
| 1997 | 6.000,70 | 61,4% | 2.233,50 | 22,9% | 1.507,10 | 15,4% | 26,10 | 0,3% | 9.767,40 | 5,37 |
| 1998 | 6.522,80 | 59,6% | 2.263,10 | 20,7% | 2.128,50 | 19,4% | 29,10 | 0,3% | 10.943,50 | 4,07 |
| 1999 | 7.311,3 | 60,9% | 2.758,4 | 23,0% | 1.898,3 | 15,8% | 34,3 | 0,3% | 12.002,30 | 5,21 |
| 2000 | 7.146,90 | 53,1% | 2.673,80 | 19,9% | 3.576,10 | 26,6% | 60,20 | 0,4% | 13.457,00 | 2,70 |
| 2001 | 9.081,20 | 61,4% | 3.058,20 | 20,7% | 2.616,70 | 17,7% | 29,20 | 0,2% | 14.785,30 | 4,59 |
| 2002 | 8.129,80 | 58,1% | 2.805,40 | 20,0% | 3.064,60 | 21,9% | 3,30 | 0,0% | 14.003,10 | 3,56 |
| 2003 | 8.063,00 | 48,4% | 3.547,50 | 21,3% | 5.034,10 | 30,2% | 15,80 | 0,1% | 16.660,40 | 2,30 |
| 2004 | 9.129,40 | 53,5% | 3.558,50 | 20,9% | 4.369,20 | 25,6% | 0,00 | 0,0% | 17.057,10 | 2,90 |
| 2005 | 9.803,60 | 52,1% | 4.103,30 | 21,8% | 4.896,30 | 26,0% | 0,00 | 0,0% | 18.803,20 | 2,84 |
| 2006 | 10.162,60 | 48,4% | 4.859,50 | 23,1% | 5.986,70 | 28,5% | 0,00 | 0,0% | 21.008,80 | 2,51 |
| 2007 | 10.805,50 | 48,9% | 5.527,50 | 25,0% | 5.769,60 | 26,1% | 0,00 | 0,0% | 22.102,60 | 2,83 |
| 2008 | 11.206,90 | 48,2% | 5.683,00 | 24,5% | 6.337,30 | 27,3% | 0,00 | 0,0% | 23.227,20 | 2,67 |
| 2009 | 11.679,10 | 47,2% | 6.099,00 | 24,6% | 6.988,60 | 28,2% | 0,00 | 0,0% | 24.766,70 | 2,54 |
| 2010 | 12.179,50 | 47,3% | 6.141,80 | 23,8% | 7.452,70 | 28,9% | 0,00 | 0,0% | 25.774,00 | 2,46 |
| 2011 | 12.268,50 | 48,2% | 5.678,70 | 22,3% | 7.461,30 | 29,3% | 25,00 | 0,1% | 25.433,50 | 2,40 |
| 2012 | 11.945,90 | 48,5% | 5.407,90 | 21,9% | 7.238,00 | 29,4% | 55,40 | 0,2% | 24.647,20 | 2,38 |

Note: From 2004 to 2010 PNPI data are included in the company sector

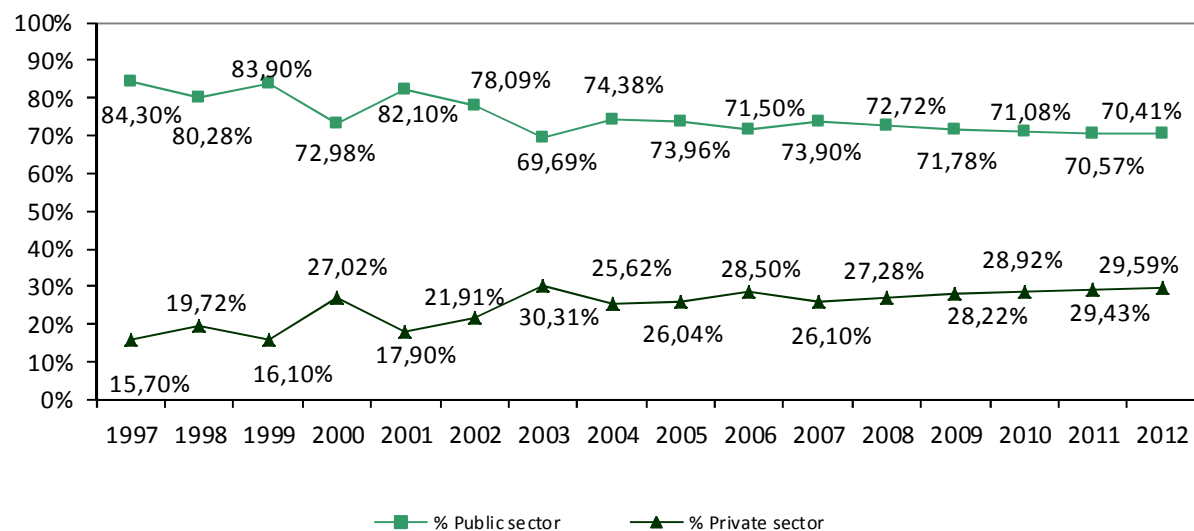
Source: INE and own compilation

□ R&D personnel (FTE) employed by public and private sectors in Andalusia. 1997-2012

| YEAR | No. Public sector | No. Private sector | No. TOTAL | % Public sector | % Private sector |
|------|-------------------|--------------------|-----------|-----------------|------------------|
| 1997 | 8.234,20 | 1.533,20 | 9.767,40 | 84,30% | 15,70% |
| 1998 | 8.785,90 | 2.157,60 | 10.943,50 | 80,28% | 19,72% |
| 1999 | 10.069,70 | 1.932,60 | 12.002,30 | 83,90% | 16,10% |
| 2000 | 9.820,70 | 3.636,30 | 13.457,00 | 72,98% | 27,02% |
| 2001 | 12.139,40 | 2.645,90 | 14.785,30 | 82,10% | 17,90% |
| 2002 | 10.939,20 | 3.069,10 | 14.008,30 | 78,09% | 21,91% |
| 2003 | 11.610,50 | 5.049,90 | 16.660,40 | 69,69% | 30,31% |
| 2004 | 12.687,90 | 4.369,20 | 17.057,10 | 74,38% | 25,62% |
| 2005 | 13.906,90 | 4.896,30 | 18.803,20 | 73,96% | 26,04% |
| 2006 | 15.022,10 | 5.986,70 | 21.008,80 | 71,50% | 28,50% |
| 2007 | 16.333,00 | 5.769,60 | 22.102,60 | 73,90% | 26,10% |
| 2008 | 16.889,90 | 6.337,30 | 23.227,20 | 72,72% | 27,28% |
| 2009 | 17.778,10 | 6.988,60 | 24.766,70 | 71,78% | 28,22% |
| 2010 | 18.321,30 | 7.452,70 | 25.774,00 | 71,08% | 28,92% |
| 2011 | 17.947,20 | 7.486,30 | 25.433,50 | 70,57% | 29,43% |
| 2012 | 17.353,80 | 7.293,40 | 24.647,20 | 70,41% | 29,59% |

Source: INE and own compilation

□ R&D personnel (FTE) percentage employed by public and private sectors in Andalusia. 1997-2012



Source: INE and own compilation

□ R&D personnel (FTE) by sector of employment and occupation in Andalusia. 1997-2012

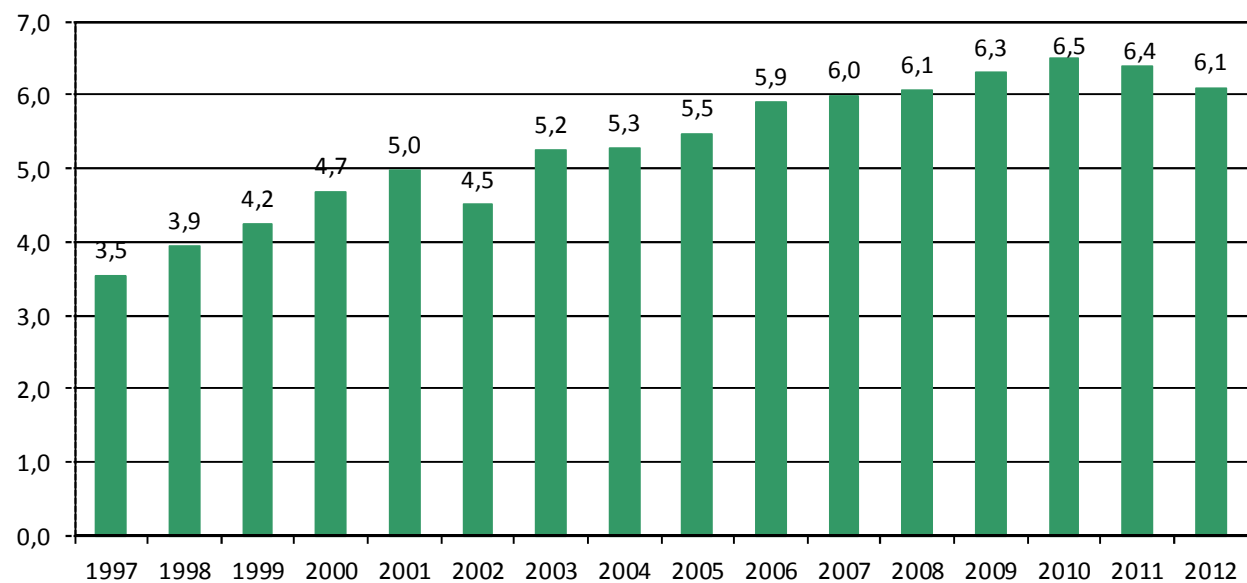
| YEAR | No. Total Personnel | No. Technicians and Assistants | No. Researchers | (Technician – Assistant) / Researcher |
|------|---------------------|--------------------------------|-----------------|---------------------------------------|
| 1997 | 9.767,40 | 3.077,20 | 6.690,20 | 0,46 |
| 1998 | 10.943,50 | 3.309,90 | 7.633,60 | 0,43 |
| 1999 | 12.002,30 | 3.342,00 | 8.660,30 | 0,39 |
| 2000 | 13.457,00 | 4.247,20 | 9.209,80 | 0,46 |
| 2001 | 14.785,30 | 3.968,70 | 10.816,60 | 0,37 |
| 2002 | 14.008,30 | n.a. | n.a. | - |
| 2003 | 16.660,40 | 5.570,70 | 11.089,70 | 0,50 |
| 2004 | 17.057,10 | 5.059,20 | 11.997,90 | 0,42 |
| 2005 | 18.803,20 | 5.584,70 | 13.218,50 | 0,42 |
| 2006 | 21.008,80 | 8.385,00 | 12.623,80 | 0,66 |
| 2007 | 22.102,60 | 8.870,10 | 13.232,50 | 0,67 |
| 2008 | 23.227,20 | 9.450,30 | 13.776,90 | 0,69 |
| 2009 | 24.766,70 | 10.100,80 | 14.665,90 | 0,69 |
| 2010 | 25.774,00 | 10.710,00 | 15.064,00 | 0,71 |
| 2011 | 25.433,50 | 10.824,20 | 14.609,30 | 0,74 |
| 2012 | 24.647,20 | 10.367,00 | 14.280,20 | 0,73 |

Note: n.a.: not available

–: Numerical information not applicable

Source: INE and own compilation

□ Personnel employed in R&D in per thousand to active population in Andalusia. 1997-2012



Source: INE and own compilation

□ Inter-annual variation rate of R&D personnel (FTE) in Andalusia. 1997-2012

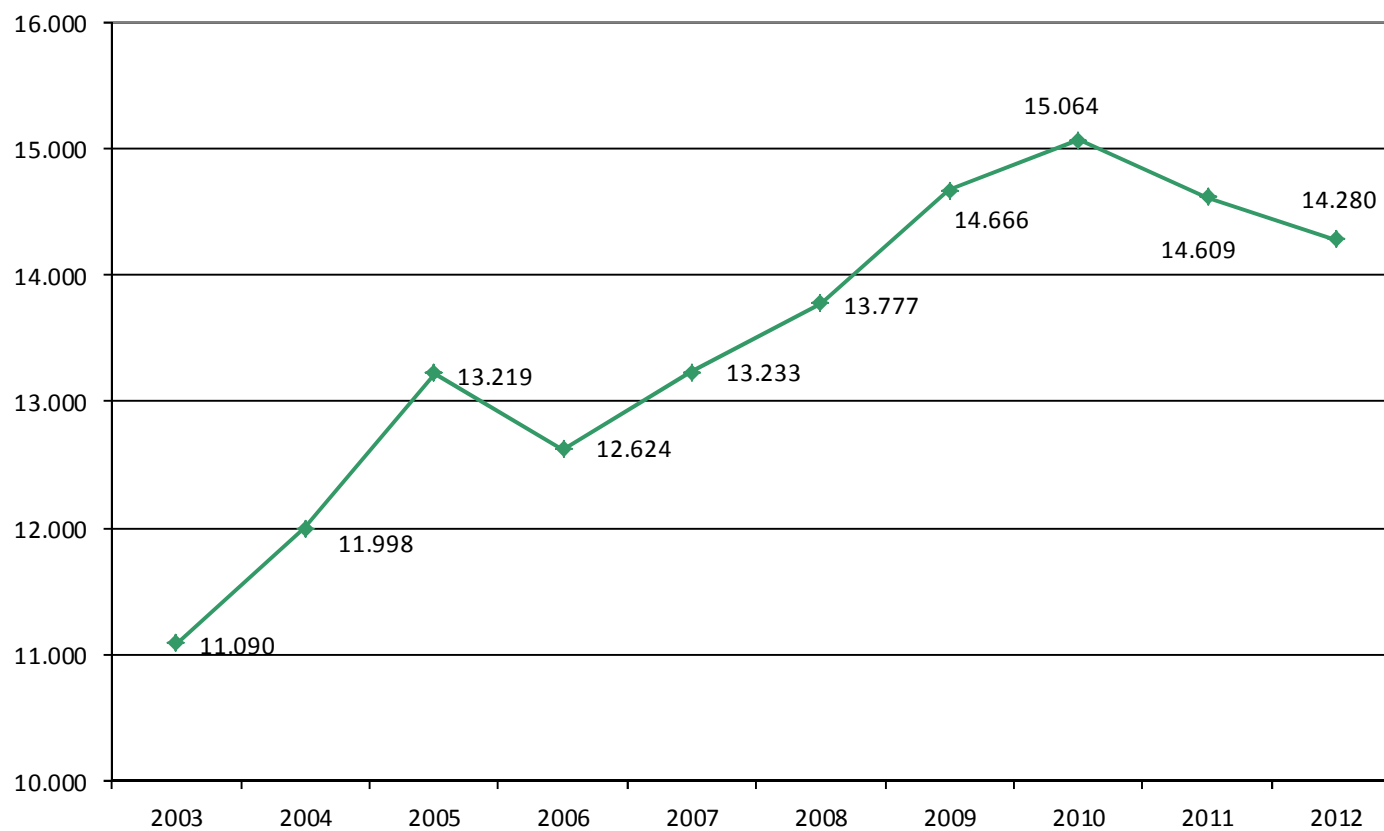
| YEAR | No. Researchers | No. Technicians and Assistants | No. Total Personnel | Rate of inter-annual variation of Researcher personnel | Rate of inter-annual variation of Technician and Assistant Personnel | Rate of inter-annual variation of Total Personnel |
|------|-----------------|--------------------------------|---------------------|--|--|---|
| 1997 | 6.690,20 | 3.077,20 | 9.767,40 | - | - | - |
| 1998 | 7.633,60 | 3.309,90 | 10.943,50 | 14,10% | 7,56% | 12,04% |
| 1999 | 8.660,30 | 3.342,00 | 12.002,30 | 13,45% | 0,97% | 9,68% |
| 2000 | 9.209,80 | 4.247,20 | 13.457,00 | 6,35% | 27,09% | 12,12% |
| 2001 | 10.816,60 | 3.968,70 | 14.785,30 | 17,45% | -6,56% | 9,87% |
| 2002 | n.a. | n.a. | 14.008,30 | n.a. | n.a. | n.a. |
| 2003 | 11.089,70 | 5.570,70 | 16.660,40 | - | - | - |
| 2004 | 11.997,90 | 5.059,20 | 17.057,10 | 8,19% | -9,18% | 2,38% |
| 2005 | 13.218,50 | 5.584,70 | 18.803,20 | 10,17% | 10,39% | 10,24% |
| 2006 | 12.623,80 | 8.385,00 | 21.008,80 | -4,50% | 50,14% | 11,73% |
| 2007 | 13.232,50 | 8.870,10 | 22.102,60 | 4,82% | 5,79% | 5,21% |
| 2008 | 13.776,90 | 9.450,30 | 23.227,20 | 4,11% | 6,54% | 5,09% |
| 2009 | 14.665,90 | 10.100,80 | 24.766,70 | 6,45% | 6,88% | 6,63% |
| 2010 | 15.064,00 | 10.710,00 | 25.774,00 | 2,71% | 6,03% | 4,07% |
| 2011 | 14.609,30 | 10.824,20 | 25.433,50 | -3,02% | 1,07% | -1,32% |
| 2012 | 14.280,20 | 10.367,00 | 24.647,20 | -2,25% | -4,22% | -3,09% |

Note: n.a.: not available

-: Numerical information not applicable

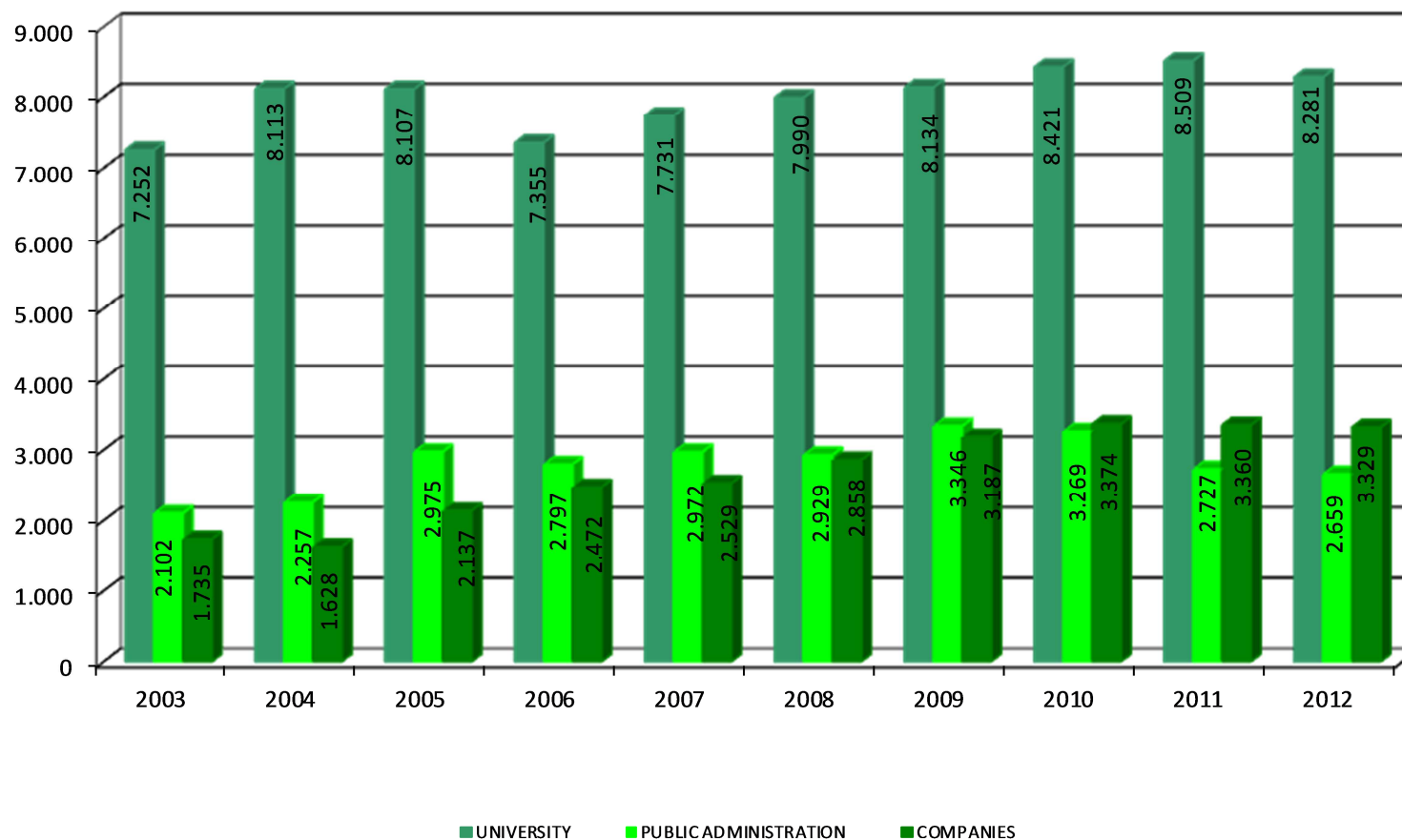
Source: INE and own compilation

□ R&D Researchers (FTE) in Andalusia. 2003-2012



Source: INE and own compilation

□ R&D researchers (FTE) by sectors of performance in Andalusia.2003-2012



Source: INE and own compilation

□ Andalusian Universities teaching staff by gender. 1998-2013

| | No. Teaching body of the Public Universities | | |
|------------------|--|-------|--------|
| | Men | Women | TOTAL |
| Course 1998-1999 | 10.099 | 4.629 | 14.728 |
| Course 1999-2000 | 10.701 | 5.048 | 15.749 |
| Course 2000-2001 | 11.192 | 5.453 | 16.645 |
| Course 2001-2002 | 10.351 | 5.072 | 15.423 |
| Couse 2002-2003 | 10.414 | 5.119 | 15.533 |
| Course 2003-2004 | 10.480 | 5.235 | 15.715 |
| Course 2004-2005 | 10.698 | 5.405 | 16.103 |
| Course 2005-2006 | 10.831 | 5.569 | 16.400 |
| Course 2006-2007 | 11.181 | 5.848 | 17.029 |
| Course 2007-2008 | 11.461 | 6.152 | 17.613 |
| Course 2008-2009 | 11.683 | 6.367 | 18.050 |
| Course 2009-2010 | 12.117 | 6.913 | 19.030 |
| Course 2010-2011 | 12.199 | 7.231 | 19.430 |
| Course 2011-2012 | 11.499 | 6.632 | 18.131 |
| Course 2012-2013 | 10.962 | 6.441 | 17.403 |

Source: MECS and own compilation

□ **Andalusian Universities professors by gender. 2004-2013**

| | No. University Professors | | | No. University College Professors | | | No. TOTAL | | | % | |
|-------------------------|---------------------------|-------|--------------|-----------------------------------|-------|------------|--------------|------------|--------------|---------------|---------------|
| | Men | Women | TOTAL | Men | Women | TOTAL | Men | Women | TOTAL | Men | Women |
| Course 2004-2005 | 1.249 | 167 | 1.416 | 368 | 168 | 536 | 1.617 | 335 | 1.952 | 82,84% | 17,16% |
| Course 2005-2006 | 1.244 | 166 | 1.410 | 362 | 166 | 528 | 1.606 | 332 | 1.938 | 82,87% | 17,13% |
| Course 2006-2007 | 1.199 | 166 | 1.365 | 344 | 162 | 506 | 1.543 | 328 | 1.871 | 82,47% | 17,53% |
| Course 2007-2008 | 1.251 | 178 | 1.429 | 300 | 139 | 439 | 1.551 | 317 | 1.868 | 83,03% | 16,97% |
| Course 2008-2009 | 1.251 | 186 | 1.437 | 271 | 128 | 399 | 1.522 | 314 | 1.836 | 82,90% | 17,10% |
| Course 2009-2010 | 1.430 | 272 | 1.702 | 249 | 114 | 363 | 1.679 | 386 | 2.065 | 81,31% | 18,69% |
| Course 2010-2011 | 1.533 | 321 | 1.854 | 224 | 107 | 331 | 1.757 | 428 | 2.185 | 80,41% | 19,59% |
| Course 2011-2012 | 1.596 | 359 | 1.955 | 301 | 95 | 396 | 1.897 | 454 | 2.351 | 80,69% | 19,31% |
| Course 2012-2013 | 1.675 | 401 | 2.076 | 191 | 88 | 279 | 1.866 | 489 | 2.355 | 79,24% | 20,76% |

Source: MECS and own compilation

□ **Andalusian Universities Student body by gender. 1998-2013**

| | No. Student body of the Public Universities | | |
|------------------|---|---------|---------|
| | Men | Women | TOTAL |
| Course 1998-1999 | 124.593 | 143.261 | 267.854 |
| Course 1999-2000 | 127.294 | 145.812 | 273.106 |
| Course 2000-2001 | 121.846 | 143.611 | 265.457 |
| Course 2001-2002 | 117.883 | 138.892 | 256.775 |
| Couse 2002-2003 | 114.119 | 134.468 | 248.587 |
| Course 2003-2004 | 109.782 | 130.943 | 240.725 |
| Course 2004-2005 | 106.194 | 127.159 | 233.353 |
| Course 2005-2006 | 104.234 | 126.387 | 230.621 |
| Course 2006-2007 | 102.535 | 124.964 | 227.499 |
| Course 2007-2008 | 101.878 | 124.794 | 226.672 |
| Course 2008-2009 | 101.750 | 124.361 | 226.111 |
| Course 2009-2010 | 104.326 | 126.391 | 230.717 |
| Course 2010-2011 | 106.873 | 127.978 | 234.851 |
| Course 2011-2012 | 107.765 | 130.785 | 238.550 |
| Course 2012-2013 | 172.860 | 210.982 | 383.842 |

Note: From the academic course 2008-2009 onwards, besides the students registered in 1st and 2nd cycles, the Degree are assessed.
Source: MECS and own compilation

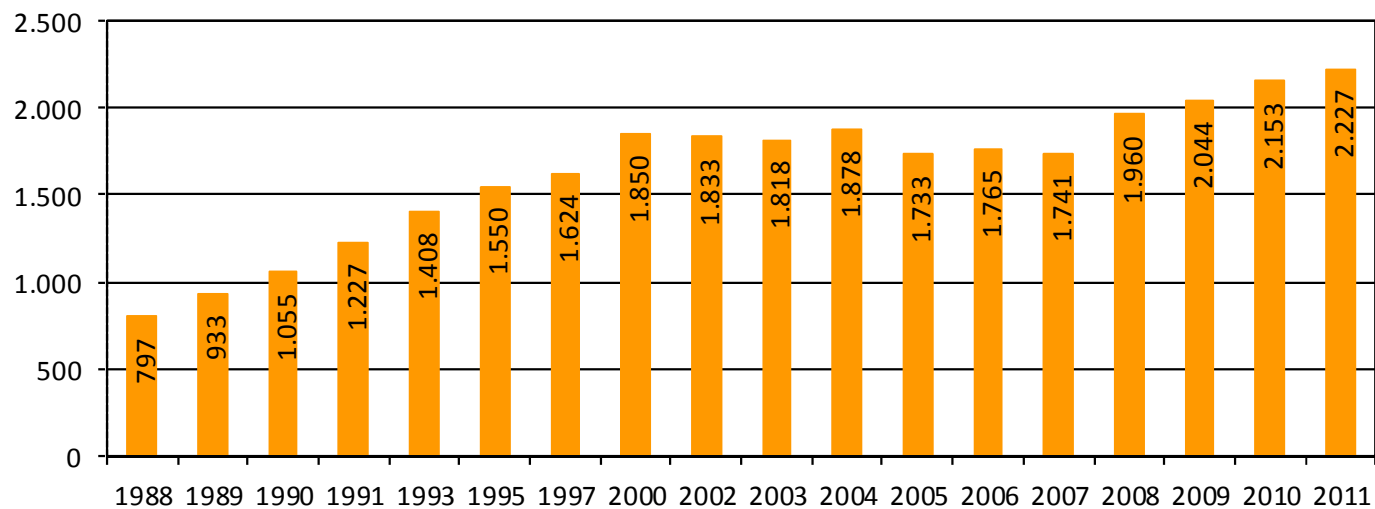
□ **Andalusian Universities graduates by gender. 1998-2013**

| | No. Student body who finished studies of the Public Universities | | |
|------------------|--|--------|--------|
| | Men | Women | TOTAL |
| Course 1998-1999 | 13.357 | 21.035 | 34.392 |
| Course 1999-2000 | 13.683 | 20.342 | 34.025 |
| Course 2000-2001 | 12.242 | 18.767 | 31.009 |
| Course 2001-2002 | 14.024 | 20.598 | 34.622 |
| Couse 2002-2003 | 14.112 | 20.766 | 34.878 |
| Course 2003-2004 | 13.711 | 20.387 | 34.098 |
| Course 2004-2005 | 13.110 | 19.793 | 32.903 |
| Course 2005-2006 | 12.143 | 18.803 | 30.946 |
| Course 2006-2007 | 11.261 | 18.201 | 29.462 |
| Course 2007-2008 | 11.304 | 18.436 | 29.740 |
| Course 2008-2009 | 11.788 | 19.676 | 31.464 |
| Course 2009-2010 | 12.294 | 20.083 | 32.377 |
| Course 2010-2011 | 13.072 | 20.913 | 33.985 |
| Course 2011-2012 | 13.980 | 20.819 | 34.799 |
| Course 2012-2013 | 14.328 | 21.567 | 35.895 |

Note: From the academic course 2010-2011 onwards, besides the students who finished 1st and 2nd cycles, the Degree are assessed.
Source: MECS and own compilation.

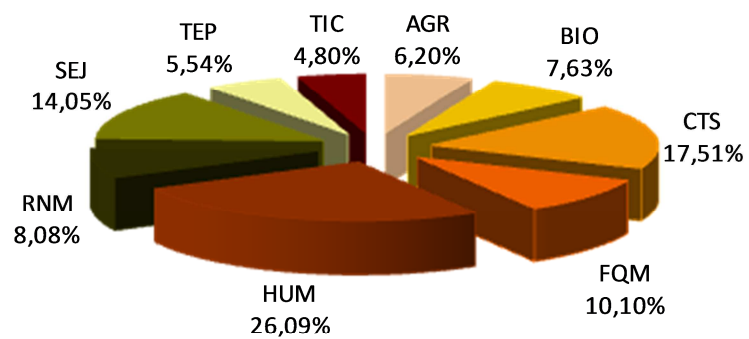
PAIDI ACTIONS

Number of R&D Groups in Andalusia. 1988-2011



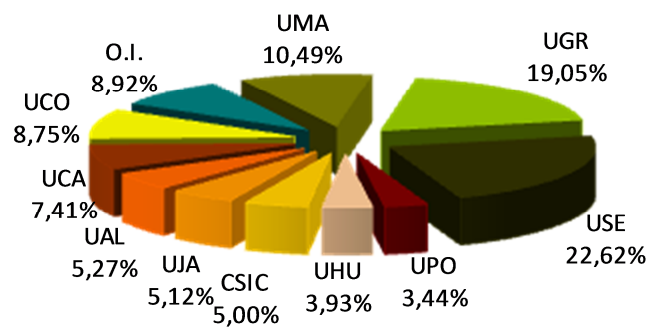
Note: The last available data are of 2011, pending resolution of 2012
Source: DGITE and own compilation

□ Distribution of R&D Groups by scientific-technical areas of PAIDI. 2011



Note: The last available data are of 2011, pending resolution of 2012
Source: DGITE and own compilation

□ Distribution of R&D Groups by institutions. 2011



Note: The last available data are of 2011, pending resolution of 2012
Source: DGITE and own compilation

□ Funding granted to R&D Groups by institutions (€). 2002-2011

| INSTITUTIONS | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|--------------------------------|----------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|
| University of Almeria | 574.069,00 | 452.448,56 | 502.425,39 | 619.150,44 | 668.555,22 | 696.925,37 | 629.398,85 | 661.002,85 | 300.216,55 | 272.339,36 |
| University of Cadiz | 865.177,00 | 575.407,98 | 656.659,30 | 806.502,62 | 869.116,42 | 865.594,40 | 919.908,75 | 911.486,79 | 407.329,63 | 368.037,04 |
| University of Cordoba | 1.133.300,81 | 974.953,81 | 1.024.989,30 | 1.208.734,06 | 1.286.223,64 | 1.289.410,62 | 1.245.069,33 | 1.192.077,60 | 529.519,44 | 482.411,43 |
| University of Granada | 3.068.079,35 | 2.237.042,62 | 2.288.745,44 | 2.775.430,33 | 3.023.693,48 | 3.162.299,45 | 3.233.516,94 | 3.475.495,24 | 1.455.058,07 | 1.313.873,51 |
| University of Huelva | 366.724,40 | 276.567,28 | 299.706,55 | 386.517,96 | 469.583,41 | 462.845,45 | 424.900,61 | 503.127,88 | 211.870,45 | 193.941,33 |
| University of Jaen | 544.313,15 | 440.459,52 | 431.870,94 | 574.465,42 | 598.103,13 | 646.184,94 | 583.097,18 | 716.131,50 | 296.166,86 | 261.763,43 |
| University of Malaga | 1.661.131,85 | 1.028.570,10 | 1.009.927,99 | 1.276.953,45 | 1.369.770,66 | 1.341.001,35 | 1.434.083,55 | 1.585.954,02 | 681.477,03 | 607.860,51 |
| University of Sevilla | 2.503.010,00 | 2.078.675,99 | 2.202.773,77 | 2.597.050,83 | 2.884.566,78 | 3.075.762,51 | 2.650.835,82 | 2.849.946,33 | 1.283.103,31 | 1.176.075,74 |
| University of Pablo de Olavide | 380.194,00 | 179.733,60 | 203.642,76 | 261.961,74 | 360.768,73 | 474.983,75 | 657.871,75 | 542.581,01 | 226.655,92 | 213.373,69 |
| CSIC | 1.601.615,00 | 896.019,19 | 927.115,70 | 1.019.255,69 | 1.128.825,48 | 1.247.829,43 | 1.091.257,47 | 1.066.285,05 | 479.657,49 | 444.892,41 |
| SAS / Foundations | 673.915,23 | n.a. | n.a. | n.a. | n.a. | 660.676,44 | 483.753,01 | 606.124,56 | 342.245,11 | 319.298,74 |
| IFAPA | n.a. | n.a. | n.a. | n.a. | n.a. | 173.968,29 | 186.716,61 | 182.874,86 | 82.997,66 | 69.108,35 |
| Others Institutions | n.a. | 361.777,22 | 437.776,19 | 550.204,45 | 861.823,76 | 8.981,92 | 0,00 | 0,00 | 5.411,49 | 2.622,41 |
| TOTAL | 13.371.529,79 | 9.501.655,87 | 9.985.633,33 | 12.076.226,99 | 13.521.030,71 | 14.106.463,92 | 13.540.409,87 | 14.293.087,68 | 6.301.709,01 | 5.725.597,95 |

Note: n.a. - not available

The last available data are of 2011, pending resolution of 2012

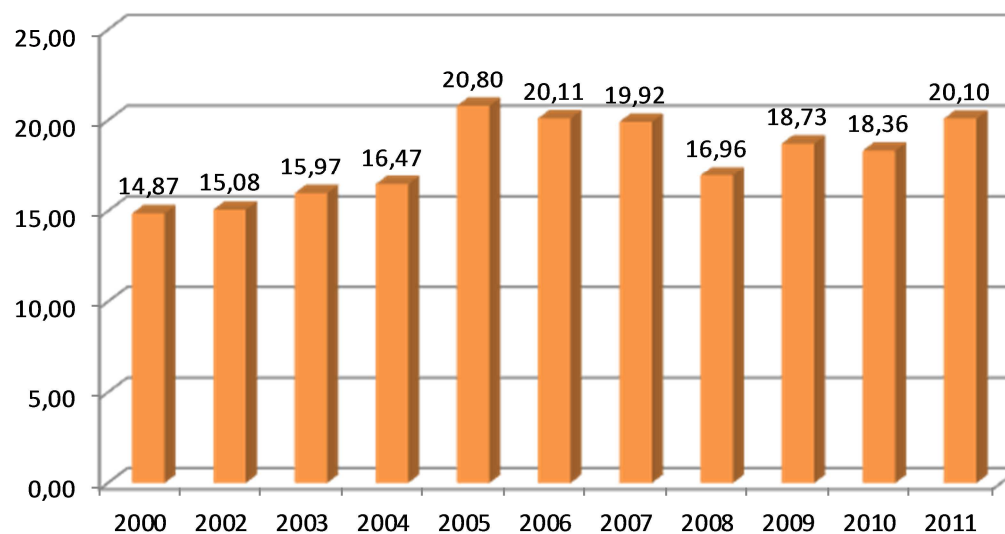
Source: DGITE and own compilation

□ Funding granted to R&D Groups by scientific-technical areas of PAIDI (€). 2002-2011

| SCIENTIFIC-TECHNICAL AREAS | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|----------------------------|----------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|
| AGR | 1.341.885,00 | 917.622,85 | 1.009.815,91 | 1.150.465,44 | 1.362.790,97 | 1.302.260,09 | 1.200.810,51 | 1.191.713,87 | 508.966,99 | 458.658,60 |
| BIO | 1.352.607,55 | 885.036,52 | 1.036.538,80 | 1.177.641,11 | 1.312.664,94 | 1.340.780,32 | 1.269.635,94 | 1.246.884,53 | 569.463,69 | 544.769,40 |
| CTS | 1.993.448,23 | 1.379.523,56 | 1.424.041,64 | 1.837.258,43 | 2.054.983,57 | 2.210.378,55 | 2.093.354,37 | 2.151.433,23 | 1.058.502,91 | 932.801,82 |
| FQM | 2.254.357,00 | 1.534.407,49 | 1.582.424,96 | 2.235.528,70 | 2.378.454,17 | 2.632.184,76 | 2.329.171,00 | 2.163.367,32 | 948.709,70 | 855.271,42 |
| HUM | 1.886.502,01 | 1.603.301,18 | 1.585.761,64 | 1.694.253,42 | 1.926.139,70 | 1.731.562,28 | 1.942.706,66 | 2.481.166,63 | 983.491,19 | 912.062,93 |
| RNM | 1.549.614,00 | 977.307,58 | 1.102.647,97 | 1.302.589,49 | 1.406.181,63 | 1.608.126,40 | 1.533.589,38 | 1.563.834,56 | 681.279,62 | 596.374,86 |
| SEJ | 1.109.400,00 | 980.825,58 | 951.947,02 | 1.189.595,62 | 1.337.256,12 | 1.380.455,40 | 1.186.263,25 | 1.512.983,17 | 631.006,93 | 595.717,32 |
| TEP | 999.310,00 | 487.958,95 | 527.077,38 | 640.971,78 | 723.314,10 | 844.354,80 | 887.657,11 | 850.680,46 | 370.524,79 | 334.450,73 |
| TIC | 884.106,00 | 735.672,16 | 765.378,01 | 847.923,00 | 1.019.245,51 | 1.056.361,32 | 1.097.221,65 | 1.131.023,91 | 549.763,19 | 495.490,87 |
| TOTAL | 13.371.229,79 | 9.501.655,87 | 9.985.633,33 | 12.076.226,99 | 13.521.030,71 | 14.106.463,92 | 13.540.409,87 | 14.293.087,68 | 6.301.709,01 | 5.725.597,95 |

Note: The last available data are of 2011, pending resolution of 2012
Source: DGITE and own compilation

□ R&D Groups average assessment. 2000-2011



Note: The last available data are of 2011, pending resolution of 2012

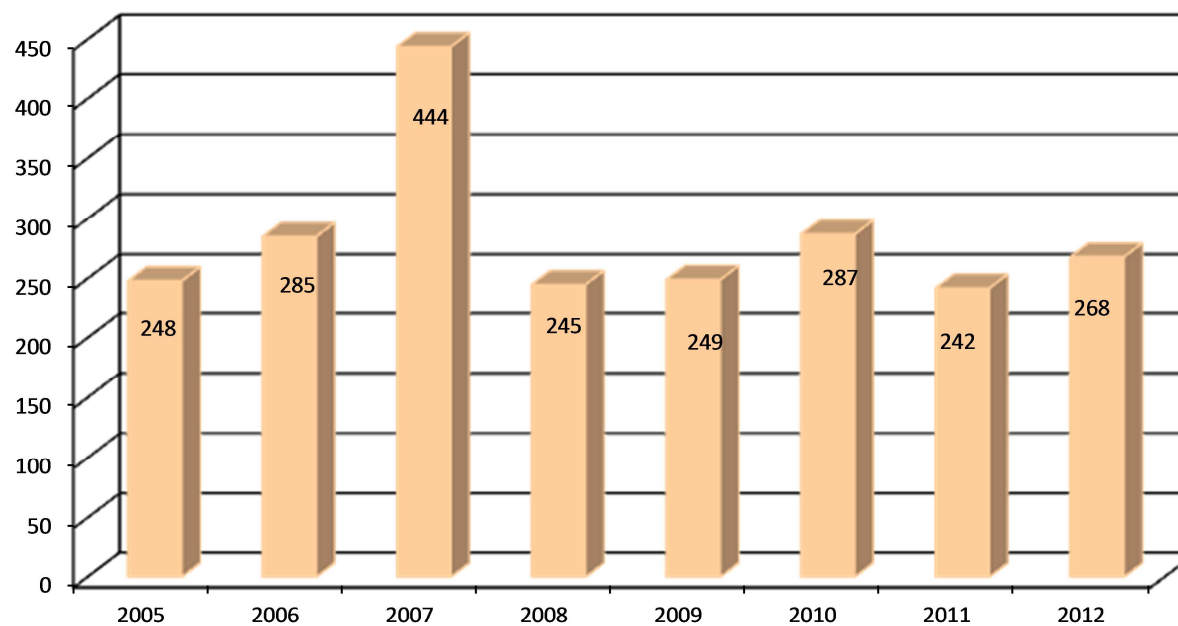
Source: DGITE and own compilation

□ R&D personnel by academic qualification in Andalusia. 1997-2011

| YEAR | No. Doctors | No. Upper studies | No. Other studies | No. TOTAL |
|------|-------------|-------------------|-------------------|-----------|
| 1997 | 8.202,00 | 6.543,00 | 1.288,00 | 16.033,00 |
| 2000 | 10.212,00 | 7.192,00 | 1.470,00 | 18.874,00 |
| 2002 | 11.158,00 | 5.780,00 | 721,00 | 17.659,00 |
| 2003 | 11.135,00 | 7.190,00 | 1.212,00 | 19.537,00 |
| 2004 | 12.049,00 | 7.859,00 | 1.336,00 | 21.244,00 |
| 2005 | 11.932,00 | 6.327,00 | 1.059,00 | 19.318,00 |
| 2006 | 12.117,00 | 6.128,00 | 1.029,00 | 19.274,00 |
| 2007 | 13.275,00 | 7.500,00 | 1.054,00 | 21.829,00 |
| 2008 | 14.073,00 | 7.959,00 | 1.097,00 | 23.129,00 |
| 2009 | 15.208,00 | 8.776,00 | 1.113,00 | 25.097,00 |
| 2010 | 16.305,00 | 9.463,00 | 1.534,00 | 27.302,00 |
| 2011 | 18.848,00 | 8.696,00 | 3.115,00 | 30.659,00 |

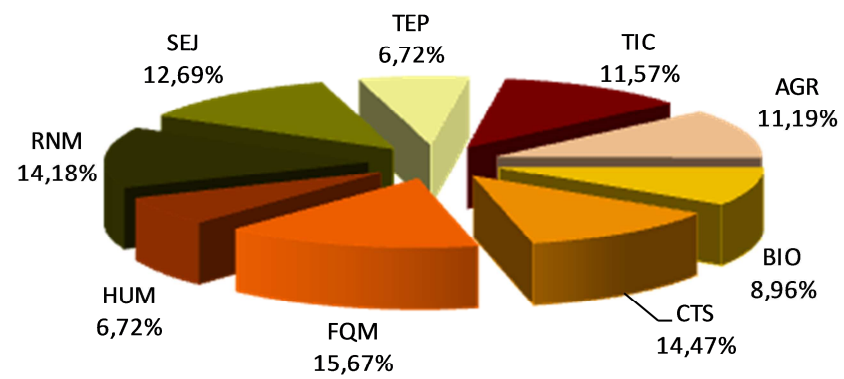
Note: The last available data are of 2011, pending resolution of 2012
Source: DGITE and own compilation

□ Number of Excellence Projects in Andalusia. 2005-2012



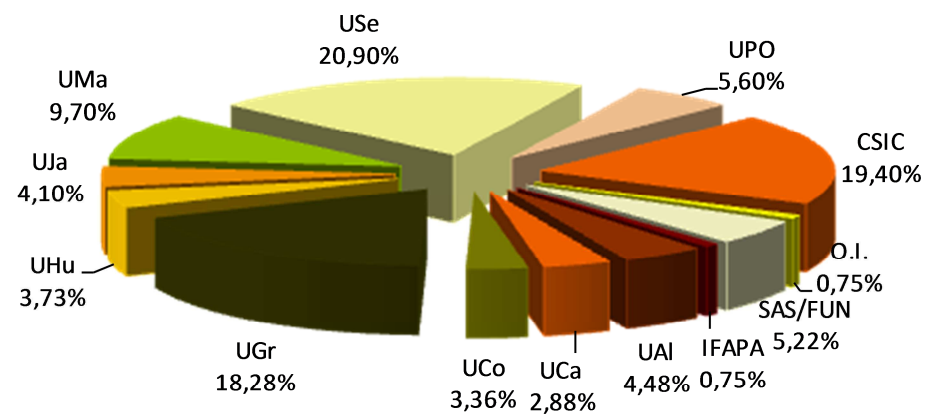
Source: DGITE and own compilation

□ Distribution of Excellence Projects by scientific-technical areas of PAIDI. 2012



Source: DGITE and own compilation

□ Distribution of Excellence Projects by institutions. 2012



Source: DGITE and own compilation

□ Funding granted to Excellence Projects by institutions (€). 2005-2012

| INSTITUTIONS | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| University of Almeria | 771.958,00 | 2.028.327,52 | 2.325.271,63 | 2.220.343,60 | 1.864.914,04 | 2.026.125,91 | 1.204.673,75 | 1.836.893,00 |
| University of Cadiz | 2.259.312,00 | 3.023.006,62 | 4.183.543,21 | 2.745.769,02 | 2.117.319,44 | 1.773.644,75 | 1.440.023,10 | 796.324,50 |
| University of Cordoba | 2.535.150,00 | 4.453.408,30 | 3.818.630,99 | 3.322.077,22 | 4.231.855,52 | 2.003.732,51 | 2.696.615,53 | 1.806.939,00 |
| University of Granada | 6.294.902,00 | 11.749.828,52 | 19.069.323,18 | 8.907.387,14 | 10.068.402,88 | 8.097.540,83 | 7.274.419,08 | 5.461.749,33 |
| University of Huelva | 961.900,00 | 354.730,00 | 2.600.794,46 | 1.039.835,73 | 1.218.581,40 | 1.337.369,00 | 468.699,58 | 1.062.848,00 |
| University of Jaen | 748.450,00 | 1.534.327,94 | 2.694.964,29 | 1.661.318,53 | 1.160.240,04 | 4.439.337,90 | 1.329.130,78 | 973.823,00 |
| University of Malaga | 2.882.545,00 | 4.041.741,80 | 10.402.008,26 | 4.569.637,51 | 4.436.609,84 | 3.761.102,19 | 4.914.776,32 | 3.729.939,00 |
| University of Sevilla | 7.847.718,00 | 9.840.328,34 | 11.907.384,17 | 9.777.509,46 | 9.168.907,36 | 7.562.545,57 | 8.314.722,54 | 8.199.132,35 |
| University of Pablo de Olavide | 1.482.872,00 | 1.716.690,60 | 4.937.344,62 | 1.336.287,36 | 2.525.587,44 | 1.329.255,44 | 1.109.563,70 | 1.782.439,00 |
| CSIC | 3.863.156,00 | 8.313.410,75 | 12.957.101,41 | 8.275.260,18 | 9.050.879,60 | 5.083.224,87 | 5.380.085,38 | 8.775.025,21 |
| Other Institutions | 705.267,00 | 1.654.647,23 | 2.840.752,94 | 730.829,56 | 0,00 | 1.047.882,00 | 428.963,05 | 190.169,00 |
| SAS/Foundation | 0,00 | 0,00 | 0,00 | 2.812.900,73 | 1.783.847,36 | 2.880.344,42 | 3.062.093,25 | 2.244.701,00 |
| IFAPA | n.a. | n.a. | n.a. | n.a. | 441.783,00 | 1.709.837,00 | 114.885,00 | 354.244,00 |
| TOTAL | 30.353.230,00 | 48.710.447,62 | 77.737.119,16 | 47.399.156,04 | 48.068.927,92 | 43.051.942,38 | 37.738.651,06 | 37.214.226,39 |

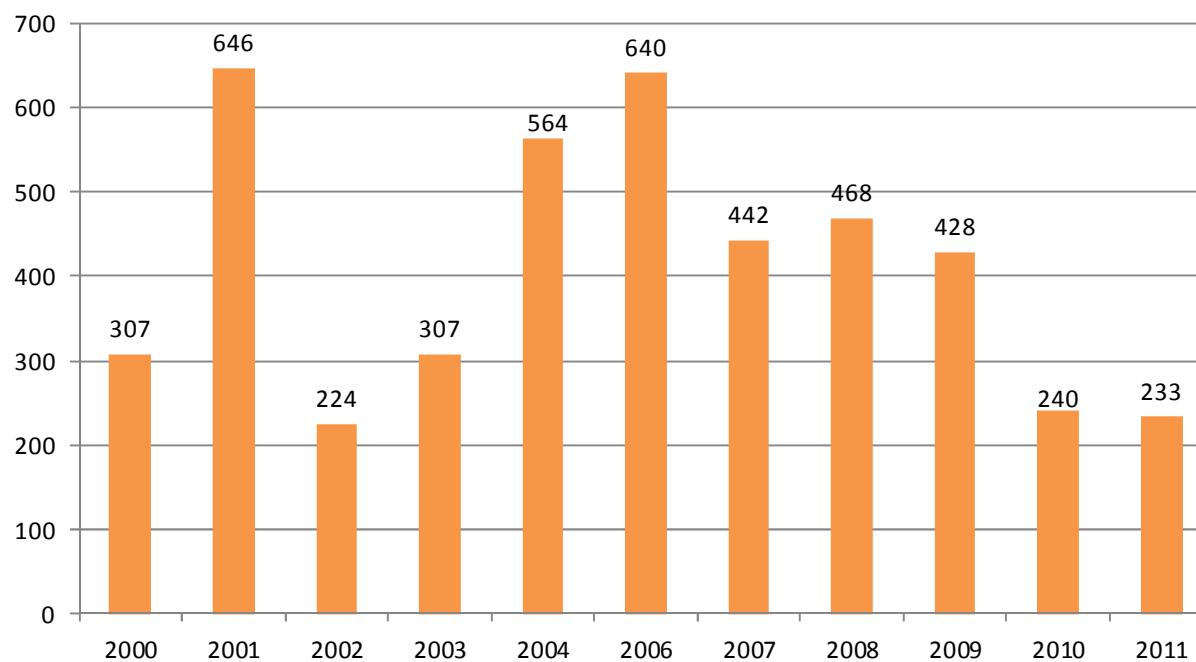
Note: n.a. - not available
Source: DGITE and own compilation

□ Funding granted to Excellent Projects by scientific-technical areas of PAIDI (€). 2005-2012

| SCIENTIFIC-TECHNICAL AREAS | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| AGR | 4.593.606,00 | 4.180.605,11 | 7.248.845,50 | 4.868.936,80 | 4.592.983,16 | 9.785.538,70 | 3.321.860,50 | 4.977.184,10 |
| BIO | 2.986.513,00 | 6.066.462,92 | 13.505.805,97 | 6.010.774,55 | 4.679.353,48 | 4.730.614,60 | 5.452.496,33 | 4.246.813,00 |
| CTS | 2.507.335,00 | 7.079.825,61 | 3.450.847,38 | 7.242.145,59 | 6.561.750,16 | 8.043.026,26 | 6.602.822,50 | 6.011.584,00 |
| FQM | 5.151.440,00 | 10.438.355,58 | 13.918.536,01 | 6.837.230,64 | 9.139.105,44 | 4.707.665,42 | 4.323.933,75 | 6.144.746,25 |
| HUM | 2.470.343,00 | 4.199.770,08 | 8.576.414,63 | 2.159.975,86 | 2.589.933,80 | 864.761,44 | 1.752.675,16 | 1.971.490,13 |
| RNM | 4.924.149,00 | 6.490.876,92 | 7.867.614,99 | 5.934.029,25 | 7.801.449,60 | 5.053.624,39 | 5.932.664,89 | 4.702.896,16 |
| SEJ | 3.046.444,00 | 3.167.227,56 | 7.869.898,57 | 3.714.258,97 | 2.193.873,76 | 1.965.578,54 | 2.373.204,62 | 2.228.910,75 |
| TEP | 2.378.463,00 | 3.696.245,34 | 4.403.507,75 | 3.782.061,85 | 5.431.286,56 | 2.996.464,76 | 2.997.974,15 | 2.364.705,00 |
| TIC | 2.294.937,00 | 3.391.078,50 | 10.895.648,36 | 6.849.742,53 | 5.079.191,96 | 4.904.668,28 | 4.981.019,16 | 4.565.897,00 |
| TOTAL | 30.353.230,00 | 48.710.447,62 | 77.737.119,16 | 47.399.156,04 | 48.068.927,92 | 43.051.942,38 | 37.738.651,06 | 37.214.226,39 |

Source: DGITE and own compilation

□ Number of incentives granted to enhance researchers mobility and improvement. 2000-2011



Note: The last available data are of 2011, pending resolution of 2012
Source: DGITE and own compilation

Percentage of female researchers recipients of R&D groups and excellence projects incentives. 2005-2011

| YEAR | No. women PRs Projects | No. women PRs Groups | No. Projects | No. Groups | % women PRs projects | % women PRs projects | % women PRs projects + Groups |
|------|---------------------------|-------------------------|--------------|------------|-------------------------|-------------------------|-------------------------------------|
| 2005 | 31 | 328 | 216 | 1.733 | 14,35% | 18,93% | 18,42% |
| 2006 | 49 | 345 | 330 | 1.765 | 14,85% | 19,55% | 18,81% |
| 2007 | 77 | 337 | 350 | 1.741 | 22,00% | 19,36% | 19,80% |
| 2008 | 51 | 405 | 245 | 1.960 | 20,82% | 20,66% | 20,68% |
| 2009 | 58 | 421 | 249 | 2.044 | 23,29% | 20,60% | 20,89% |
| 2010 | 67 | 465 | 287 | 2.153 | 23,34% | 21,60% | 21,80% |
| 2011 | 71 | 514 | 250 | 2.227 | 28,40% | 23,08% | 23,62% |

Note: PRs - Principal Researchers

The last available data are of 2011, pending resolution of 2012

Source: DGITE and own compilation

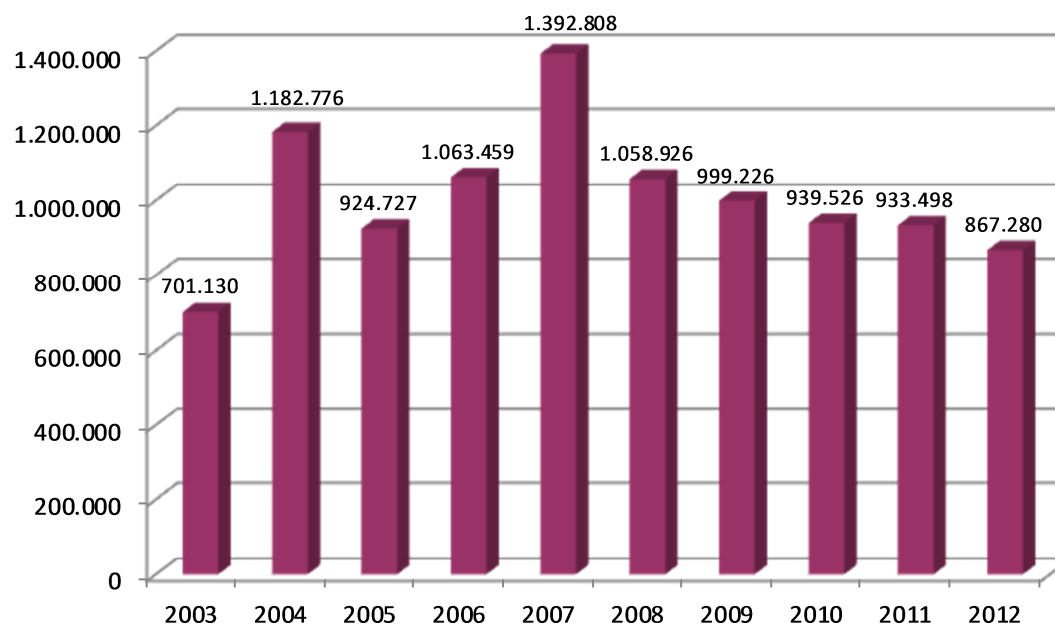
INNOVATION

□ Number of R&D performing companies by level of technology. 2002-2012

| YEAR | High tech and medium high tech technologies manufacturing sector | High technologies services | TOTAL |
|------|--|----------------------------|-------|
| 2002 | 97 | 60 | 157 |
| 2003 | 138 | 82 | 220 |
| 2004 | 152 | 80 | 232 |
| 2005 | 186 | 124 | 310 |
| 2006 | 215 | 177 | 392 |
| 2007 | 203 | 251 | 454 |
| 2008 | 171 | 239 | 410 |
| 2009 | 154 | 276 | 430 |
| 2010 | 177 | 344 | 521 |
| 2011 | 159 | 336 | 495 |
| 2012 | 166 | 302 | 468 |

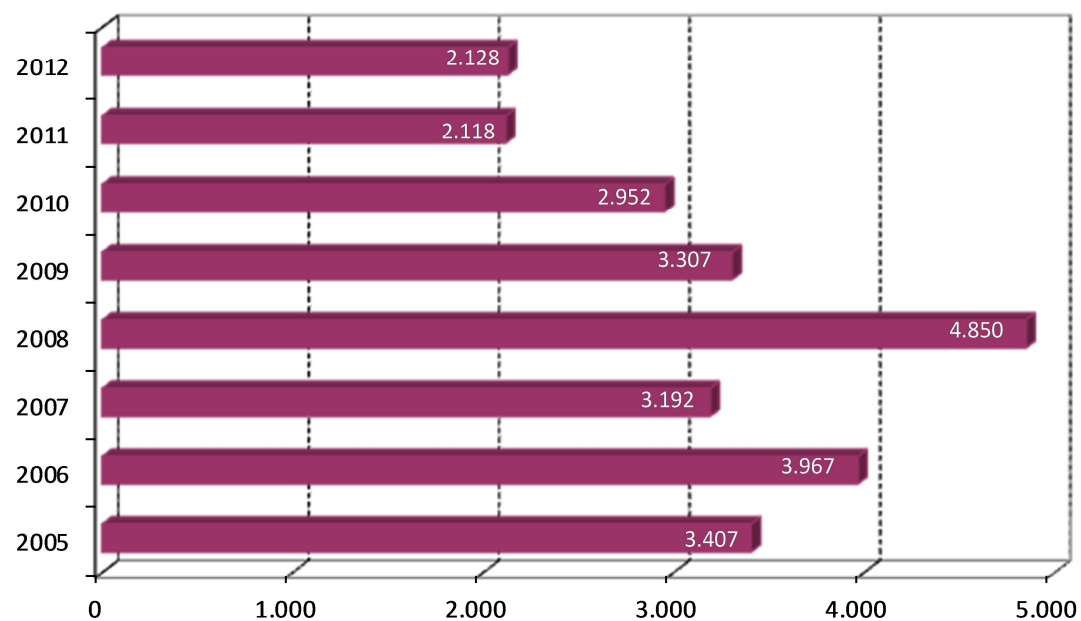
Source: INE and own compilation

□ Total expenditure on innovative activities in Andalusia (thousand €). 2003-2012



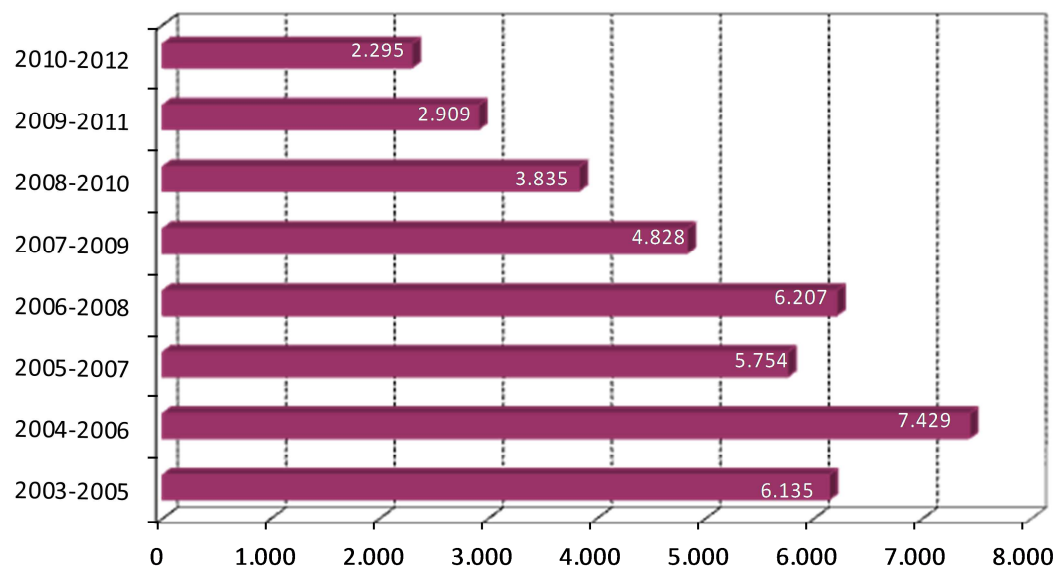
Source: INE and own compilation

□ Number of companies with innovative activities in Andalusia. 2005-2012



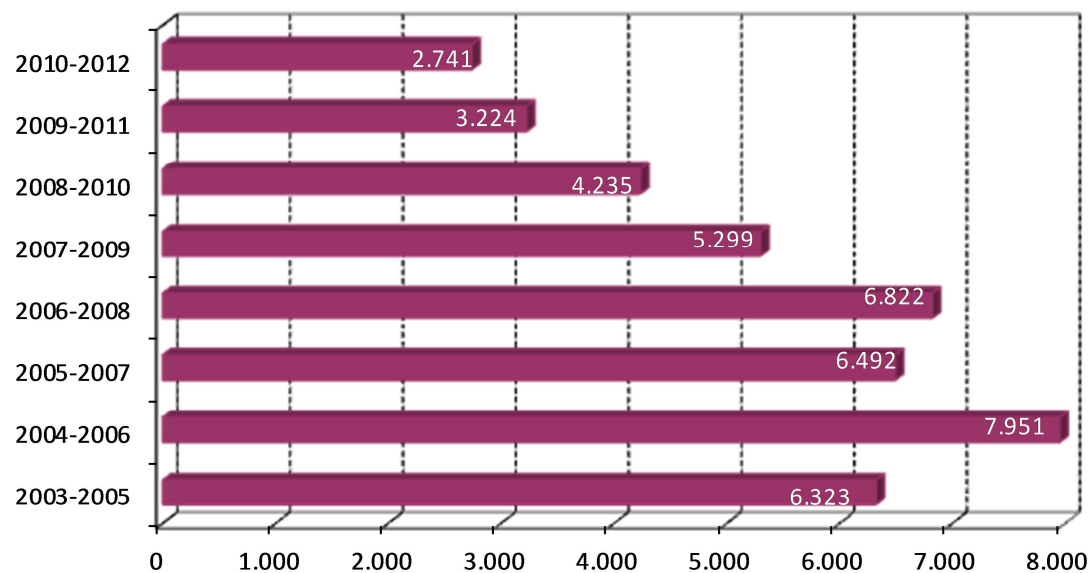
Source: INE and own compilation

□ Number of innovative companies in Andalusia. 2003-2012



Source: INE and own compilation

□ Number of EIN companies. 2003-2012



Source: INE and own compilation

□ Intensity of innovation in Andalusia. 2005-2012

| YEAR | INTENSITY |
|------|-----------|
| 2005 | 0,59 |
| 2006 | 0,55 |
| 2007 | 0,72 |
| 2008 | 0,58 |
| 2009 | 0,69 |
| 2010 | 0,75 |
| 2011 | 0,65 |
| 2012 | 0,67 |

Note: Intensity of innovation = (Expenditure on innovative activities / Turnover) x 100
Source: INE and own compilation

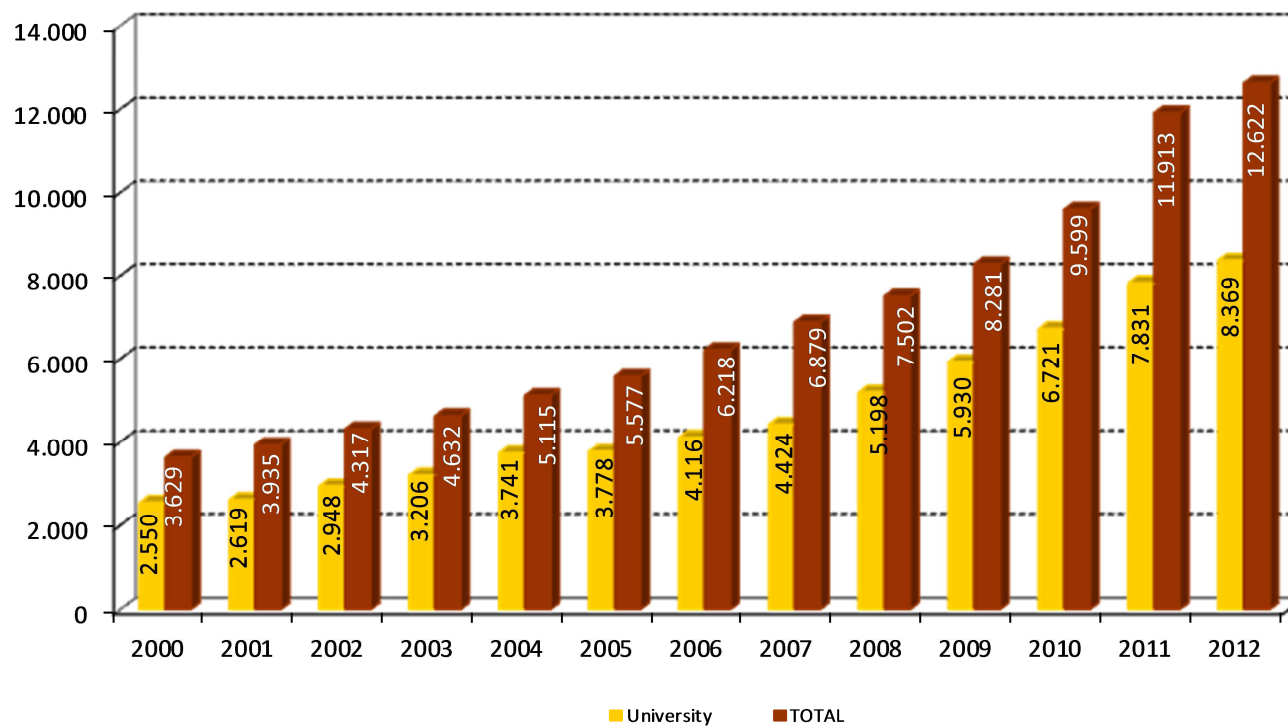
OUTPUTS

□ Number of patent applications and utility models in Andalusia. 1990-2012

| YEAR | PATENTS | | | UTILITY MODELS | TOTAL |
|------|--------------|--------------|-----------|----------------|-------|
| | VIA NATIONAL | VIA EUROPEAN | VIA P.C.T | | |
| 1990 | 131 | 3 | 1 | 153 | 288 |
| 1991 | 128 | 8 | 8 | 192 | 336 |
| 1992 | 148 | 5 | 1 | 201 | 355 |
| 1993 | 168 | 4 | 5 | 203 | 380 |
| 1994 | 177 | 7 | 13 | 183 | 380 |
| 1995 | 166 | 2 | 13 | 198 | 379 |
| 1996 | 184 | 4 | 16 | 177 | 381 |
| 1997 | 201 | 8 | 23 | 198 | 430 |
| 1998 | 175 | 7 | 19 | 192 | 393 |
| 1999 | 203 | 3 | 23 | 224 | 453 |
| 2000 | 229 | 9 | 17 | 247 | 502 |
| 2001 | 238 | 6 | 38 | 238 | 520 |
| 2002 | 273 | 5 | 38 | 231 | 547 |
| 2003 | 267 | 6 | 49 | 231 | 553 |
| 2004 | 273 | 7 | 56 | 204 | 540 |
| 2005 | 325 | 8 | 80 | 206 | 619 |
| 2006 | 334 | 9 | 93 | 198 | 634 |
| 2007 | 402 | 16 | 105 | 217 | 740 |
| 2008 | 433 | 16 | 120 | 226 | 795 |
| 2009 | 453 | 9 | 131 | 222 | 815 |
| 2010 | 454 | 16 | 180 | 233 | 883 |
| 2011 | 477 | 16 | 185 | 250 | 928 |
| 2012 | 436 | 16 | 195 | 310 | 957 |

Source: OEPM and own compilation

□ Number of ISI documents in Andalusia. 2000-2012



Source: Database of Institute for Scientific Information (ISI) and own compilation

□ Incentives granted to infrastructures, equipment and management by institutions. 2011

| CATEGORY | No. institutions | No. projects | Investement granted |
|---|---------------------|-----------------|------------------------|
| ACTA (Agent of Technological Knowledge Accredited) | 1 | 1 | 100.476,27 |
| CII (Centre and Institute of Research) | 1 | 1 | 435.951,64 |
| CIT (Innovation and Technology Centre) | 4 | 4 | 1.900.613,16 |
| CT (Technology Centre) | 7 | 7 | 2.888.773,24 |
| CTA (Advanced Technology Centre) | 1 | 1 | 1.480.000,00 |
| DCT (Space of Scientific-Technological Dissemination) | 0 | 0 | 0,00 |
| ETC (Knowledge Transfer Entity) | 1 | 1 | 415.740,00 |
| OPI (Public Research Body) | 5 | 14 | 5.317.911,04 |
| PCT (Scientific and Technological Park) | 6 | 7 | 9.863.585,70 |
| University | 8 | 52 | 19.948.557,85 |
| TOTAL | 34 | 88 | 42.351.608,90 |

Source: DGITE and own compilation

Note: The last available data are of 2011, pending resolution of 2012

□ **Summons of the National Plan of R&D&I in Andalusia by participation modality. 2012**

| National R&D&I Plan 2008-2011 | | |
|--|--------------|-------------------------|
| Modality of Participation | 2012 | |
| | No. | Amount |
| LIA for Human Resources | 343 | 25.062.250,24 € |
| LIA for R&D&I projects | 494 | 63.386.884,27 € |
| LIA Institutional Strengthening | 1 | 4.000.000,00 € |
| LIA for scientific and technological infrastructures | 11 | 5.021.565,50 € |
| LIA for the Use of Knowledge and Transfer of | 2 | 500.000,00 € |
| LIA for deployment and internationalisation of the | 63 | 107.869.473,41 € |
| Strategic action on health | 157 | 11.323.518,65 € |
| Strategic action on energy and climate change | 7 | 2.567.160,75 € |
| Strategic action on telecommunications and the | 10 | 6.072.665,01 € |
| Program of Scientific Culture and of the Innovation | 18 | 304.000,00 € |
| TOTAL | 1.106 | 226.107.517,83 € |

Source: MINECO and own compilation

□ **Projects approved from National Plan of R&D&I sources. 2000-2012**

| YEAR | NATIONAL PLAN | |
|------|---------------|---------------|
| | No. | € |
| 2000 | 354 | 12.645.930,00 |
| 2001 | 384 | 28.900.360,00 |
| 2002 | 420 | 30.556.907,00 |
| 2003 | 422 | 36.330.180,00 |
| 2004 | 461 | 37.299.065,00 |
| 2005 | 450 | 37.775.844,00 |
| 2006 | 511 | 51.184.775,07 |
| 2007 | 497 | 55.648.334,00 |
| 2008 | 460 | 51.367.464,50 |
| 2009 | 495 | 54.978.025,97 |
| 2010 | 519 | 52.470.045,00 |
| 2011 | 471 | 48.186.143,03 |
| 2012 | 400 | 36.580.127,00 |

Note: Projects of no oriented fundamental research
Source: MINECO and own compilation

□ Funding granted to R&D projects of National Plan of R&D&I by institutions. 2000-2012

| INSTITUTIONS | AMOUNT (euros) | | | | | | | | | | | | |
|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| University of Almería | 420.848,00 | 1.774.562,00 | 1.499.570,00 | 876.600,00 | 2.005.070,00 | 1.791.545,00 | 1.771.077,00 | 2.958.208,00 | 2.609.607,00 | 1.335.235,04 | 2.121.614,00 | 1.774.438,38 | 1.583.900,00 |
| University of Cádiz | 413.273,00 | 1.959.515,00 | 1.658.098,00 | 1.405.625,00 | 1.652.995,00 | 3.003.798,00 | 1.617.636,90 | 2.568.346,00 | 4.086.593,50 | 2.243.703,04 | 2.611.906,00 | 1.882.276,00 | 1.379.875,00 |
| University of Córdoba | 1.643.468,00 | 2.940.919,00 | 3.807.210,00 | 1.827.320,00 | 3.504.705,00 | 4.474.043,00 | 2.731.817,00 | 4.649.304,00 | 4.652.087,00 | 2.537.854,03 | 3.438.457,00 | 4.627.152,53 | 1.105.650,00 |
| University of Granada | 2.433.739,00 | 5.254.110,00 | 4.920.179,00 | 5.935.265,00 | 6.178.535,00 | 7.290.059,00 | 8.393.275,11 | 11.043.670,00 | 9.821.086,00 | 10.110.034,32 | 8.831.911,00 | 8.658.739,43 | 5.707.681,00 |
| University of Huelva | 493.691,00 | 491.005,00 | 682.470,00 | 880.540,00 | 1.067.685,00 | 482.902,00 | 1.287.798,16 | 1.632.411,00 | 1.005.026,00 | 843.854,02 | 2.422.783,00 | 1.029.211,48 | 349.479,00 |
| University of Jaén | 680.785,00 | 622.259,00 | 374.410,00 | 758.750,00 | 778.910,00 | 826.812,00 | 1.430.967,78 | 1.175.152,00 | 1.232.506,00 | 2.527.206,09 | 860.915,00 | 1.255.350,80 | 1.565.800,00 |
| University of Málaga | 947.080,00 | 2.331.310,00 | 3.031.440,00 | 5.924.910,00 | 2.744.505,00 | 4.331.124,00 | 6.021.485,14 | 5.651.789,00 | 6.018.661,00 | 4.681.853,09 | 5.248.617,00 | 4.714.491,54 | 2.917.816,00 |
| University of Sevilla | 2.601.485,00 | 6.128.653,00 | 5.866.175,00 | 7.552.170,00 | 7.302.885,00 | 6.189.436,00 | 11.336.395,62 | 11.756.723,00 | 7.757.552,00 | 11.374.726,25 | 10.502.437,00 | 6.770.908,32 | 6.664.179,00 |
| University of Pablo de Olavide | 145.733,00 | 160.598,00 | 1.015.290,00 | 627.140,00 | 597.160,00 | 1.214.276,00 | 1.475.735,36 | 1.894.618,00 | 2.186.349,00 | 1.246.663,06 | 1.137.884,00 | 2.267.387,54 | 1.594.008,00 |
| C.S.I.C. | 2.655.150,00 | 6.304.892,00 | 6.633.490,00 | 9.135.710,00 | 10.670.585,00 | 7.493.549,00 | 14.197.293,00 | 12.020.503,00 | 10.469.162,00 | 17.400.647,02 | 14.103.881,00 | 14.467.947,01 | 12.819.339,00 |
| Foundations - SAS | 0,00 | 169.180,00 | 103.500,00 | 721.500,00 | 287.500,00 | 215.390,00 | 364.210,00 | 209.280,00 | 509.410,00 | 526.350,01 | 924.440,00 | 324.280,00 | 269.100,00 |
| IFAPA | 130.588,00 | 46.447,00 | 41.734,00 | - | 28.750,00 | 182.070,00 | 91.960,00 | 88.330,00 | 332.750,00 | 108.900,00 | 108.900,00 | 90.750,00 | 198.900,00 |
| Other institutions | 80.090,00 | 0,00 | 373.800,00 | 684.650,00 | 479.780,00 | 280.840,00 | 465.124,00 | - | 686.675,00 | 41.000,00 | 156.300,00 | 323.210,00 | 424.400,00 |
| TOTAL | 12.645.930,00 | 28.183.450,00 | 30.007.366,00 | 36.330.180,00 | 37.299.065,00 | 37.775.844,00 | 51.184.775,07 | 55.648.334,00 | 51.367.464,50 | 54.978.025,97 | 52.470.045,00 | 48.186.143,03 | 36.580.127,00 |

Note: Projects of no oriented fundamental research

Source: MINECO and own compilation

□ Funding granted to R&D projects of National Plan of R&D&I by scientific-technical áreas. 2000-2012

| SCIENTIFIC-TECHNICAL AREAS | AMOUNT (euros) | | | | | | | | | | | | |
|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| AGR | 3.002.618,00 | 4.533.695,00 | 4.577.170,00 | 4.745.550,00 | 4.453.840,00 | 4.689.552,00 | 6.707.272,00 | 6.144.743,00 | 7.085.760,00 | 7.654.460,06 | 5.604.720,00 | 7.434.240,00 | 5.185.440,00 |
| BIO | 93.691,00 | 1.824.775,00 | 1.058.250,00 | 1.099.720,00 | 1.489.510,00 | 1.651.958,00 | 2.835.030,00 | 2.999.348,00 | 3.686.870,00 | 7.929.130,04 | 9.680.000,00 | 2.220.350,00 | 2.624.310,00 |
| CTS | 1.569.179,00 | 5.188.322,00 | 7.260.605,00 | 7.933.310,00 | 6.960.250,00 | 7.055.986,00 | 13.388.052,26 | 10.347.315,00 | 6.370.650,00 | 4.397.140,00 | 3.035.890,00 | 6.030.640,00 | 5.619.510,00 |
| FQM | 2.533.138,00 | 5.417.230,00 | 4.669.275,00 | 5.220.290,00 | 6.357.730,00 | 7.013.027,00 | 8.412.774,26 | 9.615.870,00 | 6.559.773,00 | 12.411.938,18 | 9.542.060,00 | 11.971.425,40 | 7.351.461,00 |
| HUM | 2.155.475,00 | 906.097,00 | 1.981.585,00 | 2.446.500,00 | 1.592.740,00 | 2.132.837,00 | 1.507.781,00 | 4.031.962,00 | 4.295.016,00 | 5.367.681,21 | 4.527.941,00 | 3.549.898,00 | 2.699.190,00 |
| RNM | 1.777.856,00 | 4.412.271,00 | 4.491.532,00 | 5.515.270,00 | 5.986.440,00 | 6.924.848,00 | 2.916.584,00 | 7.908.873,00 | 8.686.227,00 | 8.109.401,18 | 9.061.416,00 | 7.146.623,00 | 6.272.060,00 |
| SEI | 802.853,00 | 785.844,00 | 665.976,00 | 1.124.840,00 | 1.189.960,00 | 1.096.228,00 | 3.239.889,95 | 1.757.041,00 | 2.148.960,00 | 1.562.473,14 | 2.605.130,00 | 1.795.585,55 | 1.090.323,00 |
| TEP | 321.388,00 | 2.533.016,00 | 2.553.550,00 | 1.903.535,00 | 3.639.675,00 | 3.721.614,00 | 7.349.310,10 | 6.161.683,00 | 8.514.225,50 | 5.167.426,12 | 6.897.847,00 | 6.566.863,24 | 4.029.129,00 |
| TIC | 389.732,00 | 3.299.110,00 | 3.298.964,00 | 6.341.165,00 | 5.628.920,00 | 3.489.794,00 | 4.828.081,50 | 6.681.499,00 | 4.019.983,00 | 2.378.376,04 | 1.515.041,00 | 1.470.517,84 | 1.708.704,00 |
| TOTAL | 12.645.930,00 | 28.900.360,00 | 30.556.907,00 | 36.330.180,00 | 37.299.065,00 | 37.775.844,00 | 51.184.775,07 | 55.648.334,00 | 51.367.464,50 | 54.978.025,97 | 52.470.045,00 | 48.186.143,03 | 36.580.127,00 |

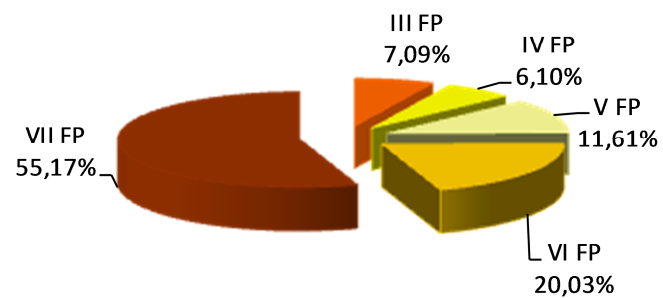
Note: Projects of no oriented fundamental research
Source: MINECO and own compilation

□ **Andalusian participation in the EU Framework Programme. 1990-2012**

| FRAME PROGRAMME | Granted activities | Amount Granted (millions of €) | RETURN |
|---------------------------|--------------------|-----------------------------------|--------|
| III Programme (1990-94) | 180 | 18,5 | 3,20% |
| IV Programme (1995-98) | 147 | 15,9 | 3,70% |
| V Programme (1998-2002) | 230 | 30,3 | 4,80% |
| VI Programme (2003-2006) | 233 | 52,3 | 5,80% |
| VII Programme (2007-2011) | 408 | 144,0 | 6,10% |

Source: CDTI and own compilation

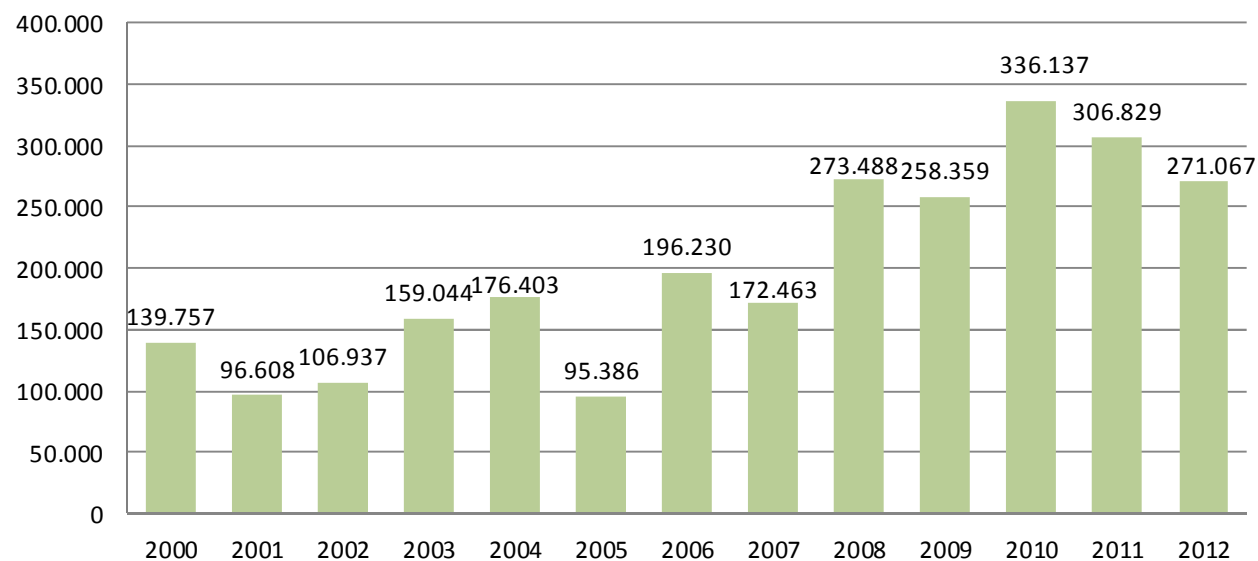
□ **Distribution of the Funding granted by the EU Framework Programme Editions. 2012**



Source: CDTI and own compilation

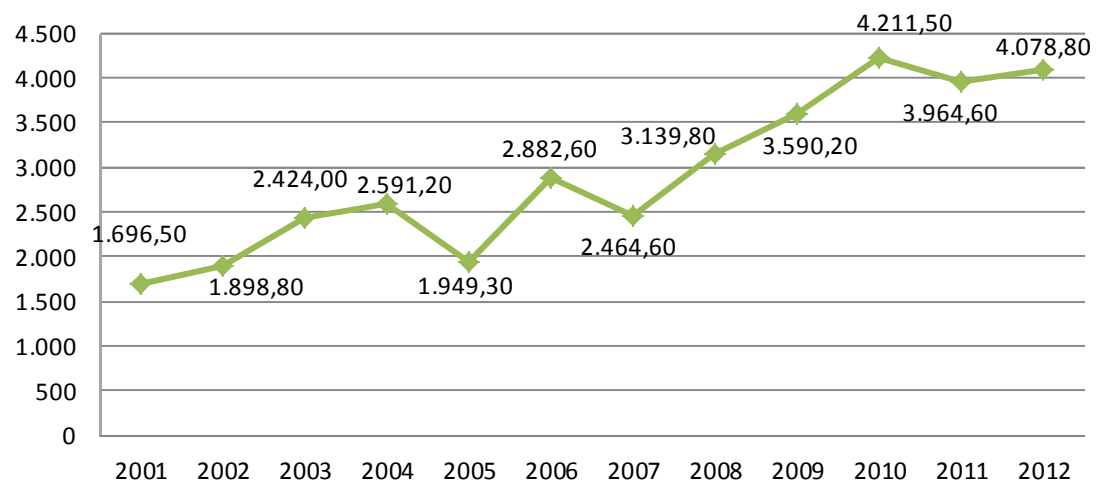
HIGH TECHNOLOGY

□ R&D Internal expenditure in high tech sectors (thousand €). 2000-2012



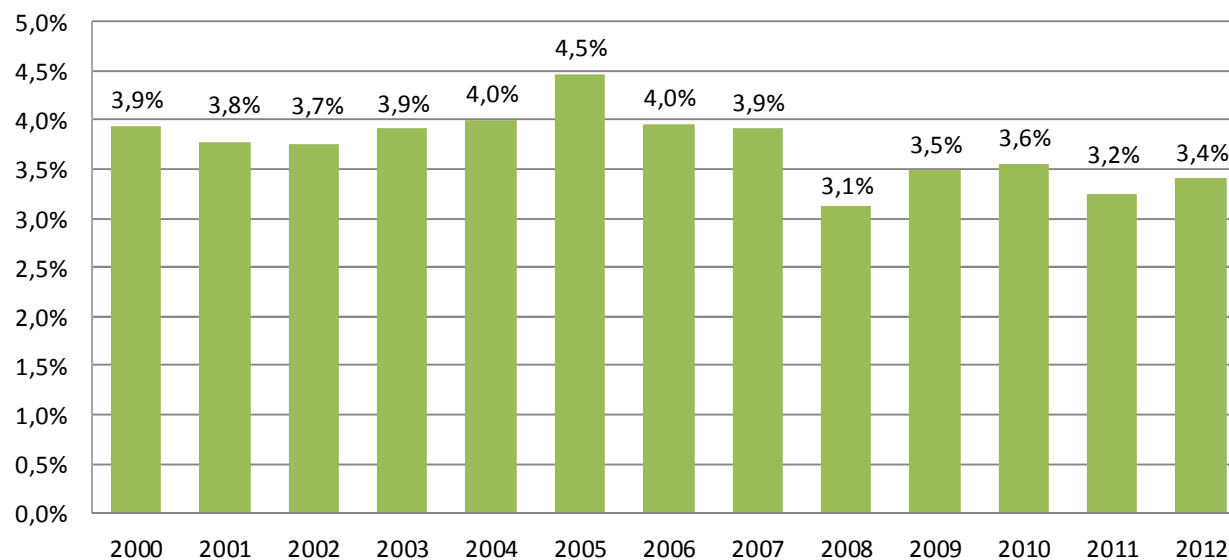
Source: INE and own compilation

□ R&D personnel (FTE) employed in high tech sectors. 2001-2012



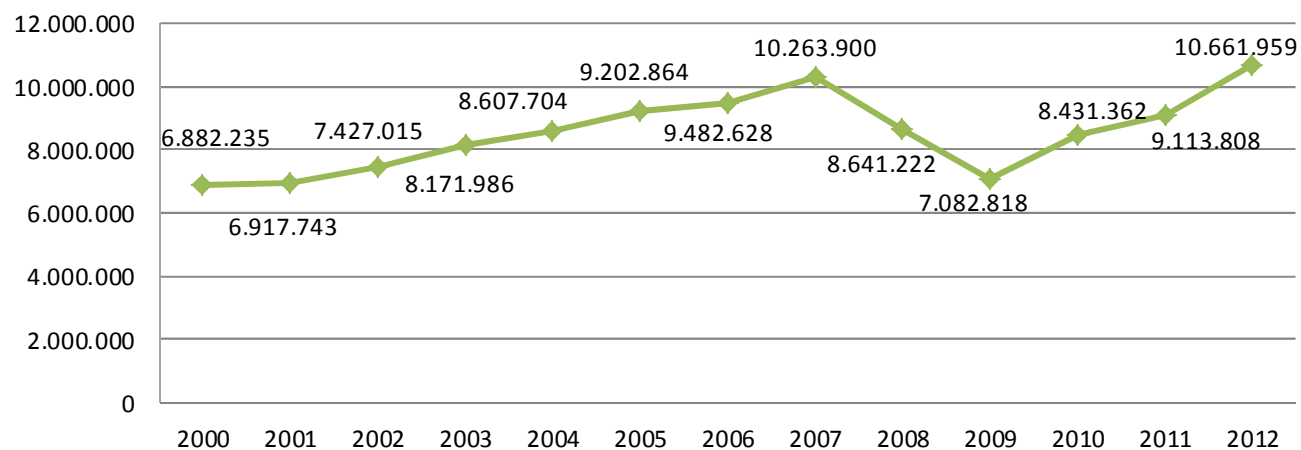
Source: INE and own compilation

Percentage of employed persons in high tech sectors to total employed persons. 2000-2012



Source: INE and own compilation

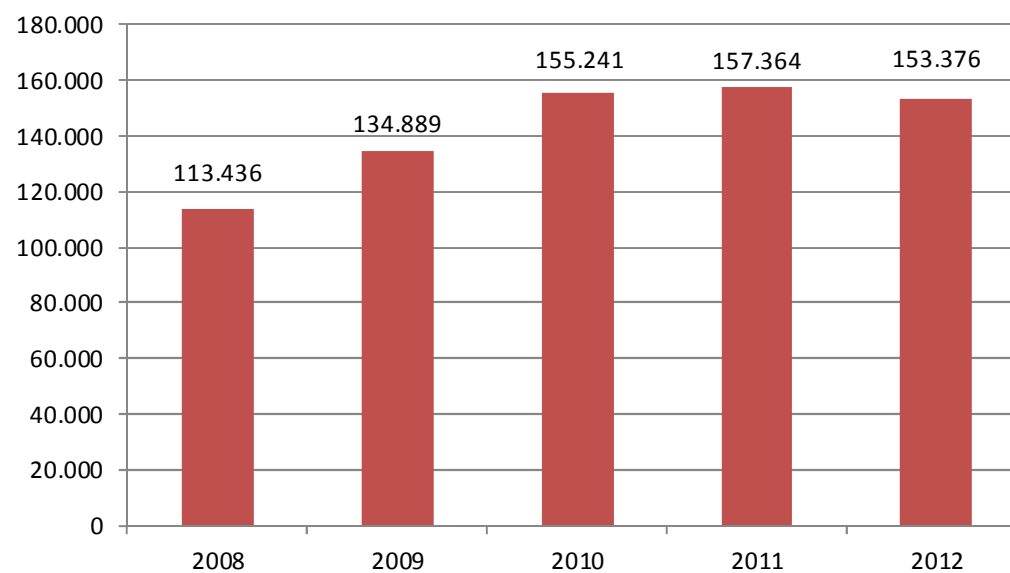
□ Turnover in high-tech sectors (thousand €). 2000-2012



Source: INE and own compilation

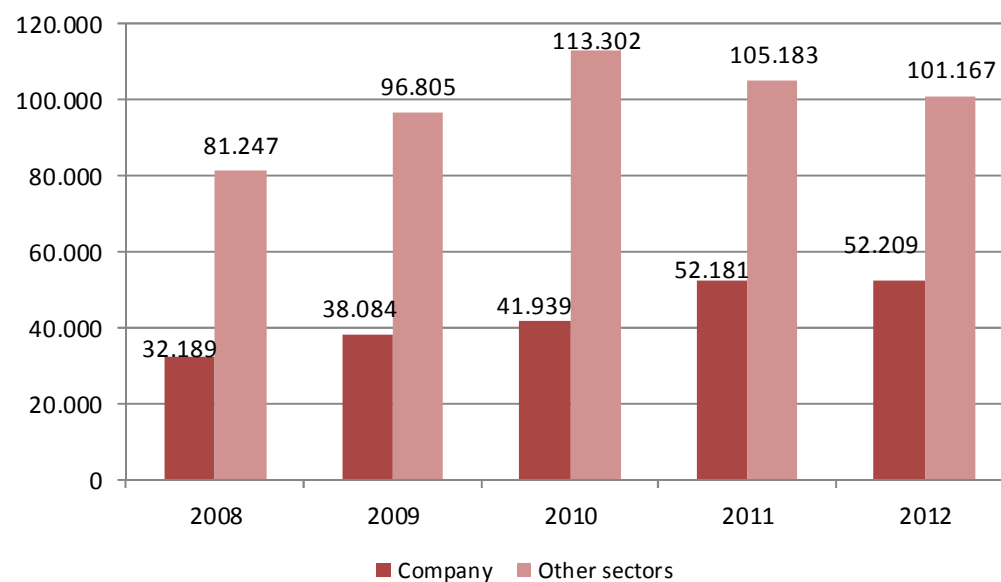
BIOTECHNOLOGY

□ R&D Internal expenditure in biotechnology in Andalusia (thousand €). 2008-2012



Source: INE and own compilation

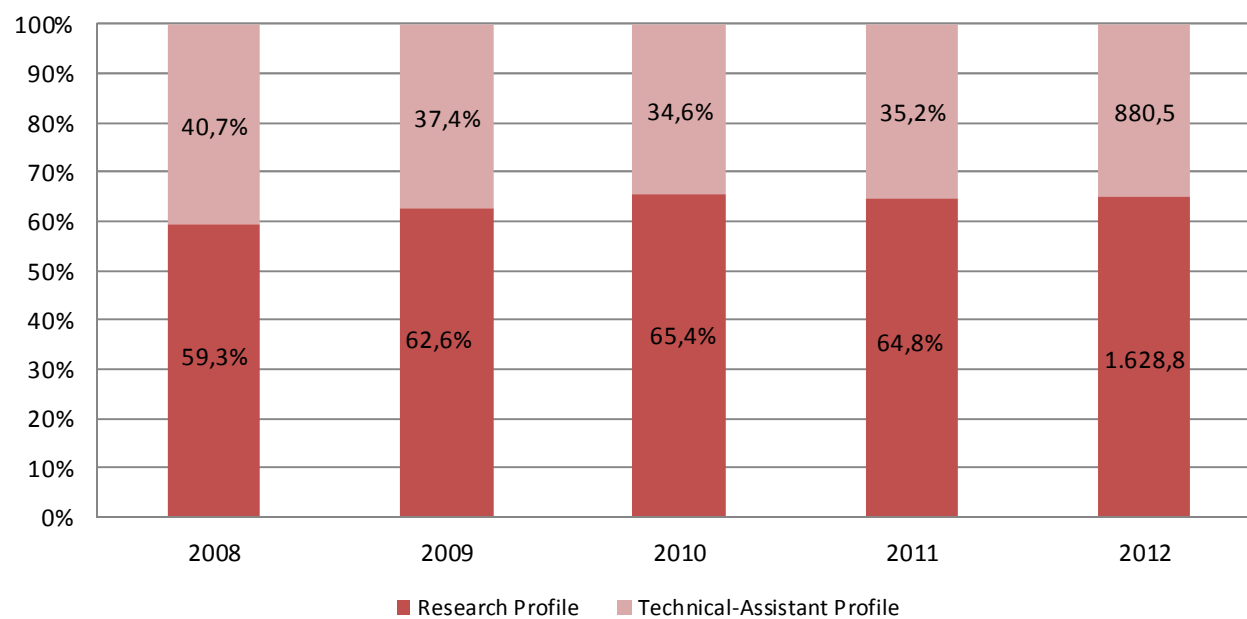
□ R&D Internal expenditure in biotechnology in Andalusia by sectors of performance (thousand €). 2008-2012



Source: INE and own compilation

Note: The remaining sectors including the Public Administration, Higher Education and Private Non Profit Institutions

Percentage of employed persons in biotechnological activities in R&D (FTE) for profiles in Andalusia. 2008-2012



Source: INE and own compilation

■ ■ ■ ABBREVIATIONS AND ACRONYMS

ACTA: Technological Knowledge Accredited Agent

ADMON: Administration

AGR: Agrifood

BIO: Biology and Biotechnology

CDTI: Industrial Technological Development Centre

CII: Research Centre and Institute

CIT: Technological Innovation Centre

CSIC: Spanish National Research Council

CT: Technological Centre

CTA: Advanced Technological Centre

CTS: Health Sciences and Technologies

DCT: Space of Scientific-Technological Dissemination

DGITE: General Direction for Research, Technology and Enterprise

EIN: Innovative Businesses or companies with innovation underway or unsuccessful

EIT: INE Technological Innovation Survey

ETC: Knowledge Transfer Entity

EU: European Union

FP: European Union Framework Programme

FQM: Physics, Chemistry and Mathematics

FTE: Full Time Equivalent

GPB: Gross National Product

GDP mp: Gross domestic product at market prices

HUM: Humanities

IFAPA: Research and Training Institute of Agriculture, Fisheries, Food and Ecological Production

ILA: Instrumental Line of Action

INE: National Statistics Institute

ISI: Institute for Scientific Information

MECS: Ministry of Education, Culture and Sport

MINECO: Ministry of Economy and Competitiveness

OEPM: Spanish Patent and Trademark Office

O.I.: Other Institutions

OPI: Public Research Body

PAIDI: Andalusian Research, Development and Innovation Plan

PCT: Scientific and Technological Park

P.C.T.: Patent Cooperation Treaty

PNPI: Private Non Profit Institutions

PRs: Principal Researchers

PIE: Business Innovation Park

R&D: Research & Technological Development

R&D&I: Research & Technological Development & Innovation

RNM: Natural Resources and Environment

SAS / Foundations: Andalusian Health System / Foundations

SEJ: Social, Economic and Legal Sciences

SICA: Andalusian Scientific Information System



TEP: Production Technologies

TIC: Information and Communication Technologies

UAI: University of Almeria

UCa: University of Cadiz

UCo: University of Cordoba

UGr: University of Granada

UHu: University of Huelva

UJa: University of Jaen

UMa: University of Malaga

Univ.: University

UPO: University Pablo of Olavide

USe: University of Seville

■ ■ ■ GLOSSARY OF TERMS

INNOVATIVE ACTIVITY: All the scientific, technological, organizational, financial and commercial activities which lead actually or potentially to the implementation of innovations. Some of these activities are themselves innovative; others are not novel activities however they are necessary for the implementation of innovations. Innovation activities also include R&D that is not directly related to the development of a specific innovation. (Oslo Manual, 2005)

HIGH TECHNOLOGY: The sectors and products within the so-called high technology can be defined, generically, as those which, given their degree of complexity, require a continuous effort in research and a solid technological base. (Methodology of High Technology Indicators, INE)

TURNOVER: This includes the amounts invoiced by the company during the reference year for the provision of services and sale of goods that are the object of the company's trade. Deductible VAT invoiced by suppliers will not be included in the valuation. These are accounted for, including the taxes paid on the goods and services, with the exception of the VAT paid by the client. They are accounted for in net terms, deducting returns of sales, as well as volume discounts. Neither cash discounts nor discounts for prompt payment are deducted. (INE Methodology)

FTE: The sum of the staff working full-time, and the fractions of time of the staff working part-time, for R&D activities. (EIT, INE)

EIN COMPANIES: Innovative businesses or companies with innovations underway or unsuccessful. (Statistics INE)

INNOVATIVE FIRM: The company which has implemented an innovation during the period under review. (Oslo Manual, 2005)

INNOVATION EXPENDITURES: Expenditures are measured on the basis of the sum of innovation activities over a specific period of time ... An alternative would be to collect information on total expenditures on activities related to individual innovations. (Oslo Manual, 2005)

INTRAMURAL EXPENDITURES ON R&D: Intramural expenditures are all expenditures for R&D performed within a statistical unit or sector of the economy during a specific period, whatever the source of funds. (Frascati Manual, 2002)

R&D: Research and experimental development (R&D) comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications. (Frascati Manual, 2002)

INNOVATION: Implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations. (Oslo Manual, 2005)

PATENT: Title that recognizes the right to exclusively exploit a patented invention, preventing others from the manufacturing, sale or use of such invention without the consent of the holder. The patent may refer to a new procedure, new apparatus, a new product or the perfection or improvement of same. The patent is valid for twenty years since the submission application date. To keep a patent in force concession annuities are to be paid. There are three International patent application procedures:

- National: By means of the filing of a patent application in each one of the states in which protection is sought. For example at the Spanish Patent and Trademark Office (SPTO)
- European: The European Patent system allows to obtain protection by means of a European direct patent application with the designation of those European States in which protection is sought, and which are part of the European Patent Convention (24 countries). The European patent application is processed by the European Patent Office (EPO) and the granting of the patent has the same effect as a national patent in all those states in which it is granted.

- International P.C.T. (Patent Cooperation Treaty): The PCT system allows for protection to be claimed for the invention in each one of the States which are party to the international treaty (115 countries as of 1st January 2002), by means of one sole application known as international application. (EIT Methodology, INE)

R&D PERSONNEL: Number of personnel employed in R&D:

- Researchers are professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems and also in the management of the projects concerned.
- Technicians and equivalent staff are personnel whose main tasks require technical knowledge and experience in one or more fields of engineering, physical and life sciences or social sciences and humanities. They participate in R&D by performing scientific and technical tasks involving the application of concepts and operational methods, usually under researchers' supervision. Equivalent staff performs the corresponding R&D tasks under the researchers' supervision in the social sciences and humanities.
- Other supporting staff includes skilled and unskilled craftsmen, secretarial and clerical staff participating in R&D projects or directly associated with such projects. (Frascati Manual, 2002)