



**OECD Reviews of Higher Education in
Regional and City Development**

Andalusia, Spain

SELF-EVALUATION REPORT

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This report was prepared by the Regional Ministry for Innovation, Science and Enterprise of Andalusia in collaboration with the ten public universities of Andalusia and a number of regional stakeholders, as an input to the OECD Review of Higher Education in Regional and City Development. It was prepared in response to guidelines provided by the OECD to all participating regions. The guidelines encouraged constructive and critical evaluation of the policies, practices and strategies in HEIs' regional engagement. The opinions expressed are not necessarily those of the Regional Government of Andalusia, the OECD or its Member Countries.

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ACRONYMS

AGAE	Andalusian Agency for Quality Assurance in Higher Education and Research
AICIA	Research and Industrial Co-operation in Andalusia Association
ANECA	Nacional Agency for Quality Assessment and Accreditation
ANEP	National Evaluation and Foresight Agency
AUPA	Andalusian Public Universities Association
BOE	Official National Gazette
BOJA	Official Gazette of the Regional Government of Andalusia
CAE	Andalusian Students Council
CAU	Andalusian Universities Council
CBUA	Andalusian Consortium of University Libraries
CCAA	Autonomous Communities
CDTI	Centre for the Development of Industrial Technology
CE	Spanish Constitution (1978)
CEI	International Excellence Campus
CEUCOSA	Business Corporation of the University of Cordoba, public limited company
CICE	Regional Ministry of Innovation, Science and Enterprise
CIEMAT	National Research Centre for Energy, Environment and Technology
CITAndalucia	Innovation and Technology Transfer Centre of Andalucía
CNEAI	National Commission for the Evaluation of Research
COE	Spanish Olympic Committee
CRUE	Spanish Universities Rectors Conference
CTA	Technologic Corporation of Andalucía
CVA	Andalusian Virtual Campus
DNI	National Identity Card
EBT	Tecnology-based spin off
EHEA	European Higher Education Area
ENQA	European Association for Quality Assurance in Higher Education
EPES	Professional Training for Employment
ESO	Compulsory Secondary Education
EU	European Union
EVA	Virtual Learning Space
FPI	Research Personnel Training
GDP	Gross Domestic Product GDP
GEM	Global Entrepreneurship Monitor
GVA	Gross Value Added
IDEA	Andalusian Innovation and Development Agency
IEA	Andalusian Institute of Statistics
IFA	Institute for the Promotion of Andalucía
INE	National Institute of Statistics
INVERCARIA	Venture Capital Investment Agency
IPI	Personalised Itineraries for Incorporation in the Labour Market
LACC	Andalusian Science and Knowledge Act
LACSU	University System Coordination Act (1992)
LAU	Andalusian Universities Act (2003)
LOMLOU	Universities Act Amendment Act(2006)
LOU	Universities Act (2001)
LRU	Universities Reform Act (1983)
MIT	Massachusetts Institute of Technology
NIE	Foreigners Identity Number
OCW	Open Course Ware
ONG	Non-governmental organization
OTRI	Research Results Transfer Office

PAI	Andalusian Research Plan
PAIDI	Research, Development and Innovation Plan of Andalusia (2007-2013)
PAS	Administration and services personnel
PDI	Research and teaching personnel
PIMA	Andalusian Innovation and Modernisation Plan 2005
PLADIT	Innovation and Technological Development Master Plan for Andalusia 2001-2003
PP	Percentage points
PPC	Scientific Policy Plan (1984-1986)
PRAEM	Training Programme
R&D&I	Research, Development and Innovation
RATRI	Andalusian Network for Transfer of Research Results
RECTA	Andalusian Network of Scientific and Technical Divulagation Spaces
RETA	Andalusian Network of Technological Spaces
SAC	Andalusian Knowledge System
SAE	Andalusian Labour Service
SGUIT	General Secretary of Universities, Research and Technology
SME	Small and Medium Enterprise
SUA	Andalusian University System
SWOT	Strengths, Weaknesses, Opportunities and Threats
UAL	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
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIA	International University of Andalusia
UPO	Pablo de Olavide University
US	University of Seville

INTRODUCTION

This self-evaluation report is the result of the strategic alliance between the Andalusian government and Andalusia's universities. The Regional Ministry for Innovation, Science and Enterprises, through its General Secretariat for Universities, Research and Technology, has placed a great deal of faith in the role of universities in the modernisation of the Andalusian economy and society, as it is demonstrated by the Innovation and Modernisation Plan for Andalusia (*Plan de Innovación y Modernización de Andalucía*, Plan for Andalusia's Innovation and Modernization, 2005).

Thanks to the collaboration and participation of the ten public Andalusian universities, this self-evaluation report has been completed following six months of intense work. Together with the universities, some of the main regional stakeholders have taken part through the Regional Steering Committee, whose composition is set out after this introduction.

The drafting of this self-evaluation report began in February 2009, after the working group was established. A methodology, based essentially on written documentation, was designed to keep a record of the opinions expressed by the stakeholders involved in the process. In this respect, two questionnaires were drawn up, in which the OECD guidelines were adapted to the respective characteristics and responsibilities of the two groups to which they were respectively addressed -on the one hand the universities and on the other, the remaining members of the Regional Steering Committee. This first stage culminated with the presentation of the methodology in the Steering Committee constitutional meeting on 15 April, 2009. In this meeting the virtual platform HIEDRA (*Horizonte e Impacto de la Educación superior en el Desarrollo Regional de Andalucía*; Horizon and Impact of Higher Education on the Development of the Region of Andalusia) was presented. The purpose of this platform was to expedite the participation of the different members of the Committee, given their complicated schedules and the large distances that some of them had to travel to attend meetings in person.

The second stage began with the presentation of the project, the methodology, the objectives and the working plan to each university. For this purpose, over a period of two weeks and travelling throughout the region, meetings were held at each institution with the university's government body in full. A tight schedule was drawn up, which has been punctually kept to.

Once the contributions of the universities and the members of the Committee were received, the main responsibilities as regards drafting the different chapters were assigned as follows: Inmaculada Perriñez Forte took charge of the initial wording of Chapters 1, 4 and 5. Eulalia W. Petit de Gabriel carried out the initial draft of Chapters 2, 3, 6 and 7. Julie Laurent was responsible for analysing all the chapters with a critical eye, all the supporting graphs and tables and concordances, as well as a final exhaustive revision of all the material. Ángel Sánchez provided an independent critical evaluation, enlivening the discussions of each and every one of the chapters.

In any case, I should point out that this report has been subject to constant consensus with the personnel of the Secretariat General for Universities, Research and Technology, the collaboration of whom is hereby acknowledged. The comments of M^a Angeles Ruiz Ruiz, who has always been easy to work with, have been particularly relevant.

Last but not least, while the accomplishments of this report are the result of a collective work any errors remain the sole responsibility of the regional coordinator, having been entrusted with the successful performance of this initiative on behalf of the Regional Government of Andalusia.

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CHAPTER I: OVERVIEW OF THE AUTONOMOUS REGION OF ANDALUSIA

1. Andalusia: territorial characteristics

1. Due to its privileged position in the south of the Iberian Peninsula, Europe's most southern point, Andalusia bridges across two continents, Europe and Africa, constituting the link between the Atlantic Ocean and the Mediterranean Sea. Its geographical position has had a decisive effect on its history and fortunes, as the Andalusian region has traditionally been Spain's gateway to Latin America as well as to the Arab civilisation.

The region has a surface area of 87 598 km² and a perimeter of 2 019 km, of which 1 971 km land boundaries and 948 km coastline. It is the second largest region in the Iberian Peninsula, and larger than more than half the European Union (EU) countries. It occupies approximately 16.7% of the Spanish territory and represents about 2.3% of the entire EU territory.

Figure 1.1: Geographical location



Source: Regional Government of Andalusia.

Figure 1.2: Andalusia topographical map



Source: Instituto Cartográfico de Andalucía, Regional Ministry of Public Works and Transports, Regional Government of Andalusia, 1994. Escala 1:800.000.

2. In this extensive area the relief is very varied, going from for example, the valley of the River Guadalquivir to the Sierra Morena and Cordillera Bética mountain chains. This latter range contains some of the country's highest peaks, including the Mulhacen, in the Sierra Nevada, which at 3 478 m is the highest point in mainland Spain (Figure 1.2).

Together with this strongly contrasting topography, the region has a particularly arid climate, with the subsequent lack of vegetation. Irregular rainfalls

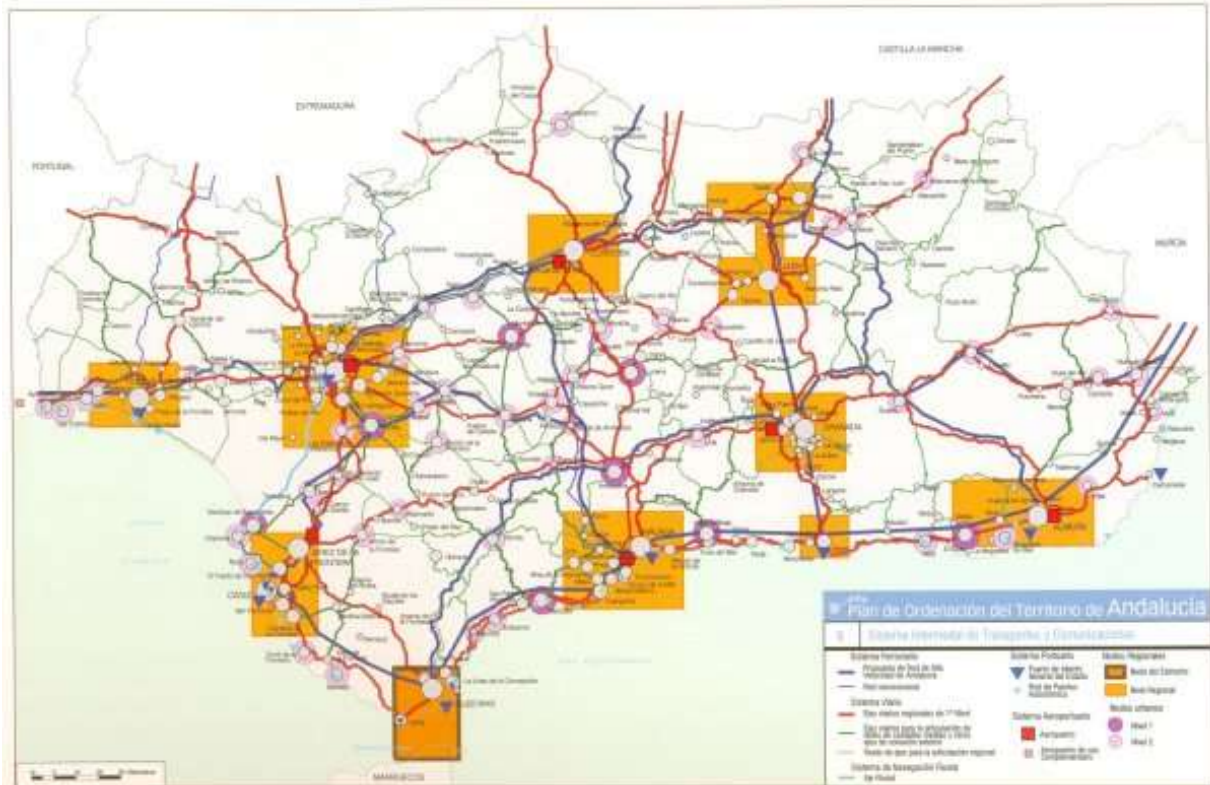
produce a hydrological regime marked by extremes in which seasonal droughts alternate with short periods of abundant and even torrential rains that increase the erosive and dredging effects in rivers.

Among the many Natural Parks located in our region, the Natural Park of Cazorla and Las Villas, located in the Province of Jaen, and the Natural Park of Sierra Nevada, in the provinces of Granada and Almeria, should be highlighted. The former is the major natural protected space in Spain with 209 920 ha. It has been accorded national protection status, along with the National Park of Doñana (140 135 ha), located in the provinces of Huelva and Seville. Furthermore, they both have been declared World Heritage in 1994 by the UNESCO. For further details about national parks in the region see Table A.1.1 (in Appendix).

3. This geography has conditioned the development of the transport infrastructure: positively, because it enables access to the region from multiple points (Figure 1.3); negatively, because its topography hampers the development of rail or road infrastructure in certain areas of the region. Nevertheless, these infrastructures have significantly improved over the last few years. Individually, the following means of transport are worthy of note.

4. *Air transport:* six airports connect the region to the major cities in Spain and Europe as well as numerous places in the rest of the world. However, even though there are great distances between cities in the region (Huelva-Almeria: 482 km; Cadiz-Almeria: 462 km; Jaen-Cadiz: 365 km), there are no direct air links within the region, but a recent connection (running from January 2010) between Almeria and Seville. At national level there are direct flights for shorter distances, such as Madrid-Zaragoza (307 km) or Alicante-Almeria (295 km).

Figure 1.3: Infrastructure network



Source: Regional Ministry of Public Works and Transport, Regional Government of Andalusia.

5. *Maritime transport:* The region's extensive coastline houses more than 52 national or regional-owned harbours devoted to recreational (45), fishing (28) or commercial (15) activities. They all generate high levels of tourist and commercial activities. Of particular note is the port of Algeciras, one of the main points of international maritime traffic (the most important at the national level, accounting for 20% of the passenger traffic and 15% of the goods traffic in 2007) and the Port of Malaga, the Peninsula's second most important cruise ship harbour.

6. *Rail transport:* Andalusia's railway network is managed by the Spanish National Passenger and Goods Rail Transport Service (RENFE) which is attached to the central government through the Ministry of Public Works. This rail system provides connections between the region's capitals and a large number of Andalusia's towns, as well as to and from the rest of Spain, via the Local, Medium and Long Distance and High Speed rail services.

Notwithstanding this, due to the previously mentioned difficulties presented by the relief and even though Jaen and Granada are only 93 km apart, you need to travel from Granada to Linares-Baeza in Jaen, and then transfer to the capital town of Jaen (that is 183 km). Alternatively, you may travel from Granada to Cordoba, and then to Jaen, which means a 361 km trip. In both cases, you need to rely on timetables and train connections. Likewise, neither is there any direct rail –nor road– connection between Huelva and Cadiz, which are only 64 km apart, as the crow flies. To make this trip by train –or by car– travellers have to go via Seville, converting the distance into 250 km. The

alternative route is not a viable option as it would run through a protected natural park with mudflats, the Parque de Doñana.

Despite these difficulties, rail transport in the region is undergoing intense changes with the incorporation of high speed trains that travel at over 250 km/h. To date the following lines have been put into service: Seville-Malaga, Seville-Cordoba-Madrid, Malaga-Cordoba-Madrid.

7. *Road transport:* Andalusia has an important highway, dual carriageway and road network. In 2007 it counted with 24 000 km, what amounts to a bit more than 14% of the total national network. The main connection with the national network is made through the A-4/E-05 in the National Park of Despeñaperros (Jaen), connecting Bailén (Jaen) with Cordoba, Seville y Cadiz.

The A-92 is the main longitudinal communication axis in the region, connecting Seville with Almeria, through Malaga (Antequera) and Granada. The Mediterranean cost area is connected through the A-7/E-15, linking Almeria with Motril and Algeciras. Finally, the A-66 connects the region to Extremadura and the A-49 to the South of Portugal.

At the provincial level, all Andalusia's municipalities are linked via the Provincial, Regional and National Road Networks. Furthermore, every city has a municipal bus service, which serves the different areas of the municipality during the day and provides minimum services during the night.

This road network provides an alternative means to rail transport in sections such as Granada-Jaen or Almeria-Malaga.

8. In this geographical setting, the Andalusian University System (*Sistema Universitario Andaluz*) comprises ten public universities, each one in a different province, except for Seville, which houses three of them. Additionally, it should be noted that some of the universities have facilities in diverse municipalities within the province, as shown in the following figure. This fact contributes towards greater decentralisation of university activities and increased territorial dynamism.

Figure 1.4: The Andalusian University System's geographical distribution



Source: Prepared internally using data from the universities' web sites.

9. This wide territorial coverage of the universities has had an impact on the regional economy, proof of which is the constant increment in the percentage of population of working age with a university degree, which went from 2.7 in 1977 to 13.3 in 2007. Likewise, the proportion of the population aged between 25 and 34 with higher education studies increased between 1992 and 2002 by 13.7 percentage points (pp), a figure slightly below the national increase, which was 14.5 pp. This growth reflects Andalusia's gradual transformation from production structures primarily based on agriculture to others that are more linked to the use of knowledge.

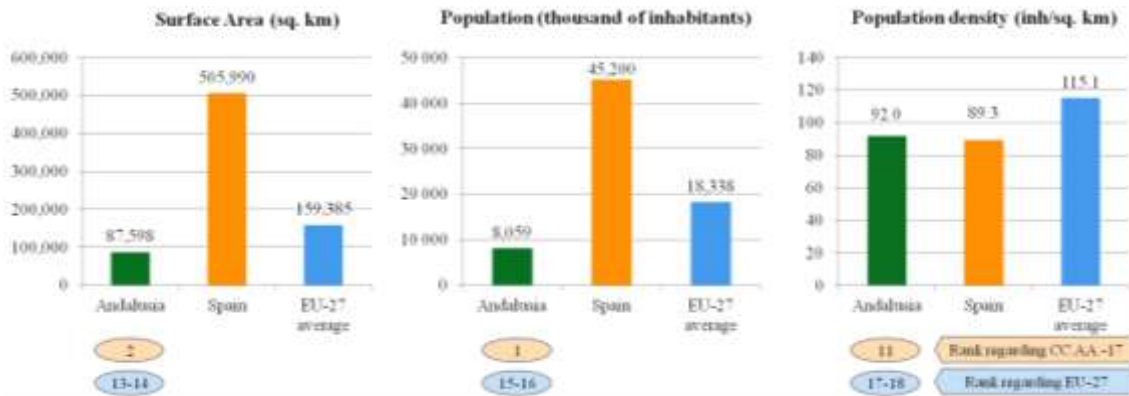
1.2 Demographic evolution and living conditions

10. At 1st January 2008, with 8 202 220 inhabitants –4 071 500 men and 4 130 720 women–, Andalusia was the most populated region in Spain, accounting for 17.77% of the total Spanish population and 1.64% of that of the EU. Within the context of the EU-27, Andalusia has more

inhabitants than the Czech Republic, Ireland or Bulgaria. In 2007 its population density (92 inhabitants per km²) was slightly higher than the national average (89.3 inhabitants per km²) but lower than the average for the EU-27 (115.1 inhabitants per km²).

In the last 20 years the population of Andalusia has grown by over a million inhabitants, going from 6 946 581 in 1988 to 8 202 220 in 2008. In relative terms, the population grew by only 13.4%, that is, 2.4 pp less than the national average (15.8%). Therefore the demographic weight of the autonomous region of Andalusia in the national total has fallen from 18.16% in 1996 to 17.77% in 2008.

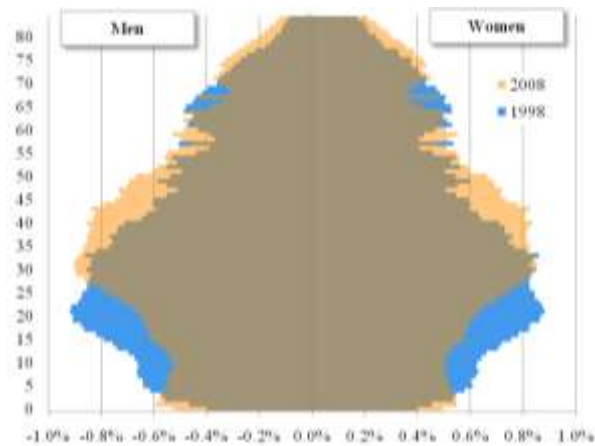
Graph 1.1: Surface area, population and population density statistics



Source: Prepared internally using Institute of Statistics (IEA) data.

11. As the pyramid shows in Graph 1.2, the two most significant effects of this demographic evolution are: reduction in the young population due to the drop in births during the last few decades – with a slight recovery after 2003–, and an increase in the middle aged population as a result of the high birth rates in the 1950s and 1960s.

Graph 1.2: Andalusian population pyramid



Source: Prepared internally using National Institute of Statistics (INE) data

Consequently, Andalusia's population pyramid clearly represents an aging population, a factor that contributes towards explaining the annual fall in the number of students attending universities, an issue that will be analysed in the following chapter.

Finally, migratory figures for 1997-2007 showed a positive balance (597 014 people), due mainly to the influx of immigrants from abroad, which represented 96.2% of immigration in Andalusia. The residential variations registered in 2008 show that 23% of the foreign population came from Africa, 19% came from South America and 15% from the EU-15. For further details see Tables A.1.2 and A.1.3 and the Graphs A.1.1 and A.1.2 (in appendix).

12. The foreign population registered in non-university studies were a total of 402 085 for the period 2000-2008. The main countries of origin were the UK (19.5%), Morocco (14%), Germany (7.8%), Argentina (7%), France (6%), United States (4.3%) and China (3.1%). Further details on the origin of foreign population registered in non-university studies and education levels can be observed in Table A.1.4 and Table A.1.5. In chapter two the origin of foreign population registered in university studies will be considered.

13. Another significant factor is the substantial improvement in living conditions in the region over the last twenty years.

Table 1.1: Basic indicators of living conditions in Andalusia

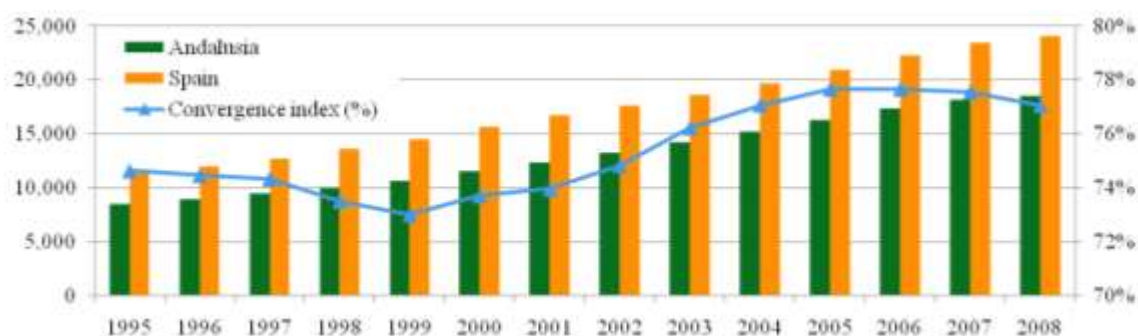
To give an example, life expectancy, although slightly lower than the average, has grown about 3 years in both sexes; the infant mortality rate has fallen by almost half, and the number of doctors has increased by 45.64 for every 100 000 inhabitants, as shown in Table 1.1.

Basic indicators	1988-1992	1993-1997	1998-2002	2003-2007
Overall birth rate	12.93	11.34	10.95	11.84
Overall death rate	7.92	8.10	8.39	8.31
Child death rate	8.57	6.50	5.08	4.38
Life expectancy at birth (male/female)	72.65 79.53	73.66 80.58	74.75 81.35	75.83 82.15
Doctors/100 000 inhab.	353.78 ^a	368.91	392.52	399.42

Source: Prepared internally using National Statistics Institute (INE) and Statistical Institute of Andalusia (IEA) data. ^a Data available for 1991-1992.

14. Finally, between 1995 and 2006, Andalusia's GDP per capita grew more than the average in Spain (93.3% compared to 83.3%) (Graph 1.3). This has led to a convergence index in the region in 2007 of 78.6%, that is, an increase of 3.6 pp compared to 1995. This convergence is due to both the significant increase in the regional production and the demographic growth differential, which is slightly lower in Andalusia than the national average.

Graph 1.3: GDP per capita (EUR)

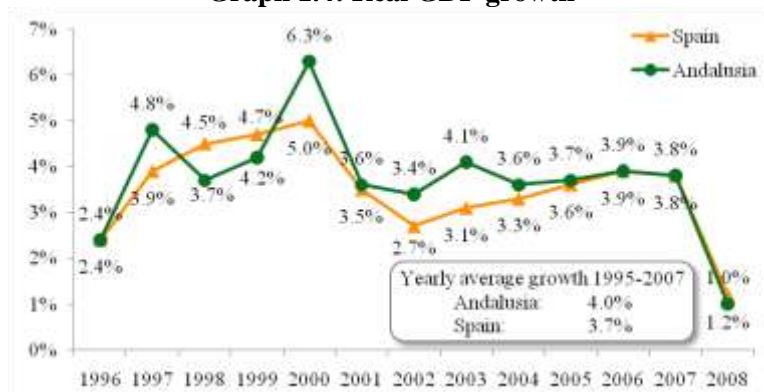


Source: Prepared internally using Spanish Statistical Institute (INE) data.

1.3 The region's economic and social fabric

15. The financial crisis that originated in the USA in 2007, the effects of which extended to the real economies world-wide, and particularly to the industrialised countries, has produced a period of global economic deceleration that has affected Andalusia's economy.

Graph 1.4: Real GDP growth



Source: Taken from graph in the report "Informe económico de Andalucía", Spanish's National Financial Agency (ICO, 29/01/09).

The figures from before the international crisis (1995-2006) place nominal GDP growth in Andalusia at 7.7%, which positioned the region's economy above the national average (7.4%). Likewise, in real terms, the region's average annual GDP growth for 1996-2007 was 4%, which was above that for Spain as a whole (3.7%) and placed Andalusia as the region with the third best GDP growth during the said period, behind

the Region of Madrid (4.5%) and the Region of Murcia (4.3%) (Graph 1.4). However, in 2008, Andalusia's real growth was only 1%, which, although lower than the national average of 1.2%, was still higher than the average for the OECD countries as a whole (0.9%) and the EU average (0.8%). Despite this, Andalusia's GDP for 2008 amounted to EUR 152 358 000, which accounted for 13.9% of the national total and 1.2% of that of the EU-27.

16. As regards Andalusia's productive structure, the data available for 2000-2007 show how the primary sector reduced its weight by 3.2 pp, though its presence was still greater than in the national average (4.9% of the region's Gross Added Value –GAV– compared to 2.9% of the GAV for Spain as a whole). A comparison between 2000 and 2007 shares by activity sector can be seen in Graph 1.5.

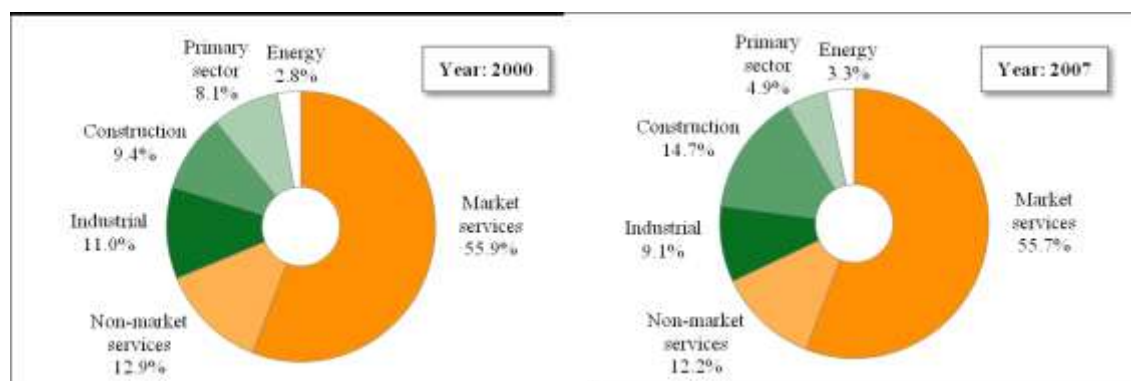
On the other hand, up to 2007 the construction sector grew sharply, its weight in Andalusia's GAV going from 9.4% in 2000 to 14.7% in 2007. This steep growth curve also took place in the rest of Spain, where the sector accounted for 12.3% of the GAV in 2007, compared to 8.3% in 2000.

The energy sector's weight grew from 2.8% of the GAV in 2000 to 3.3% in 2007, which was above the national growth rate in the sector.

However, the contribution of the industrial sector to the regional GAV (11% in 2000 and 9.1% in 2007) continued to be below the levels recorded in the rest of Spain. Likewise, modernisation of the sector in Andalusia is also below the national average and is oriented towards low-tech activities.

As has been the case in the rest of Spain, during this period the services sector accounted for the creation of more than half the total GAV in Andalusia, with a 67.9% contribution, that is, 1 pp more than the national average. Non-market services (services provided by the Public Administrations and non-profit institutions) were noteworthy in the total services, as they represented 3 pp more than the national average.

Graph 1.5: Distribution of Andalusia's GAV by sectors



Source: Taken from graph in the report "Informe económico de Andalucía", National Financial Agency (ICO, 29/01/09).

17. The figures for 2008 show that in this year Andalusia's economic growth was based mainly on the services sector, whilst a slight rise in the primary sector helped to compensate for the drop in the industrial and construction sectors.

18. Concerning the primary sector, the available information for 2008 shows an increase in citrus fruits and non-citrus fruits, and vegetables, representing altogether more than a third of the global production (36.8%). The other products registered falls, with a general slowdown in the cycles of most of them –due to climatic conditions–. For further details about the agricultural production in Andalusia and its contribution to the national total see Graphs A.1.3 and Graph A.1.4 (in appendix).

It is worth noting that the agroindustrial sector is one of the most important productive sectors in the region, where the olive grove sector is considered the most representative and symbolic agrifood system of the region and the Mediterranean culture. In fact, the olive grove area in Andalusia comprises a little more than one million and a half hectares, representing up to 33% of the cultivate lands and 16% of the total surface area of the region. 550 000 ha of this olive area are in the province of Jaen.

With regards the fishing sub-sector, the available information provided by the national and regional ports indicates that, the volume of fresh fishing unloaded in the Andalusian ports was 65 411 tons in 2008, 17% less than in 2007, amounting to the biggest fall since 1994.

19. Concerning the industrial sector, the data available for 2008 show a sub-sector composition comprised mainly of food, drinks and tobacco, as the most significant branch in the Andalusian industry. This branch generates a little more than a fifth part (20.5%) of the total GVA of this sector, a relative weighting eight points higher than that branch in the national industry (12.1%). In the second place is the electric energy, gas and water, which represents 15.1% of the sector in Andalusia (11.3% in Spain), followed by the metallurgy, with a weight of 11.1%, less than that of the national industry (14.2%). Thus, about half (46.7% of the total) of the GVA generated by the Andalusian industry belongs to these branches, nine points above of the weight at national level. For more details about the products generated by the industrial Andalusian sector, see Graph A.1.5 and Table A.1.6 (in appendix).

On another hand, the construction sector in 2008 was characterized, after eleven years of continuous growth, for an activity fall, in consonance with the national and Euro zone levels performance. The GAV generated by this sector in Andalusia was reduced in real terms in 4.7%, that is, above the average slowdown at national level and at the Euro zone (-3.3% and -1% respectively).

This reduction, in a context of a GVA growth generated by the all Andalusian productive sectors as a whole (1.1%), places the weight of the construction sector in the productive structure of Andalusia at 13.4%, one point below than last year, with a GAV in current terms of EUR 18 558.8 million, what represents 16% of the national total.

20. However, it is the services sector which enjoys the highest relative growth of all productive sectors in Andalusia, with the most important contribution to the regional GDP. Nonetheless, it is currently suffering a slowdown compared to last year, as it is the case at national level and in the Euro zone. The GVA generated by this sector's activities increased in real terms to 3%, 1.7% lower than in 2007, about equal to the national average growth (3.1%) and more than double in the Euro zone (1.4%). Thus, in nominal terms, the GAV generated by the services sector in Andalusia rose to EUR 97 182.9 million, which amounts to 14.2% of this sector in Spain and 70% of the total regional GAV. For more details about the sub-sector distribution, see Graph A.1.6 (in appendix).

21. Finally, the relative data concerning the tourism sub-sector in 2008 show that tourism suffered a fall in the entrance of foreign population into the region. However, the tourism offer has been increasing, although in a more moderate way than in 2007, with generalized increases in all types of establishments.

The available data indicates that Andalusia received in 2008 a total of 25.1 million of tourists, 739 140 less than last year, amounting to a reduction of 2.9%, the first fall since 1999. Concerning the origin of the visitors, the reduction was practically generalized, with a fall of the national tourism of 3.1%, cause by the fall of visitors from the same region (-3.2%) and from the rest of the Spanish Autonomous Communities (-2.9%).

Together with this, the number of foreign tourists was reduced in 2.5% due to the fall of tourists coming from the EU (-4.6%), which amounts to 75.2% of the volume of foreign tourists in Andalusia, whereas visitors coming from other parts of the world have increased in 4.4%.

In any case, in absolute terms and in spite of its major fall in 2008, the national tourism has the highest relative weight in the region, amounting to 61.2% of the total, above the 55.7% it represented in 1999. Within this group, the tourists from the Andalusian region amounts to more than half of the national tourists in 2008 (51.9%), 10.3 points above the relative weight it has last decade.

Regarding the origin of foreign tourism in 2008, almost three quarters parts of the total came from the EU (75.2%), with a fall of 1.2% compared to 2007. By countries, most tourists hosted in Andalusian hotels come from the UK, 22.6% of the total, followed by Germany (15.1%), France (9.8%) and Italy (7%). These four countries represent more than half (54.5%) of the total and the four registered falls compared to last year. Whereas, tourists numbers coming from the Netherlands increased in 10.7%, together with the increase of Ireland or the Czech Republic (43.1% inter-annual) or Finland (29.9%). Out of the EU-27, for its relative importance in the total, it is worth noting the

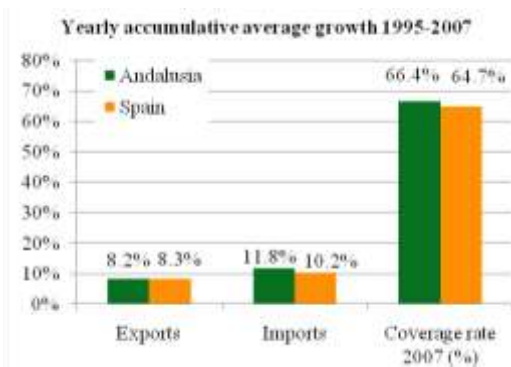
tourism from the United States represents 5.6% of the total of foreign population hosted in hotels in the region, followed by Japan (3%), both with a important reduction compared to the previous year (-17.5% and -2.9% inter-annual, respectively).

By provinces, Malaga is the favorite destination for tourists staying at Andalusian hotels, with 31% of the total. After this, come Cadiz (15.5%), Seville (14.5%) and Granada (14.4%). Compared to 2007, there has been a reduction of the number of tourist hosted in hotels in all provinces, except Huelva, with a growth of 3.8% and Malaga (1.1%). The major falls are for Jaen (-14%), Cadiz (-6.4%) Seville (-5.9), and Cordoba (-5.8%).

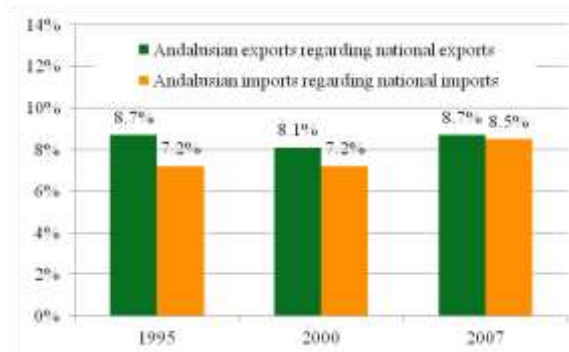
22. As regards the evolution of foreign trade, Andalusia's imports grew above the national average between 1995 and 2006, whilst the growth of the region's exports was slightly below the national average. Even so, the 2007 cover rate (percentage of imports that can be paid with exports from the same period) was slightly higher (66.4%) than that of the whole of Spain (64.7%), which can be seen as a lesser regional dependency on foreign trade than the national average (Graph 1.6). Likewise, the data show that for 2000-2007 period Andalusia's trade increased its weight in the national total: imports went from 7.2% in 1995 to 8.5% in 2007, whilst exports remained stable at 8.7% (Graph 1.7).

According to 2008 figures, imports and exports combined recorded a maximum value of EUR 43 964.3 billion, which represents a nominal increase of 10% compared to 2007 and contrasts with the stagnation of the Spanish economy as a whole (0.1%).

Graph 1.6: Evolution of foreign trade



Graph 1.7: Weight of foreign trade



Source: Taken from graph in the report, "Informe económico de Andalucía", National Financial Agency (ICO, 29/01/09).

23. As regards the origin of Andalusia's exports by sector, in 2007 they were centred in the vegetables sector (17.9%) –particularly legumes, plants, roots and tubers–, mineral products (17.2%) –fuel and mineral oils–, and common metals and their manufacture (16.68%) –iron and steel casting. Along similar lines, imports into the Andalusian region were focussed mainly on mineral products (51.49%) –particularly fuel and mineral oils–, food industry products, chemical industry products, common metals and their manufacture, machinery, electrical appliances and material, and transport material (28.56%).

Finally, Andalusia's trade-openness coefficient (the sum of the exports and imports in relation to the GDP) in 2008 reached its historical maximum of 28.9%, 1.6 pp higher than that of the previous year, although still below the national average.

24. Also of importance is Andalusia's business fabric's annual growth, which rose by 3.8% between 1996 and 2007, exceeding the national average (3.1%). In 2007, Andalusia's business sector accounted for 15.3% of the national total, with 511 728 enterprises. During this year, Andalusia's business fabric grew in all economic sectors, the most significant being the construction sector, with 81% of all the enterprises in Andalusia. Business density also increased in Andalusia, reaching 63 enterprises for every thousand inhabitants, although this is still below the national average density (74 enterprises per thousand inhabitants).

Table 1.2: Andalusian enterprises by numbers of salaried workers

2007	Number		% of total		% for 2007/2006	
No. of salaried workers	Andalusia	Spain	Andalusia	Spain	Andalusia	Spain
Without salaried workers	259 171	1 706 140	50.6	51.1	4.3	5.5
With salaried workers	252 557	1 630 517	49.4	48.9	6.0	4.7
1 to 9	223 770	1 431 323	43.7	42.9	6.2	4.8
10 to 49	25 044	169 604	4.9	5.1	4.4	3.3
50 to 199	3 135	23 517	0.6	0.7	5.8	4.7
200 to 499	473	4 218	0.1	0.1	9.2	7.9
500 or more	135	1 855	0	0.1	10.7	6
Total	511 728	3 336 657	100	100	5.1	5.1

Source: 2007 Andalusian Economic Report. Regional Government of Andalusia.

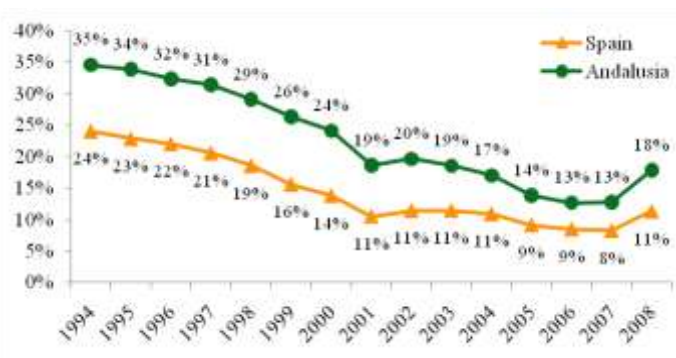
As Table 1.2 shows, one of the most essential characteristics of the autonomous region's business fabric (and of that of Spain as a whole) is that more than 99.4% of the enterprises have fewer than 50 employees. This explains why Andalusia's GDP is so highly dependent on the results of small enterprises in sectors such as agriculture, services and construction, with the consequent structural vulnerability of the region's economy and slow recovery of the economic activity. Together with this, there is little tradition in Andalusian small companies to invest in R&D&i.

25. As regards the creation and dissolution of enterprises at regional level, there is no specific indicator registering these. An approximation can be made through National Institute of Statistics information concerning business associations (*Sociedad Mercantil*), for each Autonomous Community. This indicator reflects the number of enterprises created and dissolved every year, except for those enterprises constituted as self-employers. However, it should be noted that these self-employers represent in Andalusia 57.8% of the Andalusia's business fabric. According to this statistics, in 2008, in net terms, 13 030 business associations were created, as a result of the difference between the 15 694 enterprises created and 2 664 enterprises dissolved. Compared to the previous year, the net number of commercial enterprises created was 35.9% lower, in consonance with the national slowdown (-30.8%) and the world economic crisis. Overall, 15.1% of the total of business associations created, in net terms, in Spain were created in Andalusia, over the weight that the Andalusian economy has in the contribution to the Spanish GDP (13.9%).

Taking the quotient between the number of enterprises dissolved and the number of enterprises created as a indicator of the "enterprises mortality", in 2008, 17% was located in Andalusia, percentage a little higher than that of the entire Spanish economy (15.7%), in both cases the highest since 1996. By provinces, the highest rates of dissolutions are for Cordoba (22.3%), Jaen (20.6%), Cadiz (20.5%) and Malaga (18.1%), all above the Andalusian average (17%). On the contrary are Almeria (12.7%) and Seville (13.6%), lower even than the national average, followed by Huelva (16.7%) and Granada (16.8%)

26. In this context, the deceleration of the Andalusian economy in 2008 –as also occurred at national level– has had a negative effect on the labour market, with a significant reduction in employment, following the 2007 drop to the lowest level of unemployment since 1994 (Graph 1.8). The active population in Andalusia fell between 2007 and 2008 by 2.2%, in a context of job loss that also affected Spain, with a drop of 0.5%. The construction sector has been the most seriously affected, with a drop of 15.4% (Table 1.3).

Graph 1.8: Evolution of the unemployed population



Source: Prepared internally based on Statistical Agency of Andalusia (IEA) data.

Table 1.3: Job market indicators

Job market indicators, Andalusia and Spain (thousands of people)						
	2007		2008		Annual variation (%)	
	Andalusia	Spain	Andalusia	Spain	Andalusia	Spain
Population over 16	6 560.8	37 662.9	6 659.5	38 207.8	1.5%	1.4%
Active	3 690.3	22 189.9	3 833.3	22 848.2	3.9%	3.0%
Occupied⁽¹⁾	3 219.3	20 356.0	3 149.7	20 257.6	-2.2%	-0.5%
Agriculture	249.2	925.5	234.9	879.0	-5.7%	-5.0%
Industry	325.5	3 261.8	316.8	3 225.5	-2.7%	-1.1%
Construction	491.0	2 697.3	415.3	2 404.2	-15.4%	-10.9%
Services	2 153.6	13 471.3	2 182.7	13 748.9	1.4%	2.1%
Unemployed	471.0	1 833.9	683.6	2 590.6	45.1%	41.3%
Occupation rate⁽²⁾	56.3	58.9	57.6	59.8	-	-
Unemployment rate⁽³⁾	12.8	8.3	17.9	11.4	-	-

(1) Data for the sector according to National Economic Activities Classification-CNAE-93.
(2) % of population aged 16 or over.
(3) % of population aged 16 or over and population between 16 and 64 years old.

Source: Prepared internally based on on Spanish Statistical Institute (INE) data.

27. Concerning workers registered with the Social Security in 2008 and their nationalities in Andalusia, Spanish workers registrations fell (-6.2%), whereas foreign workers registrations increased slightly (0.6%), contrary to the case of the Spanish economy where foreign workers registration showed higher falls (5%). Nonetheless, this increase in foreign workers registered with the Social Security in Andalusia is much lower than the number registered in the two previous years (around 5%). Overall, at 31 December 2008, the foreign workers registered in Andalusia with the Social Security were 203,204 Andalusia, amounting 6.9% of the total, lower than the relative weight in Spain (10.3%).

By provinces, more than half of the foreign workers registered with the Social Security are in Malaga (29.1%) and Almeria (24.3%). On the contrary, the lowest rates are in Jaen and Cordoba (lower than 5%). Taking into account the foreign workers registered rates with the Social Security on the total of each province, Almeria (18.6%) has the highest relative weight, followed by Malaga and Huelva (around 10% in both). Concerning its evolution compared to 2007, Huelva (26.8% inter-annual), Cordoba (26.5%) and Seville (10.6%) registered important increases in the number of foreign workers registered with the Social Security, compensating the falls in the rest of the provinces. For more details about the characteristics of foreign workers registered with the Social Security see Graph A.1.7 and Table A.1.7 (in Appendix).

28. In terms of levels of studies, 29.2% of the employed population in Andalusia had completed higher education, whilst only 15% of the unemployed population had completed such studies (Table 1.4.). For details of the employed population for levels of education and activity branch see Graph A.1.8 (in appendix).

Table 1.4: Employed and unemployed by level of completed studies

2008 data in %	Employed population		Unemployed	
	Andalusia	Spain	Andalusia	Spain
Total	100	100	100	100
Illiterate	0.4	0.4	1.5	1.3
Without higher studies	70.4	66.1	83.5	81
With higher studies, except doctorate	28.5	32.7	14.9	17.6
Doctorate studies	0.7	0.8	0.1	0.1

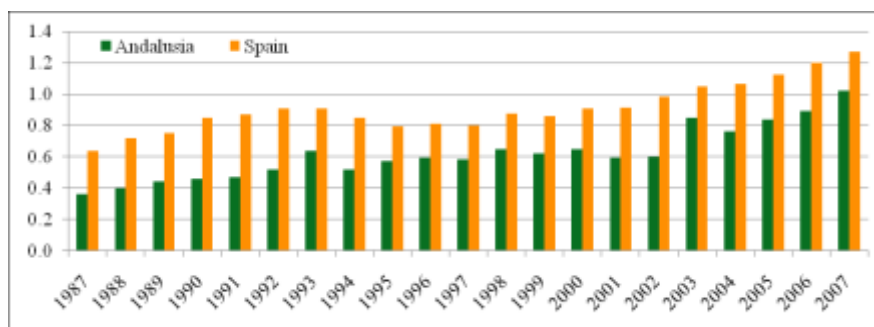
Source: Prepared internally based on Spanish Statistical Institute (INE) data.

29. Finally, investment in R&D in the region in the last few years has increased at a higher rate compared to the national average (although the region is still below average in this area). According to

2006 data, investment in R&D in Andalusia amounted to EUR 1 214 billion, representing 10.3% of the national total and positioning Andalusia as the third autonomous region, after Madrid and Catalonia, in terms of R&D spending. In 2007, the last year for which figures are available, this investment rose to EUR 1 478 billion, that is, 11.1% of national spending.

The figures for 1987-2006 show that Andalusia increased its investment in R&D at an annual rate of 13.7%, that is, 1.7 pp above the national average growth of 11.9%. These data confirm the investment effort made in the region during the last 20 years. In relation to its GDP, Andalusia multiplied its R&D investment by 2.5, going from 0.36 in 1987 to 0.89 in 2006. Nevertheless, this figure continued to be below the national average (1.2% of the GDP). The evolution in R&D can be appreciated in Graph 1.9.

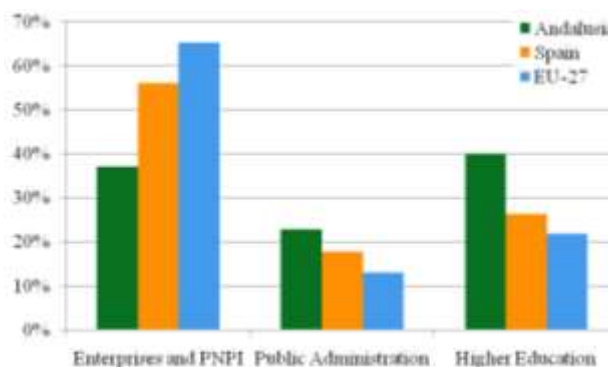
Graph 1.9: Evolution of R&D investment in relation to GDP



Source: Prepared internally based on data from the General Secretariat for Economy. Regional Government of Andalusia.

30. At regional level and by institutional sector, the public sector – specifically, Public Administrations and Higher Education– invested the greatest amounts in R&D, accounting for 66.8% of the total spending (Graph 1.10). It is interesting to note that higher education is the sector that has grown the most since 1987, with an annual increase of 15.5%. On the other hand, at the national and EU levels the sectors that have been investing more actively in R&D are the enterprises and the private non-profit institutions.

Graph 1.10: Investment in R&D in 2007 by institutional sector



Source: Prepared internally from Spanish Statistical Institute (INE) and Eurostat data.

31. The structural data recorded over the last few decades show that Andalusia is developing at a greater speed than other regions within the national context: GDP and GDP per capita growth above the national average, clear dynamism in enterprise creation and in capitalisation of talent by promoting higher education, and an economy that is becoming more and more knowledge oriented, with increasingly significant public investment in innovation. Andalusia's economic situation has been historically characterised by its lack of industry and its peripheral location.

32. In the modernization of Andalusia, the European funding has had an important influence. Andalusia receives the largest amount of the structural funds assigned to Spain (see Graph A.1.9 in appendix). This amount has increased significantly in each programming period between 1986 (when Spain joined the EEC) and the current programming period 2007-13 (see Graph A.1.10 in appendix).

The European funds –and the way they have been managed– have contributed to the economic regional growth. The progressive reduction of the weight of the European funding in the regional investments is a direct evidence of it. Currently, the Community structural funds amount to 12.3% of

the investments in the region; in 1996, amounted to 34%. In that same period, however, the net amounts received have doubled (see Graphs A.1.11 and A.1.12 in appendix). Summing up, even taking into account the important received amounts (more than EUR 14 million for 2007-13), the region is nowadays much less dependent on these aids than twenty years ago.

33. The regional government has centred its attention on renewing the traditional economic structure, investing in an innovation model. In line with this political focus, materialised in the Andalusian Innovation and Modernisation Plan 2005 (PIMA), of particular significance is Andalusia's support for the emerging economic sectors of aeronautics, agrifood, biotechnology, energy and environment and information technologies. For example, in 2008 the Andalusian aeronautics sector accounted for 22.6% of all the jobs in this sector at national level and its sales grew from 17.4% of the national total in 2005 to 23.1% in 2008, situating Andalusia as the second most important aeronautics industry in Spain, second only to Madrid.

34. Another significant example of the effort carried out by the regional government for the renovation of the economic and social structure of the region is the Guadalinfo project. Started in 2003 and co-financed with European Regional Developments Fund (ERDF), it is aimed at spreading the digital literacy to all Andalusia, especially to those municipalities with less than 20 000 inhabitants, fostering the integration of the entire region in the Knowledge Society.

To that end, the regional government joined efforts with every Andalusian Provincial Office (*Diputación Provincial*) and the 692 municipalities with less than 20 000 inhabitants (out of 770 existing municipalities in Andalusia). It is the most innovative, solid and ambitious example of collaboration of public administrations in the region. It has extended the telecommunication infrastructures, including broadband internet access, and the necessary technical means, resources and tools to achieve the complete integration of Andalusian citizens into the Information and Knowledge Society. A facilitator in every municipality has been assured as a key human factor to guarantee the use of the means and technical infrastructures furnished for the mobilization of citizens. 40 centres of public internet access in underprivileged towns within the major Andalusian cities and 13 access points in Andalusian communities abroad should be added to this network of 692 centres. The financing of this project and the main results for the phases are displayed in Table A.1.8 and Table A.1.9 (in the appendix).

1.4 The Autonomous Region of Andalusia and the governance system

35. On 28 February 1980, the Andalusian society accepted in referendum the Statutes for the Autonomous Region of Andalusia, which were approved by Organic Law (*Ley Orgánica*) 6/1981, dated 30 December (published in the Official National Gazette [*Boletín Oficial del Estado*, BOE] on 11 January 1982). Said Statutes have been amended on one sole occasion, approved in referendum by the Andalusians on 18 February 2007. Regional autonomy in Spain is constitutionally guaranteed under Section Two of the 1978 Spanish Constitution. This political regime has contributed towards the transformation of a centralised nation into another that is politically decentralised, going from the dictatorship to a constitutional and democratic system. The result was a political and administrative division, structured in seventeen autonomous regions and two autonomous cities.

36. The territorial structure of the nation comprises municipalities, provinces and autonomous regions (Sect. 139 Spanish Constitution). The autonomous region of Andalusia is made up of eight provinces: Almeria, Cadiz, Cordoba, Granada, Huelva, Jaen, Malaga and Seville and which, in turn, contain a total of 770 municipalities. There are three levels of administration: central, regional and local.

The central administration is coordinated through the Government Office (*Delegación de Gobierno*), which represents the Spanish central government in the Region of Andalusia, with headquarters in Seville and a Branch Office in each of the region's provinces.

The regional administration is carried out by the Regional Government of Andalusia, entrusted with the region's self-government. It is made up of the legislative, the Andalusian Parliament, which is located in Seville, and the executive, also in Seville and which exercises its powers for the whole of

the region and is made up of the Presidency of the Junta and the Government Council. There is also a regional government office in each province.

Local administration resides in the municipality, the basic territorial entity, the representation, government and administration of which correspond to the Town/City Councils. Each one of the eight provinces that make up the region has a Provincial Office (*Diputacion*), as the government body that encompasses all the Town/City Councils in the province and which collaborates in the management of certain services for small Councils.

37. The distribution of responsibilities among the different Administrations is established under Sections 148 and 149 of the Spanish Constitution, which in turn are complemented with the Statutes of Autonomy of each autonomous region. In Andalusia, the distribution of responsibilities entails the existence of shared powers in some areas, as can be seen in Table 1.5.

Table 1.5: Distribution of power among the different Administrations in Andalusia

Responsibility	Local Gov.	Regional Gov.	Central Gov.
Transport and communications	x	x	x
Economic development	--	x	x
Taxation policy	x	x	x
Employment, labour and social relations	x	x	x
Education	x	x	x
Universities	--	x	x
Research, development & technological innovation	--	x	x
Health, healthcare and pharmaceuticals	x	x	x
Social security	x	x	x
Housing, town planning, zoning and public works	x	x	--
Culture and heritage	x	x	x

Source: Prepared internally.

The central and regional governments share responsibility for both education and research. The second chapter analyses in detail how these powers have been exercised by both administrations and, therefore, the juridical and institutional evolution of the Spanish and Andalusian University Systems.

CHAPTER II: CHARACTERISTICS OF THE HIGHER EDUCATION SYSTEM

38. In the first place, this chapter analyses the characteristics of the Spanish university system. Following this, we will analyse the evolution of the Andalusian university system from the perspective of its relevance in regional development, taking into account that the regional government and not the central government have most of the responsibilities for classification and management of universities and research.

2.1 Overview of the higher education system

39. University access is partially determined by secondary schooling system. After the 1978 democratic Constitution, one of the main challenges for the country was raising the population education level. By mid-1970's, about 80% population had primary studies, 15% secondary studies, and 2% acceded to higher education. Even for the compulsory education ages (6 to 14 years), attendance was low for our geographic context: 88% for 13 year-olds and 80% for 14 year-olds.

Legislative measures starting in the 80's, along with an important financial effort (from 1.2% GDP investment in education in 1975 to 4.7% in 1995) have reformed largely the educative scenario in Spain. In a 20 year period, schooling from 6 to 16 years has become universal in theory and in practice, reducing the population without formal studies and the illiterate population by 7% and 45%, respectively. Graph A.2.1 (in Annex) shows the evolution in the school attendance rates in Spain from 1975 to 2005. Furthermore, the level of studies has raised for an important part of the population, those with secondary studies and higher education degrees approaching a 70% of the total population, as can be seen in Graph A.2.2 (in Annex).

40. For the last ten years, the fundamental problems in the pre-university education system are: the high drop out rate (20% female finished their 16 year without a secondary studies degree, and 35% male), the important population quota with just primary studies, a professional education historically less attractive than other secondary and higher studies, a very dynamic labour market, specially in the services and construction sectors, attracting young male population after the compulsory studies period (16 years old coming with no professional training in the labour market).

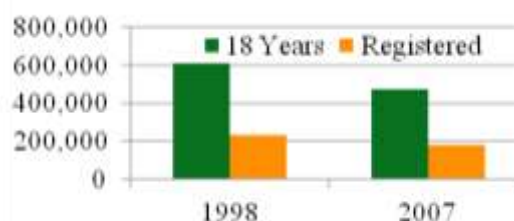
These threats have been addressed by national and regional authorities. The former have adopted a range of measures, comprising scholarship specially devoted to recover dropping outs into the education scheme, a permanent teachers training program, a more attractive and market oriented vocational education. At regional level, social services work at depressed areas schools, a placement to every 3-year-old child is assured in public nursery schools, free school-books are guaranteed for the ages from 8 to 14. Scholarship policy depends on the national, and not the regional, government.

41. Along with the drop-out rates, the evolution of the population pyramid, shown in the previous chapter, has marked the trend as regards the university access between 1998 and 2008, more importantly in absolute terms –though not relatively–.

2.1.1 University access: evolution between 1998-2008

42. The population of an age to access university studies (18 years old) has decreased significantly in Spain over the last ten years, going from 610 538 in 1998 to 475 649 young 18 year-olds in 2007. This reduction by 22% explains the 3 pp drop in the percentage of students that registered for university access exams. However, the success rate in the access exams increased by more than 5 pp, which meant that the percentage of first year university students between 1998 and 2007 remained stable, at 33.77% of population of

Graph 2.1: Young people under the age of 18 and university access



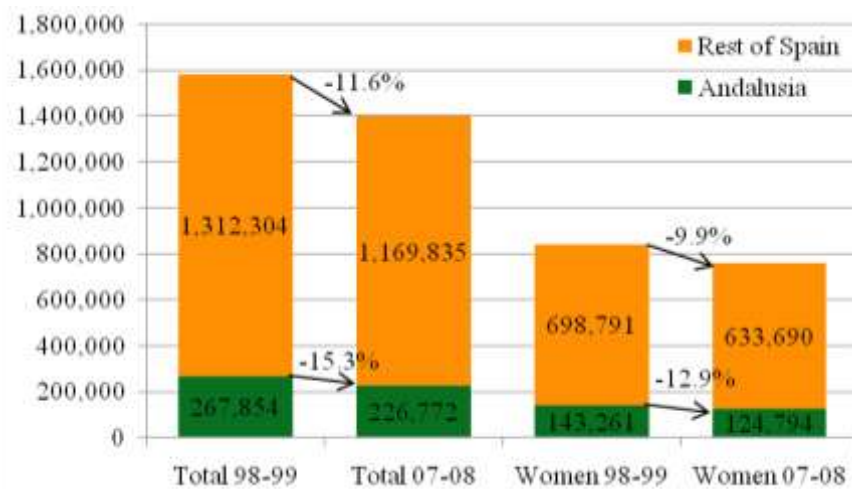
Source: Prepared internally from INE data.

the population of this age. Graph 2.1 shows a comparison between the 18 year old population and university students enrolled for the first time in 1998 and in 2007. In absolute terms, the number of these students dropped from 230 512 in 1998 to 179 662 in 2007. The percentage of women accessing university for the first time at 18 years old has remained stable at 57.8% of the total.

43. As can be seen in Graph 2.2, the total number of students enrolled in Spanish universities has dropped, in proportion, below the number of students enrolled for the first time. Specifically, at national level, this figure has gone from 1 580 158 students in 1998 to 1 396 607. At national level, the accumulated reduction in students for the period was 11.62%. Significantly, the reduction was less among women (a drop of 9.92%) and greater among male students (12.9%).

One of the generalized problems is the drop out rate in university studies. 30% of university students do not finish their degree (16% being the media for EU-15 countries). Most of the drop-outs take place after the first university year, especially in technical studies. The lowest drop out rate occurs in health science studies and in socio-legal studies.

Graph 2.2: Evolution of the number of university students 1998-2008



Source: Prepared internally from Spanish Statistical Institute (INE) data.

44. In Andalusia, the drop in the university student population has been sharper than at national level up to 2009, when the number of students enrolled has increased by 2%, reversing the trend initiated in the previous decade. Specifically, the Andalusian University System has gone from 267 854 students in 1998 to 226 772 students in 2008, with the figures rising to close to 230 000 students in 2009. The record number of students enrolled in the whole of the Andalusian University System was reached in 1998, with 270 000 students.

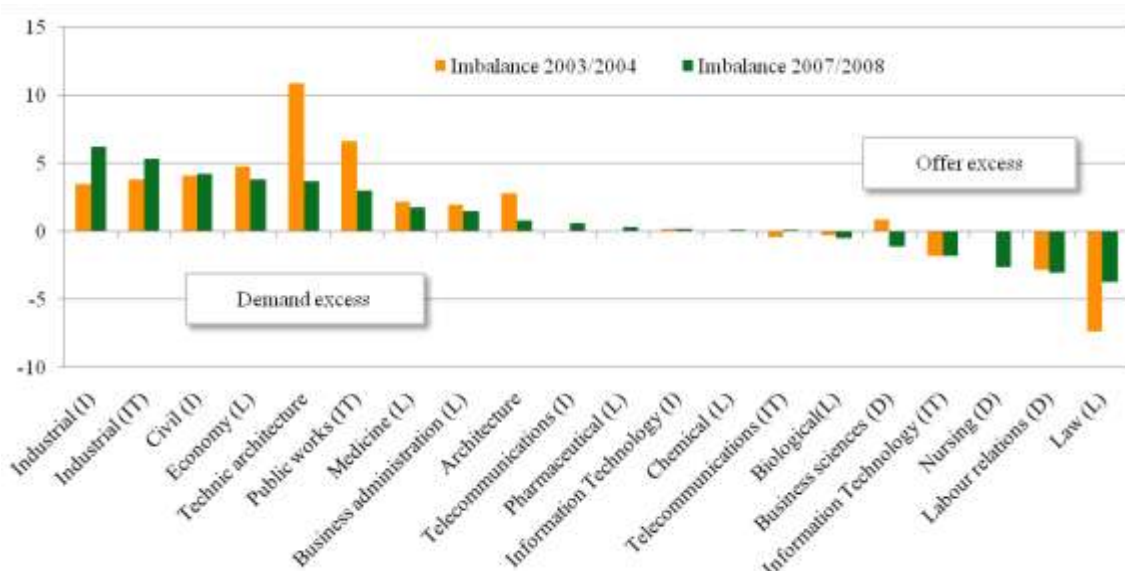
45. Nevertheless, it should be noted that even in this scenario of temporary reduction in Andalusia's university population, in 2008 the Andalusian University System attracted 7.2% of the students with their family residence outside the region. Taking into account the percentage of students with their family residence in the autonomous region who are studying outside the region (6.6%), the autonomous region has attracted –in net figures–0.6% of the total students, placing it in fourth place in terms of power of attraction, behind Madrid, Catalonia, Navarre and Castilla-Leon.

46. No study has been done at regional level concerning the drop out rate. Specific measures are taken at university level (first year students mentoring, control over professors' achievement in terms of students' advancement, etc). For the years to come, and according to the new EHEA rules, drop out and success rate for every degree should be published. Furthermore, improvement plans will be compulsory.

47. This period of reduction in the university population –now in the past– has served to adjust offer to demand. In this 2008-2009 academic year the places available in Spanish universities as a

whole have been reduced in all areas, with exception to Health Sciences, where they have increased along similar lines to last year (2.2%). The greatest reduction in places has been in Experimental Sciences (-11.1%), with much greater cutbacks than last year (-6%). In Humanities the reduction was 10.9%, more than double that of last year. Graph 2.3 shows the comparison and evolution of the offer-demand imbalance in graduates' access to the labour market. There is more demand than graduates for those careers that appear in positive numbers, whilst the negative numbers indicate careers for which there is a surplus of graduates in relation to the employment possibilities.

Graph 2.3: Offer-demand imbalance for the main higher education careers



Source: Redesigned based on graph in "Informe sobre el sistema educativo y capital humano", CES, 2009, p. 214.

Thanks to these reductions, the balance between offer and demand has improved slightly compared to the year before. Thus, in 2008 the enrolment/places ratio was 84%, meaning that 16 out of every 100 places offered were not taken. Only Health Sciences covered all the places offered. In Experimental Sciences, Technical Teaching and Humanities, the enrolment/places ratio was 74%, that is, one in every four places offered was not taken. This selective reduction in the number of places offered in Spain has made it possible –in most cases– to improve the employment expectations of most of the graduates.

48. With 490 first cycle courses available in 2008 (21 less than in 2007 but with the same relative weight, 18.8%, in the national total), Andalusia is the autonomous region with the largest university studies offer, followed by Catalonia, with 365 (also 21 less than in 2007 but with a relative weight of 14%) and Madrid, with 329 (same offer as in 2007 and weight of 12.6%). The total number of careers offered in Andalusia (first and second cycle) in 2009 was 693: 497 first cycle and 196 second cycle. On the other hand, Andalusia offered the greatest number of places: 51 757, that is, 19.8% of the total. However, the number of places available was reduced by almost 15% in 2008, which has increased the Andalusian University System's efficiency and improved the offer-demand balance and the offer-enrolment ratio, which rose ten points in respect of the previous academic year. The adjustment of place availability and enrolment ratios in Andalusia has positioned the region at similar levels to Madrid or Catalonia: the Region of Madrid offered 45 792 places, similar to last year (17.5% of the total offer of places) and Catalonia, 39 199 places (similar to the previous year) representing 15% of the total offer.

49. As a whole, and as can be seen in Table 2.1., Spain's university system is characterised by very low percentages of foreign students in

Table 2.1: Foreign and Erasmus students in Spain

2007-2008 Academic year	Students	% of total	Total students

graduate courses, in contrast with the high numbers in postgraduate and PhD Programs. Most of the foreign students in higher cycles are from Latin America. Also of note are the figures for Erasmus student mobility in Spain. Andalusia is the leading autonomous region in terms of the number of incoming students and the second (after Madrid) as regards the number of outgoing students.

Foreign graduate students	32 138	2.3%	1 389 394
Outgoing Erasmus students	23 107	1.66%	
Incoming Erasmus students	27 464*	1.97%*	
Foreign postgraduate students	7 496	22.7%	33 021
Foreign PhD students	16 996	21.9%	77 654

Source: “Datos básicos del sistema universitario español. Curso 2008/09” published by the Ministry of Science and Innovation. Prepared internally.
*Data from 2006-2007 academic year.

50. In Andalusia, the total number of foreign students enrolled in undergraduate programmes amounted up to 5 001 students, coming mostly from África (49.7%), EU-15 (15.7%) and South America (20.9%). More detail figures can be appreciated in table A.2.1 (Annex). For the academic year 2009-2010, the preliminary figures show an increase in the foreign students enrolled in the Andalusian universities, going up to 5 859, which represented approximately 2.5% of the total number of students in the Andalusian University System, highlighting the University of Malaga, with 4.8% of foreign students, and the University of Granada, with 3.3%.

2.1.2 Legal framework of universities and research

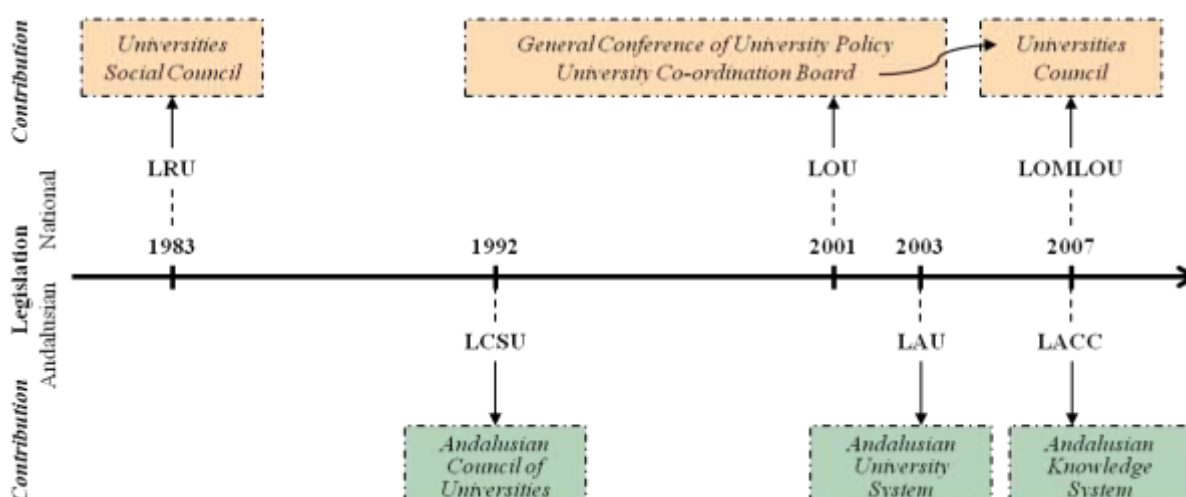
51. Both the higher education system and research in Spain are the shared responsibility of the central government and the regional (autonomous) governments. Section 149.1 of the Spanish Constitution sets out the responsibilities that correspond exclusively to the central government and in paragraph 15 it establishes that the central government shall be responsible for “*the promotion and general co-ordination of scientific and technical research.*” Likewise, in paragraph 30 it establishes as exclusive responsibility of the central government the “*regulation of the conditions for obtaining, issuing and validating academic and professional qualifications and the basic rules for implementing Section 27 of the Constitution, in order to guarantee fulfilment of the obligations of the public authorities competent in these matters.*” Section 27 of the Constitution is devoted to the rights of all to education and freedom of teaching and, with specific reference to universities, paragraph 10 of this section recognises, “*the autonomy of the universities in the terms established by law.*”

2.1.2.1 National regulations regarding universities and research

52. Exercising its powers, the central government has established the basic regulatory framework for universities with the Universities Act or *Ley Orgánica de Universidades* (L.O. 6/2001, dated 21 December, BOE 24 December 2001, LOU in Figure 2.1). This act, which was subsequently modified (L.O. 4/2007, dated 12 April, BOE 13 April 2007, LOMLOU in Figure 2.1), replaced the Universities Reform Act or *Ley de Reforma Universitaria* (Law 11/1983, BOE 1 September 1983, LRU in Figure 2.1), which gave Spanish universities their autonomy, pursuant to the provisions of the EC.

53. From an institutional perspective, the 1983 Act (not in force) created the university body of the Social Council, as society’s representative within the university. The 2001 Act established two university bodies: the General Conference of University Policy and the University Co-ordination Board, which was replaced following the 2007 Modification Act, by the Universities Council (which started up in 2008). The mission of the General Conference of University Policy (Section 27 *bis*, 2007 redrafted University Act) is to achieve territorial consensus (central government and regional governments). The Universities Council (Sections 28-30 of the 2007 redrafted University Act) is made up of all the Rectors of the public and private universities and five members of the central government, as well as the Minister responsible for university policy. Neither of these institutions has a web page or issues an informative newsletter regarding their meetings and agreements. Both institutions have to be consulted for most of the decisions regarding university policy. Figure 2.1 shows the regulatory and institutional history.

Figure 2.1: Chronology of national and Andalusian legislation regarding universities



Source: Prepared internally.

54. In the area of research, the 1986 Research and Science Act, still in effect, was approved at the time of the abolished 1983 University Reform Act. As the need became apparent, the 2001 University Act modernised the provisions relating to university research in Title VII, originally entitled “*On university research*”; significantly, the subsequent 2007 amended University Act added to the original heading of Title VII the expression “*and transfer of knowledge.*”

Until 2008, the Ministry of Education and Science held the responsibilities in university and research issues. At this time the responsibilities relating to universities were transferred to the Ministry of Science and Innovation, where they were held for just one year. With the ministerial reshuffle in April 2009, the responsibilities for universities returned to the Ministry of Education. The responsibilities for research, however, remained with the Ministry of Science and Innovation.

2.1.2.2 Regional regulation regarding universities and research

55. The autonomous region of Andalusia has extensive powers attributed in Article 53 of its Statute of Autonomy –both exclusive and shared with the central government– for planning and management in relation to universities. It shares with the central government powers related to regulation of university creation, the operating regimes and government, regulation of the frameworks for university access and teaching staff, as well as quality assurance. The regional government is exclusively responsible for: programming and co-ordinating the Andalusian University System, creation of universities and approval of its organisational regulations, co-ordination of the access procedures, the legal framework of the degrees offered by the universities, the universities’ independent financing, regulation of the regional grants systems, and remuneration of contracted teaching and research staff as well as the additional supplements/financial bonuses policy of the civil service teaching staff.

56. Exercising these powers, and following the transfer of responsibilities for educational matters from the central government to the Andalusian government (via Decree 1734/1986, dated 13 June), the autonomous region enacted Law 1/1992, dated 21 May, the University Co-ordination Act (*Ley de Coordinación del Sistema Universitario*, LCSU in figure 2.1). This Act established a multilateral and institutional decision making process on university issues within the Andalusian Universities Council (*Consejo Andaluz de Universidades*). This body is made up of those responsible for university policy in the government, the Andalusian university Rectors, the chairs of the Social Councils, five members designated by the Andalusian Parliament, the Director of the Agency for Quality Assurance in Higher Education and Research in Andalusia (*Agencia Andaluza de Evaluación de la Calidad y Acreditación Universitaria*) and the chair of the Andalusian Schools Council.

In 2003, Law 15/2003, dated 22 December, the Andalusian Universities Act (*Ley Andaluza de Universidades*, LAU in Figure 2.1) was enacted. This act, still in effect and which replaced the 1992 act, legitimised the Andalusian University System, which is mentioned right from its first section and defined in Section 2 as a group of public and private universities, created or recognised by the Andalusian Parliament. The Andalusian University Act defines a set of principles common to the Andalusian University System.

57. As regards research (and development and technological innovation), under Article 54 of the Statutes of Autonomy the only shared responsibility refers to the co-ordination of research centres and structures in Andalusia. On the other hand, the regional government is exclusively responsible for the establishment of proprietary lines of research and monitoring and assessment of projects, organisation and control of the centres and structures located in Andalusia, policy on training grants for research personnel and research support, scientific dissemination and transfer of results.

To exercise these powers, since 1984 the Regional Government of Andalusia has gradually implemented research planning, characterised by the progressive proximity of university research and innovation transfer at the service of regional development, which is dealt with in the following chapter. The creation of the Regional Ministry of Innovation, Science and Enterprise (*Consejería de Innovación, Ciencia y Empresa*) in 2004 enabled the merging of research policies, traditionally an area dealt with by the Ministry of Education and Science, and technological development and transfer policies (historically the responsibility of the Ministry of Labour and Technological Development). Law 16/2007, dated 3 December, the Andalusian Science and Knowledge Act (*Ley Andaluza de la Ciencia y el Conocimiento*, LACC in Figure 2.1), culminated the planning process for the regional research and innovation system.

2.1.2.3 Quality assurance

58. Section 31 of the national University Act introduced the philosophy of independent assessment in the university system and which, up until that time, had only been applied to research via the National Commission for the Evaluation of Research (*Comisión Nacional Evaluadora de la Actividad Investigadora*, CNEAI in table 2.2) and the National Agency for Quality Assessment and Accreditation (*Agencia Nacional de Evaluación y Prospectiva*, ANEP in Table 2.2). The enactment of the LOU was followed by the creation of the National Agency for Quality Assessment and Accreditation (*Agencia Nacional de Evaluación de la Calidad y Acreditación*, ANECA in table 2.2), with responsibility in the entire national territory, and the Andalusian Agency for Evaluation (*Agencia Andaluza de Evaluación*, AGAE in Table 2.2) in the autonomous region of Andalusia, for assessment and quality control. These two latter organisations are members of the European Association for Quality Assurance in Higher Education (ENQA). The regional agency has just passed its independent periodical assessment in 2008. Table 2.2 shows the different characteristics of these organisations.

Table 2.2: Functions of the different assessment agencies

Agency	Territorial scope	Assessment purpose	Nature	Results
ANECA	National	Teaching staff merits	Compulsory	Promotion and hiring
		Degrees curricula	Compulsory	Approval of new degree Control of their implementation
		Services	Voluntary	Quality recognition
AGAE	Regional (Andalusia)	Teaching staff	Compulsory	Promotion, hiring, emeritus
		Teaching staff	Voluntary, every 4 years	Salary bonus
		Research projects	Compulsory	Funds from regional R&D&I Programme
		Degree curricula	Compulsory	Jointly with ANE autonomous region, approval of new degrees
ANEP	National	Research projects	Voluntary	Funds from the National R&D&I Programme
CNEAI	National	Individual research	Voluntary, every 6 years	Salary bonus

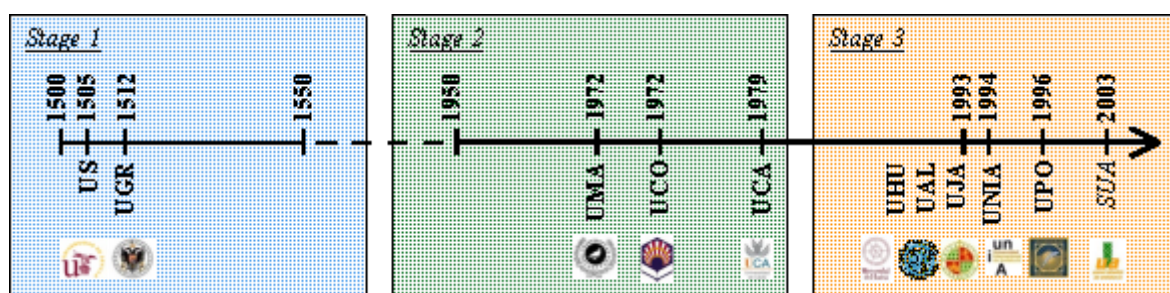
Source: Prepared internally.

59. As a result of the enactment of the aforementioned Andalusian Science and Knowledge Act, the regional Agency for Evaluation will have to be replaced by the Andalusian Knowledge Agency. The new regional agency will be given the powers to assess research policy. It would be desirable for the Agency to be able to co-ordinate all the regional government's research activities, plans and programmes, and not only the Regional Ministry for Innovation, Science and Enterprise's R&D&i plans.

2.2 Evolution of the universities in Andalusia

60. The Andalusian University System is the result of an extremely long historical evolution, in which three stages can be differentiated: the 16th century, and the seventies and the nineties in the 20th century. It is basically a university system made up of ten public universities. The creation of new universities has been due, in all cases, to the demand for university studies, especially in the eighties. This process achieved territorial distribution of higher education facilities, providing each province with a university. Only one request has been made for the creation of a private university, authorised by law approved by the Andalusian Parliament in 2007. The facility, which in October 2009 was still not in operation, will have the legal form of a foundation.

Figure 2.2: Chronology of the creation of universities in Andalusia



Source: Prepared internally.

61. Concern for regional development has been one of the driving forces in this process of creating the Andalusian University System. Following the democratisation of and universal accessibility to universities in Spain with the coming of democracy, access to the university in Andalusia was hampered by the extension of the region and its low income per capita levels. The creation of one university per province has brought about significant cultural, social and economic changes, especially in provinces with recently created universities. For example, the number of university graduates in the province of Almeria has doubled since the University of Almeria was created, which has had a decisive effect not only on the level of education of the Almeria population, but also on the province's capacity to retain its human resources.

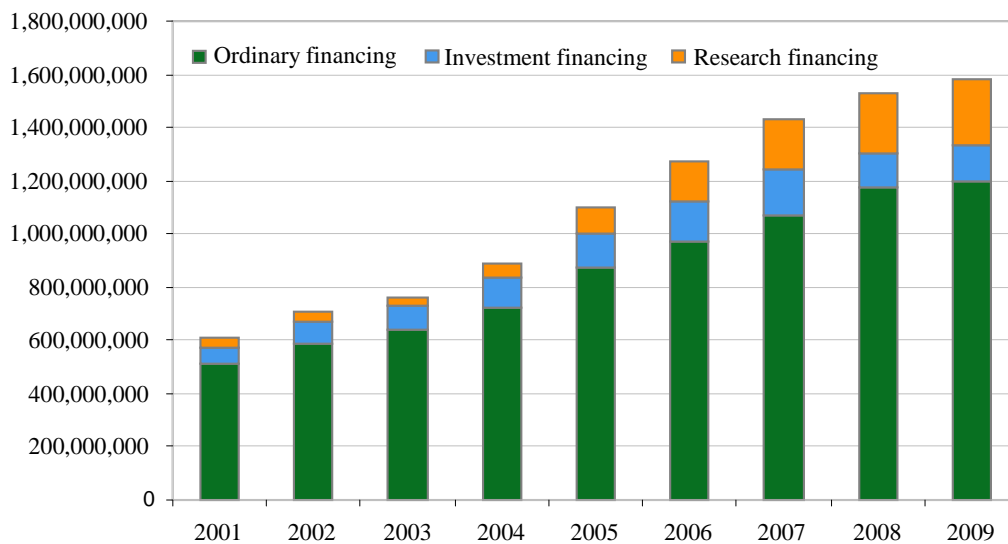
62. Linking the growth of the university system to the regional development needs was one of the pillars of the Second Modernisation Plan for Andalusia (2003), which was subsequently materialised in the 2005 Innovation and Modernisation Plan for Andalucía (*Plan de Innovación y Modernización de Andalucía*). The university and research policy "is specifically oriented towards the knowledge industry and universities as regional agents of innovation essential for the development of a modern and advanced society, capable of generating employment and social welfare. The aim is to develop an Andalusian Knowledge System, conceived as a whole that integrates all the agents and organisations involved in the processes of human resources training, knowledge and technology production, transfer of these resources to the production, social and cultural sectors, and their application to generate wealth through innovation. The universities play a key role, as agents involved in the conception, planning, implementation and assessment of the training, research, technological development and innovation policy in our autonomous region. In this context, the universities' main mission is to become a strategic asset of regional competitiveness".

2.3 Andalusian universities' financing system

63. These objectives included in the Plan for Andalusia's Innovation and Modernization have been materialised in the modification of the public funding model for the Andalusian University System universities. Starting with a situation of "relative scarcity" of public resources allocated to universities in comparison with the rest of Spain and neighbouring European countries, in its Consultancy Report 6-01/DEC-000003, issued on 7 June 2001 the Andalusian Parliament urged the Andalusian government to define a planned funding model, reviewable every five years and based on the following: integrity of the Andalusian education system, financial sufficiency and joint responsibility, convergence of the differences of the universities within the system, costs commitment for effective fulfilment of the objectives (1.05% of the regional GDP at the end of the five year period), higher education co-ordination, limitation of enrolment fees, activities planning (strategic plans) and management transparency and evaluation (operational plans, analytic accounting, contracts schedule), financial joint responsibility and control. Pursuant to this report, a five-year funding model partially based on performance was discussed and approved by consensus of the Regional Ministry for Innovation, Science and Enterprise and the Andalusian universities.

Following the first five-year period, 2002-2006, the rise in funding been remarkable and it continues in the present period, 2007-2013, as can be seen in Graph 2.4.

Graph 2.4: Evolution of the public transfers to Andalusian universities and research



Source: Regional Ministry of Innovation, Science and Enterprise, Regional Government of Andalusia.

64. Although the public funding model is responsibility of the Regional Government of Andalusia, a consensus has been sought between the regional administration and the universities through the Andalusian University Council. This model establishes the budget distribution parameters taking into account the participation quota of each university in the Andalusian University System. This quota is established based on what are called "standardised credits", which seek to make the credits of the different degrees and universities comparable, taking into account factors such as the size of the group, the experimental nature of the teaching, the teaching staff, etc. Once the quota has been calculated and, therefore, the theoretic financing of each university, 30% of the financing is conditioned on an annual contract subject to performance.

Each university establishes its performance rate (being the goals common to all universities in the region every institution may follow a different achievement rythm) in an annual contract with Regional Ministry for Innovation, Science and Enterprise, within the framework of a multiannual commitment that culminates in 2011. Monitoring and control of fulfilment is carried out through an extensive catalogue of indicators in three specific areas: education, research and innovation. The amounts discounted from the financing of each university for failure to perform as planned go into a

fund that is distributed based on three criteria: the universities' debts, master programmes offered, and rewards to universities that have complied with 100% of their engaged performance.

The model also includes financing for investment in infrastructure within the framework of the Regional Government of Andalusia's Third Multiannual Investment Plan (2006-2010), which constitutes an important mechanism for universities to participate in the development of the region's infrastructure and which has allocated an investment of EUR 480 million for the andalusian universities during its period of effect.

Finally, public funding is completed with the universities' commitment to obtain a quota of 30% in private funding by 2011. This quota is made up of enrolment fees (the rates of which are currently frozen due to the crisis) and patents, contracts and/or sponsorships. In this way, the finance model seeks to reinforce the interaction between the universities and the social and production environments.

65. This focus on public funding and public management, based on consensus among the agents, is materialising the goal of the second Andalusian modernisation and the Plan for Andalusia's Innovation and Modernization of converting this region into a knowledge society. As highlighted in the preamble of the Science and Knowledge Act, the Regional Government of Andalusia is concentrating on "the need to promote the changes required for the system to be governed by the principle of excellence and for an institutional structure to be set up that is suitable to carry out research activities and their linkage to society's needs and the Andalusian economies, within the national and European framework".

2.4 The Andalusian University System structure

66. Over the last ten years, Andalusia's universities have grown along the same lines as universities all over Spain. The number of male professors increased within the Andalusian University System by 20.7%, compared to 23.3% in the whole of Spain. Ten years ago the percentage of female professors in the Andalusian University System was 2 pp below the average for all Spanish universities, situation that remains unchanged today. The evolution of the Andalusian University System in terms of numbers of students has already been described at the beginning of the chapter; it is sufficient to reiterate that the reduction in the total number has been more pronounced in Andalusia than in Spain as a whole. This has resulted in significant improvement in the student/professor ratio in the Andalusian University System, which has gone from 19.3 students per professor in 1998 to 13.6 students per professor in 2008. In the whole of the Spanish system the ratio has dropped from 19.8 students per professor in 1998, to 14.2 students per professor in 2008. Finally, the total number of staff increased during this same period by 22.6%, whilst in the whole of Spain it grew by more than double (53.6%). Within the staff, the percentage of civil servants in Andalusia grew less than in the whole of Spain, going from 41.72% to 45.71%, whilst the average national rose from 42.9% to 59.77%.

67. Each institution has a different weight within the Andalusian University System, as can be seen in Table 2.3. It should be noted that the weight of the faculty (research and teaching personnel, PDI in Table 2.3),

Table 2.3: Structure of the Andalusian University System

	PDI	%	Students	%	PAS	%
Almeria	859	5.10	11,307	4.95	486	5.41
Cadiz	1,637	9.72	19,544	8.55	714	7.94
Cordoba	1,369	8.13	17,679	7.73	610	6.79
Granada	3,682	21.85	56,091	24.53	2,045	22.76
Huelva	897	5.32	10,102	4.42	439	4.88
Jaen	1,129	6.70	14,515	6.35	427	4.75
Malaga	2,208	13.11	33,423	14.62	1,294	14.40
Pablo de Olavide	825	4.90	8,567	3.75	369	4.11
Seville	4,242	25.18	57,426	25.11	2,603	28.96
TOTAL SUA	16,848	100.00	228,654	100.00	8,987	100.00

Source: National Statistical Institute (INE) data for the 2007-2008 academic year.

students, and staff (administration and services personnel, PAS in Table 2.3) in each university is very similar.

68. The relations between the Andalusian universities are based on co-operation, a consideration shared by all of them, leaving aside two delicate issues: student recruitment and funding. A key example of interuniversity co-operation is the existence of the International University of Andalusia (*Universidad Internacional de Andalucía, UNIA*). This university, which does not impart graduate courses, but only postgraduate and continuing education programmes, does not have its own teaching staff. It is supplied by teaching staff from the other nine Andalusian universities, ceded to give specific courses or programmes, which have to be renewed annually. Created by Act 4/1994, 12 April, is governed by a Board of Trustees made up of all the other Andalusian Rectors. It is the only case within the Andalusian University System in which the university's mission is basically that of teaching: it organises postgraduate programs, specialized courses and diplomas, scientific and cultural activities, summer courses, lifelong learning and scientific conventions. The other nine universities maintain a balance between both areas –teaching and research.

69. The relations between Andalusian universities and the regional government are based on intense collaboration. University policy is dealt with in consensus with the Andalusian University Council. Several of the participant universities have highlighted that these relations have improved notably over the last ten years. In the questionnaires completed by the universities, the main criticisms related to relations with the regional government are centred on claims for greater funding or stricter quality and results policies. In general the universities appreciate and place emphasis on being included within the Regional Ministry for Innovation, Science and Enterprise framework, regional ministry that encompasses the responsibilities for research, innovation, development, enterprises and universities. Nevertheless, this has required a huge change in mentality, proof of this being the greater connection with the business fabric.

Relations with other regional ministries are good, though irregular, being for specific projects and activities, particularly with the Regional Ministry of Public Health (for all that related to healthcare teaching and hospitals) and the Regional Ministry of Education (which has taken part in the self-assessment process), as well as the Regional Ministries of the Presidency, Labour, Equality, Social Welfare and Culture, and Agriculture and Fisheries.

2.5 Andalusian universities' positioning in the universities ranking

70. University rankings as a means of establishing universities' competitiveness and determining their quality levels have little historical tradition. Maybe because they have not been perceived as reliable or there has been no need for institutional benchmarking. However, the fact that in the last decade national rankings have been implemented alongside the most prestigious international rankings shows a perception on the move in this area.

The most famous international ranking that refers to Spain's universities is the Shagau Jiao Tong (China), which places the first Spanish centre, Barcelona University, in the 151-202 band (2007 ranking). The first of the Andalusian centres to be mentioned is the University of Granada, followed by Seville University (both in the 403-510 band, in 2007). In this ranking, as in the one drawn up by The Times educational supplement, Spanish universities do not do well. In the study published by The Times, which claims to better the indicators used by the Shanghai study, the situation is the same as in the previous study: Barcelona is the first Spanish university mentioned, placed 194 (2007 ranking), with 55.9 points out of total of 100. The first Andalusian university cited is, again, the University of Granada, followed by Seville University (positioned 401-500).

71. The most relevant national university comparison and classification studies are basically those carried out by the *El Mundo* newspaper and the CyD Foundation. There are other rankings that focus on specific aspects of the university system: in the field of research there is the classification drawn up by the COTEC Foundation in its 2006 report or the 2007 and 2008 analyses carried out by the University of Granada on research productivity in Spanish public universities.

The *El Mundo* newspaper ranking is published annually since 2002/2003. It uses up to 25 variables in the areas of teaching, research and services and carries out a survey and an objective assessment. The first of the Andalusian universities is the University of Granada (17th, followed by

the University of Seville and the University of Malaga (shared 19th). Further down the scale are Pablo de Olavide University (32nd) and University of Almeria (35th). The other Andalusian universities – UCA, University of Cordoba, University of Huelva and University of Jaen– are not placed in the ranking and, therefore, are at least below 34th, the bottom place on this list. The International University of Andalusia does not usually appear in these rankings, given its aforementioned specialisation.

The classification provided by the CyD Foundation for 2007 and 2008 contain four different rankings, depending on the variable analysed, with no consolidated ranking. The four variables that establish the universities’ positioning are: capacity to attract new students, quality of teaching, PhD programmes and research. Table 2.4 includes the relative position of Andalusian universities within the system as a whole. Once again, due to its peculiarities, the International University of Andalusia does not appear.

Table 2.4: Positioning of the Andalusian universities according to the CyD Foundation (2008)

	Capacity to attract	Quality of Teaching	PhD programmes	Research
University of Almeria	30	29	28	19
University of Cadiz	41	18	7	35
University of Cordoba	39	9	8	5
University of Granada	8	42	20	6
University of Huelva	32	21	22	46
University of Jaen	31	41	17	36
University of Malaga	n.d.	n.d.	n.d.	31
University Pablo de Olavide	33	36	12	21
University of Seville	7	28	21	11

Source: 2008 CyD report. Number of universities examined: 47.

72. It is interesting to note that there is growing concern for comparison between institutions. This can be explained, on one hand, by a greater quality and excellence philosophy and, on the other, by the universities’ increased capacity to attract students and financial resources. Furthermore, Public Administrations are exercising more control over the universities’ results and efficiency and the universities are showing greater transparency and social responsibility. However, at regional level no effort has been made to classify the universities and the universities view this issue with distrust. Among other matters, they complain about lack of transparency in the management of the results indicators used to determine university funding. By lack of transparency they are referring to the impossibility of knowing the data presented by other universities, so no public discussion on their level of fulfilment is possible. Likewise, the lack of commonly established calculation bases and concepts underlying the determination of the indicators themselves is a sign of poor transparency. Apart from this, in general there seems to be a negative reaction with regard to any possible comparison between universities, using arguments of contextual and historical interpretation of the results obtained to avoid or bias their direct comparison.

CHAPTER III: CONTRIBUTION OF RESEARCH TO REGIONAL INNOVATION

73. In this chapter we will deal with the contribution of research to regional innovation, focussing specifically on regional government policy and the results and experiences of the universities that comprise the Andalusian University System.

As regards research, there is one proviso to be made: the Andalusian University System is made up of ten universities; however, only one of them, the International University of Andalusia, is devoted mainly to teaching. This university does not have its own teaching staff or researchers but, as was explained in the previous chapter, it organises formal postgraduate training and continuous training programmes, with the collaboration of the other universities. The professors at these universities give their services in the International University of Andalusia programmes in exchange for extraordinary and specific remuneration. This means that the International University of Andalusia does not participate in most of the research related incentive initiatives and programmes, as the professor-researchers that work for the International University of Andalusia do so on a temporary basis and their research activities are managed by their universities of origin. The International University of Andalusia's main research activity is in the area of research theses as part of its master/postgraduate programmes.

3.1 Responding to regional needs and demands

74. As already explained in chapter two, responsibility for research is shared by the central government and the regional (autonomous) governments.

Within the framework of national legislation, the current Research and Science Act of 1986 responds to the historical era of the now repealed University Reform Act (1983) and which has been rendered obsolete by current needs and the development of university and non-university research. Therefore, the national University Act (2001), modernised the provisions related to university research in its Title VII, originally entitled "*On university research*"; significantly, the 2007 amended version added to the original heading of Title VII the expression "*and transfer of knowledge*."

The objective of scientific research is "*to link university research to the productive system, as a means of achieving transfer of the knowledge generated and taking the university into the productive system and the enterprises' innovation processes, giving special attention to the link with the productive system in the universities' immediate surroundings. Said link can, as appropriate, be achieved through the creation of technology-based enterprises set up on the basis of university activity, in which the universities' teaching and researchers may participate, within the framework established in Section 83*" (Sect. 41.2.g 2007 amended national University Act, referring to temporary leave of absence with reserve of the university post). At the moment there is a Research and Science Bill being debated, but it has not yet been sent to Parliament (January 2010).

3.2 Regional research planning and regulation

75. As said, the only responsibility related to research shared between the central and Andalusian governments refers to the co-ordination of research centres and structures in Andalusia (Sect 56, Statutes of Autonomy). On the other hand, the regional government is exclusively responsible for the establishment of proprietary lines of research and project monitoring and assessment, organisation and control of the centres and structures located in Andalusia, policy on training grants for research personnel and research support, scientific dissemination and transfer of results. The regional government has the essential mission of promoting university research designed to put forward and resolve problems of any nature that are particularly related to Andalusia, which should receive preferential funding (Sect. 53.3 Andalusian University Act).

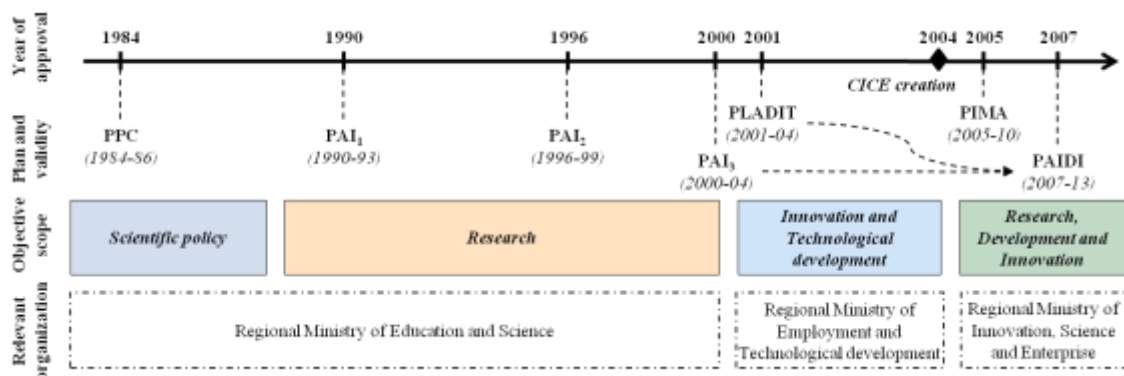
76. To exercise these powers, since 1984 the regional government has gradually implemented research planning, characterised by the progressive proximity of university research and innovation and knowledge transfer at the service of regional development. The Second Modernisation Plan for Andalusia, approved on 9 December 2003 by the Regional Government Council, sought to reinforce Andalusia's economic and social development through the establishment of a knowledge and

innovation-based society. The creation of the Regional Ministry for Innovation, Science and Enterprise in 2004 made it possible to merge research policy, traditionally the responsibility of the Regional Ministry of Education and Science, with technology development and transfer policy, historically the responsibility of the Regional Ministry of Labour and Technological Development.

This model change was materialised in the confluence of the successive research plans: the Scientific Policy Programme (1984-1986, PPC in Figure 3.1) and the first (1990-1993), 2nd (1994-1996) and 3rd (1997-2000) Andalusian Research Plans (PAI in Figure 3.1) with the Innovation and Technological Development Master Plan for Andalusia (PLADIT 2001-2003, in Figure 3.1), with the aim, among others, of putting R&D activities in touch with the productive sector.

This explains the approval of the Plan for Andalusia’s Innovation and Modernization on 7 June 2005. This strategic document was drawn up within the area of research for the Research, Development and Innovation Plan of Andalucía (Andalusian Plan for R&D&i). The Andalusian Plan for R&D&i merges what, up until then, had been two differentiated planning documents: the Andalusian Research Plan and the Innovation and Technological Development Plan. Significantly, the Andalusian Plan for R&D&i implementation period coincides with the EU financial framework for 2007-2013. The Andalusian Plan for R&D&i is set within the framework of the Lisbon Objectives and the subsequent implementation documents, the 7th Framework Programme for R&D&I, as well as within the National Reforms Programme, the 2007-2013 National Strategic Reference Framework and the 2007-2013 Strategy for Andalusian Competitiveness. Proof of the regional government’s goal of unifying university research and regional development, one of the Andalusian Plan for R&D&i objectives is “*to orientate research towards searching for solutions to specific problems, particularly in fields or sectors strategic for Andalusia*” (Objective III, Strategy Line I).

Figure 3.1: Chronology of the Andalusian research plans



Source: Prepared internally.

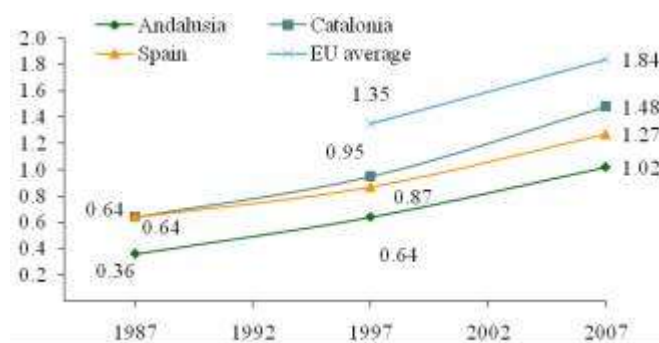
77. Law 16/2007, dated 3 December, the Andalusian Science and Knowledge Act culminates the process of merging research and innovation at the service of Andalusian development. This law created the Andalusian Knowledge System, made up of the “*set of public and private resources and structures that interact to promote the generation, development and shared use of knowledge.*” The essential mission of the Andalusian Knowledge System is to achieve “*the interaction of the different agents (...) and foster improvement of the capacity to generate knowledge through quality research and its transfer to the productive sectors*” (preamble of Law 16/2007). Additionally, the Andalusian Knowledge System endeavours to foster the instruments that help shared use of knowledge, promote enterprising thinking, and reinforce cooperation between the knowledge industry and the business fabric through local, national and European networks.

78. From an institutional perspective, this law integrates the entity called the Andalusian Committee for the Knowledge Society (created by Law 8/2005, dated 9 November) in the Andalusian Knowledge System and establishes the need to create an Andalusian Knowledge Agency, which would absorb the assessment responsibilities of the Andalusian Agency for Evaluation, as already indicated in the previous chapter, to which duties in research assessment would be added. Additionally, it establishes a Knowledge Agent Register, which is described later on.

3.2.1. Definition of the priority research areas for regional development

79. The definition of an innovation and development policy for Andalusia, joining the universities and the business fabric, can be seen in the notable increase in regional public funding. Between 1984 and 2009, funding has tripled, although continued investment is needed if these resources are to be brought up to the average levels in Spain or the EU.

Graph 3.1: Comparison and evolution of public investment in R&D in relation to the GDP



Source: Spanish Statistical Institute(INE) and OECD.

80. The Andalusian Plan for R&D&i identifies as strategic sectors a set of Technical Scientific Research Areas, of which the most important are Aeronautics, Biotechnology, Agroindustrial and Food, Health, Tourism, and Information and Communication Technologies. The AICTs have given rise to a catalogue of sector development areas, the structure of which was established under Order dated 3 September 2007, which regulates the operation of the Andalusian Knowledge System Agents Electronic Register. The sector areas of development are: Aeronautics, Space, Biotechnology and Bioengineering, Multicultural Aspects and Social Integration, Violence and Social Behaviour, Protection and Cultural Heritage, Globalisation and Cooperation in Combating Poverty, Construction, New Materials and Domotics, Transport and Intermodality, Teaching, Learning and Technology, Dependence Assistance and Technology, Nanosciences, Nanotechnologies and Materials, Machinery and Production Processes, Industrial Design, Nutrition and Food Technology, Renewable Energies and, Equality and Gender Studies.

81. On the other hand, each university has drawn up its own research strategy. All Andalusia's universities have proprietary research programmes, except the University of Huelva; the latter, however, has indicated that this study has brought this issue to its attention and it intends to immediately establish priority lines of research that incorporate regional policy. An analysis of the existing university plans shows that they are not homogenous as regards their scope and content; in general they do not define any thematic areas considered strategic for the university but rather they are centred in offering incentives and funding for actions in any area of knowledge, as can be seen in Table A.3.1 (Appendix).

It should be noted that some of the Andalusian universities declared that their priority in research is to position the university internationally, at least in certain disciplines. They consider that the regional focus of the report is more in line with the area of knowledge transfer than that of research.

82. Nevertheless, Andalusian universities deem they are particularly prepared in some areas, as can be seen in the following table, drawn up from the universities' answers to the questionnaire used. In some cases, these priorities receive an institutional support, as it is the case in the University of Jaen. Special Commissioners have been designed to plan over specific research areas such as Olive Grove and Olive Oil (Agri-food sector), Modern Languages, IT, Energy and Environment.

Some of the priorities marked by the universities in the region coincide with the regional government priorities, although few universities marked Biotechnology, ICTs or Tourism, and none checked the fields for Health Sciences or Aeronautics, despite their antecedents (the University of Granada in terms of Health Sciences; the University of Seville in the Aeronautics sector) and the fact that they have well positioned research groups in these areas. Once again, this shows that the universities do not have their own research strategies, but rather that they are derived, to a large extent, from the Research Groups.

Table 3.1: Self-definition of priority research areas in each university

	UAL	UCA	UCO	UGR	UHU	UJA	UMA	UNIA	UPO	US
Agrifood	X	X	X	X	X	X	X			X
Applied social research		X			X	X			X	
Architecture							X			
Biotechnology		X	X	X		X	X		X	X
Chemical industry					X					X
Environment	X	X	X		X	X	X		X	X
Geology and Geography				X			X	X		X
Historical, artistic and cultural heritage		X	X	X	X	X	X	X	X	
Human Rights and Development								X		
Natural parks, flora and fauna		X		X	X	X				
International Relations and cooperation								X		
Renewable energies	X		X		X	X	X			
Health						X		X		
Software development				X		X	X			X
IT						X		X		
Tourism		X			X		X			
Urbanism					X		X			

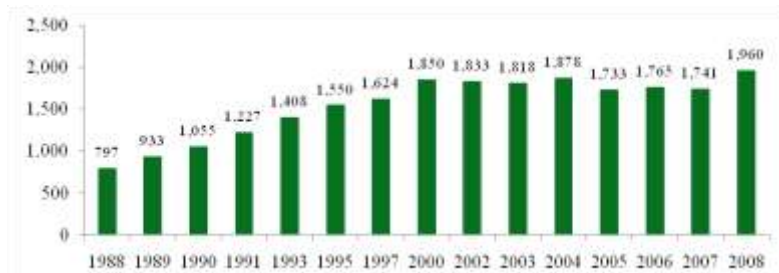
Source: Prepared internally from questionnaires completed by Andalusian universities.

83. Another significant element to appreciate the profile of each university’s research policy is the number and distribution of their research groups by research area.

As said, the Andalusian Plan for R&D&i identifies the research areas under which Andalusia’s research groups are classified, including both university groups and those of other research centres or institutions.

Graph 3.2 shows the evolution of the number of groups created between 1988 and 2008.

Graph 3.2: Evolution of Research Groups



Source: Andalusian Research, Development and Innovation Plan 2007 Report (PAIDI).

84. The following table only includes the Andalusian University System’s Research Groups, by research area. The Appendix includes the evolution of the Research Groups created between 1988 and 2008 (Table A.3.2 and Graph A.3.1)

**Table 3.2: Distribution of research groups in 2007
Andalusian University System**

	TOTAL	AGR	BIO	HST	PCM	HUM	NRE	SEF	PRT	ICT
UAL	111	10	7	5	12	40	12	18	3	4
UCA	150	3	1	26	21	42	13	20	17	7
UCO	173	38	22	21	16	34	10	20	8	4
UGR	400	7	22	64	51	150	36	43	5	22
UHU	83	3	2	5	9	26	14	18	4	2
UJA	102	2	9	7	10	31	10	15	12	6
UMA	215	3	10	25	21	65	15	53	9	14
UPO	63	0	9	3	2	18	5	2	2	1
US	449	8	35	52	58	154	19	6	43	17
Total	1,746	74	117	208	200	560	134	273	103	77

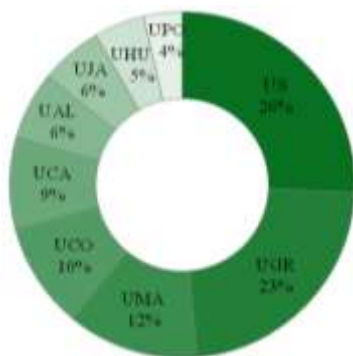
Source: Andalusian Plan for R&D&I 2007 Report.

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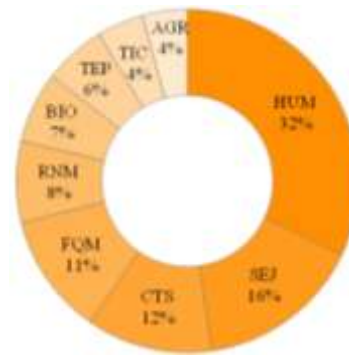
- AGR*-Agrifood
- BIO*-Biology and Biotechnology
- HST*-Health Sciences and Technology
- PCM*-Physics, Chemistry and Mathematics
- HUM*-Humanities
- NRE*-Natural Resources and Environment
- SEF*-Social, Economic and Legal Sciences
- PRT*-Production Technologies
- ICT*-Information and Communication Technologies

85. Graph 3.3 shows the weight of each institution, taking into account the total number of Research Groups in Andalusian universities. Graph 3.4 illustrates the weight of each research areas for the sets of Research Groups within the Andalusian University System. In total, the number Research Groups devoted to priority areas (AGR, BIO, HST, PRT and ICT) is 391, that is, 22.4% of Andalusia's university Research Groups.

Graph 3.3: Weight of research groups by universities



Graph 3.4: Weight of research groups by knowledge area



Source: Andalusian Plan for R&D&i 2007 Report.

3.2.2 Research support structures in the universities

86. Support to university research is provided, mainly, by the OTRIs (Research Results Transfer Office), the university foundations and the university's presence in technology parks. Additionally, universities develop their own strategies to cater for regional demands, in particular those of SMEs, by associating with other research organisations, such as the CSIC (Spanish National Research Council), or participating in public or private initiative centres. This reinforces their aperture to the outside world and promotes their Research Groups' scientific and technological production.

87. Each university in Andalusia, with the sole exception of the International University of Andalusia, has an OTRI, registered in the Andalusian Knowledge System as a Knowledge Transfer Entity. The nine OTRIs are part of the National RedOTRI. They have recently created a network, called RedOTRI Andalucía, which offers information on the groups, the university spin-offs and patents from all the universities. Table A.3.3 (Appendix) shows the main indicators of the work carried out by the Andalusian OTRIs compared with the results at national level.

The OTRIs channel the external research demands; however, they do not have sufficient personnel to maintain permanent contact with the local business fabric, and even less at regional level. The Andalusian Technological Corporation and the Andalusian Network of Technological Spaces, among other institutions, are to cover these functions at regional level. We will come back to these and their relations with the universities later.

As a singular illustration, it is important to mention a very significant experience carried out by University of Huelva's OTRI. Every year the university carries out a diagnostic study, selecting a strategic local/regional sector, which is used to plan the special R&D&I activities for this sector over a four-year period. In 2008, the Agrifood sector was chosen and in 2009, the tourist sector.

88. Another mechanism used in the last few years by universities to encourage relations with enterprises and research results transfer is the creation of foundations. The advantage of foundations is that they provide greater streamlining, being subject to private contract regulations and not the rules of public administrative contracts. The universities that were asked about the dysfunction that could

Table 3.3: University Foundations

	Univ.	Date	Reg.	T	TF	R	W
Fundación Mediterránea	UAL	1999	Yes	X	X	X	X
Fundación ANECOOP	UAL-	UAL	1994	Yes	X		X

result from the existence of two intermediaries (OTRI and Foundation) affirmed that there is good internal coordination between the two. However, this does not necessarily guarantee the appropriate visibility for the enterprises and agents that could be interested in innovation/research in the universities, especially in cases in which the Foundations - as well as the OTRIs- are registered as Knowledge Transfer Entities with the Andalusian Knowledge System, given that it is not always clear which intermediary should be approached. The University of Jaen and the University of Malaga have not created any foundation. The University of Cordoba represents a special case, as it has created a business enterprise, incorporated in the form of a public limited liability company. Similarly, the University of Seville School of Engineering created in 1982 a non-for-profit association for transfer activities called Research and Industrial Co-operation in Andalusia Association (AICIA, *Asociación de Investigación y Cooperación Industrial de Andalucía*). It has been recognised as an independent Research and Technology Centre by the Ministry of Science and Innovation.

<i>Fundación Universidad Empresa de la provincia de Cadiz - FUECA</i>	UCA	1998	Sí	X				X
<i>Corporación Empresarial University of Cordoba, S.A.</i>	UCO	1998	No					X
<i>Fundación Empresa UGR</i>	UGR	1989	Yes	X	X	X	X	
<i>Fundación Conocimiento y Cultura</i>	UPO	2006	No					
<i>Fundación Universidad Sociedad</i>	UPO	2006	No	X				X
<i>Fundación Municipios Pablo de Olavide</i>	UPO	2000	No					
<i>Fundación de Investigación de la Universidad de Sevilla</i>	US	2007	No		X	X		

Clave: T – Training; TF – Transfer; R – Research; W - Work Exp. & Jobs. Reg. Refers to whether or not the foundation is registered with the Andalusian University System.

Source: Prepared internally.

89. Besides, another channel used for reinforcing the relations with and response to SMEs is through university participation in technology parks. The table on the right shows the relations that exist between Andalusian universities and the parks around them.

Table 3.4: University – Science and Technology Parks Relations

	Science and Technology Park (PCT)	University participation
UAL	Almeria PCT (PITA)	0.30% of the capital
UCA	TecnoBahía PCT Agroindustrial PCT	23.8% 1%
UCO	Rabanales 21 PCT	24.74%
UGR	Health Sciences PCT	4.08%
UJA	Aceite & Olivar PCT (GEOLIT)	1.05%
UMA	Andalusia PCT (PTA)	1% capital
US	Cartuja 93 PCT	0.19%
UHU	Huelva PCT	Pending creation
UPO	Metropolitano PCT in Seville	Pending creation

Source: Prepared internally from Regional Ministry for Innovation, Science and Enterprise 2009 data. Regional Government of Andalusia.

90. Finally, university encourages this contact through the creation of specialised research centres or participation in mixed research centres. Detailed information can be found in Tables A.3.4 (Mixed Centres) and A.3.5 (Proprietary Centres). It is significant that the university with strongest links with CSIC –for the number and variety of research centres in which participates– is the University of Seville. On the other hand, the territorial distribution of mixed research centres founded or supported by the regional government is quite homogenous. Analysing the proprietary research centres created by Andalusian universities, it should be highlighted that, with the exception of the University of Almeria, they all have specialised centres. Specifically, the International University of Andalusia, despite its special situation as regards research, has two centres which along with the promotion of studies, boost research related to the master programmes offered.

3.3 Framework conditions for promoting research and innovation

91. Regulation of the intellectual and industrial property rights falls under the exclusive responsibility of the central government (Sect. 149.1.19, Spanish Constitution). On the other hand, the

Region of Andalusia has regulated the science and innovation structure, through the identification of the agents involved in knowledge and innovation generation, transfer and management. Ultimately, the issue of innovation and transfer appraisal and reward systems for universities, Research Groups and researchers will be dealt with.

3.3.1 Regulation of intellectual property in Spain

92. The Spanish Patents Act (1986, although amended in 1998, 2000 and 2006) establishes that ownership of the inventions carried out by university professors during their contract term and which form part of their activity or have been specifically commissioned belongs to the university. The professor/researcher has the right to a share in the benefits obtained by the university for the use of the intellectual property rights derived from the invention. This share is regulated in the statutes of each university. In general, universities are very critical as regards the legal framework regulating intellectual property, as it does not set out in detail the cases in which the universities innovative results are generated within the framework of a contractual or other kind of relationship with the productive sector.

93. On the other hand, national regulations have not favoured the exchange of researchers between enterprises and universities, as they are subject to a strict regime of incompatibilities, which prohibits them from holding more than 10% of the company shares, of being a member of the board of directors or of taking temporary leave of absence to set up a company in the private sector (Law 53/1984, dated 26 December, the Public Administration Personnel Incompatibilities Act (Sect. 11 to 15).

For the first time, the national University Act established favourable regulation regarding sharing university researchers in spin-offs, known as Technology-based Spin-offs. The University Act allows leave of absence of up to five years, without loss of the university post, so that the researcher can fully integrate in the spin-off created. At the moment this system is criticised as it is argued that there are insufficient rules to implement the regulation, which prevents the effective incorporation of researchers in the enterprises that are being created.

94. Another historical inconvenience derived from the central government regulations has been the lack of flexibility in professional researchers' careers. The system excluded the possibility of an exclusively research career in universities (with no teaching obligations), about which several Andalusian universities have complained. The bill for a professors' statute, currently under discussion, includes the possibility of professors being able to intensify their teaching or research activities, enabling a change in orientation during their professional career.

95. There are also cultural barriers: some Andalusian universities tend to identify university autonomy with freedom for research. This translates into a greater leaning towards basic research, not guided or applied, as well as a tendency to seek references in international excellence, rather than in the repercussions of their research in local or regional development. Proof of this can be seen in the criticism of some of the universities, which have labelled this study "localist". In general, as demonstrated in the proprietary research plans, the universities have no desire to "channel" research in precise strategic lines and, also in general, the university researcher-professors exercise strong pressure on their governing bodies to achieve equal treatment, regardless of the area of their research.

At the same time, there is a lack of awareness in the productive sectors regarding the potential of an association with university researchers. The business fabric is made up mostly of small or medium sized enterprises, which, for the most part, do not have research and development departments.

3.3.2 The Andalusian Knowledge System

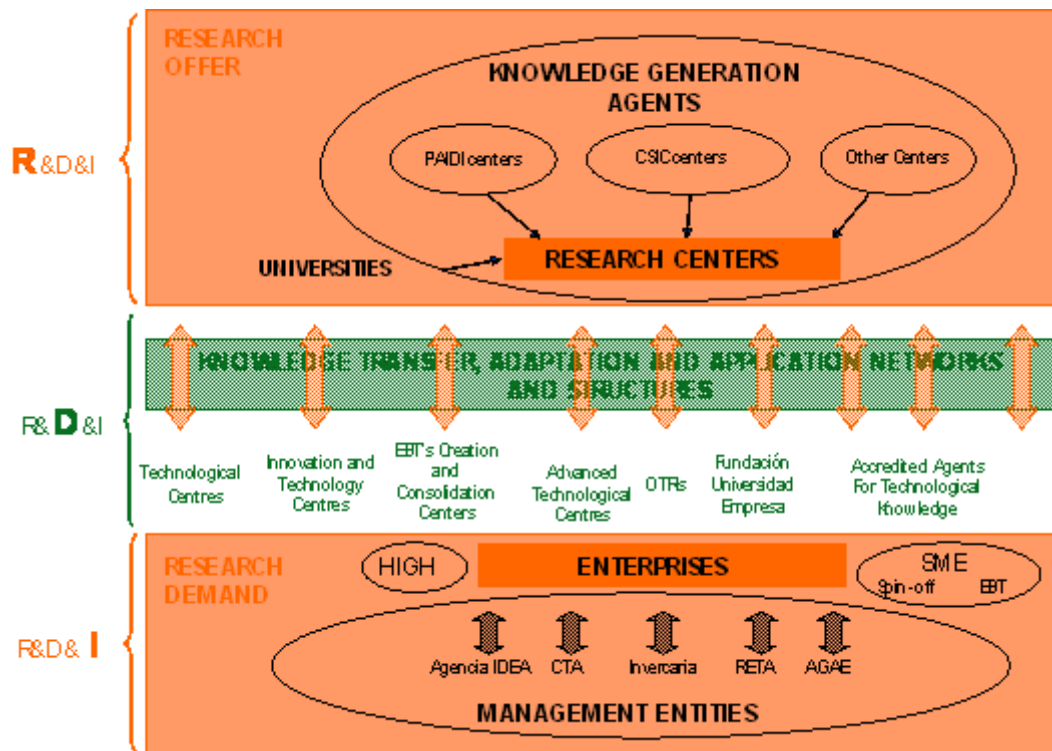
96. Following approval of the Plan for Andalusia's Innovation and Modernization and the Andalusian Plan for R&D&i, the Science and Knowledge Act set up the Andalusian Knowledge System. The implementation regulations of this Act established an Andalusian Knowledge System Agents classification, which has been progressively adapted to the requirements of the innovation sector. Three main categories have been established: knowledge generation agents (which include the Andalusian universities and Research Groups); knowledge transfer, adaptation and application

networks and structures (which include the OTRIs), and management entities (Order dated 18 September 2006, subsequently amended in Order dated 3 September 2007 and Decree 254/2009, dated 26 May).

97. For the correct classification of each agent in one of these categories, the aforementioned Order created an Electronic Register. The electronic register is public and voluntary, and it enables the maintenance of an extensive database on all the regional research, innovation and transfer agents. To encourage registration, it has been made a necessary requirement when applying for regional incentives through public funding. All universities, including the International University of Andalusia, are registered as agents of the Andalusian University System. It is most significant that 92.3% of the agents at 14/07/09 had registered in the first two years after the register was created. In 2008, Andalusian universities made up 8% of the Andalusian Knowledge System.

The following illustration gives a graphic picture of the Andalusian Knowledge System structure. As a whole, the Andalusian Knowledge System presents significant institutional density, which is shown in Table A.3.6 (Appendix).

Figure 3.2: Andalusian Knowledge System structure



Source: Regional Ministry for Innovation, Science and Enterprise. Regional Government of Andalusia.

98. This innovation and transfer system is being assessed within the framework of the OECD's LEED programme, led by the Andalusian Network of Technological Spaces (RETA).

99. One of the Andalusian Knowledge System's main characteristics, apart from the triple role of the universities (generation by the Research Groups, transfer by the OTRIs and application via the spin offs), is the existence of a varied group of institutions designed to bring research closer to enterprises, given that the Andalusian business fabric is made up primarily of small and micro-enterprises. The following table sets out the main missions of the interface organisations created over the last few years.

Table 3.5: Characteristics of the main knowledge management entities

	RETA (Malaga) Non-profit association - 2005	CTA (Almeria) Private foundation - 2005	CITAndalucía (Seville) Public company	IDEA (Seville) Public agency – 2004 Former Andalusian Promotion Agency (IFA)
Name	Andalusian Network of Technological Spaces <i>Red de Espacios Tecnológicos de Andalucía</i>	Technological Corporation of Andalusia <i>Corporación Tecnológica de Andalucía</i>	Innovation and Technology Transfer Centre of Andalusia <i>Centro de Innovación y Transferencia de Tecnología de Andalucía</i>	Innovation and Development Agency of Andalusia <i>Agencia de Innovación y Desarrollo de Andalucía</i>
Mission	To promote innovation and improvement of competitiveness of the Andalusian business fabric.	To promote collaboration between scientific and productive environment.	To support and promote the participation of enterprises, centres and Research Groups in the EU R&D programmes.	To promote innovation in the Andalusian society; to attract investment; to raise competitiveness.
Works with	SMEs RGs	Large enterprises RGs	SMEs RGs	Enterprises Universities
Instruments	87 technicians in 84 technological groups. Offer and search for associates.	Projects made up of enterprise consortia; for technological cooperation among SMEs; for cooperation for enterprises; for research and development. Offer and search for associates.	Transfer symposiums; assessment; 7th Framework Programme participation support	Incentive management and grants to enterprises; Regional Ministry for Innovation, Science and Enterprise projects and programmes management; construction of industrial and technological infrastructure.
Members	46 members, including: OTRIs, Parks Public Institutions	Universities Research Centres Enterprises Financial Entities Public Enterprises	Depends on the Regional Ministry for Innovation, Science and Enterprise	Depends on the Regional Ministry for Innovation, Science and Enterprise

Source: Prepared internally.

100. Andalusian universities value very positively the work carried out by CITAndalucía and they specifically highlight the technology transfer symposiums, data of which are included in the following section (see Table 3.8). The Andalusian Network of Technological Spaces, on its part, had attended 57 881 Andalusian enterprises at the end of 2008, 98% of which were SMEs or micro-SMEs, as well as coordinating the aid under the National R&D&I Plan for Andalusian Technology Parks, heading the national ranking for funds obtained. However, the way it searches for research partners has received some criticism from the universities, as the process is not structured formally as a stable mechanism with the university OTRIs, but rather the enterprises and Research Groups approach the Andalusian Network of Technological Spaces's offer and search promoter, which is resulting in a lack of resources for the *Andalusian Network for Transfer of Research Results* (RATRI). It is possibly this lack of coordination and joint action, as well as certain mutual unawareness, which has led the universities to be less than confident or enthusiastic in their respective questionnaires about the work carried out by the the Andalusian Network of Technological Spaces.

101. The universities are, furthermore, very critical about the Andalusian Technological Corporation, for the same reasons (they do not approach the OTRIs but select the Research Groups directly, in this case through the RATRI). Additionally, the universities have a very localist vision as regards the performance of Andalusian Technological Corporation. Notwithstanding this, an analysis of the current Andalusian Technological Corporation projects in which the University Research Groups take part belays this perception, as can be seen in the following table.

HEADINGS

AGR-Agrifood
BIO-Biology and Biotechnology
HST-Health Sciences and Technology
PCM-Physics, Chemistry and Mathematics
HUM-Humanities
NRE-Natural Resources and Environment
SEF-Social, Economic and Legal Sciences
PRT- Production Technologies
ICT- Information and Communication Technologies

Table 3.6: Distribution of Andalusian Technological Corporation-RGs research contracts by areas of research

	TOTAL	AGR	BIO	HST	PCM	HUM	NRE	SEF	PRT	ICT
UAL	17	6	3	-	4	-	1	1	2	-
UCA	13	1	-	2	2	-	2	-	4	2
UCO	20	12	2	-	2	-	3	1	-	-
UGR	19	1	4	4	1	1	5	-	1	2
UHU	7	2	1	-	-	-	2	1	1	-
UJA	6	-	1	-	-	-	1	-	2	2
UMA	16	1	-	1	3	-	2	3	2	4
UPO	5	-	4	-	1	-	-	-	-	-
US	59	4	2	6	11	2	1	2	21	10
TOTAL	162	27	17	13	24	3	17	8	33	20

Source: Prepared internally with www.cta.es data at September 09.

3.3.3 Rewarding the research at the service of regional development

102. Research at the service of regional development requirements –applied research– does not have any specific or differentiated reward mechanisms. The assessment depends on the regime of the activity in question. It is, however, possible to make a distinction in terms of the benefit obtained by the researcher, Research Group and university.

From a financial point of view, the benefits are normally shared by the university, Research Group and researcher, as we are talking about rights derived from patents and other forms of intellectual property, from innovation assessment or development contracts, or from public R&D&I subsidies.

103. The most important overall mechanism used by the regional government to encourage university innovation and results transfer in respect of enterprises is the funding contract subscribed by each university. Within the area of research, the 2011 goals are as follows:

- Goal 1: increase by 20% R&D&I activities in universities, and their excellence;
- Goal 2: manage to raise the average score of the research groups by universities for excellence to a minimum of 25 points out of a possible 32;
- Goal 3: increase the universities and other research and transfer fund management entities' income for research and technology until duplicating that obtained in 2006;
- Goal 4: increase the number of knowledge based enterprises and the number of doctors that access the labour market per university to double those that existed when the model was initiated.
- Goal 5: have, by the end of the period, at least 20% of the chairs and main top posts in the research groups occupied by women.

104. The indicators associated to these goals take into account the different forms of knowledge transfer. Specifically, the following are established as indicators for income from research and knowledge transfer:

- Independent funding in European and national calls for R&D&I projects, related to full time research personnel;
- Patents in exploitation or acquired by third parties, related to full time research personnel;
- Funds for R&D&I contracts with the Andalusian Technological Corporation and other public or private entities;
- The number of knowledge based enterprises generated in the universities, created mainly by professors over the last few years and with proven activity, related to full time research personnel;
- The number of doctors graduated in the last five years that work with enterprises or non-university institutions devoted to their speciality in relation to the number of full time research personnel;
- The percentage of professors that have collaboration contracts with enterprises with proven activity.

105. It must be noted that during the period 2002-2006, this performance-based funding amounted only to a short 10% of the total public funding for the Andalusian universities. During the present edition, the 2007-2011 financial model, the performance based part goes up to 30%, being the research funding a third part of this 30%. Detail of every university funding under both periods will be found in Table 3.7.

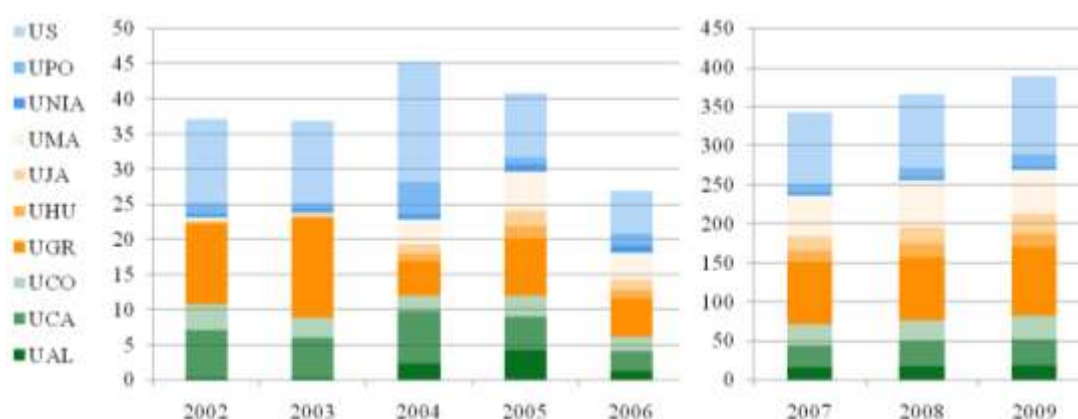
Table 3.7: Evolution of performance-based funding

	2002	2003	2004	2005	2006	2007	2008	2009
UAL	0.3	0.25	2.3	4.2	1.2	16.6	17.9	18.7
UCA	6.8	5.7	7.5	4.8	2.9	27.3	31.0	32.7
UCO	3.7	2.9	2.2	3.0	2.0	27.1	26.7	30.2
UGR	11.3	14.1	4.9	8.1	5.5	78.6	81.7	88.4
UHU	0.3	0.3	1.1	1.8	1.2	15.3	17.2	17.4
UJA	0.3	0.3	1.3	2.1	1.5	19	21.3	25.3
UMA	0.6	0.6	3.5	5.7	3.8	53	59.9	57.0
UNIA	0.4	0.2	0.7	0.9	0.9	3.1	3.7	3.5
UPO	1.5	0.8	4.7	1.1	1.8	11.6	12.8	15.9
US	11.9	11.7	17.1	9.1	6.1	91.5	93.3	99.6
TOTAL	36.9	36.9	45.4	40.9	27	342.7	365.7	388.8

Source: Regional Ministry for Innovation, Science and Enterprise. Regional Government. In million EUR.

The different ratio of performance-based funding in both periods (from 10% in 2002-2006 to 30% in 2007-2011), along with the triplication of the funding for universities and research at the regional level, explain the financial leap from the first period to the second one showed in Graph 3.5.

Graph 3.5: Evolution of performance-based funding of Andalusian University System



Source: Regional Ministry for Innovation, Science and Enterprise. Regional Government of Andalusia. Mill.EUR.

106. Together with the contract programme, which assesses the endeavours of each university as a whole, research groups and universities are supported via the Orders and incentives for research and knowledge transfer. Most of the calls for projects are organised under what are called macro-orders (Order dated 11 December 2007, project calling 2009 published in the Andalusian Official Gazette (BOJA), dated 5 January 2008. The actions considered are very diverse, as can be seen in Table A.3.7 (Appendix). The calls for excellence projects are especially important for Research Groups and university researchers, with 20% of the funding reserved for projects in which the main researchers are women, and 15% reserved for projects in which the main researchers are under the age of 35.

107. Last, but not least, research and knowledge transfer constitutes an important plus point in the personal careers of university teaching and research personnel, linked to the concession of financial bonuses or promotion in their university careers. Traditionally, however, knowledge transfer or applied research has not been recognised in the same manner as basic research in terms of professional career progress. Knowledge transfer is valued at regional level as another merit for attributing

financial bonuses (though not at national level). Nationally, research is rewarded with a specific bonus for productivity (six years research) linked directly to professional advancement in the academic career. Only the draft of the new professors' statute considers the activities of innovation and knowledge transfer at the same level as teaching, university management and research. The draft establishes that all these functions "*are essential for universities to properly carry out their roles and fulfil their missions and the goals assigned. Consequently, they must be considered in equal light in the processes for recognition, motivation and incentives, both for access to the post of university professor and for the corresponding promotion within the professional career*" (Section 8, paragraph two).

3.4 Mechanisms that expedite knowledge transfer and exploitation of results

108. Results transfer depends on the universities and their R&D&I strategy, as well as the cooperation between these and the business fabric, with direct support from the central and regional public administrations. Table A.3.3 (Appendix) shows the transfer levels of Andalusian universities and the Andalusian University System as a whole, compared with the overall figures for Spanish universities in 2007.

Apart from all of this, the Andalusian Technology Transfer Network (RATRI) was created as an instrument of dissemination of the information generated by the R&D&I agents. Its mission is to inform on and transfer the results of research in Andalusia among researchers, public administrations and enterprises interested in the generation and application of new knowledge.

3.4.1 Andalusian universities knowledge transfer strategy

109. Notwithstanding the existing barriers, some universities in Andalusia are drawing up strategies to encourage contact with different regional productive sectors.

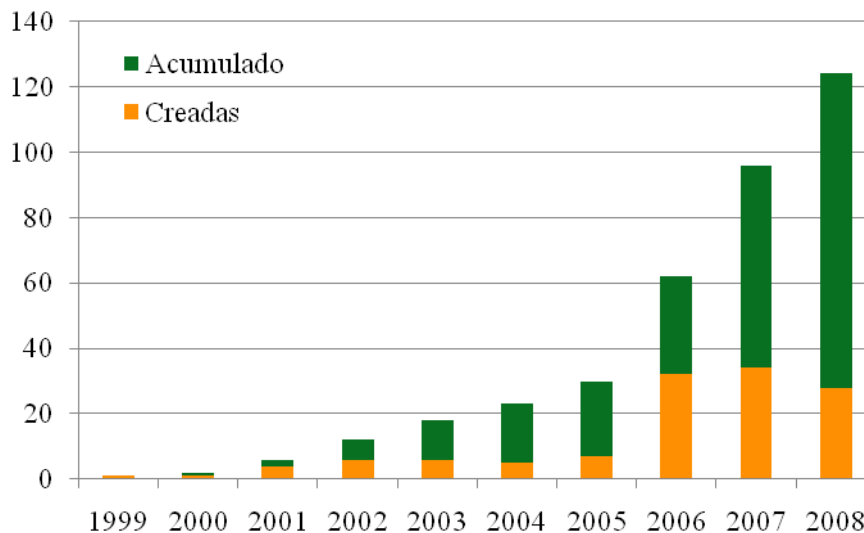
110. Specifically, in 2009 the University of Almeria approved for the first time a knowledge transfer plan with an allocation of EUR 52 000. The promoted activities include creation of spin off, registration of intellectual property and participation and/or organisation of knowledge transfer. University of Cadiz has also approved a transfer support plan ("INNOVAR en la University of Cadiz" or INNOVATE in the University of Cadiz), which includes among its priority lines the support of social sciences transfer activities, such as the HUMAN and T-CULTURE transfer programs.

111. Other universities, without going as far as to approve a knowledge transfer support plan, have included strategies to reach this objective in their own research plans. Specifically, University of Granada has included a section on aid for knowledge transfer aid in its university research plan, with four action lines: promotion of knowledge transfer in the socioeconomic environment, patents, creation of spin-off and promotion of the university's technological offer. University of Jaen's proprietary research plan has five lines of transfer support, which include intellectual property protection, creation of spin off, aid for meetings with enterprises and transfer symposiums. Pablo de Olavide University has also included an action to encourage transfer activities in its university research plan. University of Seville devotes support actions to international patent extension and to the creation of spin off.

112. The University of Malaga, the University of Huelva and the University of Cordoba do not include any incentives for promoting knowledge transfer in their respective plans. Nevertheless they promote transfer through a different set of actions. The University of Cadiz promotes spin off creation through a specific program AtrEBT! (meaning, "try and create your spin off"), where best ideas are chosen for its promoters to be train and the spin off funded by the CAMPUS programme (financed by the regional government through IDEA, the regional development agency). The University of Huelva opened last June 2009 a Centre for the Research and Development of Agri-Food Technologies, to foster Research in that area in the province of Huelva. The University of Huelva is also promoting patents and spin off creation through different workshops (2 for spin off and one for patents in 2008).

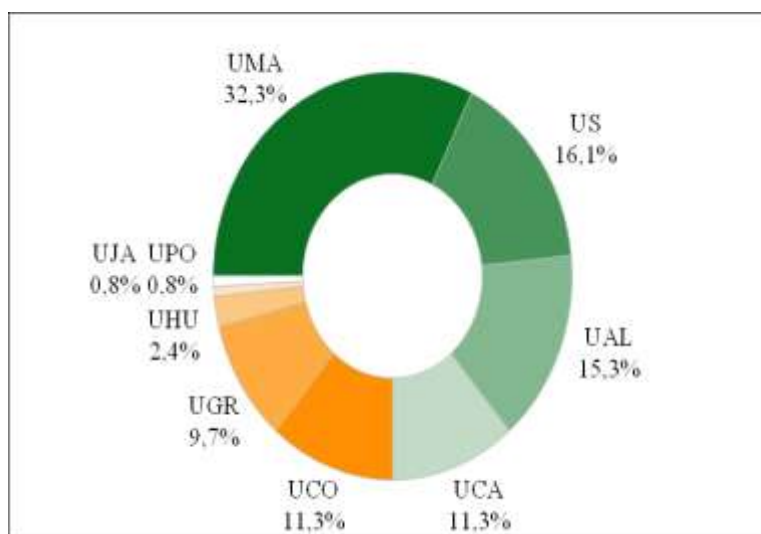
113. The evolution on spin-offs created by andalusian universities is a very clear indicator on the effectiveness of these transfer promotion programs and activities. Graph 3.6 shows an evolution for the last decade. Graph 3.7 illustrates the share of each university in this ten-year spin off results.

Graph 3.6: Spin-offs created by andalusian universities (1999-2008)



Source: Andalusian Plan for R&D&i 2007 Report.

Graph 3.7: Spin off creation by University (1999-2008)



Source: Andalusian Plan for R&D&i 2007 Report.

114. In 2004, the University of Seville created a Vice-Rectors' Office for Technological Transfer as a different and separate office to that of research. The Vice-Rectors' Office for Technological Transfer is in charge of the OTRI, the Foundation, the work experience in enterprises service and the guidance and professional recruitment unit. It would be of interest to have the possibility of carrying out an evaluation of the impact of this separation in this university's results.

115. The universities take into consideration the enterprises as recipients of their offering, although not in a generalised manner. Specifically, the home page of the websites of the University of Almeria, the University of Cordoba, the University of Jaen, the University of Malaga and the Pablo de Olavide University include specific content for enterprises that wish to examine their R&D&I offer.

116. Likewise, the universities are making increasing efforts to showcase their technological offer. Some significant initiatives are the innovation divulgation journals created by the University of Cadiz, the University of Almeria, the University of Malaga and the University of Seville. The University of Cadiz was pioneer in this respect with its i+T Newsletter, created in December 2003. In July 2009, it published its 54th issue. It is an electronic newsletter published by the TTO that provides news on research and knowledge transfer, and information on patents, projects and contracts.

In 2009, the University of Almeria launched a journal for the publication of research results under the title Nexos, which has now published its 2nd number (May-June 2009, No. 2). It is also an electronic publication that gives news on research projects, European projects, spin offs, intellectual property, researchers' profiles, etc. The University of Malaga has created a specific service for scientific documentation and publishing, which includes a web page, video documentaries, blogs and a journal with a dual edition: hardback (for distribution through newsstands in the city of Malaga) and electronic. The first number was launched in July 2009, with a special on Darwin. The goal of this journal is to improve divulgation of the University of Malaga's scientific capabilities and to enrich the science-technology-society dialogue.

Since 2006, the University of Seville has been publishing the OTRInforma Newsletter, in hard copy and electronic version, to give information on the different funding programmes, search for associates, university's research services and capabilities. Its publication on the Internet reached Issue no. 8, 2008, which corresponded to September, without any subsequent issues.

The University of Jaen, on its own, has adopted its I Scientific Divulgation Plan, addressing the need for a better transfer of the university knowledge to society at large. This plan, approved on 2009, foresees different activities to foster the vulgarization of Sciences, such as the Science Week, workshops, graphic material collections, etc.

On its part, the Regional Ministry for Innovation, Science and Enterprise created the *Andalucía Investiga* website (www.andaluciainvestiga.com), devoted to research and promotion of science dissemination, a patent and research results publication service classified in thematic areas, an image bank, a press service (InnovaPress) and a monthly, monographic journal called *Andalucía Innova* (Andalusia Innovates), which was started in April 2003 with a number on stem cells.

3.4.2 Cooperation between Andalusian universities in the area of research and knowledge transfer

117. To encourage cooperation between Andalusian universities, these have set up an association called Association of the Andalusian Public Universities, which is dealt with more extensively in Chapter 6. Its operating structure is organised in commissions, one of which is that of Research, Technological Development and Innovation, presided over by the Rector of University of Granada. These commissions meet from time to time, although no minutes or agreements are published.

118. Additionally, in the area of research the universities have set up the Andalusian Consortium of University Libraries (CBUA), made up of the ten universities, including the International University of Andalusia. Although the origins of the Consortium date back to 1998, its official date of incorporation is 23 March 2001. Its mission is to promote cooperation between Andalusian university libraries, based on three premises: to improve the use of financial resources, give greater access to shared resources and expedite the shared use of the information and communication technologies. The Consortium activities are financed via contributions from the universities, the Regional Ministry for Innovation, Science and Enterprise and the ERDF.

119. Collaboration between universities is also shown through the existence of an important number of Research Groups with components from different Andalusian universities (277 out of 1992, which means a 13.9% of the groups), as well as the number of inter-university excellence research project (72 out of 287, that is 25%). The proposals put forward jointly to the Ministry of Education's Excellence Campus programme are another example of this close collaboration (further information in Chapter 6).

120. The regional government rewards collaboration between the region's universities in the contract programme. One of its objectives is to achieve a degree of university globalisation, using as an indicator, among others, Andalusian university cooperation within the framework of the Andalusian

University System to compete in the national and European arenas. The goal for 2011 is to duplicate the number of shared projects in order to achieve greater national and international competitiveness.

3.4.3 Cooperation between universities and enterprises in research and knowledge transfer

University-enterprise cooperation is reinforced through fairs and different types of financial incentives from the central and regional governments.

121. The knowledge transfer fairs organised by CITAndalucía are essential to set up university-enterprise collaboration. The Andalusian Network of Technological Spaces, the Regional Development Agency (IDEA) and the Andalusian universities take an active part in these via the OTRIs. Table 3.8 shows the most recent events held by sectors, with a summary of the participation of enterprises (E) and research groups (RG).

Table 3.8: Knowledge transfer fairs

	Date	Province	E	RG
Agrifood				
Acuicultura 09	16/06/09	Cadiz	37	11
Expoliva 2009	13/05/09	Jaen	66	26
Expo Agro-Almeria 2008	27/11/08	Almeria	77	20
Mesa Redonda Vinoble 2008	27/05/08	Cadiz	16	20
Expo-citfresa	6/03/08	Huelva	44	28
Emerging sectors				
Turismo 09	29/10/09	Malaga		
Frío Industrial	23/04/09	Cordoba	35	7
Biotechnology				
Biología y Salud 09	31/03/09	Granada	62	53
Biología y Salud 07	14/06/07	Granada	49	42
Information and Communication Technologies				
TIC 08	22/10/08	Malaga	87	18
Transport and Metal Mechanics				
SIMA 08	10/10/08	Seville	69	19
Energy and Environment				
Bióptima 2008	8/05/08	Jaen	75	24
Bióptima 2007	19/04/07	Jaen	45	32

Source: Prepared internally, data from IDEA..

122. From the perspective of financial support, since 2005 the regional government has been providing incentives, via the Regional Ministry for Innovation, Science and Enterprise, for collaboration between research centres –including universities- and enterprises through an incentive order for the Promotion of Innovation and Business Development in Andalusia (currently in effect, Order dated 9 December 2008, BOJA dated 17 December 2008). This order established research, development and business innovation as one of its four objectives.

A 15% of the requested funding must be sub-contracted with a University Research Group, to promote cooperation between companies and researchers. Additionally, this order also encompasses promotion of spin offs and qualified research personnel mobility to SMEs for a maximum period of three years, provided this does not involve staff replacement and they work in R&D&I, though the aid programmes have still not been announced.

123. Along the same lines, the Spanish government has carried out two programmes to encourage cooperation between universities and enterprises: the Concerted Industrial Research Projects (PIIC in Table 3.9), and the National Strategic Consortia for Technical Research (CENIT in Table 3.9) programme. Table 3.9 sets out the participation of Andalusian universities.

The PIICs are designed to fund pre-competitive research, the results of which are not directly marketable. In 2007, 93 PIICs were approved. The CENIT programme seeks promote long-term public and private collaboration in joint research programmes, with the participation of at least four enterprises. In 2007, 30 projects were approved in which 50 Spanish universities took part.

Table 3.9: PIICs & CENIT in Andalusia - 2007

	UAL	UCA	UCO	UGR	UHU	UJA	UMA	UPO	US
PIIC	3	1	-	5	1	-	2	-	1
CENIT	1	-	-	1	1	-	7	2	2

Source: Centre for the Industrial Technological Development (CDTI).

The central government also has a programme for encouraging researchers' mobility towards enterprises, called the Torres Quevedo programme, which covers recruitment of research, technical, doctor and technology personnel. These incentives may be requested by enterprises, technology centres, business associations and science and technology parks with a work centre in Spanish territory, that are going to incorporate contracted researchers. A labour contract for a minimum term of

one year and with the exclusive dedication of the doctor or technologist is required. The incentive extends to a maximum term of three years. In the 2008 calling, 89 doctors and technologists moved to Andalusian enterprises thanks to this programme.

124. The regional government has set up two programmes to encourage the creation of spin offs in the region. The Atlantis Programme is oriented towards attracting investment to Andalusia. Managed by the IDEA Agency (Regional Development Agency), the programme endeavours to identify the best technological enterprise creation projects throughout the whole of Spain and attract them to set up in Andalusia. The projects certified as ATLANTES receive up to EUR 300 000 in seed capital, a general manager contracted for one year, a training grant at the MIT and free incubation for one year. Atlantis grants its “*ATLANTE Technology Enterprise*” certificate to the best EBT creation projects in the whole of Spain.

The Campus, managed by Regional Development Agency (IDEA), supports the rollout of spin offs by Andalusian universities. Through participative loans of up to EUR 100 000, via Invercaria (Andalusian Venture Capital Investment Agency), CAMPUS is very important strategically from the perspective of creating culture and enterprising experience in universities. The university undertakes to tutor the project right from the start, for which it can count on the collaboration of Invercaria and IDEA’s Provincial Offices. The Agency will provide the necessary assessment to fund and develop the project, in order to guarantee maximum possibilities of success.

3.5 Conclusions

125. To conclude this study on the contribution of research and knowledge transfer to regional development, a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis has been carried out, following the same structure as the chapter. Consequently, we will carry out a critical examination of the universities and regional administration’s response to regional needs, of the research and innovation conditions framework and, finally, of the knowledge transfer activities.

Responding to regional needs and demands	
<p style="text-align: center;">Strengths</p> <p>As regards the universities</p> <ul style="list-style-type: none"> ✓ Relevant Universities’ corporate image in their social, economic and cultural environment <p>As regards the regional government</p> <ul style="list-style-type: none"> ✓ Definition of an overall strategy for the Andalusian Knowledge System ✓ Definition of the Andalusian University System ✓ Lack of support for regional needs oriented research <p>As regards the productive fabric</p> <ul style="list-style-type: none"> ✓ Sector diversification 	<p style="text-align: center;">Weaknesses</p> <p>As regards the regional government</p> <ul style="list-style-type: none"> ✓ Excess of regulations and legal instruments <p>As regards the universities</p> <ul style="list-style-type: none"> ✓ Lack of research specialisation ✓ Lack of efficient communication channels <p>As regards the Andalusian business structure</p> <ul style="list-style-type: none"> ✓ Little industrial tradition and low productivity ✓ Low technological and training levels ✓ Scarce implementation of integrated quality and environment management systems, design offices, new technologies and other advanced services.
<p style="text-align: center;">Opportunities</p> <p>As regards the universities</p> <ul style="list-style-type: none"> ✓ International Excellence Campus Programme <p>In relation to the characteristics of the environment</p> <ul style="list-style-type: none"> ✓ Penetration in new markets through information technology, wealth in natural resources, and the possibilities of creating recycling and waste use enterprises ✓ Economic, labour, agroindustry and tourism growth expectations 	<p style="text-align: center;">Threats</p> <p>As regards the regional government</p> <ul style="list-style-type: none"> ✓ Tendency to standardise universities instead of promoting differentiation <p>As regards the financial situation</p> <ul style="list-style-type: none"> ✓ Economy in traditional primary and secondary sectors ✓ General financial crisis ✓ Delocalisation of large enterprises
Research and innovation promotion framework conditions	
<p style="text-align: center;">Strengths</p> <p>As regards the universities</p> <ul style="list-style-type: none"> ✓ High levels of R&D in universities ✓ Existence of good research support structures <p>As regards the regional government</p> <ul style="list-style-type: none"> ✓ Clear orientation of the regional government towards R&D&I <p>As regards the productive fabric</p>	<p style="text-align: center;">Weaknesses</p> <p>As regards the regional government</p> <ul style="list-style-type: none"> ✓ R&D&I investment below the national average ✓ Excessively complex Andalusian Knowledge System agents map ✓ Opaque funding system ✓ Insufficient development of spin off regulations (central government)

<ul style="list-style-type: none"> ✓ Competitive salary levels in demand sectors and average technological content 	<p>As regards the universities</p> <ul style="list-style-type: none"> ✓ Lack of personnel and excessive red tape ✓ Insufficient research and knowledge transfer philosophy in certain scientific fields <p>Interaction among agents</p> <ul style="list-style-type: none"> ✓ Low levels of cooperation among Andalusian Knowledge System agents
<p style="text-align: center;">Opportunities</p> <p>As regards the universities</p> <ul style="list-style-type: none"> ✓ Consolidated research teams with high productivity levels, comprised of mainly young, dynamic and committed research personnel and with an ongoing growth in the percentage of doctors. <p>As regards the regional government</p> <ul style="list-style-type: none"> ✓ Reorganisation of the Andalusian Knowledge System to encourage collaboration among agents ✓ Sustained efforts to increase funding ✓ Focus on Andalusian universities as a factor for modernising Andalusia. 	<p style="text-align: center;">Threats</p> <p>As regards university funding</p> <ul style="list-style-type: none"> ✓ Reduction of EU aid ✓ Uncertainty about future independent funding for OTRIs and foundations ✓ Reduction in public funding <p>As regards the financial situation</p> <ul style="list-style-type: none"> ✓ Low levels of industrial promotion coordination ✓ Andalusian structure in SMEs

<i>Mechanisms that expedite knowledge transfer and exploitation of results</i>	
<p style="text-align: center;">Strengths</p> <p>As regards the universities</p> <ul style="list-style-type: none"> ✓ TTOs, with experienced and motivated personnel and a good image, both within and outside the Andalusian University System ✓ Incipient foundations with dynamic management <p>As regards the productive fabric</p> <ul style="list-style-type: none"> ✓ Existence of local dynamic productive systems at regional and national level <p>Interaction between agents</p> <ul style="list-style-type: none"> ✓ Cooperation between universities ✓ Collaboration between researchers and Research Groups from different universities ✓ Collaboration experiences and dynamics established with enterprises and some Andalusian Knowledge System agents ✓ Capacity to encourage new activities by large industrial enterprises 	<p style="text-align: center;">Weaknesses</p> <p>As regards the regional government</p> <ul style="list-style-type: none"> ✓ Excessive red tape ✓ Lack of transparency in project assessment <p>As regards the universities</p> <ul style="list-style-type: none"> ✓ Possible confusion between the interests and strategies of the OTRI and the university foundations ✓ Absence of enterprise dynamics ✓ Excessive red tape <p>As regards the Andalusian business structure</p> <ul style="list-style-type: none"> ✓ Unawareness of the universities' offering ✓ Low commercial innovation capacity ✓ High external dependence in some cases
<p style="text-align: center;">Opportunities</p> <p>As regards the universities</p> <ul style="list-style-type: none"> ✓ Association of universities with technology parks <p>As regards the regional government</p> <ul style="list-style-type: none"> ✓ Promotion of one sole innovation and knowledge transfer portal for cross referencing offer and demand ✓ Development of professional recognition for knowledge transfer activities <p>Interaction between agents</p> <ul style="list-style-type: none"> ✓ Growing interest in the productive sector towards drawing on universities ✓ Participation of SMEs, particularly rewarded in the 7th FP ✓ Future EUROCIENCIA Plan 	<p style="text-align: center;">Threats</p> <p>As regards the universities</p> <ul style="list-style-type: none"> ✓ Excessively strict regulation of personnel participation in R&D&I ✓ Lack of support to consolidate university knowledge transfer mechanisms <p>As regards the financial situation</p> <ul style="list-style-type: none"> ✓ Insufficient scientific-technological environment as a support for industry ✓ Involuntary interference of other initiatives and organisations ✓ Lack of perception of the innovation enterprise as an element of competitiveness

CHAPTER IV: CONTRIBUTION OF TEACHING AND LEARNING TO LABOUR MARKET AND SKILLS

126. This chapter deals with universities' contribution to human resources skills development and the incorporation of their students and graduates in the labour market, as well as the existing regulatory framework to achieve this objective.

In this respect, it should be remembered that the International University of Andalusia only offers official postgraduate and continuous training programmes and not graduate degrees (*licenciatura* and *diplomatura*), which means that many of the programmes aimed at graduate students considered in this chapter will not be applicable to this university.

4.1 Localising the learning process

127. The Spanish university system is currently undergoing a period of transition, with the changeover from the official university degrees available in Spanish universities until the 2008/2009 academic year –*Diplomado, Licenciado, Ingeniero, Arquitecto* and *Doctor*–to those that may be obtained following the introduction of the European Higher Education Area (EHEA) –Graduate, Master and Doctor. These degrees constitute the official education programmes provided in Spanish universities (Table 4.1). During several years, the two sets of degrees will coexist until all the curricula in effect prior to the EHEA have been extinguished.

Table 4.1: Spanish university degrees

Cycle	Degree	Course length	EHEA
First cycle	<i>Diplomado</i>	Short cycle (3 years)	<i>Graduate</i>
Second cycle	<i>Licenciado /Ingeniero/Arquitecto</i>	Long cycle (4 or 5 years)	<i>Master</i>
Third cycle	Doctor	±3 additional years	<i>Doctorate</i>

Source: Prepared internally.

128. The region's public universities are responsible for the design of their own curricula (Sect. 8.2 National Act on Universities and Sect. 55.1 Regional Act on Universities) and following presentation of each university's proposal, the autonomous region Government Council is responsible for authorising its implementation or suspension or eliminating degree programmes (Sect. 56.1 Regional Act on Universities).

In this respect it should be noted that the regional legislation endeavours to link university activity to the region, establishing that the universities shall promote "*the development of the studies and cross-discipline learning orientated towards better knowledge of the Andalusian region*" (Sect. 55.2 Regional Act on Universities). It also includes as a requirement for the creation of new university degrees, "*the need to fulfil the study on the effective skill demands within the university system, including its impact in the province, and in the region of Andalusia, together with the graduates' job placement possibilities*" (Sect. 56.1 a Regional Act on Universities). Additionally, it establishes that "*the studies must reflect both the social demand present in the cultural, productive and business environment and the students' professional demands*" (Sect. 56. 3 Regional Act on Universities).

129. For the same purpose, but at national level, the National Agency for Quality Assessment and Accreditation's mandatory verification of each degree programme is foreseen, among other aspects, to check that the proposed degree programme caters for the social and labour market needs. To obtain this verification, the university has to draw up an Application Report for Official University Degree Programmes (Appendix I, Royal Decree 393/2007), in which it is required to justify the proposed degree based on independent references that endorse the suitability of the proposal and guarantee the degree programme's academic, scientific or professional interest. Additionally, a description of the procedures used in the internal and external consultations with professionals, students and other groups is required to draw up the curriculum.

As this provisions show, there is a regional and national political strategy in terms of social reflection on the university degree programmes that should be imparted.

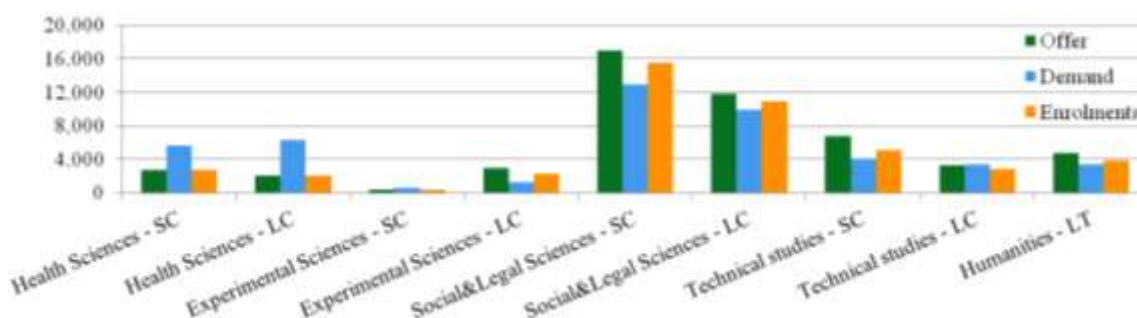
130. The Andalusian universities are aware of their social importance and this has been materialised in their strategic plans, in which it can be seen that great emphasis has been placed on linking the university's mission to the progress of the local and regional environment, as shown in Chapter 6. Likewise, the corporate responsibility model implemented during the last few years in the Andalusian University System –described in chapter 5– includes the commitment of each university to improve its relations with the different interest groups, both within and outside the university.

Although, for the purposes of this review, some of the universities declared that the analysis of needs in their local and regional environment and the design of education programmes responding to these needs is currently insufficient; Andalusian universities continue to create mechanisms designed to connect the university with citizens, institutions and the social and economic stakeholders.

131. The External Assessment Commissions, which Andalusia's universities are creating following the indications of the Andalusian University Council, are an example of this continuing effort. These commissions are made up of experts in the respective professional careers, employers and graduates, who contribute in the design of 25% of the credits in the university's specific curricula. These commissions guarantee a consultation process between the local economic and social agents and the bodies of each university entrusted with designing the curricula. These communication channels are aimed at guaranteeing the analysis of real needs in the region and the design of educational activities taking into account the verified demands of students. However, some of the Social Councils have suggested that an evaluation of the participation levels of these agents in the design of the Bolonia curricula would be interesting.

132. In general, all the universities state that they offer graduate or postgraduate degrees orientated towards the characteristics and needs of the region. Among these, the universities highlight their programmes in agrifood sciences, biotechnology, health, renewable energies and tourism, which coincide with some of Andalusia's strategic lines. The following graph shows the current relation between the offer, demand and enrolments (details in Table A.4.1 in appendix): The universities offer their degrees through their own and associated centres which are in most cases distributed among the different municipalities of the province where each university is located (see Table A.4.2 in appendix).

Graph 4.1: Offer, demand and enrolment in the Andalusian University System, 2007-2008



Source: Prepared internally from the study "Estudio de la oferta, demanda y de la matrícula de nuevo ingreso en las Universidades públicas y privadas. Curso 2007-2008", published by the Ministry of Science and Innovation.

133. The regional dimension of the Andalusian University System is exemplified by the creation in 1995 of the Single University District, mechanism through which Andalusia's universities agree their pre-registration procedures and offer and allocation of places. The formalities are carried out entirely on the Internet, meaning that students can apply for admission to any of the programmes imparted in any of the Andalusian universities without moving from their place of residence. This mechanism eliminates the inconvenience of going from one university to another when students apply for a place in several universities. The implementation of this mechanism also fulfils one of the goals in the Plan for Andalusia's Innovation and Modernization, that is, the "creation of a single access space to higher education".

134. Within a similar strategy, of note is the recent implementation of a common 75% for graduate degrees in all Andalusian universities. This general principle, approved by the Andalusian University Council's Academic Commission on 22 January 2008, guarantees the recognition of studies common to several universities in the region and tries to boost mobility across the region.

135. Finally, it is becoming increasingly important the offer of inter-universities master programmes, provided by Andalusian universities. The catalogue of the Andalusian inter-universities master programmes approved for 2008-2009 and the participating universities are shown in Table A.4.3 in appendix. These masters, together with the aforementioned mechanisms, encourage student mobility, institutional cooperation and joint teaching and research efforts between universities and provide the Andalusian University System as a whole with an image of strength.

4.1.1 Relation between the curricula and the incorporation of graduates into the labour market

136. The need to reconcile university actions with its environment is one of the goals for the construction of the EHEA. In this respect, the employability of university graduates has become an EU priority.

In Spain, only half of the 74 universities that exist carry out more or less regular studies on the incorporation of their graduates in the labour market. Furthermore, they are totally heterogeneous, making any comparison extremely difficult (Vieira, 2008). As regards Andalusian universities, this report shows that only Pablo de Olavide University, University of Huelva, University of Granada and University of Cadiz have carried out individual and one-off studies in this area. Apart from these, University of Jaen has been carrying out studies for the last two years via the online application – INSERLAB – on the incorporation of its graduates in the labour market.

In the face of this general lack of methodology at national level, in 2004 the National Agency for Quality Assessment and Accreditation created the Labour Recruitment Observatory, with the mission of providing methodology tools, mostly to universities, for analysing the labour market corresponding to the degrees they impart, as well as providing all those interested with reviewed information on incorporation in the labour market, job markets for university graduates and methods to analyse these situations. Its purpose is to pave the way for a more integrated and global trajectory of all Spanish universities. Its most important project to date has been the macro survey on jobs placement, within the context of the international REFLEX project, carried out on over 5 000 Spanish university graduates, although it has not been possible to access data broken down by autonomous region.

137. In Andalusia, the evolution of graduates is monitored by the Argos Observatory, which reports to the Andalusian Labour Service, although it is a relatively recent initiative. This public organisation has signed an agreement with all the Andalusian universities. Thus, in order to analyse the incorporation of Andalusian university graduates as professionals in the labour market it is necessary to rely on the study “*Estudio de la Situación Laboral de las personas egresadas en Enseñanzas Universitarias y de Formación Reglada en Andalucía – Promociones 2006-2007 y 2005-2006*” (*Study of the Labour Situation of University and Official Studies Graduates in Andalusia – Years 2006-2007 and 2005-2006*) (the main results of which are shown in Table 4.2).

According to this study, 52% of graduates have second cycle degrees; and of these, half of them correspond to branches of social and legal sciences (sample universe: Andalusian university graduates during the 2006-2007 academic year with Spanish Id. (DNI) or Foreigners Id. (NIE) number). The figures show that 61.4% of the graduates were women and that Technical Studies was the only area in which there were more male graduates than female (24.35% in the short cycle careers and 32.93% in the long cycle). By age group, half of the graduates were aged between 25 and 29 and a third of them were under the age of 25. One outstanding aspect is the high number of graduates over the age of 30 (25.4%), a circumstance that is even more relevant in Technical Studies, both in intermediate (22.41%) and in higher studies (23.10%).

138. As regards the labour situation of these graduates at 30 September 2008, 57.86% of the graduates were registered with the Social Security as working. By gender, the percentage of male graduates registered was 61.06%, whilst that of women graduates was 55.85%. By areas of study, the

most outstanding were Health Sciences and Technical Studies, where graduates registered with the Social Security as working were over 70%, Whereas, the careers of Humanities and Teaching accounted for less than 45% of the graduates that were working, according to Social Security registration figures.

Table 4.2: Main results of the Andalusian Labour Service’s Study

Study branches and duration (SC: short cycle, LC: long cycle)	Graduates' distribution			Registered as working	Job- seekers	Unemployment rate
	Persons	Structure	Rank			
Health Sciences - SC	1,708	6.53%	8	70.68%	6.21%	4.92%
Health Sciences - LC	1,391	5.32%	9	79.08%	3.24%	2.52%
Experimental Sciences - SC	160	0.62%	10	66.88%	8.13%	3.13%
Experimental Sciences - LC	1,902	7.27%	7	51.99%	18.30%	15.77%
Social&Legal Sciences - SC*	3,608	13.79%	3	59.14%	16.08%	11.86%
Social&Legal Sciences - LC	5,920	22.62%	1	54.62%	14.86%	13.53%
Technical studies - SC	2,932	11.20%	4	72.83%	6.89%	5.56%
Technical studies - LC	2,147	8.20%	6	71.29%	5.59%	4.56%
Humanities - LT	2,259	8.63%	5	37.66%	16.78%	17.13%
Teaching*	4,144	15.83%	2	44.49%	14.04%	10.35%
Total	26,171	100%	-	57.86%	12.44%	10.43%

* Separated data for the relevancy of Teaching within Social&Legal - SC

Source: Prepared internally using data from the aforementioned study.

139. It should be noted that the results obtained in this report are used by the regional government in the funding contracts entered into with each university, thus providing an incentive for the incorporation of their graduates in the labour market. Within the section devoted to studies indicators in the contract-programme, one of them analyses the integration of graduates from Andalusian universities in the socioeconomic fabric. Its goal for 2010 is to have all graduate students achieve full integration in the socioeconomic fabric within two years following their graduation.

140. The relation between the education level and their employment opportunities appears clearly in the Andalusian Economic Report (2008). According to this report, a bigger share of total employment is accorded to qualified population, that is, 6.1% with secondary studies and 2.3% with university studies more than the previous year. It also shows the gradual increase of qualified population incorporated into the Andalusia’s business fabric. In particular, the working population with secondary studies and/or university studies amounted to 81.3% of the total in 2008, percentage significantly higher than those in the mid-eighties (33.7%). This leads to a convergence with the national average (84.2%). For more details on the working population by qualification and study level in Spain and Andalusia (1986 compared to 2008) see Graph A.4.1 (in appendix).

If the gender variable is introduced, the percentage of working-qualified population is higher for women (84.4%) than for men (79.1%). This indicates the significant progress for both genders since the mid-eighties, when male and female population represented 45.7% and 29.6% of the total of working population, respectively. For further details see Graph A.4.2 (in appendix).

According with the education level, the non-working population rate is higher for non-qualified population, with the lowest rate for those with university studies, 8.8% in 2008, one point higher than last year. Contrary, within the non-qualified population, the non-working rate is higher in 2008 with 28.4%, 10 pp higher than in 2007.

4.2 Promoting lifelong learning, continuing professional development and training

141. Apart from the official studies, non-degree programmes (complementary courses or lifelong learning) constitute an opportunity to reinforce relations between universities and the social and productive environments. The national Act on Universities states, in its Preamble that, “*society demands, furthermore, continuing education throughout life, not only in the macroeconomic and structural plane, but also as a means of personal self-realisation*”. To achieve this, the law recognises

that, together with the official degrees, universities may “impart studies for granting other diplomas” (Sect. 34).

Universities –as the regional stakeholders– respond to the demands of society and the productive system, offering even tailor-made learning activities.

4.2.1 Universities

142. All the Andalusian universities offer their complementary studies (complementary Master, Expert and Specialist diplomas) and a wide range of different types of non-degree programmes: continuing education, extended university studies, diploma certificates, summer courses and autumn courses, among others. Each university is totally free to establish the configuration of its non-degree programmes: requirements, duration, credits, prices, etc. This heterogeneousness makes it difficult to carry out a comparative analysis of the universities’ offer.

In this chapter, however, we only deal with the studies offered to university graduates, whilst the non-degree programmes offered to society as a whole are dealt with in chapter five.

143. The bodies entrusted with managing the non-degree programmes in Andalusia’s universities are:

- ❑ University of Almeria: Vice-Rector’s Office for Postgraduate and Continuing Education
- ❑ University of Cadiz: Vice-Rector’s Office for Postgraduate and Permanent Education
- ❑ University of Cordoba: Vice-Rector’s Office for Postgraduate and Continuing Education
- ❑ University of Granada: Vice-Rector’s Office for Graduate and Postgraduate Studies
- ❑ University of Huelva: Vice-Rector’s Office for Postgraduate and Doctorate Studies
- ❑ University of Jaen: Vice-Rector’s Office for European Convergence, Postgraduate and Permanent Education
- ❑ University of Malaga: Vice-Rector’s Office for University-Enterprise Relations
- ❑ International University of Andalusia: Vice-Rector’s Office for Extended University Studies and Participation
- ❑ Pablo de Olavide University: Vice-Rector’s Office for Social Participation
- ❑ University of Seville: Vice-Rector’s Office for Institutional Relations

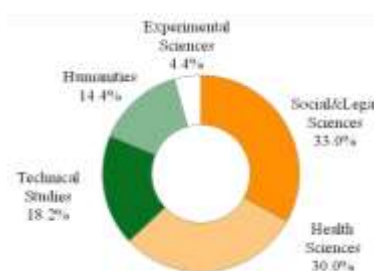
144. Within each Vice-Rector’s office, each university has created secretariats, centres or units entrusted with managing non-degree programs. For example, the University of Almeria has a Continuing Education Secretariat; the University of Cordoba has a Permanent Education Secretariat and the University of Seville has a Permanent Education Centre.

145. The general trend among Andalusian universities is to offer courses that cover the social or productive fabric demands, or to place emphasis on those areas of knowledge in which the university has shown excellence. The International University of Andalusia, on the other hand, states that it has two channels for organising and extending these teaching activities: via proposals for courses received for their study and possible implementation or through direct commission from the universities to relevant professionals in the area in question.

146. The distribution of students among non-degree postgraduate programmes by study branch is as follows:

Table 4.3 and Graph 4.2: Enrolment in non-official postgraduate studies

Study branches	Enrolments, course 2006-2007	
	# students	%
Health Sciences	2,932	30.0%
Experimental Sciences	430	4.4%
Social&Legal Sciences	3,220	33.0%
Technical Studies	1,776	18.2%
Humanities	1,403	14.4%
Total	9,761	100.0%



Source: Spanish Universities in Figures 2008. Spanish Rectors Conference (CRUE).

147. The Andalusian universities have not created independent companies to extend their non-degree programmes offer, except for University of Cordoba, which has created the following companies, all of them integrated in the University of Cordoba Business Corporation (CEUCOSA):

- UCOIdiomas: a public limited liability company devoted to foreign language studies imparted in Cordoba city and in 3 facilities in the province (Cordoba city, Montilla and Baena).
- Veterinary Sciences Clinical Hospital: national benchmark and the only one of its kind in Andalusia. Its teaching activities are designed both for veterinary science students and for the organisation of permanent education courses and vocational training (*Formación Profesional Ocupacional*, FPO).
- UCOaviacion: Responsible for complementary Aeronautical Pilot studies.

148. These studies are quite often carried out with the collaboration of regional or local stakeholders. The level of collaboration, however, varies depending on each university and the local environment. The universities' perception regarding the sufficiency of the stakeholders involved in the continuing education depends on the university. Some consider that the agents involved are insufficient and others that there are too many and that there is little co-ordination between them. Consequently, in the opinion of these latter universities the offer is surplus to the real needs of the local and regional environment, and monitoring the quality of the courses is not always possible.

4.2.2 Regional government

149. The regional government has made two important contributions for the universities teaching resources to reach the productive fabric: the Virtual Learning Space (*Espacio Virtual de Aprendizaje*, EVA) and the Talentia grants.

- Virtual Learning Space (EVA): a project created to provide advanced permanent education programmes using the most innovative didactic methods. It is designed for professionals, enterprises, public institutions or entrepreneurs, and it is managed by the Andalusian Network of Technological Spaces. Part of the resources of this virtual learning platform are organised through collaboration with universities.

This project has achieved one of the goals set out in the Plan for Andalusia's Innovation and Modernization: "Creation of a Virtual Learning Space to respond to the training needs in Andalusia, in its different areas and at different times in life". The studies offered under this platform cover three basic areas: SMEs, public administration and teacher training. In this way, the programme seeks to become an Andalusian, national and European benchmark in permanent education programmes and educational technology through the excellence of its innovative pedagogical model, its processes, its activity lines and its study programmes.

- Talentia Grants: programme designed by the Regional Ministry for Innovation, Science and Enterprise for young graduates carrying out postgraduate studies at top level foreign universities, conditioned to their undertaking to return. They are directed at Andalusian graduates or EU graduates from Andalusian universities who wish to contribute to the future development of Andalusia through a professional career with an international approach. Since its inception in 2007, and with the current 2009 edition, around five hundred young Andalusians will have benefited from the programme. The Andalusian government seeks to promote a generation of bilingual people with higher education degrees and top level international training in the different areas of the Knowledge Society.

4.3 Student recruitment and regional employment

150. Andalusian universities recognise the importance of policies supporting the incorporation of university students in the labour market. This aspect, together with those of education and specialisation, is included in the strategic plans of each university as one of the cornerstones of university activity. For this purpose, all the Andalusian universities have designed, together with the regional government, mechanisms to create gateways between the university community and the labour market. As a whole, there are a large variety of tools that cannot be fully considered in this section. Therefore, they have been classified according to the general trend, distinguishing between:

initiatives most frequent in the universities or individual initiatives and initiatives carried out by the regional government, either managed directly by the public administration or through collaboration with the universities.

In general, all of them are designed to offer job guidance, work experience or regional employment services.

4.3.1 Universities

151. All the universities state that they have infrastructure and qualified personal to provide assessment and support to university students and graduates regarding their incorporation in the labour market. In general, all declare to offer, to a lesser or greater extent:

- Professional guidance on a one-to-one basis and in groups: tutorials, symposiums, seminars, workshops or courses on self-knowledge and professional skills (how to succeed in a job interview, how to draw up a CV and a letter of presentation, etc) and on self-employment and company management.
- Information on work experience management.
- Mechanisms for employment: job fairs, organisation of bilateral meetings with companies.

The universities also highlight the importance of academic guidance: possibility of studying a second cycle or another career, information on grants or postgraduate studies. In this respect, some universities stated that it would be of interest that the Job Guidance Service was available to students from their first year of studies: the sooner students become aware of the professional options for their studies and the real situation of the labour market and how it operates, the better prepared they will be to make responsible and coherent decisions.

Additionally, most of the services designed to promote entrepreneurship, and which are mentioned in the following section, are also provided for by the job guidance offices in each university.

152. The bodies in charge of job guidance and work experience management in Andalusia's universities are:

- University of Almeria: Vice-Rector's Office for Students and Employment
- University of Cadiz: Vice-Rector's Office for Students
- University of Cordoba: Vice-Rector's Office for Students and Culture
- University of Granada: Vice-Rector's Office for Students
- University of Huelva: Vice-Rector's Office for Employment and Relations with Enterprises
- University of Jaen: Vice-Rector's Office for Students and Incorporation in the Labour Market
- University of Malaga: Vice-Rector's Office for University-Enterprise
- International University of Andalusia: Vice-Rector's Office for Education Planning and Postgraduate Studies
- Pablo de Olavide University: University-Society Foundation
- University of Seville: Vice-Rector's Office for Technological Transfer

153. As occurs with non-degree programmes, each university has created secretariats, centres or units within each Vice-Rector's Office, entrusted with managing internships and providing job consultancy. For example, the University of Jaen has a Secretariat for Work Experience in Enterprises, Entrepreneurs and Employment; the University of Malaga has a Placement Agency and the University of Granada has an Employment and Work Experience Promotion Centre and the University of Cadiz has an Employment Counselling Office.

4.3.1.1 Most frequent initiatives in the universities

154. The most representative of all the initiatives carried out have been selected below:

- Proprietary internships plans: it is a service provided by each university employment offices to foster students' training internships and/or professional integration in the labour market. It is organised through agreements with companies, private entities or any centre or department within the university itself. All the universities use an online application –*Programa Ícaro*– where enterprises and students can cross offer and demand.

- Academic internships, included in the curricula of certain degrees as a mandatory requirement to attain them.
- Internships abroad: EU Erasmus grants and Leonardo Da Vinci Grants providing with international work experience opportunities, basically.

Several universities have indicated that they are developing a Regional University Coordination System for the Incorporation of Andalusian Graduates in the Labour Market, on which information is not yet available.

4.3.1.2 Individual initiatives

155. Most significant activities are described below.

- Awards: to mark the 25th anniversary of its service, the University of Granada presented enterprises that have received students for work experiences with awards in the categories: loyalty, recruitment, authorisation, public entities and non-profit associations.
- Local Labour Observatory: created by the University of Huelva in 1996 as an instrument for strategic observation and participative assessment, at the service of local needs and for the development of actions and strategies that favour employment.
- Neurona Project: the University of Huelva developed this project as a bridge between the university and enterprises. It aims to transfer knowledge and services to the enterprises and to create synergies among them and the university. Among all services offered there are training in enterprises along with the possibility to channel job placements improving the university labour market connection. It also offers the possibility to use university services (infrastructure, laboratories and so on) to the private sector.

4.3.2 Regional government

156. Through different regional ministries, a set of job placement programmes has been designed to improve university and labour market connections. In the first place, some of the programmes developed by the Regional Ministry of Labour are dealt with, even though they are managed directly by each university's employment office:

- Andalucía Orienta: orientation service regarding job seeking techniques, self-knowledge and positioning in the market, professional guidance and self-employment directed at different groups, which includes university students. This group is attended jointly at the offices of the Andalusian Labor Service and the employment offices in each university. Up until September 2009, a total of 20 910 university students have been attended (7.62% of all those attended under this programme): 3 917 university students have found a job. This programme has been well received by the universities, though at the same time they claim for greater flexibility in the service to adapt it to the needs of university students.
- EPES (*Experiencias Profesionales para el Empleo*) Programme: this "Work Experience for Employment" programme is linked to the establishment of Personalised Itineraries for Incorporation in the Labour Market (*Itinerarios Personalizados de Inserción Laboral*, IPIs). It offers young recently graduated people the possibility of acquiring professional experience in enterprises for a period of between two to six months.
- Experimental Action Programme: the aim is to organise experimental actions designed to help the unemployed get a job. This programme, together with the previous one (EPES), are directed at promoting the incorporation of graduates, women with problems for finding a job, people with disabilities and the long-term unemployed in the labour market.

157. In second place and apart from the Regional Ministry of Labour initiatives, there are others of interest, which we set out below:

- Work experience programme (PRAEM): created by the former Regional Ministry of Education and Science in 1989 and currently under the Regional Ministry for Innovation, Science and Enterprise, it is managed by the employment office of each university. This programme offers grants for students enrolled in any Andalusian university and in any of the three existing cycles to carry out work experiences. Their purpose is to introduce students to the labour market. In 2007, EUR 2 million were allocated to work experience grants and EUR 1 495 million to job training activities in centres.

- **Universem:** programme developed by the Andalusian Institute for Women, which is part of the Regional Ministry of Equality and Social Welfare. It is managed by the employment office in each university. It is designed to improve the employment opportunities of women university students who are about to commence their professional career. Integrated itineraries for incorporation in the labour market are carried out, in collaboration with Andalusian universities, including training actions and internships in enterprises.
- **International Employment Fair:** meetings organised with the participation of the regional government, the universities and private entities. These fairs have a dual mission: to increase university graduates' employment possibilities and to gain first-hand information on the most demanded skills in the labour market, adjusting the studies imparted to the real existing demand.
- **Virtual Employment Fair:** this is an initiative that enables enterprises and other entities to cross reference their employment offers and demands through a 3D multimedia environment that is attractive and user-friendly. An instrument that allows participants to optimise their time and costs, it is organised by the universities involved, as well as entities from the public and private sector.

158. The Regional Ministry for Innovation, Science and Enterprise promotes Doctoral Symposiums, as an initiative specifically for PhD candidates, with the aim of improving the professional integration of doctors and technologists. Since 2003, every year one university organises these symposiums. During the symposiums, the participants carry out a wide range of joint activities, so these future doctors reflect on and achieve the necessary skills to seek out professional opportunities outside the strictly academic environment.

159. Finally, it should be noted that within its objective of promoting relations between the Andalusian Higher Education System and the business sector, the Plan for Andalusia's Innovation and Modernization includes plans for the "creation of a Joint Space for Integrated Management of Work Experiences in Enterprises". The universities, however, do not seem to be very enthusiastic about this initiative, which is not still in place.

4.4 Promoting entrepreneurship

160. Together with the policy for supporting university graduates' labour integration, there is also the need for an entrepreneurship policy that would contribute towards strengthening Andalusia's business fabric and creating a more competitive environment. This requires the joint effort of the universities –and the other regional stakeholders involved– and the public sector.

4.4.1 Universities

The Andalusian universities are aware of the need to encourage entrepreneurship among university students and teaching staff. As set out below, all the universities declared they offer, to a greater or lesser extent, services designed to stimulate the entrepreneur spirit. The following are some examples of the most relevant initiatives.

4.4.1.1. Most frequent initiatives among universities

161. Main initiatives follow.

- **Student services:** all the universities offer consultancy services regarding self-employment and company creation, training activities, workshops, competitions and awards, designed to stimulate the entrepreneur spirit.
- **The Bancaja Chairs for Young Entrepreneurs:** The purpose of these chairs, in which University of Cadiz, University of Cordoba, University of Granada, University of Jaen, University of Malaga, Pablo de Olavide University and University of Seville participate, is to reinforce the entrepreneur spirit, encourage innovation and diversification, and support young peoples' business initiatives. They are designed to support activities such as think tanks, organisation of seminars and symposiums on entrepreneurship or the organisation of meetings with enterprises and entrepreneurs.
- **Entrepreneurs Fair:** as a meeting point for all the stakeholders involved in higher education and the promotion of entrepreneurship, its aim is to encourage the entrepreneur spirit to generate employment and improved skills.

Together with these initiatives, others are carried out on a more general scale, such as activity divulgation (publication of journals, publicity in the press, public conferences, etc.) and the organisation of company recognition events (awards, competitions, etc.).

4.4.1.2 Individual initiatives

162. Especially interesting initiatives include the following.

- Ideas Fair: For several years now, the University of Almeria has been organising, with the collaboration of the public and private sector, an Ideas Fair, aimed at serving as a launching pad for new enterprising talent. This fair's mission is to promote entrepreneurship and company creation, putting companies and institutions in contact with entrepreneurs and, in general bringing the university community closer to the business fabric.
- Proprietary Spin-off programme: this initiative of the University of Malaga's Vice-Rectors Office for University-Enterprise Relations seeks to encourage enterprising activity. It provides support for the business ideas identified through an enterprise creation competition in which different groups within the University of Malaga take part.
- Research Projects: the University of Cordoba has carried out a research project called "*Estudio, desarrollo y evaluación de la actitud emprendedora en el marco de las nuevas titulaciones de Grado*" (Study, Development and Assessment of the Enterprising Climate within the Framework of the New Graduate Degrees). The purpose of this study is to identify the most efficient procedures to deal with enterprising attitudes as a basic part of the graduate degrees curricula. The University of Huelva is also carrying out a research project called "Autónomos Hoy" ("Self-employed Today"). This project is focused on analysing the skills of the self-employed population and the needs of the labour market of the entire province of Huelva. Its purpose is to allow students to identify the best ways and opportunities to create their own companies.
- UCO21 Programme: it is promoted by the Social Council of the University of Cordoba and integrated by companies and entities. It is aimed at students of this university to foster the integral development of the required skills in the EHEA panorama, among them, initiative and entrepreneurship, creativity and innovation, communication and mastery of oral and written expression. This Social Council has a Labour Orientation Programme since 1998, with a labour orientation office in each of the eleven centres of the University of Cordoba.
- Prizes, awards and competition: the Social Council of the University of Huelva organises different kind of prizes, awards or competitions (*Concurso de Inventos, Premio al Mejor Proyecto Innovador*, etc) to foster the entrepreneurship culture among the university community.
- Chair of entrepreneurs: the University of Cadiz aspires to become an entrepreneur university, encouraging, training and supporting entrepreneur initiatives. To that end, it has developed an action programme comprising different projects such as "Entrepreneurs as you", to create referents; "Undertaking from culture" to foster the creation of cultural and creative enterprises; and, "Undertaking closer", to carry on informative sessions in classrooms. Furthermore, the chair has a research line on the entrepreneur phenomenon, participating in the international network (Global Entrepreneurship Monitor).

4.4.2 Regional government

163. The Andalusian government considers that promoting entrepreneurship is key in the design of a new sustainable economic and social development model in the region. This political commitment comes from the desire to reinforce Andalusia's economic development and the conviction that enterprising spirit is the main driving force for innovation, competitiveness and economic growth. In this mission, the work of the universities is considered essential.

In this respect, both the Plan for Andalusia's Innovation and Modernization and the Andalusian Plan for R&D&i include a set of actions designed to encourage entrepreneurship in universities. On one hand, the Plan for Andalusia's Innovation and Modernization includes among its goals that of promoting entrepreneurship training in university studies, establishing among its actions: incorporation of "entrepreneurship and innovation" skills in the university teaching staff's curriculum, entrepreneur workshops (for final year university students) to promote, boost and support enterprising people who wish to start up a project, showing them how to detect and concentrate on profitable business initiatives with development potential.

Likewise, the Andalusian Plan for R&D&i goal is to develop entrepreneurship in universities, through entrepreneurship training programmes in research and technological centres, in universities and in technology parks.

164. In general, all the universities declare that they receive public and private funding to carry out activities designed to encourage entrepreneurship, although they also consider, in general, that the level of funding is insufficient.

165. The Andalucía Emprende Foundation, created in 1999, today puts into practice the Plan for Andalusia's Innovation and Modernization and the Andalusian Plan for R&D&i goals by fostering the creation and consolidation of enterprises in Andalusia and promoting entrepreneurship throughout the entire region. Most of the universities value this Foundation as an interesting and even excellent initiative, although they also mentioned the following possible improvements: greater dissemination among universities, reduction of red tape in the formalities to access projects, which has increased since the management of the Business Development Support Centre was centralised in Seville, and closer links to the university.

166. Andalusia's overall dynamism in the promotion of entrepreneurship has been assessed by the 2006 Global Entrepreneurship Monitor (GEM), coordinated by the University of Cadiz. This study, which provides valuable information on enterprise creation and the philosophy of entrepreneurship, pinpoints the most favourable and least favourable aspects identified by the experts as regards entrepreneurship in the region. These are summarised below:

- Highest scoring aspects within the enterprising environment: access to physical infrastructure, promotion of growth, government programmes, and commercial and services infrastructures.
- Lowest scoring aspects within the enterprising environment: absence of entrepreneurship in universities and in primary and secondary education. Technology transfer and the role of the universities also received low scores, although the results were better than the previous year (2005).
- Most significant obstacles for company creation: social and cultural rules, lack of financial support and scarce enterprising capacity. There was improvement in the experts' consideration of the significance of government policy.
- The factors that most favour company creation: government programmes and policy and the economical climate (2006 data), followed, in order of importance, by financial support.

These opinions are clarified with the specific analysis of each variable: positive consideration is given to the political will to prioritise company creation, but not the excessive amount of formalities; in terms of finance, the study highlights the lack of private or venture capital investment. The Andalusian government programmes achieve higher scores than other regions, such as Valencia, Catalonia, Madrid or Galicia.

4.5 New types of educational services

167. The use of new technologies has marked a before and after for Andalusia's universities: the learning processes, knowledge generation and transfer, and the university management and administration have been modernised, as well as occurs with other activities inherent to the universities' functions.

At regional level, the most important contribution has been the Digital University Project, which is an Andalusian government initiative. Therefore, in this section, the government initiatives are dealt with first, before considering those carried out by the universities.

4.5.1 Regional government

168. The most important initiatives are the aforementioned Digital University Project, the Andalusian Virtual Campus, and the management of collective software licences.

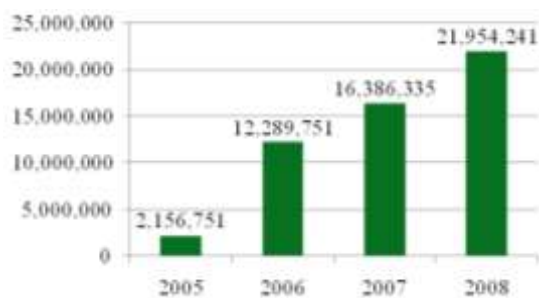
- Digital University Project: the aim of this project, designed in 2005 by the Regional Ministry for Innovation, Science and Enterprise, is to provide the Andalusian University System with the means, resources and infrastructure it requires to progress towards the Knowledge Society and efficiently respond to the needs arising from the current situation: the EHEA, the search for excellence in education and research, electronic administration, internationalisation of the

university system, promotion of mobility and, in short, all the changes inherent to the Knowledge Society. Since its commencement, the Regional Ministry for Innovation, Science and Enterprise has invested over EUR 20 million (Graph 4.3). This programme has made it possible to carry out technological updating: creation of a wifi network accessible by all the members of the Andalusian University System (students, faculty and staff) in the university campuses, regardless of the university of origin; improvement in the electronic services in libraries; provision of advanced virtual computer classrooms, and content digitalisation to make it accessible from anywhere via the virtual campuses.

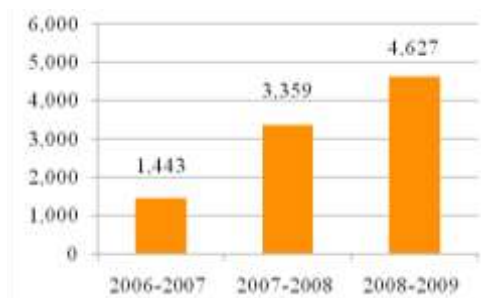
□ Corporate Licence: In 2008, the Regional Ministry for Innovation, Science and Enterprise arranged an unlimited Corporate Licence for “Oracle” products, for a value of EUR 5.5 million, which has made it possible to provide Andalusia’s universities with licences from this company, as well as the version updates, maintenance services and training necessary for their installation and rollout.

□ Andalusian Virtual Campus: created in 2006, this initiative, which is a result of the above described project, enables any student, from any Andalusian university to enrol in any of the 90 subjects that are renewed annually. The subjects offered come from any of the Andalusian universities and the programme is designed to offer inter-university, virtual and distance studies to all students within the Andalusian University System. The entire enrolment process and updating of students’ records is automatic and transparent for students. At the moment, more than 4 500 students per year are taking advantage of this academic offer (Graph 4.4).

Graph 4.3: Accumulated funding by year in the digital university project (in EUR)



Graph 4.4: Growth in the number of students enrolled in the Andalusian Virtual Campus



Source: Regional Ministry for Innovation, Science and Enterprise. Regional Government of Andalusia.

4.5.2 Universities

169. In general, the Andalusian universities consider the Digital University Programme and the Andalusian Virtual Campus as important opportunities to continue modernising the institutions and to universalise teaching methods. All of them, to a greater or lesser extent, use new technologies in university activities. The innovations that are transforming the Andalusian University System most are OCW (Open Course Ware), virtual platforms and the use of technological media.

□ Open Course Ware: this platform, created at the MIT and which, with the financial support of the Universia network, has extended to Spanish and Latin American universities, enables publication of teaching materials for the subjects imparted in each university. It is based on the "open content" concept, which gives free access to the published content so that it may be used in different types of educational processes.

□ Virtual Learning Platforms: these are common access point via which the entire university community has at its disposal useful tools for e-teaching, which makes it possible to complement classroom teaching and provide distance learning. However, it should be noted that some universities within the Andalusian University System use Moodle and others use WebCT, which makes joint virtual teaching initiatives more difficult (see Table A.4.4 in appendix).

170. To a greater or lesser extent, all the universities use new technologies in their activities. In this respect, the most significant are the use of computers, projectors, digital boards, virtual classrooms, etc.

The universities have highlighted as one of the strengths in the use of new technologies, the decisive focus on moving towards the introduction of technology in all university aspects (teaching, research, management, and knowledge transfer). As a threat they point out the lack of awareness, on occasions, of the current importance of the new technologies. Among the weaknesses, they underline the voluntary nature of the use of new technologies by the members of each university, and finally, as opportunities they highlight changes in how information is managed and in the promotion of inter-university projects or "shared actions" (e.g.: enabling any Andalusian university access others to use their services or the shared use of a digital library).

4.6 Enhancing the regional learning system

171. All of the universities expressly acknowledge that they feel part of the Andalusian University System; likewise, there is the general belief that the Andalusian government holds a coherent vision of said system. They also recognise that the implementation of the Single Andalusian District and the creation and operation of the Andalusian University Council and the Association of the Andalusian Public Universities have contributed notably towards strengthening this vision of ensemble.

It should not be forgotten that the Andalusian University Council was created under the University Coordination Act (*Ley de coordinación del sistema universitario*) (Law 1/1992, dated 21 May). Its composition shows the regional scope of its operation: those responsible for university policy in the Andalusian government, Andalusian university Rectors, the chairpersons of the social councils, five members appointed by the Andalusian Parliament and the chairperson of the Andalusian School Council. On the other hand, the Association of the Andalusian Public Universities, as Andalusian public universities association, organises teaching projects in the European Space, Innovation and Teaching Quality Commission, which is presided over by the Rector of University of Cadiz. The projects on new technologies are the responsibility of the Information and Communication Technologies Commission, which is presided over by the Rector of the Pablo de Olavide University.

These two bodies have been acknowledged as essential elements to give coherence to the system, although it has been highlighted that there should be greater publicity of their functions, even within the university community.

172. On the other hand, the offer of joint degrees –both official and complementary– is an initiative that shows the importance of collaboration at regional level between universities. However, there is no joint planning between universities for the overall offer of official studies and complementary degrees, but rather specific collaboration for certain degrees. Each university, based on their resources and in many cases without even any specific planning, promotes its offer. This generates proposals that coincide in terms of content and target public.

Likewise, even in the case of more or less frequent collaboration with other institutions, there is a lack of joint planning with these institutions to prevent duplication of initiatives at provincial level. As already described in the previous section on lifelong learning, university collaboration with other regional agents varies depending on the university. Some have stated that they have no problems in their relations, whilst others recognise that they do have certain difficulties in setting up relations with other regional players.

Consequently, the universities' main challenge has been established as the need to participate in the analysis and detection of the real demands in their environments and the specific nature of these environments, in order to develop an offer in studies based on the results of said analysis.

Finally and as regards national and international mobility programmes, the universities consider very positively the full transfer of credits mechanisms within the framework of the different programmes and agreements.

4.7 Conclusions

173. To finalise the analysis of the contribution of teaching and learning to the labour market and skills development, a SWOT analysis has been carried out, with the same structure of this chapter, to identify the main aspects in each area.

Strengths	Weaknesses
<p>Regional dimension of the learning process</p> <ul style="list-style-type: none"> ✓ Legal support university-region relations ✓ Creation of mechanisms that reinforce the regional dimension of the Andalusian University System: Single Andalusian District and implementation of a common 75% in degrees <p>Curricula and labour integration</p> <ul style="list-style-type: none"> ✓ Creation of the regional Argos Observatory, which carried out studies of the Andalusian universities labour situation ✓ Use of the Argos Observatory study results by the regional government for the funding contracts <p>Lifelong Learning</p> <ul style="list-style-type: none"> ✓ Wide range of permanent training in Andalusian universities ✓ Contribution of the regional government to permanent training: Virtual Learning Space and Talentia grants <p>Regional recruitment and employment</p> <ul style="list-style-type: none"> ✓ Conviction of the universities and the regional government of the need to support labour policy. ✓ Wide offer of services and consultancy, work experience and labour programmes ✓ Organisation of regional scope activities that promote collaboration between universities and other regional agents and effective allocation of resources <p>Philosophy of entrepreneurship</p> <ul style="list-style-type: none"> ✓ Conviction of the universities and regional government of the need to promote a philosophy of entrepreneurship ✓ Organisation of activities with regional scope that promote collaboration between universities and other regional agents, and exchange of ideas and bring the business sector and the university community closer <p>New types of educational services</p> <ul style="list-style-type: none"> ✓ The regional government’s decisive focus on the use of new technologies in universities: Digital University Project, Andalusian Virtual Campus, and Unlimited Corporate Licence for “Oracle” products ✓ Introduction of new technologies in all areas of the university <p>Reinforcement of the education system</p> <ul style="list-style-type: none"> ✓ Firm belief of the universities and the regional government in the need for the existence of the Andalusian University System ✓ Importance given to the Single District, the Andalusian University Council and the Association of the Andalusian Public Universities ✓ Offer of joint degrees in official and complementary studies 	<p>Regional dimension of the learning process</p> <ul style="list-style-type: none"> ✓ Duplication of official studies imparted by different universities with coincidence in terms of content and target public ✓ Lack of analyses of the educational needs of the professional world. <p>Syllabuses and labour integration</p> <ul style="list-style-type: none"> ✓ Studies offered do not respond to the real needs of the business fabric ✓ Lack of uniformity in the analysis carried out by the universities to provide comparable data <p>Lifelong Learning</p> <ul style="list-style-type: none"> ✓ Duplication of official studies imparted by universities and regional stakeholders, with coincidence in terms of content and target public <p>Philosophy of entrepreneurship</p> <ul style="list-style-type: none"> ✓ Insufficient philosophy of entrepreneurship in the universities <p>New types of educational services</p> <ul style="list-style-type: none"> ✓ Voluntary nature of the use of technology by members of the university ✓ Occasional lack of awareness of the importance of the new technologies
<p>Opportunities</p> <p>Regional dimension of the learning process</p> <ul style="list-style-type: none"> ✓ Adaptation of curricula to the graduate and postgraduate degrees to carry out an analysis of the real regional needs ✓ Increase in the coordination between universities for planning their curricula ✓ Creation of mechanisms for the detection of regional needs: External Consultancy Commissions <p>Curricula and labour integration</p> <ul style="list-style-type: none"> ✓ Creation of a Labour Integration Observatory at national level for the use of methodological tools common to all the universities for analysis of the 	<p>Threats</p> <p>Regional dimension of the learning process</p> <ul style="list-style-type: none"> ✓ Possible rigidity due to the incorporation of common 75% in degree studies in order to adapt the curricula to the real demand in the region. <p>Lifelong Learning</p> <ul style="list-style-type: none"> ✓ Little collaboration and coordination with the other regional agents involved <p>Regional recruitment and employment</p> <ul style="list-style-type: none"> ✓ Concern for possible cutbacks in funding to carry out activities and implement projects ✓ Lack of flexibility of the university graduate guidance programme, Andalucía Orienta.

<p>universities' labour markets</p> <ul style="list-style-type: none"> ✓ Adaptation of curricula to graduate and postgraduate degrees to carry out an analysis of the real needs of the productive fabric <p>Lifelong Learning</p> <ul style="list-style-type: none"> ✓ Margin of improvement in the relation between the university and the social and productive environment in terms of adjustment of the offer-demand and collaboration-coordination <p>Regional recruitment and employment</p> <ul style="list-style-type: none"> ✓ Planning for the creation of a Joint Space for Integrated Management of Work Experiences in Enterprises (PIMA) <p>Philosophy of entrepreneurship</p> <ul style="list-style-type: none"> ✓ Planning for the development of actions established under the Plan for Andalusia's Innovation and Modernization and Andalusian Plan for R&D&i designed to promote a philosophy of entrepreneurship in universities <p>New types of educational services</p> <ul style="list-style-type: none"> ✓ Promotion of inter-university projects or "shared actions" (e.g.: enabling any Andalusian university access others to use their services or the shared use of a digital library) <p>Reinforcement of the education system</p> <ul style="list-style-type: none"> ✓ Margin of improvement in coordination and joint planning among universities and other regional agents of the overall offer of official and complementary studies <p>Recognition of teaching between universities to promote inter-university mobility</p>	<p>Philosophy of entrepreneurship</p> <ul style="list-style-type: none"> ✓ Concern for possible cutbacks in funding to carry out activities and implement projects <p>New types of educational services</p> <ul style="list-style-type: none"> ✓ Occasional lack of recognition of the work that comes with the use of new technologies in teaching <p>Reinforcement of the higher education system</p> <ul style="list-style-type: none"> ✓ Little coordination with the regional agents involved in the training programmes
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CHAPTER V: CONTRIBUTION TO SOCIAL, CULTURAL AND ENVIRONMENTAL DEVELOPMENT

174. This chapter deals with the activities and best practices carried out by the Andalusian universities to contribute towards the social, cultural and environmental development of the city and region in which they are located. It is worth noting that all Andalusian universities are spectacularly dynamic concerning these goals with a local, regional and international scope. In the light of this evaluation, all Andalusian universities have shown a very proactive attitude providing with information about good practices carried out individually by each university, together with other universities or in collaboration with the regional government.

In this chapter, some examples will be shown -although not exhausting- with the large number of activities currently carried out.

5.1 General framework

175. The Andalusian universities are free to impart studies and organise activities designed for technical, scientific, social, cultural and environmental divulgation in order to spread university knowledge beyond the academic community to society as a whole. For this purpose, the National Act on Universities declares in its preamble that the universities need to get involved by responding to the demands of society and opening their doors to people of all ages who wish to access their cultural or educational offering. Likewise, in its articles it indicates that the universities are responsible for connecting the institution with the systems of ideas current at the time, creating mechanisms for intellectual reflection and cultural creation and dissemination. Similarly, it highlights that they shall promote activities and initiatives that contribute towards fostering sport, sustainable development and respect for the environment in the locality and region in which they are located.

Together with the existing regulations, there are also a series of documents and declarations establishing an action framework for the universities in sociocultural and environmental issues, which are set out in Table A.5.1 (in appendix). In this context, each Andalusian university has defined, within its strategic plan, an action program for its contribution to the social, cultural and environmental development of the locality and region in which it is located. In general, these plans include a set of strategic lines and actions that reflect the vision and mission of the university, together with its engagement commitment. These lines and actions include the creation of alliances with local and regional stakeholders to carry out and disseminate these activities.

176. These activities are managed and coordinated in each Andalusian university by the Vice-Rector's Offices with responsibilities for social, cultural or environmental issues; within these, centres, secretariats or special units have been created, which are responsible for each specific area. The organisation of these bodies and the distribution of the responsibilities among them vary depending on the university. For more information on the institutional structure in these areas in each of the Andalusian University System's universities, see Table A.5.2 (in appendix). These activities are often carried out in different localities throughout the province where the university is located. For details about the localities where each university is decentralised for these purposes, see Table A.5.3 (in appendix).

The following section looks at some of the Andalusian universities' best practices. The rest of the chapter is devoted to analysing the social, cultural and environmental contributions of the Andalusian University System to the local and regional environment. This analysis is set out in three sections in which a differentiation is made between the general trends among universities and some of the initiatives –of the many that exist– that are carried out jointly and individually within the Andalusian University System.

5.2 Best practices

177. The Andalusian universities' activities very often adopt the form of common practices. They have demonstrated their effectiveness for social, cultural and environmental development in their respective areas.

5.2.1 Shared use of facilities

178. The Andalusian universities cede their facilities through agreements or through the participation of the university in subsidised projects that commit the said facilities. Likewise, they cede material and human resources to institutions, non-governmental organisation (NGOs) or the companies that so request for social services and/or cultural activities. The latter include sports activities for which, apart from the normal university facilities, some universities enter into agreements with the town councils or competent public entities for the shared use of municipal facilities. For example, the University of Jaen has signed a collaboration agreement with Linares Town Council for the use of the municipal sports facilities and, furthermore, university students can use them at a discount. At the same time, as already mentioned, the universities open their facilities to the non-university community for their use and enjoyment.

5.2.2 Collaboration with other stakeholders

179. Andalusian universities carry out activities with local, provincial, regional, national and international scope, for which they subscribe agreements with different entities and organisations, both public and private. The purpose of these agreements is to carry out joint programmes, projects and activities with social, cultural or environmental content; how the collaboration works depends on the needs in each area of activity. The universities have highlighted that these collaborations are of a fundamentally strategic nature.

180. To give just a few examples, the University of Almeria provides summer courses in collaboration with the *Diputacion Provincial* (provincial government) and the different town councils in Almeria. The University of Cordoba carries out cooperation for development actions with different organisations and entities in the agricultural sector, as well as a craftwork school, a study of the water supply to needy population centres, etc., in different places in America and Africa. The University of Malaga has 120 agreements with companies that offer the university personnel discounts in clinical, legal, insurance, automobile and travel services, depending on the company and to name just a few. The University of Seville provides annually a commercial guide with discounts offered to every university member to be used in certain services and shops, as a result of the agreements signed by the university. Likewise, the University of Seville has signed 75 agreements with public and private entities through which social and volunteering projects and provisions are financed. Finally, the University of Huelva has more than 150 agreements signed with several entities for the provision of services and products at a special discount price.

5.2.3 The design of online mechanisms for university collaboration

181. There are also a number of online mechanisms for collaboration between the Andalusian universities, designed by the universities as a whole and/or with the collaboration of the regional government, which contribute towards providing the Andalusian University System with a regional dimension. These mechanisms are used to plan and carry out the social and cultural activities designed for both the university and non-university community, thus establishing a connection with society.

182. An example of this online collaboration is the Cultural Observatory, part of the Atalaya Project, which is described in the section devoted to culture. This Observatory, coordinated by the University of Cadiz and the International University of Andalusia, has the mission of offering those responsible for cultural policy tools that facilitate their daily work. It also provides the cultural sector with reliable and measurable statistical data, and society with information on the situation of our university cultural sector. Additionally, also of significance is the creation of the Andalusian Social Councils Forum, set up to connect the different Social Councils of each university and expedite joint projects.

5.2.4 Social responsibility report

183. For several years now, some of the Andalusian universities have been drawing up or are currently doing so, a Social Responsibility Report, as a new model for accountability and transparency in the public functions. This report, addressed to the university community and society as a whole, sets out the activities carried out, including breakdown of the investment expenditure for every item in the

university's annual budget. The progress status of each university's social responsibility report is shown in Table A.5.4 (in appendix).

The universities consider drawing up this report a very positive practice. They acknowledge that it has brought about fundamental changes: on one hand, it has enabled systemised processing of all the aspects that the university had been dealing with in a dispersed manner, in areas such as human rights, management transparency and analysis of the needs and expectations of the interest groups, among other issues. On the other hand, it has helped to give visibility to the progress in and fulfilment of the social, environmental and economic development commitments made by the university, facilitating the comparison and identification of the best practices carried out by each of them. It has also been commented that it would be of interest to have a suitable Social Responsibility Plan that would go even further in terms of social engagement.

184. Additionally the Social Council Forum has drawn up a proposal for an Andalusian University Social Responsibility Report, which some universities consider would be a good guide, although it would need to be adapted to the specific circumstances of each institution in order to reflect each university's peculiarities. In turn, the regional government also endorses drawing up this Report as a general objective of the performance-based contract that each university subscribes with the Regional Ministry for Innovation, Science and Enterprise.

5.2.5 Dissemination of and access to university activities

185. The Andalusian universities promote and disseminate their services and activities throughout the university community and society in general through the media, via the Communication Office and on the web page of each university. In this way, the whole of society is invited to participate in the social and cultural activities organised by each institution, in accordance with the protocols and regulations that exist for this purpose.

186. An example within the area of access to university activities is the University of Seville's Language School, with education programmes in ten different languages. Non-university students share the classrooms with the university students and the fees are the same for both, although there are provisions for discounts for university personnel and students in certain circumstances.

Moreover, the sports facilities in Andalusia's universities are open to both the university community and the rest of society. In general, their prices are reasonable, with discounts that can be as much as 100 percent in some cases for faculty, staff and students.

As an example, the University of Huelva organises every year open doors events in the sports pavilion in which more than 3 000 students from secondary school and formative cycles have the opportunity to experience the University by themselves.

5.2.6 Chairs

187. The Andalusian universities have assigned a large number of Chairs to different areas of social, cultural and environmental issues. Through these chairs they undertake to programme a series of activities each year: seminars, publishing, conferences and research activities related to the subject of the chair. Within this section, of note are the UNESCO Chairs, which are set out in greater details in Table A.5.5 (in appendix). As regards these latter, the 5th Spanish UNESCO Chairs Meeting has been hosted this year by the University of Cordoba. This meeting is designed as a forum for exchanging experiences and analysing the activities and interests of the Chairs.

5.3 Contribution to social development

188. In general, all the universities have a specific structure and personnel entrusted with the coordination, dissemination and promotion of social services. As mentioned previously, Table A.5.2 includes a list of the responsible bodies and their areas of work in social issues in each university. The most outstanding among these are: Accommodation, Volunteering, Health and Social Welfare Services, Religious Support, Equality, Interculturality and Cooperation Services. The university usually publicises its own programme of the services offered.

A representative selection has been made from all the initiatives carried out by the universities, highlighting some of the practices made either jointly or individually.

5.3.1 Accommodation

189. The main alternatives offered by the universities to the university community are: halls of residence, university residences and flat letting and sharing pools. Apart from these there are also different programmes for university students, sponsored by the Regional Ministry of Equality and Social Welfare. An example of these is the Accommodation with Senior Citizens programme, designed to foster and promote solidarity and mutual support between university students and senior citizens –the elderly person supplies the student with accommodation and in exchange the student helps out with domestic chores and offers company. Equally of interest due to its social nature is the university accommodation programme managed through Inturjoven, which offers students and young workers the possibility of staying at a youth hostel during the school year.

190. The following individual initiatives have been selected:

- “Flora Tristan” University Residence: is a Pablo de Olavide University social project. It is located in an area of Seville in danger of exclusion. This project creates a place where young university students of different nationalities and cultures can meet and live together, as well as fostering collaboration with diverse neighbourhood entities through the volunteering activities of the students. More information about the project can be found in Table A.5.6 (in appendix).
- “Visit us in Seville”: is a University of Seville programme carried out in agreement with the Seville City Council. It came about from the synergies between both institutions, considering the potential of the student population as ambassadors of the city to attract tourism and investment for the city. The programme offers very reasonably priced services –such as accommodation– to the families and friends of foreign students.

Both of the aforementioned programmes are based on collaboration between institutions, which shows their commitment to local development.

5.3.2 Volunteering

191. Each university offers different services, such as publishing volunteering offers, symposiums, workshops and volunteering experience courses. Some of them also offer credits (academic) for the participation of the students in these types of activities.

192. At regional level, particularly noteworthy is the Andalusian University Volunteering Conference, organised by the Andalusian universities with the collaboration of the Andalusian government. All members of the university community are invited, as well as Andalusian volunteering entities and any people interested in taking part in volunteering activities. It is also important to mention the different programmes promoted by the regional government, such as “Andalusian Digital Commitment”, a volunteering project, promoted by Regional Ministry for Innovation, Science and Enterprise whose objective is to foster the use of Information and Communication technologies amongst Andalusian society.

193. The following individual initiatives are worthy of note:

- Volunteering Initiation Symposium: at the beginning of the academic year the University of Granada publishes the associations with which the university collaborates, which in turn inform on their volunteering activities and the ways to collaborate with them on issues related to the disabled, international cooperation, immigration, women, minors, the elderly, health, the homeless, environment, prisoners, etc. For the same purpose, the University of Malaga organises monthly events to inform students about the associations with which the university collaborates and their volunteering activities. The University of Huelva has already organised its IV Symposium on Volunteering training, with free configuration credits to foster volunteering activities among students.
- Participation in volunteering programmes: the University of Malaga participates in the “Andalusian Digital Commitment Programme”, the “Ciber-volunteers Programme” and the

“Student-Mentorign Programme”, all of them aimed at integrating the Andalusian Society into the Information and Technological Society.

- ❑ Volunteering training: over the last two years the University of Almeria has organised a dozen of their own academic credit valued courses, attended by almost 300 students in different areas of volunteering (sports, social welfare, disabilities, environment, cooperation, new technologies, etc.).
- ❑ VI Edition of the Spanish Programme on University Volunteering of United Nations concerning the Millennium Development Goals: 5 out of the 30 selected participants at national level were from the University of Cadiz, which has carried out volunteering activities (six months) in Bolivia, Honduras, Guatemala and Ruanda. The Univeristy of Cadiz has participated in all the editions of the programme.

5.3.3 Health and social welfare services

194. Each one of the bodies created in each university with responsibilities in health or social affairs develop and coordinate actions for information, guidance, divulgation, advice and support in prevention of drug addiction, psychological support, healthy life habits, and sexual or health information.

195. The Andalusian Health Network has been created by the ten public universities as a joint project. Among its principal objectives is the creation of a space where experiences, contacts, information and resources are shared. It also seeks to foster joint actions of university collaboration in development.

196. The following individual initiatives are noteworthy:

- ❑ Oral and Dental Healthcare Plan for socially underprivileged sectors and the Geriatric Dental Programme: professors and students from the University of Granada’s School of Dentistry give their services in order to provide oral and dental care to groups with low income levels. The second programme –the Geriatric Dental Programme– is addressed to the elderly. This type of initiative is also carried out in other Andalusian universities.
- ❑ Quality of Life and Aging Office: the University of Granada has created this unit to integrate retired professionals (whether at retirement age or earlier) in health and welfare programmes, whose advice and assistance is offered to students, regarding their academic fields of training. In this way, students get a practical training, on skills and abilities necessary to access the labour market.
- ❑ Vaccinate Programme: the Pablo de Olavide University develops this vaccinate programme against the flu and medical checking for their workers with a yearly recurrence.
- ❑ “Family Break Programme”: the University of Seville gives remunerated grants to students who provide support to families that have a dependent person under their charge, accompanying the dependent person in their daily routines or providing support in the event of unexpected situations.
- ❑ “UMA and Drugs” Health Portal: is the first Andalusian university Internet portal devoted to the prevention of drug addiction. It was created through an agreement between University of Malaga and the Regional Ministry of Equality and Social Welfare.
- ❑ “Prevention of drug addiction programme”: the University of Cadiz develops this programme in collaboration of the Regional Ministry for Equal and Social Wealth, which is materialised in educational actions, as the forum cinema “another way to see dugs”, in several studies about the prevention of drugs and the Intervention Plan to prevent alcohol consumption.

5.3.4 Religious support

197. The universities also provide a religious support service, orientated towards educating in humanism, doctrines, and social volunteering. The activities carried out include the organisation of conferences and round tables, seminars on theological and cultural issue, awareness raising and information actions (campaigns, marches, development project funding, etc.).

5.3.5 Caring for the disabled

198. Each university carries out actions to expedite the integration of people with disabilities in the university. For this purpose they organise actions designed to eliminate architectural barriers; provide

personalised information on grants, study programmes and legal questions; set up specific services in libraries and, in general, carry out support activities to overcome the social barriers.

Of particular note is the participation of the universities in the organisation of conferences on disabilities. The University of Cordoba took part in the 1st International Conference on Integral Support for Disabilities and Dependence and University of Jaen hosted the 1st Conference on Caring for People with Mental Disabilities held in Andalusia.

Also of interest in this respect is the report from the Andalusian Ombudsman addressed to the Andalusian Parliament, in the preparation of which all the university ombudsmen took part. The purpose of this report was to identify the regulatory, organisational and infrastructural obstacles that still make it difficult for people with disabilities to access the university world, in equal conditions.

199. Below are some individual practices:

- Fees exemption and other measures: the University of Seville, as a result of the Ombudsman's Report, was the first university to grant disabled students exemption from the payment of fees for academic and administrative services. Likewise, it has drawn up regulations for the academic treatment of disabled students and an Integral Plan for 2009-2013. This later plan sets out the objectives and strategic lines and actions that guarantee full integration of people with disabilities in the university. Likewise, the University of Huelva also offers disabled students exemptions from payment of fees, disabled transport services, grants for collaborating students and a specific set of rules to guarantee equal opportunities for disabled students.
- "Project for Universal Accessibility to the University": in 2006, this University of Jaen project received the 1st Andalusian Award for Best Practices in Concern for Disabilities from the Regional Ministry of Equality and Welfare. This year, 2009, the university has presented the project "Design, Implementation and Certification of the Universal Accessibility Management System", which is part of its Universal Accessibility Project, which aims to incorporate the aspect of accessibility in all its services, areas and equipment.

5.3.6 Cooperation for development

200. The universities promote and support numerous projects in this area, in collaboration with NGOs and other public and private entities, designed to achieve local, regional and/or international development.

201. The following individual projects have been selected:

- Saharawi Refugee Camps: for the past four years the University of Cordoba has been organising a programme for computer courses in the Saharawi refugee camps in Tinduf (Algeria). It also has a Chair in Cooperation for Development.
- Alliances with the local environment: the Pablo de Olavide University has formed alliances with enterprises and public and private institutions through its foundations. Specifically, it has created the Knowledge and Culture Foundation –university foundation that supports Pablo de Olavide University's academic, research, cultural and social activities–, the "Olavide en Carmona" Cultural Centre –located in the historical quarter of the town and where diverse social and cultural activities are carried out for the university community and the citizens of the town of Carmona, in the main– and the Pablo de Olavide Municipalities Foundation –of a social and cultural nature, devoted to activities designed to promote and develop the link between university and local life.
- Spanish Agency of International Cooperation for Development (AECID) calls: for the fifth consecutive year, the UCA holds a leading position when it comes to inter-university cooperation projects financed by AECID. For the sixth consecutive year, it has been the Spanish University with the highest number of academic cooperation projects with Moroccan counterparts. It has promoted cooperation initiatives with all the members of the Iberoamerican Community of Nations; it is also the entity that sent the largest number of Spanish lecturers to Russia in 2009. This reflects the efforts of the three regional "Class-rooms" that guide UCA's international cooperation initiatives; Straits' University

Class-room, the Latin America University Class-room and the Hispano-Russia University Class-room.

- Callings for international cooperation projects: the University of Malaga has launched this year a calling for projects designed to foster participation of all the members of the University of Malaga in international cooperation for development projects, as well as to raise awareness within the university community regarding the global problems and responsible behaviour, through supporting sensitisation activities and education for development.
- Courses for international development: the International University of Andalusia has an essential vocation to development. This is exemplified by different courses organised in Morocco and Latin America to train professionals and to integrate graduates into the market labour of their countries of origin.

5.3.7 Interculturality

202. Andalusia's universities also carry out significant activities oriented towards educating in and fostering interculturality. Among these, of note are the culture forums –spaces where best practices related to immigration issues are exchanged–, or the intercultural weeks –for reflection, education and debate about interculturality–, as well as the organisation of workshops, gastronomic events, meetings and conferences.

203. The individual activities include:

- Multicultural events: this year, the University of Granada has organised, in collaboration with the NGO “Almería Acoge”, the 1st “Interculturality and Interreligious Dialogue” conference in Melilla. This university has an Intercultural Studies Laboratory and a Migrations Institute, where numerous studies and activities in this field are carried out. The University of Almeria has also hosted for several years an International Conference on Intercultural Education.
- “Proyecto Únete”: the University of Almeria carries out this project designed to favour immigrant students and immigrants' children that reside in Almeria so that they can continue their studies at the University of Almeria. This is carried out through monitoring the students in question from their secondary and pre-university education stages, and informing them on the grants, aid and services the University of Almeria offers them to achieve their goals.
- The summer course, “Sport as a Vehicle for Integration, Intercultural Dialogue and Co-existence between Different Cultures”: the International University of Andalusia has prepared this course with the collaboration of the ‘Tres Culturas del Mediterráneo’ foundation. The aim is to offer students a complete vision of sport, showing them how it is possible and desirable to promote, through sport, education in values and the development of different cultures, committing to tolerance and integration.

5.3.8 Equality

204. The Regional Act on Universities establishes that university access, access to the centres, permanence in the university and the exercising of academic rights shall be given based on equal opportunities and without any discrimination for reasons of gender, race, religion or disability or any other personal or social condition or circumstance.

In the area of social equality, the universities carry out a series of actions – financial aid programmes, subsidies for pre-schools, dining room vouchers, aid for optics (glasses), aid for school text books, among others– designed to expedite the educational and social integration of students with special needs.

As regards gender equality, the Regional Act contemplates the creation of men and women Equality Units in the universities' organisational structures. Symposiums at regional level have been held among these units with the aim of facilitating their coordination and mutual communication. As a result of these, University of Seville assumed the commitment to promote the creation of a “Public Universities Network for Equality”. In general, numerous studies –like the one prepared by the Social

Councils' Forum, cited in the final bibliography– have been carried out and different measures have been taken by all the universities to promote gender equality.

Also of note is the participation and collaboration of the universities in different public initiatives organised by regional or national stakeholders and relating to equality policy (conferences, seminars, meetings, etc.), such as the Andalusian Institute for Women, or the Conference of the Spanish Universities' Rectors, among others.

205. The following examples may be highlighted:

- ❑ Diversity Observatory: the University of Cadiz runs this observatory to detect any possible difficulties and barriers for participation and academic, professional and personal development, in equal terms, when differences in gender, functional abilities, culture and social position are at stake. It is also thought to draw up proposals to achieve these barriers elimination.
- ❑ “Leonor de Guzmán” Chair: through this Chair, the University of Cordoba promotes research and studies on gender equality, as well as organising a research award and carrying out a range of actions designed to raise awareness on this issue: seminars, talks and exhibitions, among others.
- ❑ Commemorative Ceremony of the International Day of the Working Woman: for two consecutive years the University of Malaga has organised a cycle which aims at rescuing from oblivion outstanding women from Malaga; they have been great figures in Literature, Science, Arts but have been invisible until now.

5.4 Contribution to cultural development

206. As in the case of social services, all the universities have specific structures and personnel entrusted with coordinating, disseminating and organising cultural activities, a list of which is shown in Table A.5.2 (in appendix). Among these the following areas may be highlighted: activities or resources for skills improvement and promoting art and sports, for which the Andalusian universities organise a multitude of cultural events in collaboration with the regional government. Additionally, they have designed and implemented a mechanism for coordination at regional level.

5.4.1 Activities and resources for skills improvement

207. Together with their own degree programmes, dealt with in the previous chapter, the universities offer university extensions and continuing professional development programmes, as a modality of their own degree studies, which include activities of dissemination of knowledge to society. The aim is to contribute towards the development of culture, science, humanity, art and equality in the social environment. These programmes are addressed to society in general, enabling professionals to update their knowledge and specialise in their area of work, provided they fulfil certain access requirements. Also of note is the universities' use of the new technologies, which enables them to offer online programmes, thus reaching a wider public.

208. The Senior Citizens Space constitute another notable initiative, designed to provide a space for skills improvement, participation and co-existence for those who, having finalised their years of work or for any other circumstances, wish to access educational or general culture studies. The programme is open to people over the age of 55, regardless of their level of education. The universities have centres in different municipalities within the province in order to make these activities more accessible for the local population.

209. Likewise, the university libraries are open to the general public, although certain services are restricted to the university community. Worthy of note in this respect is the Andalusian University Libraries Consortium (*Consortio de Bibliotecas Universitarias de Andalucía*, CBUA), which was mentioned in chapter three.

210. Individually, the following initiatives have been selected:

- ❑ 10C Project: this project has been selected as an example of the permanent education programmes. This initiative, part of University of Huelva's commitment to providing its students with integral studies, is an intensive seminar aimed at giving students the skills required in the labour market: leadership, organisation and communication skills, flexibility, entrepreneurship and innovative spirit, social skills and teamwork capacity, among others.
- ❑ EVAempresa: the University of Almeria and its Mediterranea Foundation have implemented the Virtual Teaching Service called EVAempresa, which offers an integral service centred on developing skills improvement programmes –with partial in-class and virtual studies– for organisations and private entities. The ultimate goal is to satisfy the real training needs of the organisations.

5.4.2 Fostering the arts

211. The universities carry out a multitude of cultural events in the areas of cinema, scenic arts, music, dance, exhibitions, cine clubs, theatre workshops, etc. To do this they collaborate with other institutions and local and regional entities, organising joint activities and programmes. Additionally, some universities organise visits, excursions and field trips in the region and in different culture related areas: mainly museums, theatres, excavation sites, and courses.

212. Particularly relevant for this report is the Atalaya Project, as an interuniversity cultural collaboration model, which has positioned the Andalusian University System as a cutting edge organisation in terms of university extension in Spain. Implemented in 2007, it is coordinated by the Andalusian public universities and financed by the Regional Ministry for Innovation, Science and Enterprise (see table A.5.7, in appendix). Under the umbrella of the Atalaya Project, a set of initiatives are organised, led either by one university or managed jointly. The idea behind this grouping is give new value to the already existing cultural initiatives in the universities, as well as to promote new actions that enable the dissemination of the cultural and social engagement of each university.

The actions carried out through Atalaya include, among others: cultural awards, scenic arts meetings, skills improvement projects and photography competitions. Other activities that can be highlighted are the creation of joint resources: Contemporary Culture Channel; Networked Flamenco, the magazine "Diez en Cultura" (A Ten in Culture) and the Cultural Observatory, which make it possible to complement and optimise resources and reinforce networking dynamics. Furthermore, programmed activities are published through the different channels for public information.

213. Individually –although there are many initiatives than could be highlighted– the following have been selected:

- ❑ The “Arteypensamiento” Project: with this project the International University of Andalusia seeks to incorporate the university in the debates, production, dissemination and consolidation of the contemporary creations and reflections. This should be taken to mean not just a form of completing the university's academic offering, but more particularly a way of establishing a relationship between the university and its cultural and social environment.
- ❑ The International University of Andalusia shares its facilities and collaborates with the Andalusian Contemporary Art Centre, a cultural centre that has among its main objectives that of developing an educational activities programme to promote the study and fostering of international contemporary artistic creation in the widest sense: temporary exhibitions, seminars, talks, workshops, concerts, meetings, recitals, film series and conferences.
- ❑ Historical-artistic Heritage Unit: the University of Seville publicises a valuable ensemble of monumental and artistic elements: sculptures, paintings, portraits, academic drawings, etc.

5.4.3 Promoting Sport

214. The Andalusian universities contribute significantly to promoting sport, opening up their facilities to the university community and the public in general. They offer a wide range of sports activities: courses, trophies, recognition of credits through participation in sports activities, etc.

Furthermore, also relevant is the participation of our universities in provincial and regional championships –organised by the universities in collaboration with the Regional Government– as well as national ones. As regards the latter, this year the University of Almeria has hosted the 2009 Spanish

University Championships for football, volleyball and triathlon. The University of Granada has hosted the Spanish University Championships for handball, cross-country racing and fencing. According to the universities, university sports activities not only contribute to personal development, but they also create a framework for co-existence that enables the establishment of cooperation and interaction relations between students, both with their fellow students in their own university and those in other universities.

215. The following individual initiatives can be highlighted:

- Participation in university sport championships: the University of Malaga stands out in the sports field. Its sport students have been second place in the general classification of the Andalusian Championship; sixth place in the general medal ranking of the Spanish University Championship; gold medal in golf in the European University Championship, and third place in beach volleyball, both in female and male category; and the revalidation of the European University Championship of men five-a-side football. It is also worth noting the extension of the sports infrastructures in 16.000 m², with the creation of new cardiovascular rooms, paddle, sport centre and beach-volleyball; the organisation of many sports events, programmes to promote sports and concessions of awards.
- Sports Open Days for Beginners: for several years now, the Pablo de Olavide University and the University of Huelva have been organising these open days addressed to 4th year *ESO* (secondary education), *Bachillerato* (pre-university) and Vocational Education students. Through these, both universities seek to encourage sport among young people and establish their first links with the university. With the same purpose, the University of Huelva organises Olympics events (Unilandia) addressed to pre-university students to establish first links with the university.
- Olympic Studies Space: in 2008, the University of Jaen and the Spanish Olympic Committee (*Comité Olímpico Español*, COE) signed a collaboration framework agreement under which the University of Jaen Olympic Studies Space was created for the purpose of carrying out Olympic dissemination activities.
- Campaigning “Fair play in the University of Cadiz. Sports educate”: with this campaign the University of Cadiz highlights the value of sports as an educational activity: team-work, collaboration with others and knowledge of everyone’s capacities. It also teaches acceptance of both success and failure as fundamental aspects of the integral education of students. It has to be mentioned that this initiative gained several prizes. It proposes “The Ten Commandments of fair play” as well as disciplinary rules.
- Bicycles hire: in September 2009 the University of Granada inaugurated a bicycle hire service for its students’ “inter-campus” movements and which operates through mobile telephone messaging. This service is designed, in principle, for the members of the university community, with very reasonable prices. With this type of initiative the University of Granada contributes towards creating healthy habits among university students and, furthermore, to adopting habits that are more respectful with the environment.

The use of bicycles is encouraged by most of the universities. The University of Almeria, for example, has implemented a project within which it has extended the existing bicycle lane –from the town centre to the university– to the whole of the campus.

5.5 Contribution to sustainability

216. With a view to contributing towards environmental sustainability, the universities are taking steps to adapt the university space to the criteria on sustainability. In this respect, each university has specific environmental management units –most of them have sustainability spaces or green offices– from which they disseminate information, organise courses, symposiums, seminars, debates, exhibitions, competitions and publish magazines. They are addressed to raise awareness and educate society about general conducts that are more environmentally sustainable and promote such conducts. Likewise, they identify lines of collaboration and volunteering with other stakeholders involved in environmental sustainability, establishing coordination and collaboration mechanisms with other

environmental management units in other universities. Specific actions include the programmes for management of the waste produced in the facilities, energy efficiency, water consumption efficiency and sustainable urban mobility, among others.

217. The Regional Ministry of Environment’s University Environmental Volunteering Programme is open to the entire community of Andalusian universities and includes multiple actions for environmental improvement, research projects and environmental awareness raising. The Regional Ministry of the Environment’s Green Space (Aula Verde) magazine addresses multiple environment improvement actions, research projects and awareness raising on environmental issues, both for the university students and professors or staff alike.

218. Of note are the following individual initiatives:

- ❑ Solar Panel System: the University of Jaen has a solar panel system, made up of 2 000 panels integrated in the university complex, distributed over the façade and the roofs of the car parks and pergolas. They produce 10% of the electrical power consumed in the university complex, enabling significant energy saving.
- ❑ Andalusian Centre for the Evaluation and Monitoring of Global Climate Change: the University of Almeria houses the headquarters of this centre, which is set up as a meeting point between the scientific community, the Administration and the enterprises and constitutes a space for multidisciplinary research in the fight against climate change.
- ❑ Car sharing pool: the University of Malaga and the University of Cadiz have implemented a programme designed for the members of the university community who travel daily to the different academic centres using private transport. The aim is to contribute towards reducing consumption of energy resources, pollution and traffic density.
- ❑ The Conference of the Spanish Universities’ Rectors Sectorial Commission for Environmental Quality: with the participation of the University of Cadiz and the University of Granada – elective offices– this commission has the mission of promoting sustainable development and risk prevention in the universities, compiling the experiences of the university community on environmental management, their progresses in "greening" the university community and their risk prevention projects, whilst at the same time endeavouring to constantly encourage their mutual cooperation.
- ❑ Measures adopted by the Secretariat for Sports of the University of Malaga: use of salt for the treatment and disinfection of swimming pools, use of solar energy for water heating and domestic hot water, creation of 10 000 m² of gardens according to xerogardening criteria, such as creating clean points to contribute to recycling.

5.6 Conclusions

219. To round off the analysis of the universities’ contribution to social, cultural and environmental development, a SWOT analysis has been drawn up with the same structure as the chapter in order to identify the main aspects in each section:

<i>Contribution to social, cultural and environmental development</i>	
Strengths	Weaknesses
<ul style="list-style-type: none"> ✓ The universities’ recognition of their social, cultural and environmental engagement in their strategic plans and definition of strategic actions and lines ✓ Creation, in each university, of specific bodies with social, cultural and environmental responsibilities ✓ Preparation of a University Social Responsibility Report that gives visibility to the actions carried out by each university ✓ Implementation of mutual enrichment programmes between universities and society: provision of oral dental services, Accommodation with Senior Citizens Programme, etc. 	<ul style="list-style-type: none"> ✓ In social issues, possible lack of resources to fully cater for the university community’s social demands ✓ Lack of visibility and publicity in society of the activities carried out by the university.

<ul style="list-style-type: none"> ✓ Existence of mediation structures in the universities – foundations, social councils– that expedite their social involvement in the regional fabric 	
<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> ✓ Firm commitment on the part of the regional government to university actions as a driving force for regional development ✓ Collaboration with other local, regional, national and international stakeholders with which to share experiences, learning, team work, etc. ✓ As regards environmental issues, the use and incorporation of the new technologies in the university that contribute to environmental sustainability ✓ Use of a Social Responsibility Report common to all the universities to enable easy comparison and identification of the best practices among the universities. 	<p style="text-align: center;">Threats</p> <ul style="list-style-type: none"> ✓ The current economic crisis could produce cutbacks in resources earmarked for these activities ✓ Activities duplicated with those of other institutions

CHAPTER VI: CAPACITY BUILDING FOR REGIONAL CO-OPERATION

220. This chapter deals with general aspects regarding the Andalusian University System's impact on regional development. The first part gives an overview of the cooperation in different areas, whilst the second part presents an analysis of each university's specific response to the challenges of regional development, the results of which are set out in the Table A.6.1 (in appendix).

6.1 Mechanisms to promote universities' regional engagement

221. This section studies how regional engagement is identified and promoted, how the activities of the different stakeholders are coordinated and how the universities have incorporated regional and local engagement in their strategic plans and in their internal actions (in respect of the university community) and external actions (cooperation with other agents).

6.1.1 Identification of the universities' regional and local engagement

222. The regional government has actively taken on the task of identifying regional needs. As already mentioned, in 2001 the Andalusian government embarked on what it called Andalusia's Second Modernisation Plan to incorporate the autonomous region in the Knowledge Society: *"if we want to continue to grow; if we want our growth to be a differential and to converge with the most advanced economies, our economic model will have to be a new model, based on innovation and on the incorporation of the new technologies and their dissemination in the business fabric, as well as throughout the entire Andalusian society. This would be the true reflection of the Second Modernisation in the area of civil, economic, social and cultural activity."*

This was the idea of the *Strategies and Proposals for the Second Modernisation of Andalusia* (Regional Government, 2003) and *One Project, Ten Initiatives and a Hundred Measures for the Second Modernisation of Andalusia* (Regional Government, 2003), which gave rise to the Plan for Andalusia's Innovation and Modernization, in 2005, with a horizon of 2010. This latter document applies to Andalusia the 2000 Lisbon Strategy, which was approved by the European Council and designs a set of precise strategic lines and actions.

223. The Plan for Andalusia's Innovation and Modernization establishes as its goal the following ten objectives: *"1. An Andalusia that is connected through a solid network of technological infrastructure and has 2. achieved a high level of progress generated by education, research and innovation, in which 3. the universities, enterprises and organisations and people generate and share knowledge as an element that creates wealth and welfare, 4. obtaining balanced and cohesive regional development, stimulating the local endogenous resources, with 5. efficient and effective public administrations and with the citizens as the ultimate protagonist of their service, 6. promoting an Andalusian Innovation System based on competitive cooperation, which recognises and rewards enterprising spirit and merit. 7. A European region with international projection that embraces renewable energies and conservation of a sustainable environment, with an 8. Andalusian lifestyle that assimilates technology naturally and recognises innovation as one of its values, in an 9. intercultural and mutually supportive society that participates actively in the construction of its future, and 10. promotes and progresses through the equality and wellbeing of its citizens."*

According to the Plan for Andalusia's Innovation and Modernization, the key stakeholders for innovation are society, the educational institutions and research institutions (with special reference to universities), the enterprises and the Administration. The Regional Ministry for Innovation, Science and Enterprise is the institutional instrument for the modernisation of Andalusia: a regional ministry that brings together development, innovation and research, the universities and research centres, and the business fabric. The Regional Ministry for Innovation, Science and Enterprise materialised its political vision in the Andalusian Plan for R&D&i (2007-2013).

224. Likewise, the first fundamental premise of the Andalusian Competitiveness Strategy 2007-2013 is the development of the Knowledge Society, given that it is the driving force behind Andalusia's development. Universities are referred to in this Strategy in terms of R&D&I, knowledge transfer and relations with enterprises. The Strategy's premise 7, which deals with increasing and

improving human resources, highlights the role of Andalusia's universities in the areas of equal opportunities and lifelong learning. Universities should promote adaptation of the education system to the labour market and the needs of the enterprises, as well as achieving greater integration of the education systems, both one with another (universities, vocational training and job training) and through linkage of these with workers' training needs

225. The perception of the appropriateness of regional engagement varies somewhat among the governing bodies of Andalusia's universities: whilst for newer universities their creation, in itself, responds to promoting a regional development strategy, in general, those created in the 70s and the older ones do not share the same idea. The more recently created universities consider regional engagement as a commitment assumed independently by their institutions, within their own social responsibility and as part of their strategic plans. The older universities consider regional engagement as a political objective of the regional government, before that of the university. Despite the number of activities and impact generated within the territory, they conceive their own objectives in terms of international competitiveness, rather than in terms of impact on regional and local development

Nevertheless, some evidence of regional engagement among most of the universities can be seen in their participation in the Strategic Plans of the provinces and cities in the areas in which they are located. This is the case of the strategic plans of the provinces of Jaen and Cordoba, and those for the cities of Cordoba, Malaga and Seville.

226. The direction taken by the regional government is transferred to the universities through the performance-based funding contract, which accounts for 30% of the universities' total budget. It is very important to highlight that this financial model is the result of the agreement between the Regional Ministry for Innovation, Science and Enterprise and the universities, within the Andalusian University Council. These performance-based contracts are reviewed annually to verify fulfilment of the annual objectives set and to agree those for the following financial year. They undergo independent auditing by the Andalusian Auditors Chamber. Failure to fulfil the contract results in a reduction in funding, these amounts going to a fund that is used to reward the universities that do fulfil their performance-based engagement. However, the system is somewhat lacking in transparency, inasmuch as the annual data for each university is not made public to the others, which generates criticism and discontent among the universities regarding its application. Not every university shares this approach. Some of them consider that the auditing system, which relies on different universities auditors assures enough transparency.

The objectives in these contracts that contribute most directly to the modernisation of Andalusia include, most significantly, the implementation of digital processes, both in administration and in teaching (virtual campus); the development of wireless communication networks; the process and skill-based management systems; the existence of online teaching material; the improvement of teaching and administration staff and the quality of teaching; the improvement of graduate's professional integration and their enterprising skills; bilingualism; the improvement in research and knowledge transfer; encouraging professors and researchers' access to posts of responsibility; the connection with the productive fabric, and internationalisation and cooperation among universities.

6.1.2 Knowledge resources audit

227. The regional government maintains an updated information system on research capacities through the research group records, which can be consulted online on both the Regional Ministry for Innovation, Science and Enterprise and the Andalusian Transfer of Technology Network (RATRI) webpages. It also maintains a repository with all the research activity, including registration of patents and other forms of intellectual property, which is available for public online consultation via the Andalusian, Scientific Information System (SICA). There are different access modes for researchers and research groups, research project appraisers and Andalusian Knowledge System agents, as well as for the general public. Permanent updating of the data is encouraged via financial aid to the research groups based on the data incorporated annually. Furthermore, the system has been equipped with different curricula export utilities for the callings of other agencies or institutions (such as the national and the regional agencies for evaluation) or permanent information on research subsidies, to make it attractive and thus encourage constant updating.

On the other hand, there is no inventory of facilities, such as experimentation facilities, laboratories, or libraries and other training or research infrastructure, which may be accessed by the general or specialised public and includes usage terms, managers, costs, etc.

228. The 2015 University programme, which seeks to position Spanish universities among the 100 best in Europe, has made a particularly important contribution to auditing Spanish university resources. The projects presented to the call for proposals for the International Excellence Campus showcase the contribution of universities to regional and national development. This Spanish government programme has highlighted the importance of territorial aggregation of the higher education institutions and has enabled identification of regional strengths. The call was organised in two programmes: A and B. For the program A, the applicants had to draw up a Strategic Plan proposing an aggregation plan for the entities (universities, research institutes, technology centres, autonomous region institutions, enterprises, etc.) that will make up the excellence campus. In a first stage, 15 projects have been selected, which have been granted almost EUR 200 000 in subsidies to draw up a full proposal. These will be valued by international experts, who will choose the ten best projects, the strategic plans of which will be financed by the Ministry. The programme has a budget of EUR 53 million in direct subsidies and EUR 150 million for loans.

229. In this first edition, the Andalusian University System universities presented 7 proposals, 6 of which obtained favourable results during the pre-selection stage, as can be seen in Table 6.1.

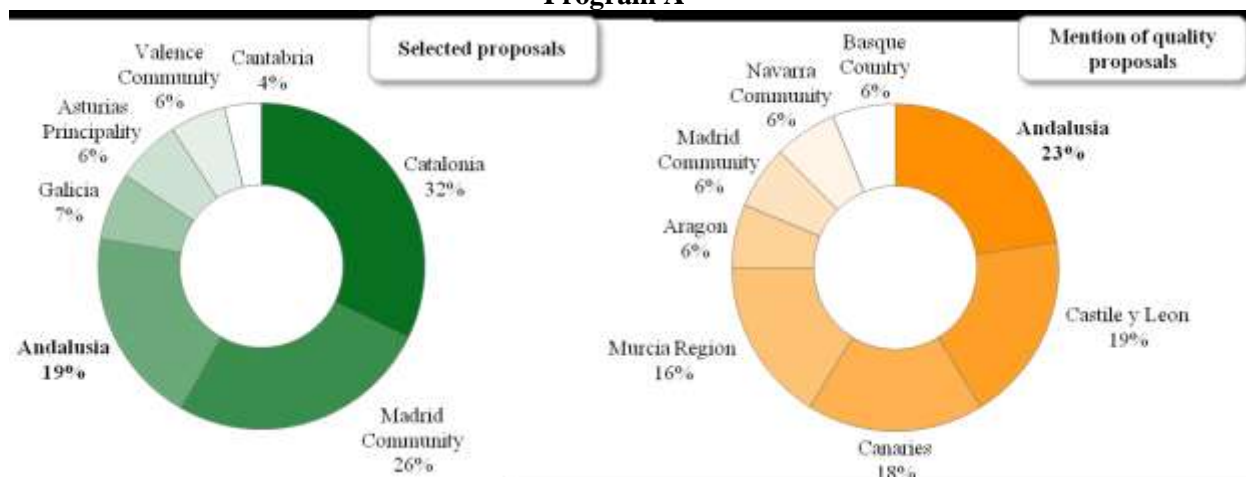
**Table 6.1: Results of Andalusian universities
in the “International Excellence Campus” call (pre-selection phase), Program A**

Coord. Univ.	Associated universities	Proposed Programme Title	Program A: Strategic Plan	TOTAL EUR
UGR	None	Campus Excelencia Internacional Granada (CEI Granada)	Selected	195 000
UCO	UAL, UCA, UHU, UJA	Campus de Excelencia Agroalimentario (CEI-A3)	Selected	193 972
US	UNIA*	La Universidad de Sevilla, Campus de Excelencia Internacional	Selected	193 972
UMA	None	Tecnologías Aplicadas al Desarrollo y a la sostenibilidad Territorial: Turismo y Hortofruticultura	2009 CEI Mention of Quality (Strategic Plan Sub-programme)	90 000
UJA	UCA, UCO, UGR, UHU, UMA, UNIA and US	Campus Andaluz de Excelencia Internacional en Patrimonio Cultural y Natural	2009 CEI Mention of Quality (Strategic Plan Sub-programme)	60 000
UCA	UHU, UMA	Campus del Mar	2009 CEI Mention of Quality (Strategic Plan Sub-programme)	30 000

*Source: Prepared internally, based on data published by the Ministry of Education. *Joint after selection process started.*

230. Three of them have been selected for appraisal by the international commission (Strategic Plan Sub-programme). In total, the three pre-selected CEIs received EUR 582 943, from the total of EUR 3 million granted for the preparation of the respective Strategic Plans, which represents 19% of the distributed funding. The Ministry awarded special mentions for improvement of the candidacy for a subsequent calling in 2010 to the projects that stood out either due to their strategic-territorial nature (the proposal coordinated by University of Malaga, or the strategic-sector nature (the proposal coordinated by University of Jaen), or its original and innovating nature (the proposal presented by University of Cadiz). These projects also received 23% of the financial aid that accompanies the Mentions of Quality within the Strategic Plan Sub-programme, a total of EUR 180 000 (out of EUR 800 000). Graph 6.1 shows a comparison of the resources obtained by the universities of the different autonomous communities.

**Graph 6.1: International Excellence Campus Funding by autonomous region (first phase)
Program A**



Source: Prepared internally, based on data published by the Ministry of Education..

231. After the pre-selected proposals were examined by an international expert commission, 7 projects were retained for the whole country. Those were granted the mention of International Excellence Campus, among which four corresponding to Universities from Madrid and three from Catalonia. The Ministry of Education decided to grant four special mentions to those projects especially relevant for regional development. Among them, one was the andalusian CEI in Agrifood, coordinated by University of Cordoba and grouping four more andalusian universities (University of Almeria, University of Cadiz, University of Jaen and University of Huelva). The project received EUR 7.5 million. University of Seville and University of Granada respective projects received a financial grant (EUR 4 million each) to prepare their projects for the 2010 CEI call. Andalusian Universities got an 11.26% of the total financial aid offered through the Program A, consisting of loans.

232. The 2010 Call for Program B addressed the Research and Transfer future plans of the Spanish universities. The National Ministry for Innovation and Science granted EUR 50 million to the 25 selected projects (out of 44 proposals). Andalusian Universities got a 20% (EUR 10 million) out of the total funding, consisting of direct grants to the research and transfer plans. The University of Cordoba got EUR 3 million for its agrifood project; the University of Granada got EUR 3 million for 2 projects, one in health Science and another in IT; the University of Sevilla got EUR 2 million for its sustainability project; the University of Jaen, EUR 1 million for its project in Cultural Heritage and the University of Malaga, EUR 1 million for its project in Tourism.

6.1.3 Strategic plan and engagement with regional and local development

233. The performance-based contracts require each university to draw up a strategic plan. Each one of them has approved the corresponding plan, as shown in Table 6.2.

Table 6.2: Regional development and the Andalusian University System strategic plans

	Strategic Plan	Institution's mission and vision	Follow-up
UAL	FuturAI 2004 UAL Strategic Plan	The general purpose of the SP is to "respond to the demands of society and, in particular, to the demands of the immediate environment, Almeria and Andalusia."	No data
UCA	2005-2010 PEUCA Strategic Plan	Public University, committed to society through its international connections and acting as the hub of the province of Cadiz.	Annual
UCO	2006-2015 Strategic Plan	Education programmes, research and knowledge transfer, connected with the local, regional, national and international social, cultural and productive environment.	Annual
UGR	2006-2010 Strategic Plan	Its mission is to be "connected with its environment and have international aspirations."	No data
UHU	Plan Estratégico Institucional 2008	Instrument of social transformation due to its capacity to promote economic, environmental and cultural development, particularly that	Reviewed 2009

		of the Huelva society.	
UJA	2003-2010 Strategic Plan	Quality and innovation for the development of the socio-economic and cultural environment of the province of Jaen.	Annual follow-up indicators
UMA	2009-2012 Strategic Plan	University positioned strategically in Malaga and province and with national and international scope.	Follow-up Protocol
UNIA	2007-2009 Strategic Plan	Committed to the progress of its environment, with aspirations for supportive cooperation in the international arena, particularly in Latin America and the Maghreb.	Follow-up Protocol
UPO	2009-2011 Strategic Plan	To become an international benchmark and integrate the university in its environment through the application of social responsibility.	Revision of 2005-2010 Plan
US	2008 Strategic Plan	The university commits its members to cooperation with the local, regional, national and international community, helping towards scientific-technical, cultural, social, sports, economic and territorial development.	No data

Source: Prepared internally from data on the universities' webpages.

234. All the Andalusian universities are in the process of improving their strategic planning. After the approval of their respective plans they still have to establish the deadlines and indicators and the monitoring and control systems. Table 6.2 gives extracts of the mission and/or vision of each university according to its strategic plan and which seek references to the local and regional environment. It can be seen that the newest universities –the University of Almeria, the University of Cadiz, the University of Huelva and the University of Jaen– identify development of the local and regional environment as one of their missions. On the other hand, the older and larger universities (the case of the University of Cordoba, the University of Granada, the University of Malaga and the University of Seville) highlight their international aspirations along with or before any local or regional ones. Two new universities, the Pablo de Olavide University and the International University of Andalusia, can also be counted within this latter group.

6.1.4 Public funding resources and review of the funding system

235. As highlighted in other chapters, the regional government encourages regional engagement via the funding model, the 3rd Investment Plan for Infrastructures, innovation funding through the business incentives order, which links aid to the participation of universities' Research Groups and research centres, and aid to promote enterprising spirit, as well as other programmes to promote employment - such as the job guidance offices.

Table 6.3: Direct and indirect funding of the Andalusian University System

Programme	Total EUR
Funding contract, 2008 yearly amount	1.49 billion
3rd Multiannual Investment Plan (its whole term)	480 million
Business Investment Incentives Order	1.5 billion
Scientific Technological Infrastructure Programme	230 million
Talentia and Erasmus	19 million

Source: Prepared internally, based on parliamentary report of the regional minister, Mr Martín Soler on 4 June 2009

In previous chapters, the share-out or distribution of the aid associated to the different programmes mentioned has been highlighted. The universities consider the financial effort made up to date and the total funding insufficient.

236. As an essential means of reviewing the main funding mechanisms for supporting the universities' regional engagement, the funding model (2007-2013) is agreed within the Andalusian University Council and has to be renegotiated at the end of the period. Nevertheless, each funding contract between the Regional Ministry for Innovation, Science and Enterprise and each Andalusian university undergoes an annual review that enables specification of the engagements for the following year and, at the same time, review of the fulfilment of the previously agreed engagement performance. This review is carried out bilaterally between each university and the Regional Ministry for Innovation, Science and Enterprise. The 3rd Multiannual Investment Plan (2006-2010), which was agreed with the Andalusian University Council, is reviewable every two years in order to adjust the investment to new needs.

237. Some Andalusian universities are very critical of this model, considering that the trend towards equality and homogenisation does not take into consideration the singularities of the universities: the new ones argue that, being new, they require special funding, whilst others argue that consideration is not given to the objectives of each university, their history and structure or the problems of personnel consolidation or postgraduate education programme costs. The Social Councils, on their part, consider that the criteria for funding subject to performance are not applied rigorously, due to system inertias.

6.1.5 The universities' coordination of regional engagement activities

238. On 25 February 2005, the Andalusian Public Universities Association was created with the mission, among others, of: *“reinforcing the universities’ social projection and their engagement with society; increasing cohesion among universities and achieving closer contact between the respective university communities, whilst respecting their singularities, and defending the universities and university communities’ common positions of interest that justify their existence, in order to transfer them to the public authorities and society.”*

239. The association’s organisational structure comprises a General Assembly, in which all the universities participate, and Sectorial committees, in which the Vice-Rectors for the corresponding areas participate, presided over by a Rector. The University of Malaga is currently presiding over the association. The sectorial committees are each presided over by another University Rector, as shown in the following table.

Table 6.4: Association of the Andalusian Public Universities Sectorial Committees

Sector	
Teaching and Academic Planning	UCO
International Cooperation	UJA
Research, Technological Development and Innovation	UGR
European Area, Technological Development and Innovation	UCA
Students and Services	UAL
Libraries and Library Consortium	UHU
Management and Infrastructures	US
University Extension and Social Responsibility	UNIA
Information and Communication Technologies and General Secretariat	UPO

Source: Prepared internally.

240. Along with the Association of the Andalusian Public Universities, the Social Councils are organised through its Forum at regional level, and at a Conference of Social Councils at national level. The Andalusian Forum prepares impact studies on the current situation of andalusian universities: social responsibility issues, private funding in public universities, mobility, women presence, etc. The universities’ Social Councils channel the voice and relations of these institutions with other social stakeholders: public and private enterprises, non-profit associations, etc. Together with their respective councils, the universities manage their institutional relations, constructing a network of agreements with enterprises and public administrations for student work experiences, research, consultancy, funding, etc.

241. Furthermore, the Andalusian University Council organises the cooperation between the universities and the regional government. The relations with other Andalusian Knowledge System agents are set up either through participation of the universities in the structure or capital of some of these agents (Andalusian Technological Corporation, Science and Technology Parks), or through informal collaboration mechanisms (such as in the case of the the Andalusian Network of Technological Spaces), which could be improved.

6.1.6 Shared use of public and university facilities

242. As was seen in the previous chapter, universities sometimes use public infrastructure for their activities. Specifically, one of the most significant examples of this, due to its repercussion on teaching, research and university administration, is the use of the Andalusian Scientific Computer Network (RICA), which connects Andalusia’s research centres with one another and with other facilities outside the region.

Much more frequent is the use of university facilities by the general public and not just the members of the university community. The previous chapter provided a breakdown of the accessibility for the local and regional population to libraries, sports facilities, or language institutes.

6.2 Promoting regional dialogue and joint activities

243. This section deals with the different channels used by the different players in their mutual relations and with regional players. In general, all the universities and players consulted identified the players for regional dialogue among the universities, public administrations, enterprises, foundations and other non-profit entities, unions and business associations.

6.2.1 Mechanisms that promote regional dialogue

244. Dialogue between the different education levels is essential, especially when the higher education system that does not depend on the Regional Ministry of Education, but rather on that of Innovation, Science and Enterprises. Apart from the smoothness of personal relations, dialogue is ensured by the presence of the chairperson of the Andalusian School Council (part of the regional Ministry of Education) in the Andalusian University Council, as the body responsible for deciding the universities' regional policy. This is joined by the necessary dialogue for the teaching graduate degree or for the secondary education master degree. The existing gateways between higher vocational training and university studies are automatic between certain branches of knowledge, with 15% places reserved in the single cycle degrees and 7% places reserved in the first and second cycle degrees, pursuant to that established under Royal Decree 777/1998.

245. The university Social Councils, as the representative bodies of the political, economic, social and institutional interests and, therefore, the entities that enable the participation of society in the university, make it possible to organise dialogue and bring together different socially sensitive areas regarding the university. The studies drawn up by the Social Councils are, therefore, reference points for the integrated analyses of the university institution (as in the case of the University of Almeria, the University of Huelva, and the University of Cordoba). Other universities show certain distrust derived from the financial control exercised by the Social Councils.

246. The universities participate in a number of regional dialogue institutions, such as the Andalusian Council for International Cooperation for Development, with two representatives out of the total of twenty members. However, there is no directory or census of the universities' participation or of its members in other institutions or networks. This could be of interest, particularly to communicate the social significance of the university and its active participation in the design of public policy and social progress.

6.2.2 Regional development agents

247. The main regional dialogue stakeholders are the public institutions, the educational institutions at all levels, the business associations, professional societies and associations, unions and NGOs. There is no single vehicle for dialogue between the different groups. The universities, individually, establish relations with the different players, in the main, without a precise institutional framework or strategy, with exception to the subscription of collaboration agreements.

6.2.3 University contribution to the design and implementation of regional and local strategies

248. The universities collaborate with different regional players, both public and private, to carry out business strategies and prospecting studies for public administrations and institutions, and for foundations and non-governmental organisations, etc.

Specifically, some Andalusian universities have taken part in the preparation of the Andalusian Public Health Plan, the Andalusian Programme on the Levels of Accident in the Workplace, the Andalusian Volunteering Plan, the Andalusian Drug Prevention Plan, the Andalusian Cooperation for Development Plan and studies prepared by the Volunteering Observatory, as well as contributing to the Cultural Agendas of various institutions. They have also collaborated in national plans, such as the National Cooperation for Development Plan.

6.2.4 Participation of university personnel in public and private institutions

249. The number of university members (professors, researchers or staff) serving in the regional or local government is not homogenous for every institution. In recently created universities or those located in cities with smaller populations these numbers are small, perhaps due to their distance from the decision making hubs. Nevertheless, it is significant how the University of Jaen endeavours to get involved with all the institutions in which it can participate, such as the economic and social councils, the science and technology parks, etc.

In general, the Andalusian universities' alumni and professors include council members, people with important political responsibilities, institutional advisors, researchers in external institutional programmes, trustees in foundations, officers in associations, advisors for the strategic plans of public organisations, among other relevant posts. To mention just a few, there is the now minister and former President of the JA (Manuel Chaves, professor at the University of Cordoba), another former President of the JA (Rodríguez de la Borbolla, professor at the University of Seville), former President of the Andalusian Parliament (Ángel López López, professor at the University of Seville), the current Regional Minister for the Environment (Cinta del Castillo, professor at the University of Seville), as well as numerous Andalusian, national and European members of Parliament.

6.2.5 External institutions and their role in the universities' decision-making

250. Pursuant to the Spanish Constitution, universities are self-governing and, therefore, the role of external institutions in decision making is legally restricted. This is the case of budget control (revenue, expenditure, fees, etc) exercised by the Social Council, or the role of the national and regional evaluation agencies in the accreditation of teaching personnel and services, verification of degrees, etc. Examples of how the university has voluntarily taken into consideration the social environment when drawing up their strategic plans are the University of Malaga and the University of Almeria, which have invited local external stakeholders (economic, political and social) to participate.

6.2.6 Promotion and recruitment of international and national talent vs. development of local talent

251. There are initiatives implemented at European level (Marie Curie Programme) and by the central government (Visiting Professors Programme) designed to attract top line international researchers to Andalusian universities for temporary stays. This has a multiplying effect on attracting funding for research. However, it also produces the problem of competition with locally trained personnel, due to the lack of posts and permanent positions (either as civil servant or under contract). At regional level there are no programmes of this type financed by the regional government, and which some of the universities (such as the Pablo de Olavide University) consider there should be. Other universities (such as the University of Jaen) note the lack of a programme to recruit technicians to support research management. The system, however, leans generally towards promoting local professors and researchers.

6.2.7 Strategic and structural changes

252. The previous chapter included the structure devoted to the universities' social functions. This structure, comprehensive and complex, has been created very recently to respond to the demands made of universities in the last decade. Offices have been set up devoted to the development and follow-up of the strategic plan and the environmental and sustainability services, as well as structures for assistance to members of the university community and new infrastructures for research, which in numerous cases are open for use by external enterprises and institutions, under terms and conditions established by the universities (normally the payment of certain fees).

6.3 Evaluating and mapping the impact of the regional university system

253. The following section describes the initiatives for analysing different aspects of the Andalusian University System, as well as their dissemination and relation with the public image offered by the universities.

6.3.1 Impact studies and their dissemination

254. The best example of the evaluation of the impact of universities on their environment is the University of Jaen. In 2009 it commissioned a study of the socio-economic impact of the creation of the university in the province, as yet unpublished. The results have been presented to the provincial Economic and Social Council for it to issue its report in the next few weeks. After this it will be formally presented to both the government bodies and those of the university, as well as to the general public. The vehicles for dissemination are the meetings held between the university research groups and the different local agents (city councils, provincial government offices, etc.) These meeting are also attended by the local press to achieve greater dissemination.

255. Other universities have taken part in impact studies. The University of Malaga participated in the institutional assessment programme of the European Universities Association. The University of Granada's Social Council has also carried out an impact study. However, no impact study has been carried out in respect of Andalusia's universities as a whole or on each individually.

256. On its part, the Andalusian Social Councils Forum has carried out a study on the social responsibility reports, previously referred to. The authors of the document point out that, "*in the specific case of Andalusian universities [...] it is not that there are few activities carried out and structures created in aspects closely associated with social responsibility, but rather, perhaps, that there lacks the communication for them to be appreciated by society and the different interest groups*". In general, dissemination of results is carried out through the universities communication offices and local media. It would probably be possible to deploy dissemination initiatives that materialise the universities strong and manifest engagement.

257. Finally, the report issued by the Andalusian Ombudsman on universities and disabilities has had special significance, as it has enabled identification of Andalusian universities' strengths and challenges in this area in order to improve the facilities and regulate catering for the specific needs of this section of society.

6.3.2 Social image of the universities and their contribution to local and regional development

258. Universities recognise, in general, the efforts made to improve their social image, carried out both within university institutions, through their communication policies, and the regional government, with its support of the Andalusian University System as an essential component of the driving force for modernisation in Andalusia. The University of Malaga was the institution that received the best 2008 score from citizens of the province of Malaga. All the universities consider that the social value is much greater than people's actual perception of it, with the universities being unknown institutions and somewhat distant from citizen, in most cases.

When asked about the possible ways of improving the social perception of the university, some of the andalusian universities stated that the dissemination of the work of teaching personnel and researchers in society is not perceived as their own (the researchers' and professors') responsibility, but rather only that of the communication offices. The teaching and administrative personnel receive no incentive or remuneration for the dissemination of their work and its impact, with which a network of hundreds, and in some cases, thousands of social communicators - each professor and each member of the administration - is lost. Another example is the fact that scientific divulgation is not valued in the researcher's career, a circumstance that some universities consider evidences the lack of action to promote the university within society.

6.4 Institutional capacity building for regional involvement

259. This section deals, first of all, with some issues that need to be addressed in homogenous manner by all the universities, following which an individualised study of each universities' peculiarities and/or best practices is carried out. A brief abstract in a comparative manner is presented in the table A.6.1 (in appendix).

260. Andalusian universities, which have developed significantly during the last ten years, do not identify changes with the promotion of regional development, but rather with political changes within the Regional Ministry for Innovation, Science and Enterprise. The strategic plans of all Andalusian universities take into account the environment and regional development, as already analysed *ut supra*. When drawing up these plans they have not designated independent experts for their strategic planning, but depend on the human resources within their own institutions. University of Almeria and University of Malaga mention that they have used the participation of different social sectors (communication media, institutions, political parties and unions, business and productive sectors, and professional societies) at debate tables for drafting their respective strategic plans.

261. As already mentioned, all the Andalusian universities use the Regional ICT infrastructures (RICA). Moreover, e-administration is being implemented in all the universities to digitilise their management processing, and to promote and to democratise citizen and user access. All the tools necessary in this rollout have been developed and made available to Andalusian public universities by the Regional Government of Andalusia within the “2006-2010 Regional Government of Andalusia Public Services Modernisation Plan”.

262. The objective of the **University of Almeria** is to develop a new integrated model of interactions between the university and society. To do this it has created a Secretariat of Society Relations, within the Vice-Rector’s Office for Planning, Quality and Society Relations, which is responsible for channelling external relations. Notwithstanding this, other Vice-Rectors’ offices also manage specific relations in the areas of research, professional integration in the labour market, etc. The University of Almeria has nurtured its relations with the Social Council, creating a Social Council-Management Council Mixed Commission. This commission draws up and approves an annual action plan in order to promote relations between the university and its cultural, professional, economic and social environment at the service of the quality of university activity.

263. The **University of Cadiz** has strengthened its regional commitment through the creation of the OTRI in 2003 and the University-Enterprise Foundation (FUECA). Furthermore, its commitment to local and regional development led University of Cadiz to create a Vice-Rector’s Office for the “Bahía de Algeciras Campus”, in order to support this area of economic development. For similar reasons, a University Straits of Gibraltar Space has been created through an agreement with the City Council of Algeciras and the provincial government (*Diputación Provincial*) of Cadiz, to reinforce relations with the North of Morocco (particularly, Tangiers and Tetuan).

264. The **University of Cordoba** has reinforced its regional engagement, particularly by responding more to the needs of its environment through the education programmes offered and its proposals for labour integration, reinforcing knowledge transfer actions and intensifying its cultural offer and the university’s social projection through lifelong learning, campus sustainability and focus on a philosophy of peace, solidarity and volunteering.

265. The **University of Granada** considers that since the implementation of the national University Act, academic performance has been gradually modified towards greater engagement with knowledge transfer and generation of external resources. Management of needs, not only regional ones, has required improvement of the university’s management structures (particularly OTRI, employment offices and work experience) oriented more towards businesses. The OTRI enables implementation of a more flexible recruitment model, charged against specific programmes or projects.

266. The **University of Huelva** considers it has “very extensively” modified its management strategy for its engagement with the local and regional development.

267. The governing body at the **University of Jaen** declares strong engagement with regional development, greater than that of the university community in general. The University of Jaen has strong links with the strategic plan for the province of Jaen as its Rector is the Vice-chairman of the provincial plan. Several of the preparatory discussion tables for the provincial plan were coordinated

by the University of Jaen professors. All Schools have a quality management system, verified by the National Quality Agencia (AUDIT program, National Agency for Accreditation and Verification, ANECA).

268. The **University of Malaga** has assumed transparency, communication and information, from both the academic and management perspectives, as values that have enabled it to get closer to regional needs. The Vice-Rector's Office for Culture and Institutional Relations, together with the Vice-Rector's Office for University-Enterprise Relations act as important interface elements that enable coordination of regional actions in their respective areas (professional guidance, employment prospecting unit, etc.) The same can be said of the Vice-Rector's Office for Research in respect of knowledge generation and transfer activities (OTRI).

269. The **International University of Andalusia (UNIA)** highlights as the most significant change, thanks to the development of regional policies, the generalised use of the new technologies and the information and communication networks and their rapid development. In this case, and given its extended activity throughout the entire autonomous region, this, in turn, has brought important modifications in academic demands, cultural action and management methods: use of videoconferences as a regular means of communication and meetings, personnel training using the virtual campus, use of forums and collaborative tools, as well as documental managers and repositories.

The main mechanism for coordinating activities is the university's *Board of Trustees*, made up of representatives of the university, the Regional Ministry for Innovation, Science and Enterprise, the Andalusian universities' Rectors, representatives from the city councils and the provincial government offices in which the International University of Andalusia has a facility, and representatives of Andalusia's most important business organisations and unions. The *Decentralised Facilities Directors* constitute another mechanism to coordinate regional activities; these maintain permanent relations with the social, economic and cultural agents, promoting collaboration through agreements. Other specific actions are undertaken, such as the International University of Andalusia *Debates*, which are held in La Rabida every fortnight.

270. For the development and reinforcement of relations with its environment, the **Pablo de Olavide University** has created the Vice-Rector's Office for Social Participation, as well as the Knowledge and Culture Foundation and the Pablo de Olavide Municipalities Foundation. Its commitment to quality has been materialised, among other actions, in the assessment of all its Schools, the postgraduate School included, through the national evaluation agency's programme. It is the unique andalusian university with all schools certified, and was the first one in Spain, remaining up to day one of the few along with, for example University Carlos III (Madrid).

271. The **University of Seville** has developed a strong commitment with social responsibility through SACU (Social Assistance to the University Community) programmes. Besides, it has devoted a sole Vice-Rector office to transfer of research results, to strengthen its capabilities. This has been highlighted by its International Excellence Campus proposal. Far reaching importance is accorded to sustainability, which has resulted in the creation of a specific office in the Vice-Rector office for facilities and infrastructure.

6.5 Human and financial resources management

272. In first place, this section deals with some aspects in which the universities have responded homogeneously. Following this, the distinctive and differentiating aspects of each institution are set out. A brief abstract in a comparative manner is presented in the Table A.6.1 (in appendix).

273. In general, none of Andalusia's universities have developed specific mechanisms to reward their employees' engagement with their local or regional environment. The financial decentralisation of the Andalusian universities' funding, as a rule, only affects expenditure, not revenue. Most of the universities have decentralised financing in the units that hold the management responsibilities. In

some cases, this does not occur, such as in the University of Granada and the University of Huelva, which have conserved a centralised expenditure management system. The Faculty, in general, carries the burden of financial expenditure management linked only to research, although this is not small, which provokes a general complaint from professors on the need for effective administrative support.

274. The new financial resources are linked to knowledge transfer actions. All the universities agreed that reinforcement of relations with the business world and society in general will contribute to improve the ratio of private funding, whether linked to research (patents, consultancy contracts, etc.) and commissioned lifelong learning, or linked to the use of facilities (experimental or sports activities, complementary education programmes, etc.).

275. The **University of Almeria** has adopted diverse measures in its human resources policy that contribute indirectly towards improving its institutional engagement: incorporation of unemployed under social collaboration schemes; mobility of public sector employees; implementation of productivity-based remuneration systems, and implementation of flexitime working hours. Four years ago the University of Almeria implemented a skill-based management system, the ultimate purpose of which is to detect shortages through individual assessment of the group. Once the assessment has been carried out, the education programme is drawn up based on the results, endeavouring to provide a la carte learning. The University of Almeria has gone from an offer-based education programme to an education on demand system. Additionally there is funding (10% of the education programme funding) devoted to education outside the university, promoting quality learning imparted in other institutions.

The services and units with administrative responsibilities related to regional projection and development are: University Employment Service, Vice-Rector's Office for Culture, University Extension and Sports, Research Management Unit, and the OTRI.

The University of Almeria proposes a stronger commitment of the university Social Council in obtaining new financial resources, considering that this should be one of its main functions.

276. The **University of Cadiz** has no specific training programme for its staff. This university pays special attention to its relations with the local stakeholders and the productive fabric in order to attract new financial resources, particularly in the Technological Campus of Algeciras (Gibraltar area), where a stronger economic development is sought.

277. The **University of Cordoba** includes specific staff actions in its annual education plan for improving institutional knowledge, skills that are instrumental for exercising interpersonal relations, planning and leadership skills, processes-based management and quality management, as well as specific programmes in the areas of languages, computer tools and e-administration, which can be placed at the service of regional development.

278. The **University of Granada** reinforces the regional dimension in its OTRI personnel's training through symposiums and conferences. The decentralisation of financial management in this university is scant. It has been initiated for travel allowances and certain financial aspects of research and international relations. However, it presents an extremely centralised model. The teaching personnel are supporting around 20% of the administrative burden. In any case, they are hiring personnel to support research personnel.

279. The **University of Huelva** prepares its personnel through internal and independent courses. There is little financial management decentralisation. The Faculty does not support the financial management burden, although it does deal with some of the administrative management linked to research.

280. The **University of Jaen** considers that all the human resources policies take into consideration the regional dimension. For example, the union agreements are negotiated at regional level. Suitable training is offered to personnel, although University of Jaen considers there should be agreed training

at regional level for the university staff that face the challenges of regional funding management and local and regional engagement.

A magnificent practice implemented by the University of Jaen and which affects financial management is the subscription of internal performance-based contracts with university centres and departments within a joint responsibility model, in line with the objectives of the strategic plan and the commitment assumed under the University of Jaen-Regional Ministry for Innovation, Science and Enterprise performance-based financial contract, which regulates a significant percentage of its funding. Although there are support services in each university centre and department, the academic personnel support an important part of the administrative burden. This situation is viewed by the teaching and research personnel (who should not have to devote so much time to management tasks) as a problem that hampers true specialisation in terms of their activities and which needs to be resolved. To this end, all the initiatives designed to improve the quality of the services so that their operations can be optimised in accordance with the human resources available and the universities current needs (processes and skills-based management, services charters, etc.) are considered essential.

281. The **International University of Andalusia** does not define its work posts based on a criterion of regional engagement. Nevertheless, the universities constitutional act defines as its own scales those of the Rural Development Studies Centre Technicians, attached to this Centre with headquarters in Baeza, and those of the Andalusian Centre for Latin American Studies Technicians, with headquarters in La Rabida. The duties assigned to these posts are teaching and research in areas related to the responsibilities of these centres and their creation is a result of the strong involvement of these fields in each of these regions. There is no specific training in the Development and Training Plans related to regional development or remuneration or reward mechanisms for personnel for their implication or regional engagement.

The International University of Andalusia's financial decentralisation is extremely significant and a true example of social responsibility. Since its creation, the necessary mechanisms have been set up to carry out decentralised financial management in each one of its facilities. They have been set up as cost centres, capable of managing expenditure through delegation of the Vice-Rector's responsibilities to the Directors and Managers of each facility. Therefore, the Facility Directors, members of the Andalusian public university teaching staff, take on a significant administrative burden, specifically, in relation to the institution's financial management. The territorial dispersion of the International University of Andalusia facilities contributes towards an intense distribution of the economic streams produced by this university (suppliers, services, etc.). Furthermore and as in the case of the University of Jaen, the university links financial resources to performance via subscription of internal performance-based contracts. Resource assignment is carried out based on participation in the main academic offering and the performance engagements are closely linked to those the Regional Ministry for Innovation, Science and Enterprise requires from the university in its performance-based contract, with which the performance engagements of the facilities are necessarily aligned.

Within the International University of Andalusia's budget for 2009, decentralisation affects 47.25% of the total expenditure, although personnel expenses are still managed centrally and the percentage in respect of investment management drops sharply, with decentralised management referring mostly to bibliographic acquisitions, furnishings or similar, and excluding decisions on investment in land, buildings, constructions, computer material or other long-term investment, which are centralised.

Consequently, budget assignment in the facilities is carried out not only on an operational plane, to expedite operations, but there is also margin for making decisions of a more strategic nature. Due to this decentralisation, the Facility Directors assume an important role in the university's financial management, as they have a wide range of authority to decide on decentralised credit.

282. The **Pablo de Olavide University** has recruited personnel via its Foundation to support knowledge transfer activities. However, there is no specific training for personnel designed to reinforce their knowledge of the regional needs, the strategic planning, on obtaining resources or establishment of relations with the local and regional environment. Most of the financial decentralisation occurs in the Postgraduate Studies Centre and the summer courses, which operate independently as self-financed courses. To lighten the burden of researchers, financial management for

research is attributed to those responsible for the research, with the corresponding administrative support.

283. The **University of Seville** has developed a skills development department for its administrative staff and another one for its faculty. Both serve the regional development evolving need of the university community. Its expenses are decentralized in schools, departments and research groups co-ordinators. Specific administrative support for research management can be hired on the research expenses account.

6.6 Creating a new organisation philosophy

284. Andalusia's universities accept, in general, that aspirations of international excellence and regional engagement are fully compatible. Nevertheless, some universities give more weight to their commitment to international excellence, whilst others consider more important their engagement with local and regional development, as can be seen in the breakdown by university provided.

The former, which choose to favour international excellence, consider that the best contribution to regional development is to erect a top class university institution, committed to leading edge research and quality teaching. They consider that regional engagement is critical in first stages of the regional/university development but that once this has been achieved the distribution and subsidy system should be limited to the social minimum, increasing competitive funding. For the latter group of universities, if excellence is considered, not as a goal, but as a consequence of the improvement in the services provided by the university in its environment, there is no incompatibility. Working in the opposite direction can only pervert the system, resulting in a university that no longer fulfils its main function -that of a public service subject to the interests of society.

In any case, they consider that excellence is an extremely broad concept that can be analysed from different perspectives and that those chosen must be in line with perspectives that represent a true service to society: excellence in everything is not possible.

A brief abstract of the following individual positions is presented in a comparative manner in the table A.6.1 (in appendix).

285. The **University of Almeria** does not consider that there are any formal obstacles for greater regional engagement. The engagement is there, although it could be improved over time. It has decided for full integration in the EHEA and the 2015 University programme for specialisation, as can be seen in its participation in the International Excellence Campus mentioned at the beginning of this chapter.

286. The **University of Cadiz** considers its regional and international commitments are compatible with its possibilities of international positioning. In that respect, it has created a Latin American Space, the already mentioned Straits of Gibraltar Space and a Russian-Hispanic Space. It is a participant in the International Excellence Campus for Agri-food Sciences and coordinates one of the two with quality awards, the one devoted to Sea Sciences. Its current goals include promoting its specialisation in marine sciences as well as developing the Algeciras Technological Campus and the Jerez Campus.

287. The **University of Cordoba** considers that there is a limited vision of the university as a body exclusively for research and teaching, ignoring that culture also forms part of knowledge creation and transfer. The University of Cordoba has endeavoured to overcome this obstacle through the university's greater efforts for engagement with its surroundings. It has always held among its objectives that of becoming an international benchmark in its areas of specialisation. Continuing advancement in this respect has always formed part of its ambition and strategy, one of its results being the proposed International Excellence Campus strategy in an area essential for Andalusia's economic development such as agrifood. However, there is no contradiction between international ambition and focus on local and regional development, as the University of Cordoba's global excellence will have a knock-on effect on the international projection of Andalusia.

288. The **University of Granada** does not see any obstacles for the development of its regional engagement and considers that its Faculty and its staff have always held this as one of the university's missions. It has international aspirations that it considers are compatible with its regional engagement. Moreover, it considers both aspects provide mutual feedback.

289. The **University of Huelva** does not see any obstacles to fulfilling its local/regional engagement. At the moment it does not aspire to global excellence but is concentrating rather on local and regional engagement, although it does not consider these strategies incompatible. It does not rule out the possibility of aspiring to global excellence in the future, as the university develops.

290. The **University of Jaen** considers there are no obstacles for this regional engagement, which has been very much accepted by the university community. Nevertheless, it considers that perception of the local and regional institutions could be improved and that they could receive more collaboration from the University of Jaen. The university has focussed on excellence from the perspective of extremely strong local and regional engagement, which it does not consider incompatible with future development towards positions of excellence at international level.

291. The **University of Malaga** considers that there are no cultural obstacles for accepting greater regional engagement. The University of Malaga does not see any conflict between global excellence and regional engagement, but considers them complementary. In this respect, its 2009-2012 strategic plan includes different objectives and establishes different strategic lines and actions to achieve both.

292. The **International University of Andalusia (UNIA)** considers that the only obstacle for the university's greater regional engagement is financial. It does not consider regional and global strategies incompatible, although global competitiveness is not one of the International University of Andalusia's strategies.

293. According to the **Pablo de Olavide University**, financial limitations and lack of a decisive policy constitute the greatest obstacle for regional engagement. The Pablo de Olavide University considers that, if regional engagement means positioning Andalusia as a leading-edge region in terms of science and technology, there is no conflict. This posture clearly demonstrates that it places its international aspirations before local or regional considerations.

294. The **University of Seville** considers that there is no conflict between its commitment to the local and regional environment and its international excellence campaigning. More importantly, the University of Seville considers that the former –regional engagement- serves the later –international excellence.

CHAPTER VII: CONCLUSIONS, BEYOND THE SELF-EVALUATION REPORT

295. This self-evaluation process has made it possible to compile a series of data regarding the strengths of Andalusian universities and their engagement with regional development, whilst at the same time highlighting possible areas for improvement.

7.1 Overall vision

296. Over the last few decades, the Andalusian university system has gradually grown to its current stable dimension. In the last five years, the relations with the regional government have undergone profound changes and this self-evaluation has provided the opportunity of considering them with certain perspective. Consequently, it is possible to offer an overall vision of the best practices within the Andalusian University System, of the synergies between the universities and the regional government, and the incentives and challenges that await the system.

7.1.1 Best practices and the keys to their success

297. The Andalusian University System is characterised by a high degree of dialogue and cooperation. In the institutional plane, this collaboration has given rise to the Andalusian Public Universities Association. Likewise, this cooperative spirit has been materialised in joint initiatives as important as the Andalusian University Libraries Consortium, the Andalusian Virtual Campus or the Atalaya Project, to name just three examples mentioned in three different chapters of this report. However, this collaboration has not only been institutional; close relations have also been set up between the Andalusian University System's research groups and individual researchers, as it is demonstrated by the fact that 25% of the 2009 Excellence Projects include researchers from several universities. This intense relation comes from the common history of the universities, some of which have their roots in Granada or Seville from where their researchers subsequently gradually "repopulated" the regional university territory. Further examples of the commitment to interuniversity collaboration are the joint initiatives within the national 2015 University Programme in its International Excellence Campus initiative.

298. These joint initiatives are merely the tip of the iceberg: the Andalusian universities are known in the national arena for achieving a position of consensus prior to any meeting within the framework of the Rectors Conference. Furthermore, the image they project outside Andalusia is that of a system of universities, rather than 10 independent institutions.

299. Both the excellent personal relations among the Rectors and the identification of training and research needs at local and regional levels have contributed towards the aforementioned.

Although the Rectors' relations may seem a minor, temporary or subjective factor, the stability of these relations is unquestionably an essential element for maintaining the dialogue between universities in times of financial scarcity and, in some cases, divergent interests. Clear identification of the historical deficit in skill based learning and applied research in the region is a basic starting point to ensure that any political decision of the regional government or commitment of the Andalusian universities' governing bodies obtains the desired results.

300. In this context, the weakness of the productive fabric, together with the impact of the economic crisis that has particularly affected the construction and tourism sector, should be seen as an area of possible improvement for the development of Andalusia. Together with skill based learning and research, entrepreneurship of graduate students should be reinforced. The lack of large enterprises and SMEs with high technological value is a true handicap for more intense relations between universities and the productive fabric and, consequently, the universities need to engage in improving the productive fabric in order to improve their own knowledge transfer results. In this respect, the joint initiatives between the Andalusia's universities and the Regional Ministry of Labour in the creation of the Argos Observatory, for monitoring job placement among graduates, provide a source of strategic data for the analysis and development of future lines of action.

301. The political and financial support of the regional government in the new challenges for the Andalusian universities was materialised, in the first place, through the creation of the Andalusian Universities Council as a platform for dialogue and decision making between the political and academic representatives. In second place, it was materialised in the decision to merge the responsibilities for universities and research with those for industrial affairs and enterprises, under the umbrella of the Regional Ministry for Innovation, Science and Enterprises (2004). This decision has brought about irreversible changes –positive ones– in both the university and the economic systems in Andalusia. The Andalusian initiative of moving the universities from the area of education to that of innovation and enterprises has been emulated by other regional governments (such as the Valencian and Catalanian governments) and even by the central government (though not with its full consequences as the Ministry of Industry and the Ministry of Science and Innovation –responsible for the universities during the 2008-2009 academic year– continued to be independent ministries).

7.1.2 Synergies between the university and the regional government

302. The objectives of the universities and the regional government are aligned, even though their respective short-term visions do not always converge. Drawing up this report has highlighted the interest of the universities and the regional government for differentiation, both in terms of teaching and in terms of research. Now that the Andalusian university system has reached its optimum size, the two great challenges for the system are: on one hand, to continue adapting the curricula to the European Higher Education Area and, on the other, the intensification of the university-society relations.

303. Although the first of these challenges provokes a degree of tension, this does not derive so much from the relationship between the regional government and the Andalusian universities, but rather it is due to the slow and sometimes disjointed regulation at national level. Likewise, the relations between the evaluation agencies –national and regional– and between these and the regional government have made the adaptation process complex, stressful and sometime unpredictable, both for the universities and for the regional government. In the area of lifelong learning, for years the Andalusian universities have been devoting part of their energies to providing education programmes for the elderly, specialisation and continuous training courses, and university extension. Likewise, the internships in enterprises, as a bridge between education and initiation of the professional activity for graduates, demonstrate the universities' engagement with their local and regional environment, today assessed and financially rewarded by the regional government. Both actions –lifelong learning and job placement– are among the objectives of the European Higher Education Area.

304. As regards the second of the challenges, reinforcement of the relations between the university, society and the regional government, both the universities and the regional government are committed to intensifying engagement. Although traditionally the regional government has not become involved in the universities' social, cultural or environmental activities, the requirement of a social responsibility report, as a component of the performance-based funding contracts, has given public endorsement to the university initiatives. The social, cultural and environmental activities carried out by the universities independently from the regional government show their social implication in the times prior to the current performance-based funding contracts, in which this commitment did not receive any direct financial reward from the regional government. There are numerous examples of actions embarked upon independently by the universities to reinforce their local and regional engagement. It is sufficient to mention, in this respect, the territorial dynamics of the universities, which provide service –especially in university extension and courses for the elderly– in different municipalities in each province.

305. However, the actions the Regional Ministry for Innovation, Science and Enterprise supports most directly within this university-society relationship are those relating to research and technology transfer, with a view to transforming the regional productive fabric and the labour structure. The support of the university research strategies is one of the basic aspects of the performance-based contract. At the same time, the regional callings programmes in specific and competitive research

areas seek to support research that include, on one hand, quality of excellence and, on the other, links to the productive fabric.

306. Taking into account the weakness of Andalusia's productive structure, in which there are predominantly SMEs and micro-SMEs, the regional government has put in place a complex institutional and regulatory structure, namely the Andalusian Knowledge System, with the participation of the agents of knowledge creation, transfer and application. This entails incorporating the universities (research groups, TTOs and spin offs) in all three stages of the model, as well as setting up a network of relations between the agents. It is in this respect, perhaps, that the model would seem to have some weaknesses. Despite being created to expedite the relations with a productive fabric in which research and innovative activity is low, neither the interface entities created (Andalusian Network of Technological Spaces –RETA-, Andalusian Technological Corporation –CTA-) nor have the universities, up to now, been capable of building fluid relations. The universities feel slightly displaced in their role of innovation transmitters to the enterprises. The interface entities seek quick and effective actions and they do not consider that the universities can give sufficient guarantees in this respect. These relations, which could easily be strengthened from the institutional plane, cause the system as a whole to lose part of its value.

Additionally, the existence of several online tools for technology availability (Andalusian Network for Transfer of Knowledge –RATRI-, Andalusian OTRINetwork –RedOTRI Andalusia-, the Andalusian Network of Technological Spaces research engine –RETA-, Andalusian Scientific Information System –SICA-, etc.) weakens the system, creating a dangerous Achilles' heel: the absence of a unique vision and a window with correct data traffic and centralised dissemination of both the needs and the technological resources available.

307. In short, no serious conflicts of interest exist between the Andalusian universities and the regional government. Their relations are smooth and based on dialogue, even though, as we have seen during these months of study, the universities are permanently concerned about their funding and the application of stringent and public control criteria within the performance-based funding system (which accounts for 30% of the public funding of the Andalusian universities).

7.1.3 Incentives for regional engagement

308. The regional engagement is a spontaneous part of the university personnel's activities, despite the absence of any specific internal reward mechanisms within universities, other than those that encourage productivity and quality in carrying out the duties that correspond to each area of personnel.

In the area of research and knowledge transfer, one of the reward systems is the direct financial benefit that the university, research groups and researchers obtain from exploiting their results or from consultancy contracts. Apart from this, the greater value given to knowledge transfer actions in terms of the researcher's *curriculum* is another factor that could contribute to more intense dedication by researchers to the divulgation of knowledge and transfer of innovation and research.

In the relation between the universities and the regional government, however, regional engagement is reinforced through a series of financial incentives. These can be summarised in the performance-based funding contracts, which, as has been repeatedly mentioned in this self-evaluation, directly reward the engagement commitment and the results achieved. These are joined by other measures, such as research and knowledge transfer incentive programmes and participation in innovation projects presented by enterprises for public funding.

309. The central government's 2015 University Programme is of particular interest as its call for proposals for the International Excellence Campus has encouraged strategic alliances. In Andalusia, this has led the universities to take a decisive interest in specialisation, which, as pointed out in the chapter devoted to research, had been lacking. Furthermore, it has promoted alliances among the region's universities around subject areas, reinforcing regional, national and international competitiveness in the medium sized institutions that initially demonstrate preference for their immediate local environment, as was highlighted in chapter VI, devoted to forms of cooperation. Both effects –greater strategic definition and institutional aggregation– will contribute towards increasing

the participating universities' visibility, associated to a brand component (International Excellence Campus) and a preferential teaching and research environment.

7.1.4 Future challenges in decision-making

310. At the moment, the universities are facing strategic decisions, both as regards defining a criterion to differentiate each institution, as we have just seen, and as regards adjusting their degrees to the EHEA.

311. In respect of this latter challenge, the main characteristic of the process in Andalusia has been the regional government's requirement for homogeneity in undergraduate curricula, which has been achieved through a core of 75% common subjects in the different universities teaching it. Interuniversity commissions set up by areas of knowledge have designed the "skeleton" of said common portion of the curricula. On the other hand, the future challenge lies in designing curricula for the postgraduate and doctoral studies that enable the development of each institution's research and knowledge transfer potential to the highest levels. It will probably be at postgraduate level where the competitiveness between the Andalusian and other Spanish universities enter into play. And a clear analysis of the strengths of each university in terms of research and postgraduate studies will strengthen the Andalusian University System's recruitment ability. Likewise, another sure-fire path to take is that of alliances for offering interuniversity programmes to accompany the joint university research lines carried out in Andalusia (which are extremely numerous) and which transpose to the area of teaching the focus of the International Excellence Campus programme.

312. In the area of research and compared with Spain as a whole, the Andalusian universities obtain good results. Furthermore, the researchers from the different institutions cooperate intensely, as the universities do. However, the universities have to decide on a clear strategy for connection to the productive fabric, avoiding possible institutional duplications between the TTOs and the Foundations, and improving relations with the Andalusian Knowledge System agents, in particular those related to management and interfacing, such as the Andalusian Technological Corporation and the the Andalusian Network of Technological Spaces. This is a process that has to be carried out jointly and particularly with the support of the regional government, which has drawn up the strategy and the map of existing players. No institutions should dispossess the others of what are their own areas of action. In this same sense, the regional government should clearly commit to a single technological portal on which the regional offer and demand can be cross-referenced, avoiding duplication of systems, as these cannot be permanently updated all at the same time. The still to be created Knowledge Agency will have to accept the challenge of providing visibility to the technological offering, avoiding duplications within the system.

313. In the social, cultural and environmental context, the universities have come a long way. The Atalaya Programme may well be exportable to other sectors of the universities' relations with society. It is important to reinforce communications within the local environment of each institution and although numerous facilities are accessible to the general public (libraries, sports services, language schools, etc.), failure of the dissemination mechanisms means, in turn, failure to achieve awareness – outside of the university community– of the possible use of the resources. The universities need to assume as their own the social responsibility strategy, placing special emphasis on monitoring, control and transparency as regards the results of their actions in respect of vulnerable groups (for example, the disabled) and in areas such as gender equality and sustainability. In this respect, it is important to promote individual commitment to responsibility within each institution, of which the performance-based contracts between the university and its centres and departments constitute a magnificent example of best practices.

314. The universities' integration in their local and regional environment is a constant, and yet they have not been able to provide a breakdown of the institutions in which they participate (boards of directors, boards of trustees, advisory bodies), despite the fact that they collaborate with numerous organisations. The identification and publication of these relations constitutes a channel for the

reinforcement of the relations with society and the universities' image as stakeholders engaged with their local and regional environment.

7.2 Strengths, Weaknesses, Opportunities and Threats of the universities' contribution to regional development

315. The Andalusian universities have highlighted an equal number of weaknesses and strengths, while they declare few threats and opportunities. As in other chapters, we include a table that sets out each of these.

<i>Towards greater contribution to the region</i>	
<p style="text-align: center;">Strengths</p> <p>In relation to the universities</p> <ul style="list-style-type: none"> ✓ Consolidated research tradition ✓ Existence of research infrastructure ✓ Consensus on 75% common part of degrees <p>In relation to the regional government</p> <ul style="list-style-type: none"> ✓ Clear orientation of the regional government towards R&D&I ✓ Increased investment, from 0.36% to 1.21% GDP <p>In relation to the local and regional environment</p> <ul style="list-style-type: none"> ✓ Incorporation of the External Advisory Commissions in the design of new degrees 	<p style="text-align: center;">Weaknesses</p> <p>In relation to the government</p> <ul style="list-style-type: none"> ✓ Lack of confidence in the TTO's (regional government) ✓ Lack of continuity in Evaluation Agencies research assesment and in transfer assessment criteria (regional and central government) ✓ Non-existence of a regulatory framework for defining careers in research and teaching (central government) ✓ Delay in defining the guidelines for undergraduate curricula (central government) ✓ Non-existence of a clear degrees map (regional government) <p>In relation to the universities</p> <ul style="list-style-type: none"> ✓ Need for a generational changeover among the leading researchers in their respective fields ✓ Lack of definition of a support workforce for knowledge transfer <p>Interaction among stakeholders</p> <ul style="list-style-type: none"> ✓ Lack of entrepreneurship and a philosophy of enterprise and innovation
<p style="text-align: center;">Opportunities</p> <p>In relation to the universities</p> <ul style="list-style-type: none"> ✓ Position of the university in the local, regional, national and international environment <p>In relation to the regional government</p> <ul style="list-style-type: none"> ✓ Results of the impact assessment of higher education on regional development ✓ Awareness and concern of the Andalusian government for regional development <p>In relation to the local and regional environment</p> <ul style="list-style-type: none"> ✓ The EHEA, a new opportunity to develop university objectives 	<p style="text-align: center;">Threats</p> <p>In relation to the government</p> <ul style="list-style-type: none"> ✓ Lack of general funding ✓ Excessive red tape ✓ Lack of financing for adaptation to the EHEA <p>In relation to the universities</p> <ul style="list-style-type: none"> ✓ Too locally oriented universities ✓ Lack of publicity of the Report from the Commission for Teaching Innovation in Andalusian Universities (<i>Innovación de la Docencia en las Universidades Andaluzas</i>, CIDUA) <p>In relation to the environment</p> <ul style="list-style-type: none"> ✓ Lack of participation of the social stakeholders in the new degrees ✓ Economic crisis

7.3 Regional vision and future policy

316 The regional government has committed to a decentralised university model in which each province has, at least, one university. This process, materialised over the last forty years, seeks to revert a historic deficit at cultural, economic and industrial level and a situation of dependence on the agricultural sector, with concentration of property in the hands of few. Apart from this, a region that is the size of many European countries needed to have greater presence of universities throughout its territory. Despite the fact that this decision may seem logical, although it has not always been properly understood by the older universities, today there is a need to promote greater definition of the identity of each institution. At the same time, the regional government wants to commit the universities to an interuniversity sectorial collaboration strategy.

317. It is evident that merging the responsibilities on universities, research, enterprises and industry has been a positive move. Consequently and in view of the results of this self-evaluation, no significant changes are envisaged in the structuring of responsibilities. Notwithstanding this, in the area of research and innovation, an analysis of the relations forged between the Andalusian Knowledge System agents could be of interest. One of the fruits of this model is the leading position of the Andalusian universities in the creation of spin offs at national level. Despite being based on the goal of taking research closer to the productive fabric, it would seem that the resulting model has evolved with a hypertrophy of organisations, or with a deficit of dialogue or relationship between these. In this respect, the results of this evaluation of the regional impact of the universities should be complemented with the results of the study on the innovation system in local development, which is being carried out within the framework of the OECD's LEED initiative, and which is led in Andalusia by the the Andalusian Network of Technological Spaces. Likewise, perhaps the time has come to evaluate the strategic and planning instruments, such as the Andalusian Plan for R&D&i and the Andalusian Knowledge System, as well as the incentives associated to the Andalusian Knowledge System, in order to establish an overview of the future strategies.

318. Each university has produced significant change in the province in which it is located, both in cultural terms and from the perspective of society, education and innovation. The pending task is to achieve a balance between excellence and the social function, taking into account that research and knowledge transfer, in themselves, are not enough to turn the Andalusian social and productive fabric into a more industrialised one. Innovation and knowledge transfer has to go hand in hand with the promotion of entrepreneurship within a business structure, which is currently lacking in our regional environment. As was seen in the first chapter, it is an extremely dynamic fabric in terms of enterprise creation, but most of these are labour intensive and not innovation intensive. However, all of this cannot overshadow recognition that one of the universities' main missions is providing citizens with improved skills, and this requires investment in humanistic studies and research: training in businesses and science does not mean training for entrepreneurship. On the other hand, creating responsible and cultured citizens can generate a more dynamic economic fabric and, above all, contribute towards reinforcing the social fabric in a globalised and socially unequal world.

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APPENDIX

Table A.1.1: Natural Protected Spaces in Andalusia

National Parks		
Name of the National protected park	Province	Total Area (ha)
Sierra Nevada	Granada/Almeria	85 883
Doñana	Huelva/Seville	54 252

Natural Parks		
Name of the Natural protected park	Province	Total Area (ha)
Cabo de Gata-Níjar	Almeria	49 512
Sierra María-Los Vélez	Almeria	22 562
Bahía de Cádiz	Cadiz	10 522
De la Breña y Marismas del Barbate	Cadiz	5 077
Del Estrecho	Cadiz	18 931
Los Alcornocales	Cadiz/Malaga	167 767
Sierra de Grazalema	Cadiz/Malaga	53 411
Sierra de Cardena y Montoro	Cordoba	38 449
Sierra de Hornachuelos	Cordoba	60 032
Sierras Subbéticas	Cordoba	32 056
Sierra de Baza	Granada	53 649
Sierra de Castril	Granada	12 696
Sierra de Huétor	Granada	12 128
Sierra Nevada	Granada/Almeria	88 966
Sierra de Aracena y Picos de Aroche	Huelva	186 827
Doñana	Huelva/Seville/Cadiz	53 835
Despeñaperros	Jaen	7 649
Sierra de Andújar	Jaen	74 774
Sierra Mágina	Jaen	19 961
Sierras de Cazorla, Segura y Las Villas	Jaen	209 920
Montes de Málaga	Malaga	4 996
Sierra de las Nieves	Malaga	20 163
Sierras de Tejeda, Almijara y Alhama	Malaga/Granada	40 663
Sierra Norte de Sevilla	Seville	177 484
Cabo de Gata-Níjar	Almeria	49 512
Sierra María-Los Vélez	Almeria	22 562
Bahía de Cádiz	Cadiz	10 522
De la Breña y Marismas del Barbate	Cadiz	5 077

Source: Regional Ministry for Environment. Regional Government of Andalusia.

Table A.1.2: Immigrants by country of origin and by destination province in Andalusia in 2008 (absolute data)

Country of origin/province	Almeria	Cadiz	Cordoba	Granada	Huelva	Jaen	Malaga	Seville	Total
Africa	8 766	826	752	1 672	989	588	3 986	1 887	19 466
Central America	132	226	142	187	71	44	469	631	1 902
North America	54	216	32	111	19	16	306	225	979
South America	1 839	985	882	1 614	509	418	5 770	3 947	15 964
Asia	219	152	108	269	86	75	1 139	513	2 561
Europe (EU-15)	2 346	834	204	1 035	596	160	8 031	928	14 134
Europe (rest)	3 810	431	1 004	1 121	1 307	242	2 923	1 620	12 458
Oceania	2	6	0	5	3	0	18	8	42
Unknown origin	3 058	1 798	566	1 928	1 691	1 460	4 659	1 852	17 012
Total	20 226	5 474	3 690	7 942	5 271	3 003	27 301	11 611	84 518

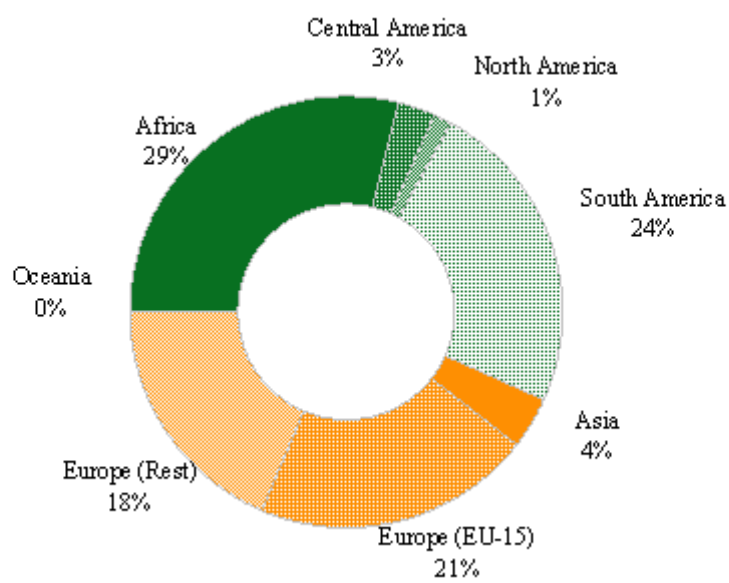
Source: Prepared internally from Spanish Statistical Institute (INE) data.

Table A.1.3: Immigrants by country of origin and by destination province in Andalusia in 2008 (percentage)

Country of origin/province	Almeria %	Cadiz %	Cordoba %	Granada %	Huelva %	Jaen %	Malaga %	Seville %	Total %
Africa	43.34	15.09	20.38	21.05	18.76	19.58	14.60	16.25	23.03
Central America	0.65	4.13	3.85	2.35	1.35	1.47	1.72	5.43	2.25
North America	0.27	3.95	0.87	1.40	0.36	0.53	1.12	1.94	1.16
South America	9.09	17.99	23.90	20.32	9.66	13.92	21.13	33.99	18.89
Asia	1.08	2.78	2.93	3.39	1.63	2.50	4.17	4.42	3.03
Europe (EU-15)	11.60	15.24	5.53	13.03	11.31	5.33	29.42	7.99	16.72
Europe (rest)	18.84	7.87	27.21	14.11	24.80	8.06	10.71	13.95	14.74
Oceania	0.01	0.11	0.00	0.06	0.06	0.00	0.07	0.07	0.05
Unknown origin	15.12	32.85	15.34	24.28	32.08	48.62	17.07	15.95	20.13
Total	100	100	100	100	100	100	100	100	100

Source: Prepared internally from Spanish Statistical Institute (INE) data.

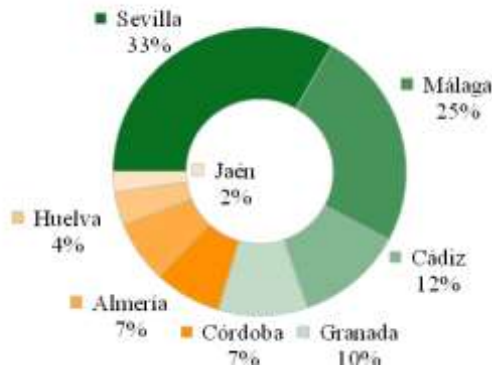
Graph A.1.1: Origin of residential variations in Andalusia in 2008



Source: Prepared internally from Andalusian Statistical Institute (IAE) data.

Graph A.1.2: Residential variations by origin and destination province in Andalucía in 2008

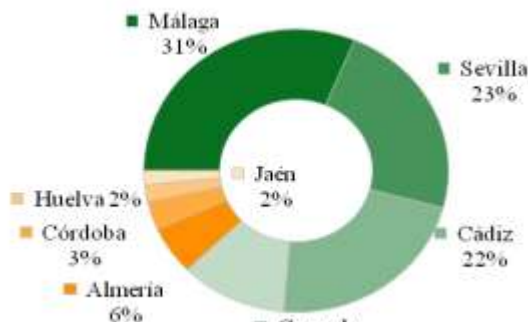
CENTRAL AMERICA



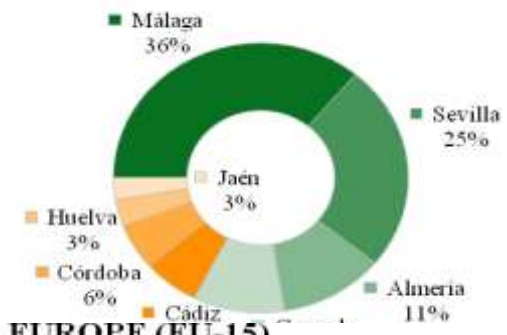
AFRICA



NORTH AMERICA



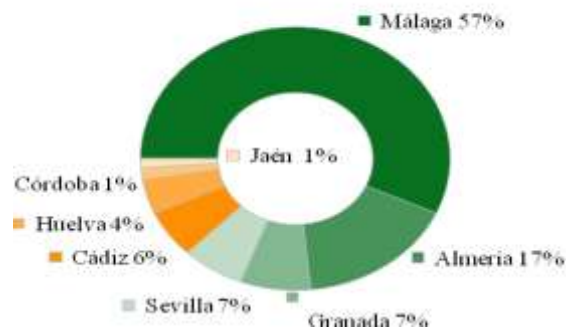
SOUTH AMERICA



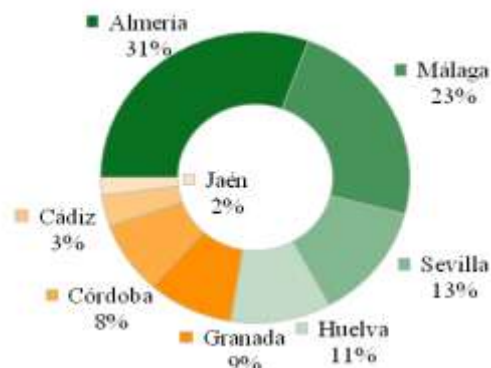
ASIA



EUROPE (EU-15)



EUROPE (Rest)



OCEANIA



Source: Prepared internally from Andalusian Statistical Institute (IAE) data.

Table A.1.4: Immigrants registered by education levels for the 2002-2008 period (absolute data)

Country of origin (Absolute data)	Child Education	Elementary	Secondary	High School	Vocational Training	Handicapped Programs	Social Program	Special Program	Adult Education
Africa	13 880	29 556	19 572	1 552	2 850	354	876	911	28 082
North America	867	1 933	1 071	399	113	3	7	258	222
Central America	386	1 753	1 702	310	276	11	29	150	363
South America	13 546	45 797	30 712	4 668	3 854	288	336	1 780	4 866
Asia	1 591	4 351	3 574	526	215	16	22	769	3 863
Europe (EU-27)	23 251	66 256	42 085	5 208	2 352	190	197	3 788	20 302
Oceania	31	69	61	15	3	1	-	58	35
Stateless and unknown origin	292	521	461	145	76	-	3	895	1 334
Total	53 944	150 236	99 238	12 823	9 739	863	1 470	8 609	59 067

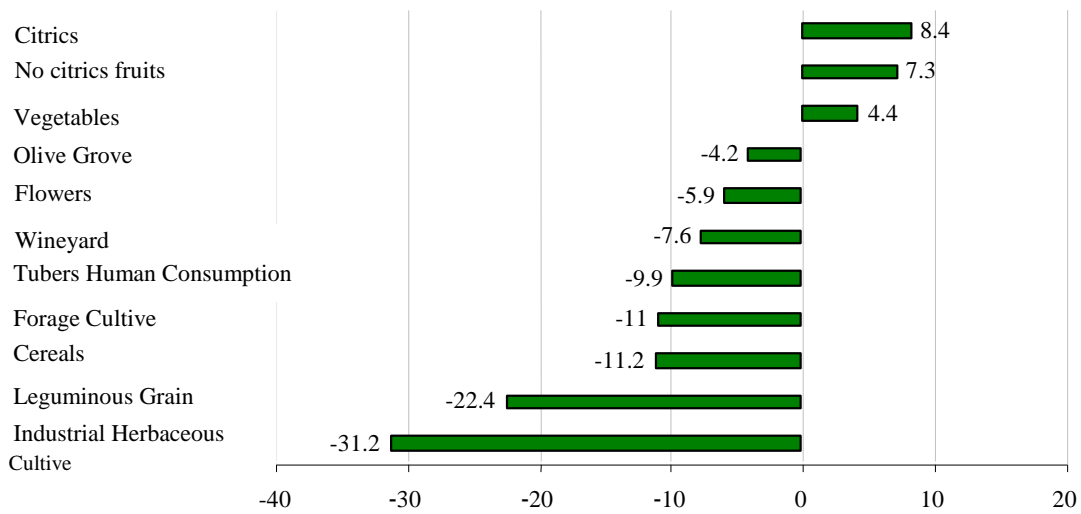
Source: Prepared internally from Andalusian Statistical Institute (IAE) data.

Table A.1.5: Immigrants registered by education levels for the 2002-2008 period (percentage)

Country of origin (Percentage)	Child Education	Elementary	Secondary	High School	Vocational Training	Handicapped Programs	Social Program	Special Program	Adult Education
Africa	25.73	19.67	19.72	12.10	29.26	41.02	59.59	10.58	47.54
North America	1.61	1.29	1.08	3.11	1.16	0.35	0.48	3.00	0.38
Central America	0.72	1.17	1.72	2.42	2.83	1.27	1.97	1.74	0.61
South America	25.11	30.48	30.95	36.40	39.57	33.37	22.86	20.68	8.24
Asia	2.95	2.90	3.60	4.10	2.21	1.85	1.50	8.93	6.54
Europe (EU-27)	43.10	44.10	42.41	40.61	24.15	22.02	13.40	44.00	34.37
Oceania	0.06	0.05	0.06	0.12	0.03	0.12	0.00	0.67	0.06
Stateless and unknown origin	0.54	0.35	0.46	1.13	0.78	0.00	0.20	10.40	2.26
Total	100	100	100	100	100	100	100	100	100

Source: Prepared internally from Andalusian Statistical Institute (IAE) data.

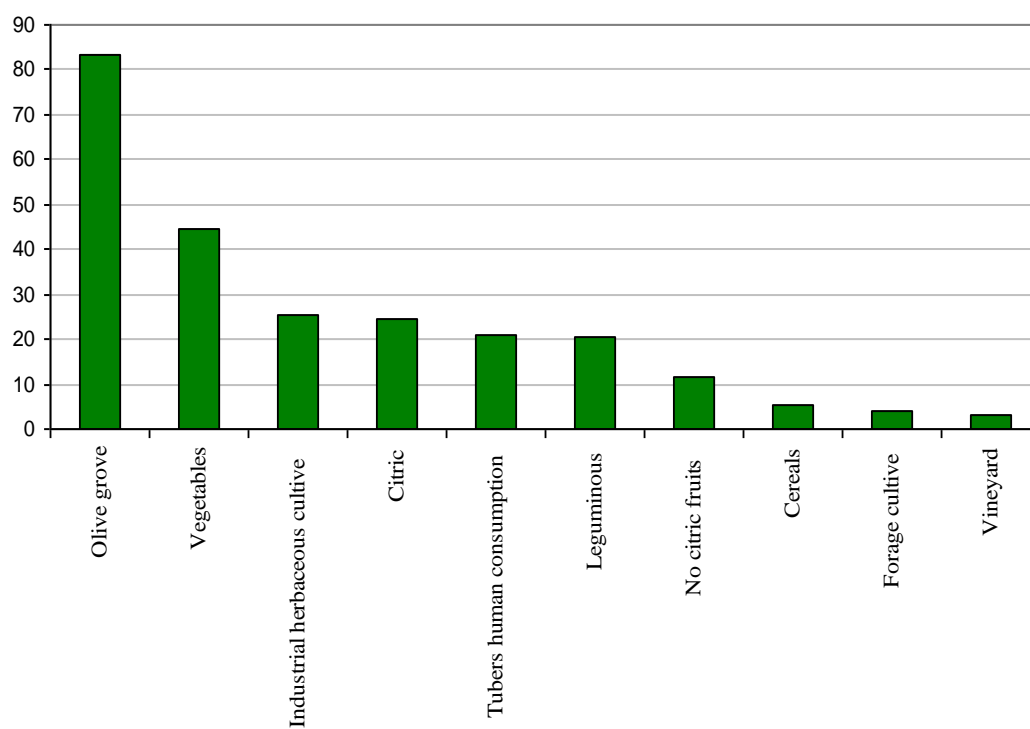
Graph A.1.3: Agricultural Production. Andalusia, 2008



Source: 2008 Andalusian Economic Report. Secretary General for Economy. Regional Government of Andalusia.

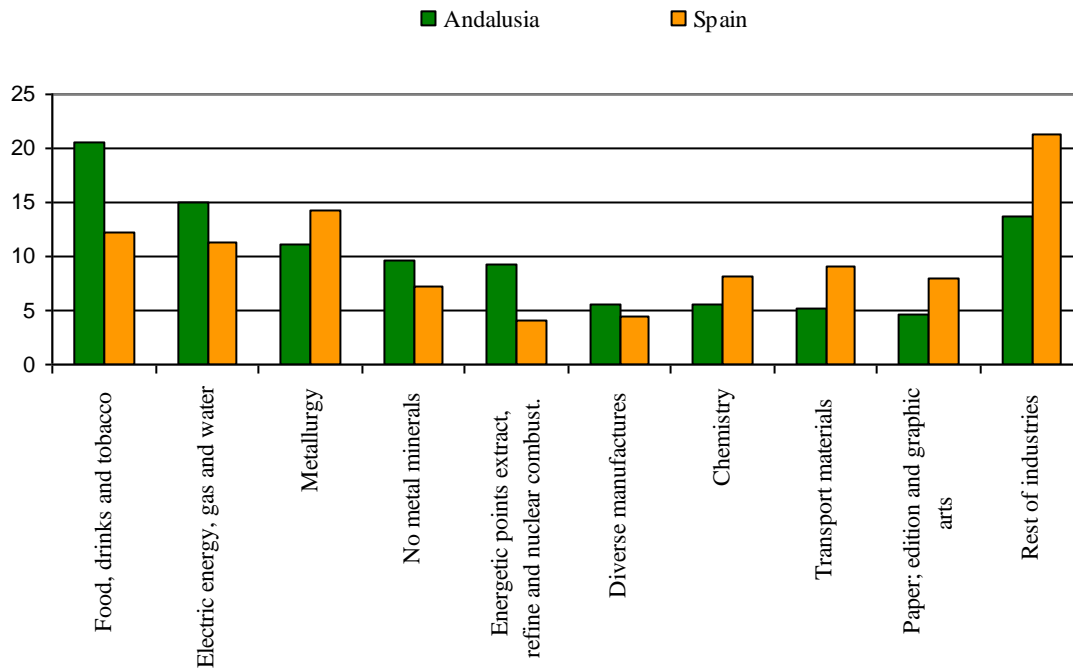
Note: Inter-annual variation of the production by volume. Date according the surface and production for December 2008.

Graph A.1.4: Contribution of the Andalusian agricultural production to the national total. 2008



Source: 2008 Andalusian Economic Report. Secretary General for Economy. Regional Government of Andalusia.
Note: % Andalusian production on the national total by farming. Productions measured by volume. Data according surface and productions for December 2008.

Graph A.1.5: Industrial sector structure by sub-sectors. 2005



Source: 2008 Andalusian Economic Report. Secretary General for Economy. Regional Government of Andalusia.
 Note: GAV on basic prices. Current Euro. % on the total industrial production.

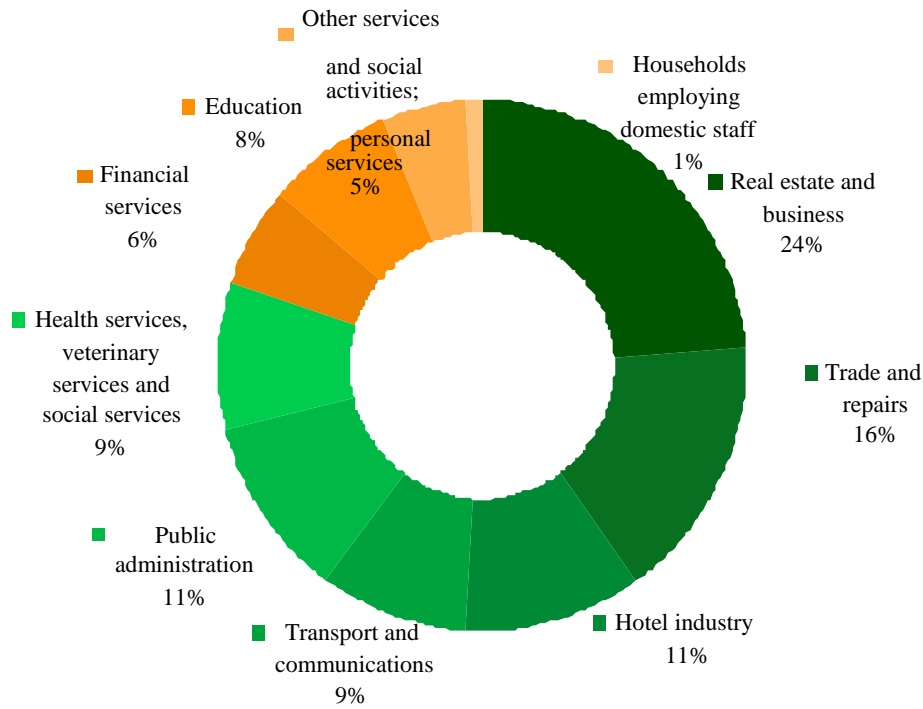
Table A.1.6: Sales of industrial products. Andalusia-Spain

	2008		
	Andalusia	Spain	% on Spain
Food, drinks and tobacco	12 879	78 962	16.3
Textile and tailoring	414	9 690	4.3
Leather and shoes	114	2 809	4.1
Wood and cork	415	6 470	6.4
Paper, graphic art, and similar	1 023	17 323	5.9
Chemistry, Pharma and oil refinery	12 457	68 242	18.3
Rubber and plastic manufactures	951	16 446	5.8
Non metallic mineral products	3 023	24 766	12.2
Production, first transformation and metal smelting	4 759	33 060	14.4
Metal products	2 820	34 708	8.1
Optical and electrical components and hardware	1 240	21 648	5.7
Machinery and equipments	693	17 519	4.0
Transport and packing materials	3 022	56 173	5.4
Furniture and industrial manufactures	945	9 852	9.6
Machinery repair and installation	987	12 031	8.2
Electric energy, gas and steam production	2 732	21 492	12.7
TOTAL	48 474	431 191	11.2

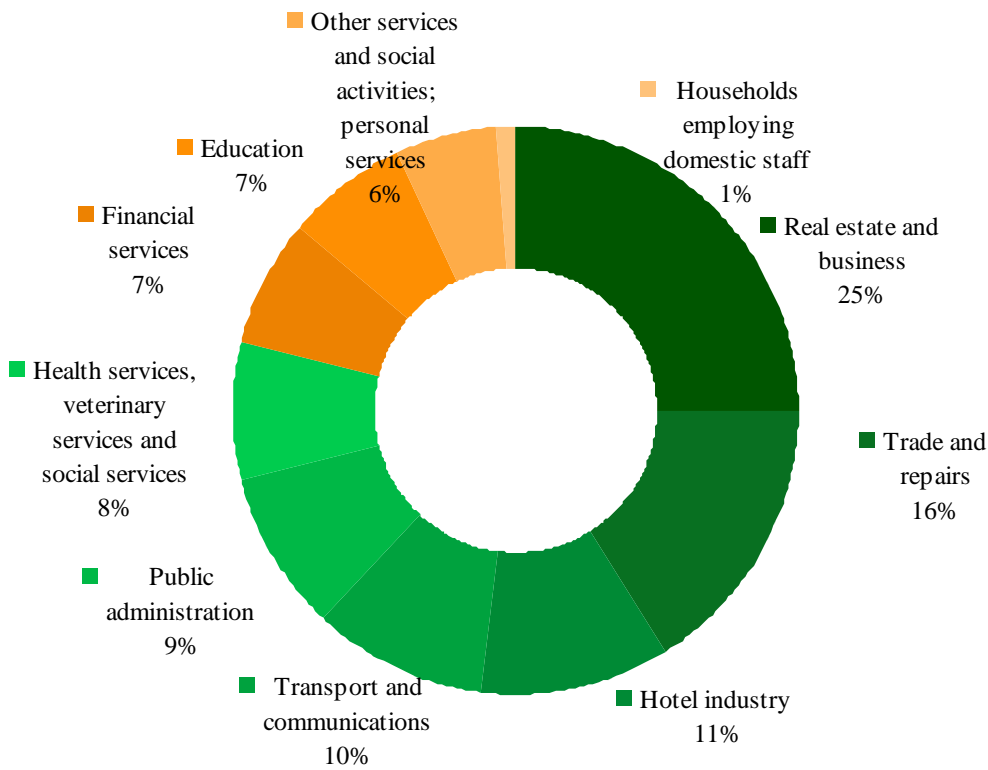
*Source: 2008 Andalusian Economic Report. Secretary General for Economy. Regional Government of Andalusia.
Note: Millions of euros.*

Graph A.1.6: Services sector structure by sub-sectors. 2005

Andalusia



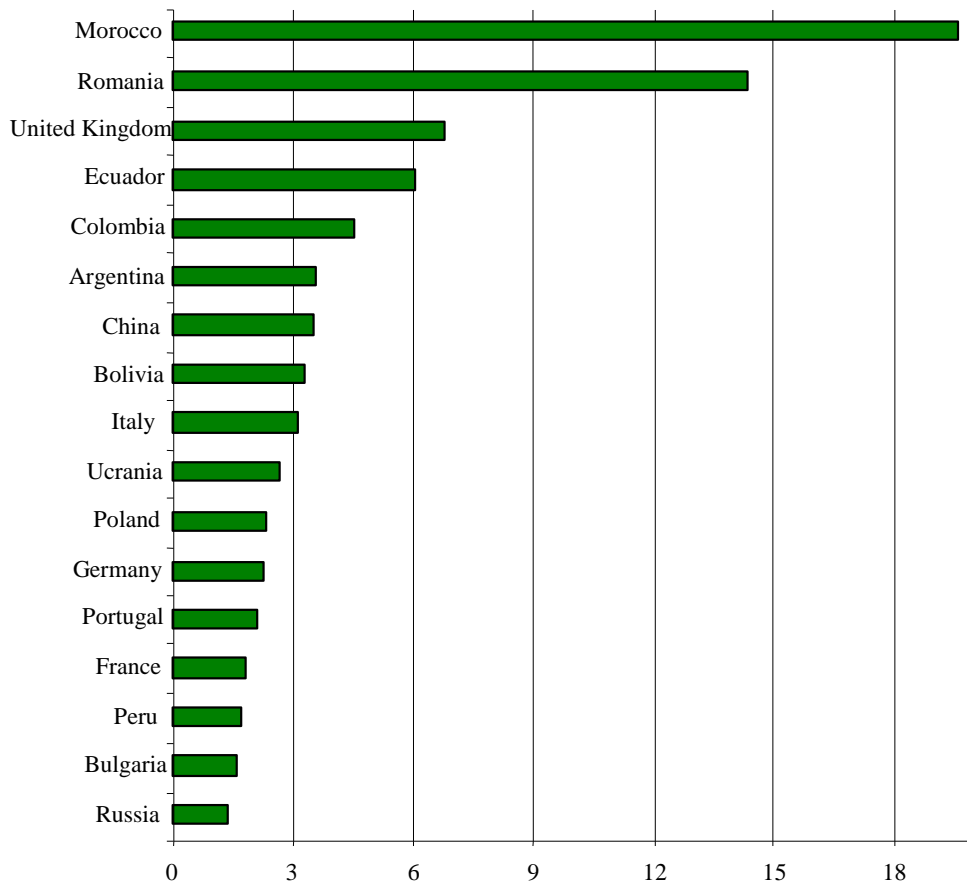
Spain



Source: Prepared internally using the 2008 Andalusian Economic Report. Secretary General for Economy. Regional Government of Andalusia.

Note: % on the total. Note: GAV, basic prices, current euros.

Graph A.1.7: Main countries of origin of foreign population registered with the Social Security as working. Andalusia, 2008



Source: 2008 Andalusian Economic Report. Secretary General for Economy. Regional Government of Andalusia

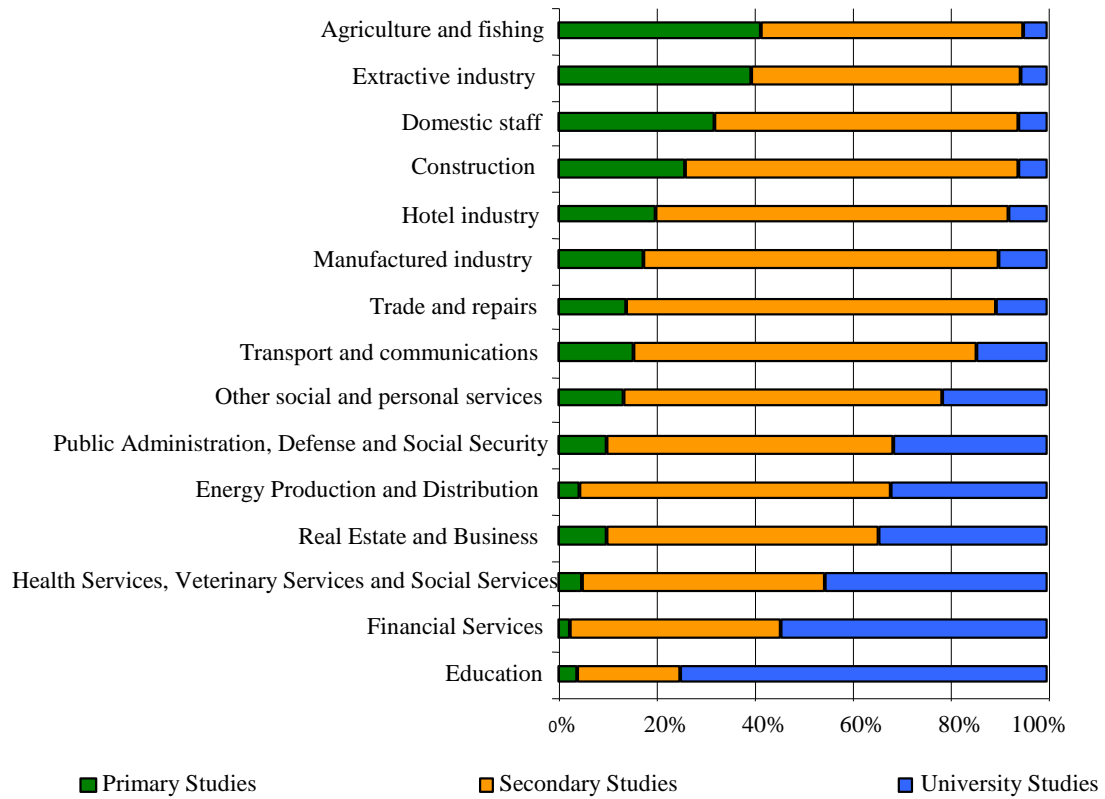
Notes: % on the total. Data reflecting the average of December. These countries represent the 81.5% of the foreign population registered with the Social Security in Andalucía in 2008.

Table A.1.7: Characteristics of the foreign workers registered with the Social Security in Andalusia. 2008

	2008		Variations compared to 2007	
	Persons	% on the total	Absolute	Relative (%)
TOTAL	203 204	100	1 127	0.6
Gender				
Women	88 424	43.5	6 238	7.6
Men	114 779	56.5	-5 112	-4.3
Regime				
General	96 100	47.3	-17 786	-15.6
Self-employed	29 476	14.5	92	0.3
Agrarian	57 983	28.5	15 340	36.0
For the Sea	425	0.2	25	6.3
Employees of private households	19 220	9.5	3 456	21.9
Economic activity				
Agriculture	1 125	1.2	-63	-5.3
Industrial	6 923	7.2	-2 005	-22.5
Construction	12 549	13.1	-12 711	-50.3
Services	75 503	78.6	-3 007	-3.8

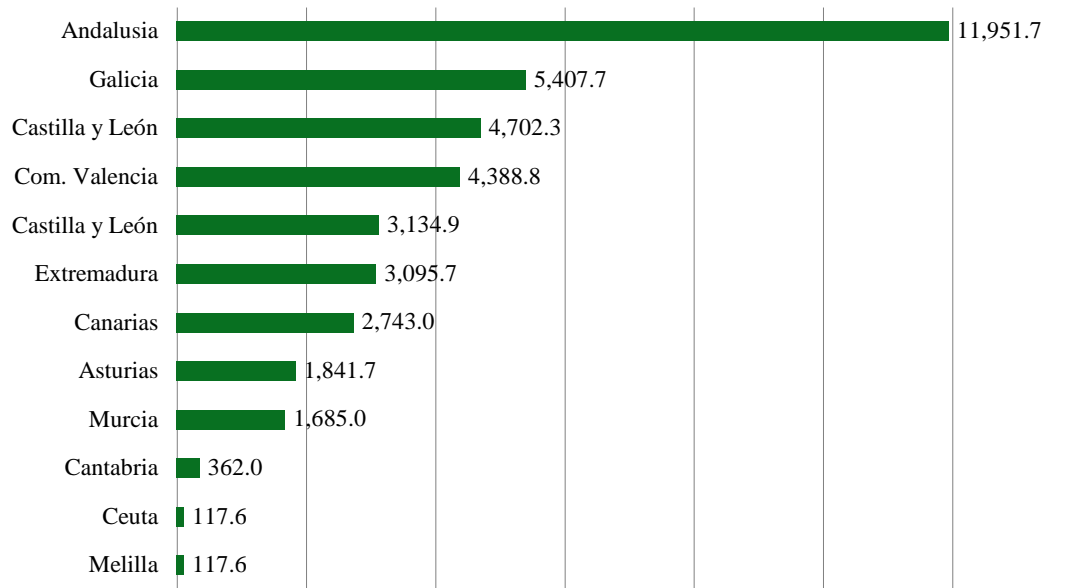
Source: 2008 Andalusian Economic Report. Secretary General for Economy. Regional Government of Andalusia.

Graph A.1.8: Employed population according to working activity and level of education. Andalusia 2008



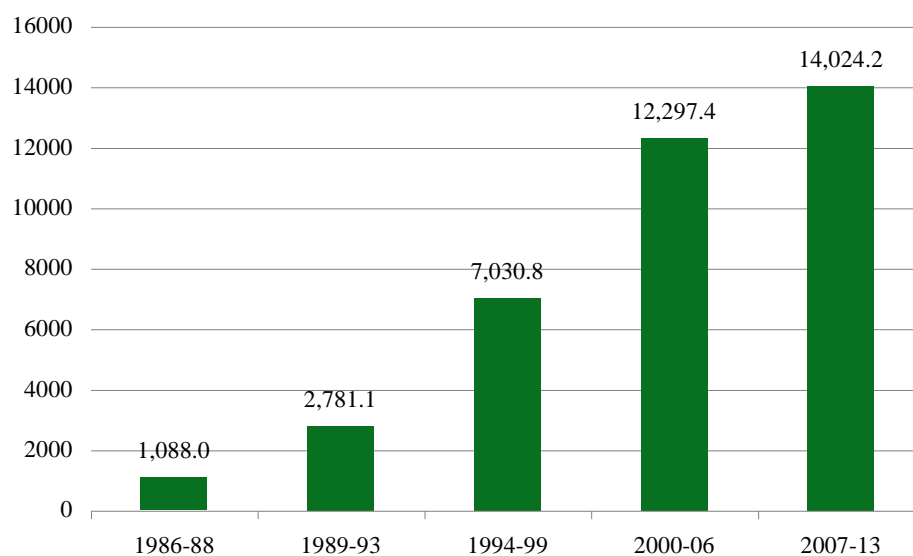
Source: 2008 Andalusian Economic Report. Secretary General for Economy. Regional Government of Andalusia.
Note: Shares of the total employed on each activity branch.

Graph A.1.9: Distribution of structural funds for Spain 2000-2006 by autonomous regions (EUR million)



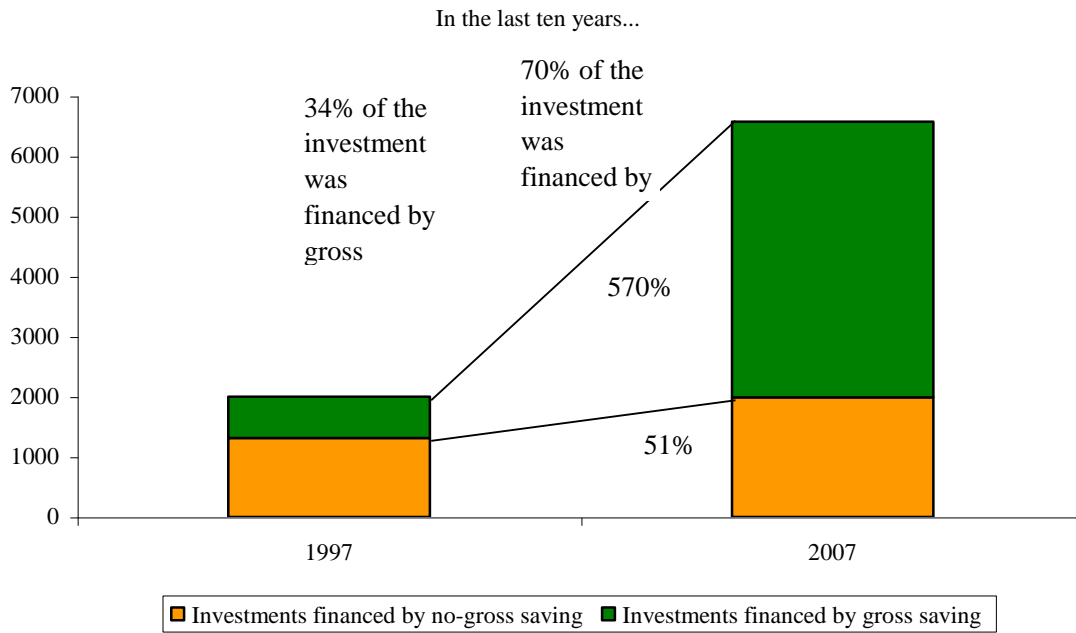
Source: Prepared internally from the Regional Ministry for Economy data. Regional Government of Andalusia.

**Graph A.1.10: Evolution of European funds programmed for Andalusia
(EUR million)**



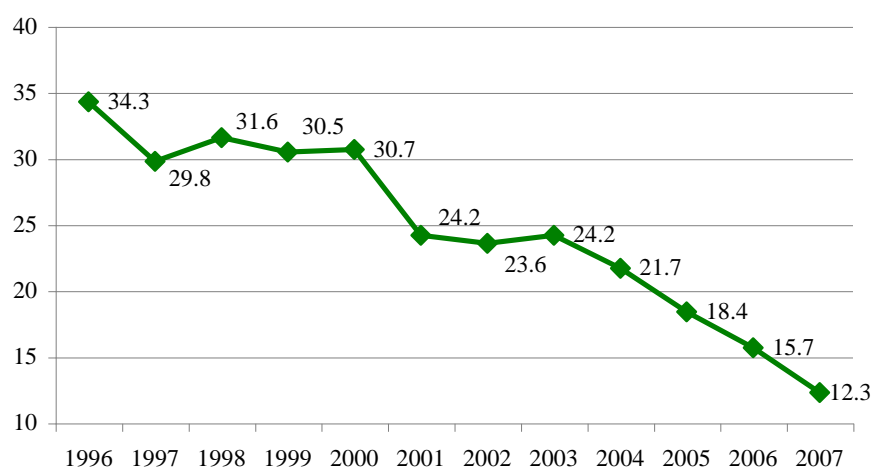
Source: Prepared internally from the Regional Ministry for Economy data. Regional Government of Andalusia.

Graph A.1.11: Origin of Andalusian investments



Source: Prepared internally from the Regional Ministry for Economy data. Regional Government of Andalusia.

Graph A.1.12: Percentage of investment financed by European funds



Source: Prepared internally from the Regional Ministry for Economy data. Regional Government of Andalusia.

Table A.1.8: Guadalinfo project funding (EUR)

Phases	Financing	
Pilot phase 2002-2004	Total Budget: EUR 7.85 million	
	Regional Government	2.26 million
	ERDF	2.94 million
	Private Investment	2.65 million
Guadalinfo Project 2004-2008	Total Budget: EUR 66.1 million	
	Regional Government	21.8 million
	ERDF	11.3 million
	Provincial Offices (Diputaciones Provinciales)	16.6 million
Guadalinfo Project Provisions 2008-2010	Estimated Budget: over EUR 60 million	
	Regional Government	38.8 million
	ERDF	10 million
	Provincial Offices (Diputaciones Provinciales)	17.8 million
	Local Funding*	17.8 million

Source: Prepared internally from Guadalinfo data.

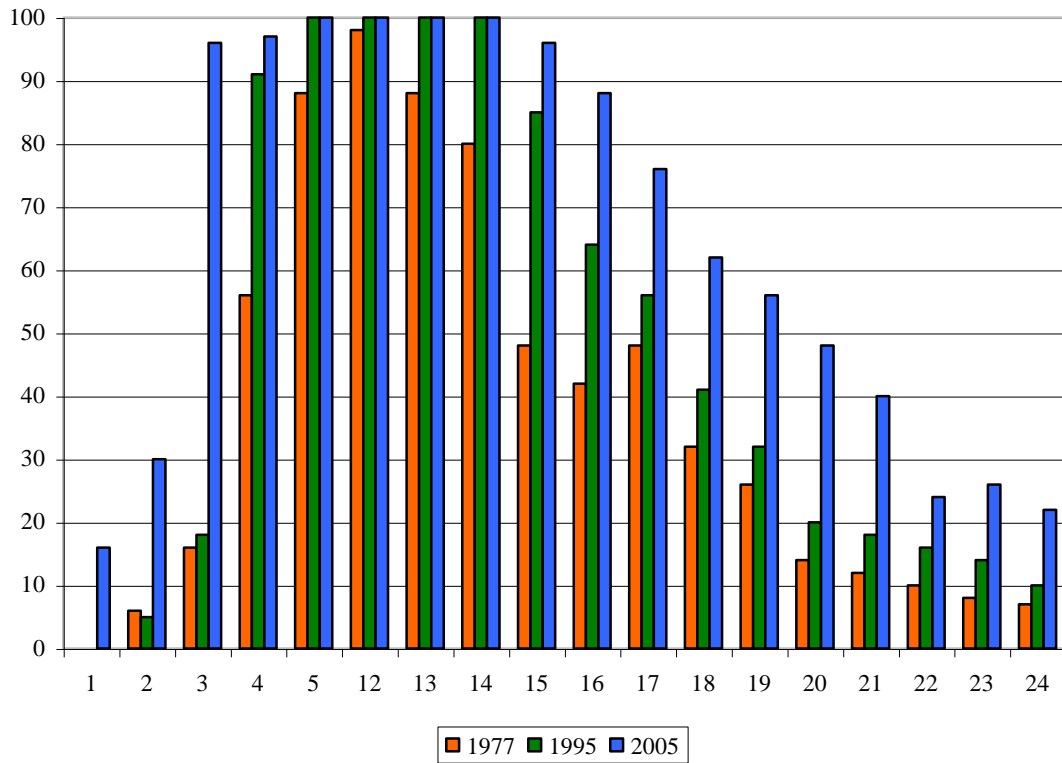
*Payment in kind mainly, being the real financial contribution of EUR 1.3 million.

Table A.1.9: Main results of the Guadalinfo project, 2002-2004 y 2004-2008

Pilot phase 2002-2004			
Action line 1: Public internet access point centres network	Chosen indicators		
	Expected results	Obtained results	Fulfillment rate
Number of public internet access point centres	25	26	104%
Number of individual access places	150	215	143%
Private investment mobilised in infrastructures	EUR 250 000	EUR 1.5 million	203%
Incorporated population in broadband	100 000 and 150 000	105 031*	105%
Number of users in the centres	5 000-7 500	11 562	231%
Hours of use in the centres	594 000	217 287	37%
Action line 2: Innovative services for territorial integration	Expected result	Obtained result	Fulfillment rate
Number of municipalities	25	26	104%
Number of digital information layers	Between 5 and 8	Between 5 and 8	100%
Number of e-government projects	6	7	140%
Number of users in e-government services	Between 750 and 1 000	2 704	360%
Number of ASP services projects	3	4	133%
Users of ASP services	Between 80 and 100	208*	260%
<i>*Number of customers identified with different IP</i>			
Action Line 3: Fostering the creative activity / Local Cooperative	Expected result	Obtained result	Fulfillment rate
Number of virtual communities establishing links among different geographic areas	12	13	108%
Number of technologic development projects in cooperation, finalised with success	15	7	47%
Action Line 4: Innovative small enterprise in “e-learning” products	Expected result	Obtained result	Fulfillment rate
Number of projects resulting from “e-learning” activities	10	9	90%
Mentored e-Learning cycles for Guadalinfo cooperation networks	30	83	277%
Non-mentored use by Guadalinfo cooperation networks	300 users	3 965 users	1 322%
2004-2008 period			
Guadalinfo Centres	637 (included the 26 of the pilot phase)		
Individual access posts installed in the centres	More than 4 000		
Users in the centres	More than 400 000 users		
Mentored activities	More than 69 000 activities		
Covered mentored places	More than 1 000 000		
Offered activities	More than 800 000 hours		

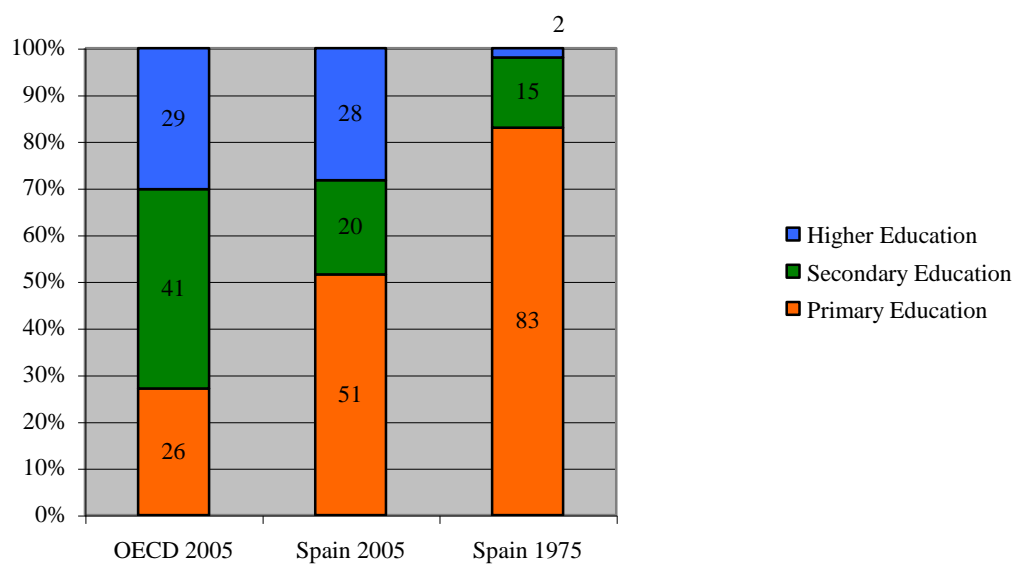
Source: Prepared internally from Guadalinfo data. For further details: <http://www.guadalinfo.es>.

Graph A.2.1: School attendance rate by age



Source: Report “Sistema educativo y capital humano”, Consejo Económico y Social (Economic and Social Council), 2009.

Graph A.2.2: Educational level of adult population (25 to 64 year-olds)



Source: Education at a Glance 2005 (OECD) and Spanish Statistical Institute (INE) data.

**Table A.2.1: Undergraduate Andalusian University Students' origin
Academic year 2007-2008**

Origin	University									Total
	UAL	UCA	UCO	UGR	UHU	UJA	UMA	UPO	US	
Spain	10 589	19 247	15 402	51 558	9 971	14 393	31 055	8 487	56 605	217 307
Africa	38	98	64	1 000	32	99	557	14	580	2 488
Central-America	3	7	5	24	3	2	12	1	12	69
North America	1	8	2	53	-	1	12	5	20	102
South America	70	59	44	185	24	27	219	18	140	786
Asia	4	9	6	40	3	8	38	2	27	137
Oceania	-	1	-	5	-	-	3	-	1	10
Europe (non EU)	61	14	13	108	22	16	81	6	41	362
European Union	44	69	40	422	26	10	278	24	134	1 047
Unknown	-	-	-	-	-	-	-	-	6	6
TOTAL	10 810	19 512	15 576	53 395	10 081	14 556	32 255	8 557	57 566	222 308

Source: Regional Ministry for Innovation, Science and Enterprise. Regional Government of Andalusia.

Table A.3.1: Basic element in the proprietary research plans within the Andalusian University System

	UAL 2008	UCA 2008- 2011	UCO 2009	UGR 2009	UJA 2009- 2010	UMA 2006	UNIA 2009	US 2008- 2011	UPO 2008
Does it define priority research lines?	No	No	No	No	Yes	No		No	No
Research Support									
Aid for fulfilment of contract programmes	X	X			X			X	
Aid for presentation of European projects	X	X	X	X	X	X		X	
Aid for research groups		X	X		X			X	X
Aid for doctorate theses		X	X	X		X	X		X
Aid for stays in external research centres	X	X	X	X	X	X	X	X	X
Aid for attending conferences		X	X	X		X	X	X	X
Aid for organising conferences	X	X	X	X	X	X		X	X
Reduction in teaching load		X			X				X
Aid for scientific divulgation					X		X	X	
Human and Technical Resources									
Aid for students for initiation of research					X			X	X
Pre-doctorate grants/contracts	X	X		X	X	X		X	X
"Bridging" contracts*	X	X	X	X	X				X
Research assistants									X
Incorporation of doctors				X					
MICINN/ME joint financing contracts programmes				X					
Aid for hiring technical personnel		X	X					X	X
Guest Professors	X		X	X	X	X			
Aid for scientific instrument repairs			X	X					
Rewards									
Research awards		X		X				X	X
Sabbaticals				X	X			X	
Scientific Divulgation Award								X	
Award to private enterprises for research activities with the university		X							
Type of aid: E-exclusive C-complementary	E	C	C	C	C	C	C	C	C

Source: Prepared internally from data on the universities' websites and the questionnaire.

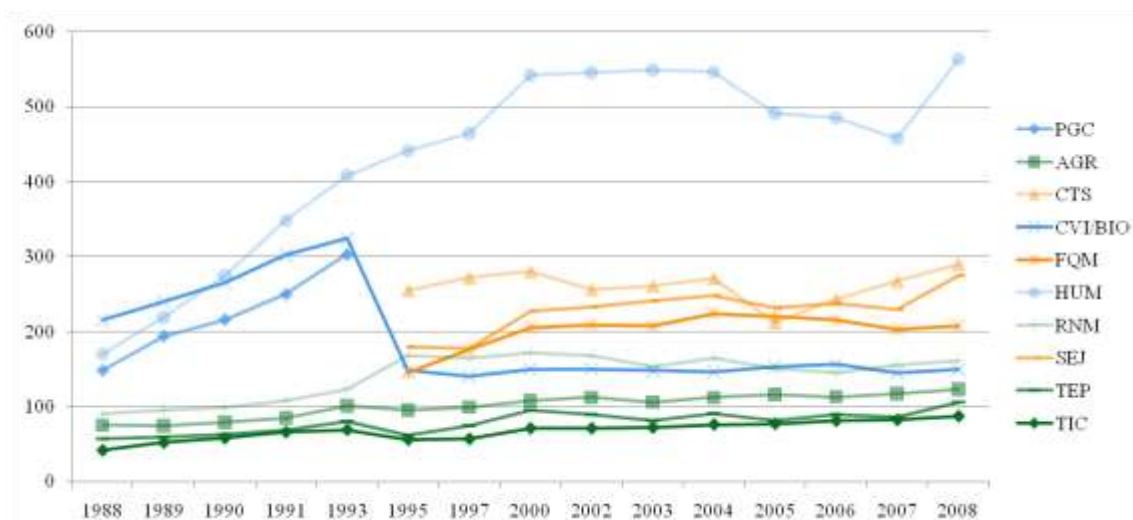
**"Bridging" contracts are used to maintain the contractual relationship of researchers from when the research grant comes to an end until they receive their accreditation as professor/researcher.*

Table A.3.2: Evolution of the Andalusian University System research groups

	PGC	AGR	CTS	CVI/BIO	FQM	HUM	RNM	SEJ	TEP	TIC
1988	148	75		215		170	90		57	42
1989	194	74		240		219	95		59	52
1990	216	79		265		275	99		63	58
1991	250	85		302		348	108		68	66
1993	303	101		324		408	123		80	69
1995		95	255	148	145	441	168	180	62	56
1997		99	272	140	176	464	165	177	74	57
2000		108	280	150	205	542	172	227	95	71
2002		112	256	150	209	545	168	233	89	71
2003		106	261	148	207	549	153	241	81	72
2004		112	271	146	224	546	164	248	91	76
2005		116	212	153	220	491	151	232	81	77
2006		113	243	156	215	485	145	238	89	81
2007		117	267	145	203	457	155	229	86	82
2008		123	290	149	207	563	161	274	106	87

Source: Prepared internally from the 2007 Andalusian Plan for R&D&i Report.

Graph A.3.1: Evolution of the Andalusian University System research groups



Source: Prepared internally from the 2007 Andalusian Plan for R&D&i Report.

Table A.3.3: 2007 results of the Andalusian university TTOs

	TTO Syst.	SUA Total	UAL	UCA	UCO	UGR	UHU	UJA	UMA	UPO	US
EUR million obtained from enterprises	617	187	3.8	5	7.3	4.2	3.1	3	13.2	2.9	35.1
National patent applications	458	95	4	9	4	19	5	5	36	0	16
Patents granted	229	49	3	8	4	6	4	1	3	1	19
Patents maintained	2 174	421	42	30	58	141	0	23	109	6	12
PCT extension applications	193	45	3	11	3	8	1	0	6	1	12
Registered biological material, vegetable varieties and microorganisms	8	1	0	0	1	0	0	0	0	0	0
Registered trademarks	25	2	0	2	0	0	0	0	0	0	0
Licence contracts	177	22	2	4	10	3	0	0	3	0	0
Confidentiality agreement to protect university know-how	163	10	0	7	0	2	0	0	0	1	0
University-enterprise contracts within the framework of public callings	1 260	189	13	2	14	17	0	7	58	7	70
University-enterprise contracts without public funding	8 690	663	95	50	54	132	26	12	37	32	225
Technical support contracts	6 636	1 030	3	159	90	38	64	204	159	36	277
Services rendering	6 822	861	230	10	97	23	4	0	13	9	475
Subsidised projects in public callings for university-enterprise collaboration	972	128	0	11	9	18	0	4	8	7	71
EU FP R&D projects	244	26	0	1	4	0	0	0	2	2	17
EU FP R&D currently in progress	1 025	75	0	5	14	15	2	2	31	6	--
Independent customers in the autonomous region	7 222	1 174	50	143	82	182	72	103	182	70	290
Independent customers in the rest of Spain	3 457	441	22	65	40	63	20	32	73	12	114
Independent customers in the EU (excluding Spain)	313	40	3	3	8	5	2	4	3	2	10
Independent customers outside the EU	125	6	1	1	2	1	0	0	1	0	0
Spin-off	111	26	6	1	7	3	1	0	3	0	5
Enterprise start-up (excluding spin-off)	122	10	0	0	0	2	0	0	6	0	2

Source: 2008 RedOTRI 2008 Report and 2007 Andalusian Plan for R&D&i Report.

Table A.3.4: Mixed research centres

	UAL	UCA	UCO	UGR	UHU	UJA	UMA	US	UPO
Centres of the Spanish nacional Research Centre (CSIC)									
Centro Andaluz de Biología del Desarrollo (CABD) (Development biology)									X
Centro Andaluz de Biología Molecular y Medicina Regenerativa (CABIMER) (Molecular biology & regenerative medicine)								X	X
Centro de Hortofruticultura Subtropical y Mediterránea (being created) (Subtropical and Mediterranean fruit and vegetables)							X		
Centro de Investigaciones Científicas Isla de la Cartuja (CICIC)								X	
Centro Nacional de Aceleradores (Accelerators)								X	
Instituto Andaluz de Ciencias de la Tierra (IACT) (Soil)				X					
Instituto de Biomedicina de Sevilla (IBIS) (Biomedicine)								X	
Instituto de Bioquímica Vegetal y Fotosíntesis (IBVF) (Vegetable biochemistry& photosynthesis)								X	
Instituto de Ciencia de Materiales de Sevilla (ICMS) (Materials)								X	
Instituto de Investigaciones Químicas (IIQ) (Chemistry)								X	
Unidades asociadas (Research groups that works with the CSIC, being created)	1	3	1	3	3	4	8	3	1
Unidad de Investigación Compartida del Aceite (+IFAPA) (Vegetable oil)							X		
Other mixed centres									
Centro de Investigaciones de la Energía Solar (CIEMAT) (Solar energy)	X								
Centro de Migraciones y Relaciones Interculturales (Ministry of Labour and Immigration, being created) (Immigration and international relations)	X								
Centro de Energías Renovables (JA, CIEMAT enterprises in the sector) (Renewable energies)	X	X				X			
Centro Andaluz para el Seguimiento del Cambio Global (JA) (Global change monitoring)	X								
Centro Andaluz de Ciencia y Tecnología Marina – CACYTMAR (JA) (Marine)		X							
Centro Andaluz de Investigaciones Vitivinícolas - CAIV (JA) (Winemaking)		X							
Instituto de Criminología (Inter-university) (Criminology)		X	X	X			X	X	
Centro Experimental Andaluz de Salud Animal -CEASA (JA) (Animal health)			X						
Centro Andaluz del Medio Ambiente (JA) (Environment)				X					
Instituto Andaluz de Geofísica y Prevención de Desastres Sísmicos (Geophysics & Seismic studies)	X			X					
Centro Internacional de Estudios y Convenciones Ecológicas y Medioambientales – CIECEM (JA) (Ecology & environment)					X				
Centro de Hidrogeología de la UMA –CEHUMA (Instituto Geológico Minero de España) (Hydrology and geology)							X		
Instituto Andaluz de Biotecnología (JA) (Biotechnology)	X	X	X	X		X	X	X	X
Instituto Andaluz de Energías Renovables (Renewable energies)							X	X	

Source: Information from www.csic.es, universities web pages and own data.

Table A.3.5: Universities' proprietary research centres

Univ.	Research centre
UCA	Instituto de Microscopía Electrónica y Materiales (IMEYMAT) (Electronic microscopy and materials) Instituto de Biomoléculas (INBIO) (Biomolecular studies)
UCO	Hospital Clínico Veterinario (Veterinary sciences) Botanical Garden
UGR	Centro de Instrumentación Científica (Scientific instrumentation) Instituto del Agua (Water) Instituto de Biopatología y Medicina Regenerativa (Biopathology and regenerative medicine) Instituto de Biotecnología (Biotechnology) Instituto Carlos I de Física Teórica y Computacional (Theoretic and computational physics) Instituto de Desarrollo Regional (Regional development) Instituto de Neurociencias Francisco Olóriz (Neurosciences) Instituto de Nutrición y Tecnología de los Alimentos (Nutrition and food technology) Instituto Universitario de Estudios de la Mujer (Study of women) Instituto Universitario de Investigación de la Paz y los Conflictos (Peace and conflicts research)
UHU	Laboratorio de Investigación y Control Agroalimentario (LICAH-CIDERTA) (Agrifood research & control) Centro de Investigación y Documentación del Eucalipto (CIDEU) (Eucalyptus research and documentation) Observatorio Local de Empleo (Local employment observatory)
UJA	Centro Andaluz de Arqueología Ibérica (Iberian archaeology)
UMA	Instituto Andaluz de Automática Avanzada y Robótica (Advanced automation and robotics) Grupo de estudios en biomimética (Biomimetics) Instituto de Procesado de Imagen (Image processing) Grupo de ingeniería de sistemas avanzados (Advanced systems engineering)
UNIA*	Centro Andaluz de Estudios para el Desarrollo Rural (CAEDER) (Rural development) Centro Andaluz de Estudios Iberoamericanos (CAEI) (Latin American studies)
UPO	Centro de Investigación en Contabilidad Social y Medioambiental (CICSMA) (Social/environment accounting) Centro de Estudios Avanzados para América Latina y el Caribe (Colegio de América) (Latin America/Caribbean) Centro de Sociología y Políticas Locales (Sociology & local policy)
US	Instituto García Oviedo (Legal studies) Instituto de Ciencias de la Construcción (Construction sciences) Instituto de Biología del Desarrollo (Development biology) Instituto de Medicina Legal y Ciencias Forenses (Forensic medicine and science) Instituto Universitario de Investigación en Matemáticas Antonio de Castro Brezezicki (Mathematics)

Source: Internally prepared from universities web pages.

** International University of Andalusia Centres are mainly created to boost teaching programmes in their area of specialization. They boost research at postgraduate level related to their study programmes, but they are not specifically centres where research is undertaken.*

Table A.3.6: Andalusian Knowledge System Agent Classification

Category	Subcategory		No.	
Knowledge generation agents	Andalusian Universities (UA)		10	
	Public Research Organisations or PROs (OPI)		33	
	Research Centres and Institutes (CI)	Specific Research Institutes (IIS)	¿?	
		Research Institutes (II)	1	
		Research Centres (CI)	2	
Research Groups or Research Groups (GI)		1 960		
Knowledge transfer, adaptation and application networks and structures	Technological and Knowledge Spaces	Science and Technology Parks (PCT)	11	
		Enterprise Innovation Parks (PIE)	3	
		Business Parks (PE)	¿?	
	Entities oriented towards knowledge and technology application and transfer	Knowledge Application Technological Centres	Advanced Technological Centres (CTA)	3
			Technological Centres (CT)	17
			Innovation and Technology Centres (CIT)	16
		Knowledge and Technology Transfer Entities (ETC)		23
		Technology-based Enterprise Creation and Consolidation Centres (CRECEBT)		5
Accredited Agents for Technological Knowledge (ACTA)		28		
Management Entities	Incorporated Agencies	In the Regional Ministry for Innovation, Science and Enterprise	Andalusian Knowledge Agency	1
			Andalusian Innovation and Development Agency (IDEA)	1
			Andalusian Energy Agency	1
			Andalusian Network of Technological Spaces (RETA)	1
			Andalusian Network of Scientific and Technical Divulcation Spaces (RECTA)	1
	Foundations and entities of other regional ministries that manage or coordinate knowledge and technology		¿?	
	Academies		¿?	
	Scientific societies		¿?	
Other entities with the same purpose		13		

Source: Decree 254/2009, dated 26 May 2009, BOJA no. 109, dated 9 June 2009. Regional Ministry for Innovation, Science and Enterprise data at 14/07/09.

Table A.3.7: Outline of regional government incentives for innovation

CONCEPT				
M A C R O - O R D E R	1. Research projects	Excellence projects	Excellence projects ----- Excellence projects grants ----- Excellence projects doctorate contracts ----- Excellence projects staff contracts ----- Excellence projects contracts for aknowledge researchers	
		Knowledge application projects (R&D&I)		
		Participation in Interntional projects	Projects elaboration and presentation ----- Co-financing costs for international projects	
		2. Researchers formation and scientific activity promotion	Scientific activity incentives	Publications, conferences and stays
			Research personnel formation incentives	Linked to research projects ----- Teaching personnel formation in deficit areas ----- Doctors formation in technological centers
		Technology personnel incorporation programme		
		Knowledge attraction for Andalusia programme		
	3. Infrastructures and operational improvement for SAC agents	Infrastructures, equipment and maintenance improvement incentives	Annual pain of activities ----- Infrastructures and scientific-technological equipment improvement or implantation projects ----- Complementary actions	
		Research centers incentives	Non university ----- University	
	O T H E R S	Other aids	Scientific infrastructures and equipment (Andalusian public universities)	-----
OTRIs Action plan				
Doctors extensions				
Andalusian research awards				
Fullbright grants				
Academies and royal academies				
R&D&I centers				
PhD conference				
I3 programme				
Ramón y Cajal				
Others				

Source: Regional Ministry for Innovation, Science and Enterprise. Regional Government of Andalusia.

Table A.4.1: Offer, demand and enrolment in the Andalusian University System for the 2007-2008 academic year

Study branches and duration (SC: short cycle, LC: long cycle)	Offer		Demand		Enrolments		D/O	E/O
	#	%	#	%	#	%	%	%
Health Sciences - SC	2,706	5.2%	5,672	11.9%	2,772	6.06%	209.6%	102.4%
Health Sciences - LC	2,000	3.9%	6,286	13.2%	2,060	4.50%	314.3%	103.0%
Experimental Sciences - SC	410	0.8%	572	1.2%	347	0.76%	139.5%	84.6%
Experimental Sciences - LC	2,964	5.7%	1,252	2.6%	2,256	4.93%	42.2%	76.1%
Social&Legal Sciences - SC	17,034	32.9%	12,941	27.2%	15,525	33.92%	76.0%	91.1%
Social&Legal Sciences - LC	11,818	22.8%	9,945	20.9%	10,977	23.98%	84.2%	92.9%
Technical studies - SC	6,795	13.1%	4,126	8.7%	5,111	11.17%	60.7%	75.2%
Technical studies - LC	3,282	6.3%	3,392	7.1%	2,858	6.24%	103.4%	87.1%
Humanities - LT	4,748	9.2%	3,351	7.0%	3,864	8.44%	70.6%	81.4%
Total	51,757	100.0%	47,537	100.0%	45,770	100.00%	91.8%	88.4%

Source: Prepared internally from the study "Estudio de la oferta, demanda y de la matrícula de nuevo ingreso en las Universidades públicas y privadas. Curso 2007-2008", published by the Ministry of Science and Innovation. Government of Spain.

**Table A.4.2: Undergraduate and Graduate Schools Decentralization
of Andalusian universities in their own province**

UAL	UCA	UCO	UGR	UHU	UJA	UMA	UNIA	UPO	US
Almeria	Cadiz	Cordoba	Granada	Huelva	Jaen	Malaga	Seville	Seville	Seville
	Algeciras (Cadiz)	Belmez (Cordoba)	Ceuta	La Rábida (Huelva)	Linares (Jaen)	Antequera (Malaga)	La Rábida (Huelva)		Bellavista (Seville)
	Jerez de la Frontera (Cadiz)		Melilla		Úbeda (Jaen)	Ronda (Malaga)			Bormujos (Seville)
	La línea de la Concepción (Cadiz)								Osuna (Seville)
	Puerto Real (Cadiz)								

Source: Regional Ministry for Innovation, Science and Enterprise. Regional Government of Andalusia.

Note: Andalusian universities have developed their adult and senior education centres as well as their cultural activities in others localities, as can be seen in Table A.5.3, concerned with adult and senior education and/or cultural activities decentralization.

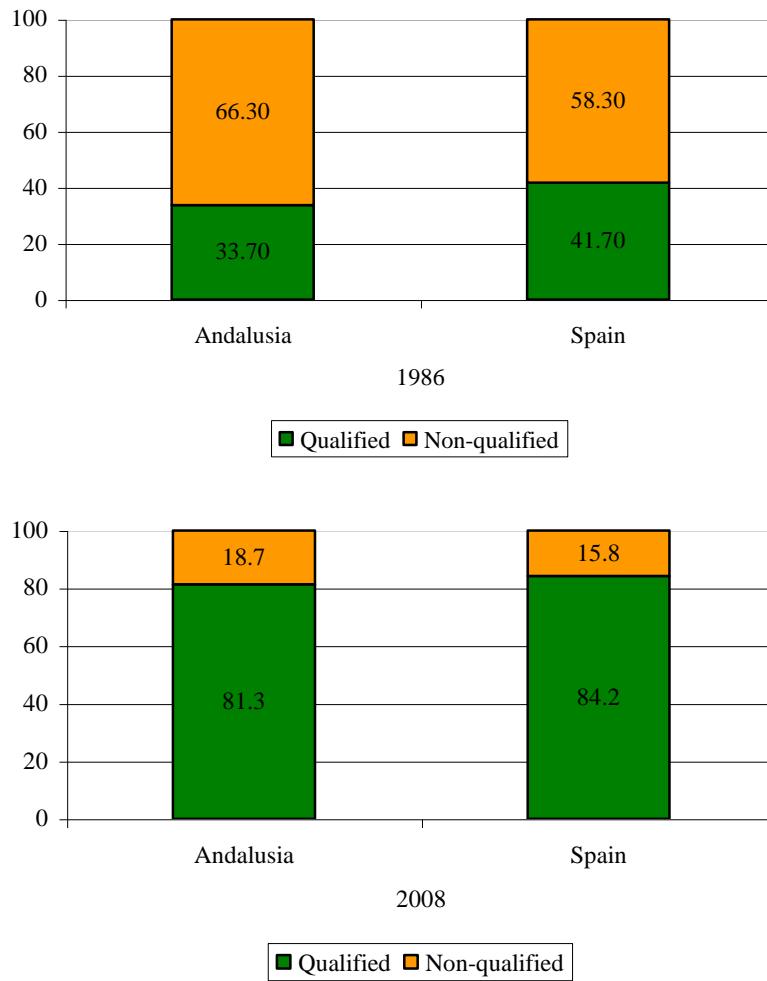
Table A.4.3: Inter-university master courses

INTER-UNIVERSITY MASTER COURSES (according to the offered published in BOJA 138, 17/07/2009)	Participant universities									
	UAL	UCA	UCO	UGR	UHU	UJA	UMA	UNIA	UPO	US
Actividad Física y Salud Physical and Health Activity								X	X	
Agroalimentación Agrifood		X	X							
Agroecología: Un enfoque sustentable de la Agricultura Ecológica Agro-ecology			X					X	X	
Análisis Geográfico en la Ordenación del Territorio: Tecnologías de la Información Geográfica Urban Development and Geography				X			X			
Arqueología y Patrimonio: Ciencia y Profesión Archeology and Heritage			X		X		X		X	
Bioinformática Bioinformatic							X	X		
Biomedicina Regenerativa Regenerative Biomedicine	X			X		X				
Biotecnología Avanzada Advanced Biotechnology							X	X		
Ciencia y Tecnología de Coloides e Internases Science and Technology of Coloides				X			X		X	
Ciencias de la Enfermería Nursery	X				X					
Control de Procesos Industriales Industrial process verification			X			X				
Criminalidad e Intervención Social en Menores Minors Criminology and Social Intervention				X			X			
Cultura de Paz, Conflictos, Educación y Derechos Humanos Peace Culture, Conflicts, Education and Human Rights		X	X	X			X			
Derecho y Medio Ambiente Environment Law					X			X		
Derechos Humanos, Interculturalidad y Desarrollo Inter-culturality and Development								X	X	
Desarrollo Económico y Sostenibilidad Economic development and sustainability								X	X	
Diagnostico y Terapia de las Enfermedades Raras Rare illness diagnose and therapy								X	X	
Economía y Desarrollo Territorial Economy and Territorial Development		X			X	X				
Educador / Educadora Ambiental Enviromental Education	X	X	X				X		X	
Estudios Migratorios, Desarrollo e Intervención Social Migratory Studies	X			X	X					
Estudios Superiores de Lengua Española: Investigación y Aplicaciones Spanish Linguistics Studies				X			X			
Formulación y Tecnología del Producto: Aplicaciones en la Industria Química, Agroalimentaria y Farmacéutica Chemical Industrial, Agrifood and Pharma Applications					X			X		

INTER-UNIVERSITY MASTER COURSES (according to the offered published in BOJA 138, 17/07/2009)	Participant universities									
	UAL	UCA	UCO	UGR	UHU	UJA	UMA	UNIA	UPO	US
Genero, Identidad y Ciudadanía Gender, identity and citizenship		X			X					
Geología y Gestión Ambiental de los Recursos Minerales Geology and mineral waste management					X			X		
Gestión Estratégica e Innovación en Comunicación Strategic management and Innovation in communication		X					X			
Gestión y Evaluación de la Contaminación Acústica Noise pollution evaluation and control		X		X						
Hidráulica Ambiental Enviromental Hydraulics			X	X			X			
Investigación en la Enseñanza y el Aprendizaje de las Ciencias Experimentales, Sociales y Matemáticas Research on Teaching and Learning in Maths, Experimental and Social Sciences					X			X		
Láseres y Aplicaciones en Química Laser applications in Chemistry							X		X	
Marketing y Comportamiento del Consumidor Marketing and Consumer Behaviour				X		X				
Matemáticas Maths	X	X		X		X	X			
Políticas Territoriales de Empleo Regional employment policies			X		X					
Políticas y Practicas de Innovación Educativa para la Sociedad del Conocimiento Innovation in education policy for the Knowledge Society	X						X			
Relaciones Internacionales: Mediterráneo, Mundo Árabe, Iberoamérica y Europa International Relations: Mediterranean area, Arab World, Latin America and Europe								X	X	
Religiones y Sociedades Religions and Society								X	X	
Tecnología de los Sistemas de Energía Solar Fotovoltaica Solar Energy Technologies						X	X	X		
Tecnología Ambiental Enviromental Technologies					X			X		
Vitivinicultura en Climas Cálidos Wineculture in Warm Climate Areas		X	X							
Zootecnia y Gestión Sostenible: Ganadería Ecológica e Integrada Zoology and environmental management: integrated and organic cattle farming			X		X					

Source: Prepared internally from universities data.

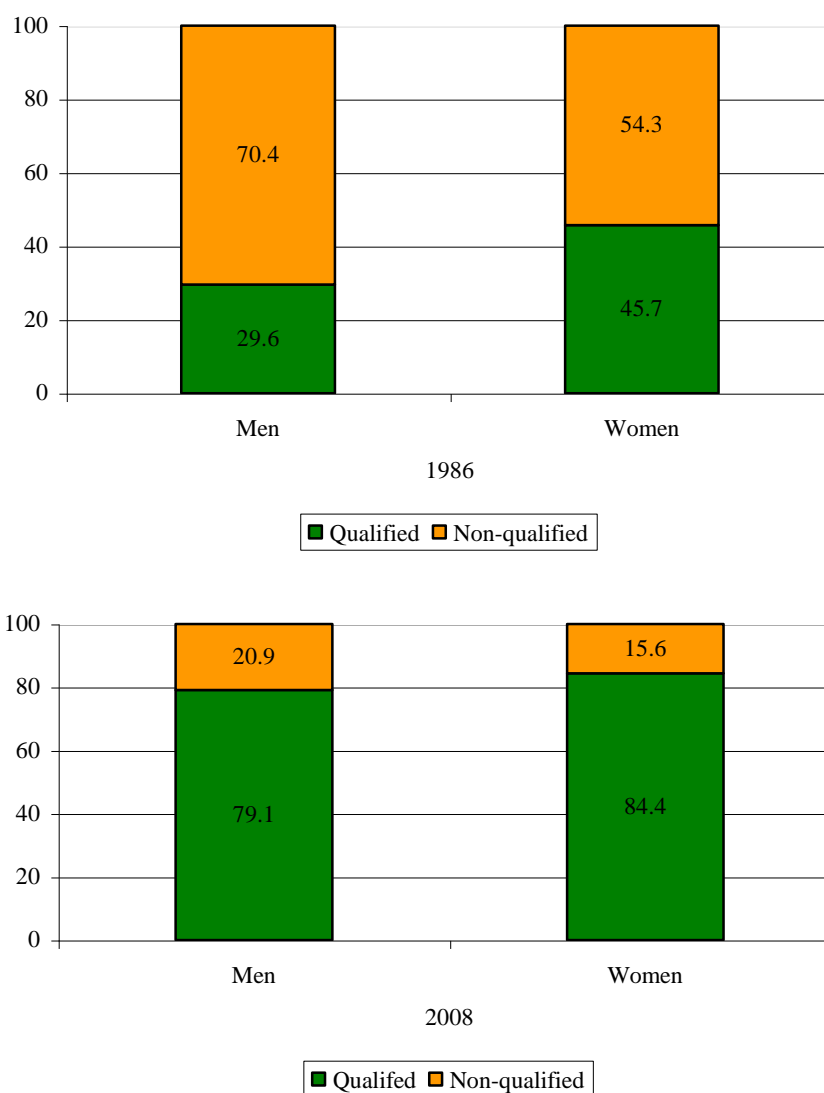
Graph: A.4.1: Working population by qualification. 1986-2008



Source: 2008 Andalusian Economic Report. Secretary General for Economy, Regional Government of Andalusia.

Note: Share of the total. Year 1986: EPA 2002; Year 2008: EPA 2005. Non-qualified: illiterate, without studies or with primary studies. Qualified: with secondary studies or university studies. EPA stands for Working Population Census (Encuesta de población activa).

Graph A.4.2: Working population by qualification and gender. Andalusia. 1986-2008



Source: 2008 Andalusian Economic Report. Secretary General for Economy, Regional Government of Andalusia.
Note: Share of the total. Year 1986: EPA 2002; Year 2008: EPA 2005. Non-qualified: illiterate, without studies or with primary studies. Qualified: with secondary studies or university studies. EPA stands for Working Population Census.

Table A.4.4: Virtual platforms used by the Andalusian universities

Virtual platforms by Andalusian universities										
	UAL	UCA	UCO	UGR	UHU	UJA	UMA	UNIA	UPO	US
WebCT	x								x	x
Moodle		x	x	x	x		x	x		
Ilias						x				
Others				SWAD y TD*						

Source: Prepared internally from universities data.

* Platforms **SWAD** (Sistema Web de Apoyo a la Docencia, Teaching Support Web System) and **TD** (Tablón de Docencia, Teaching Board), both designed by the University of Granada, are integrated together with Moodle in **PRADO** (Plataforma de Recursos de Apoyo a la Docencia, Teaching Support Resources Platform).

Table A.5.1: Sociocultural and environmental actions legal framework

Regulation	Date	BOE No.	BOJA No.	Date of publication or approval	Title
Law 12/2007	26/11/2007	--	247	18/12/2007	<i>Ley para la promoción de la igualdad de género en Andalucía</i> (Andalusian Gender Equality Act)
Law 6/1996	15/01/1996	15	--	17/1/1996	<i>Ley de Voluntariado</i> (Volunteering Act)
Law 13/1982	7/04/1982	103	--	30/04/1982	<i>Ley de Integración Social de los Minusválidos</i> (Social Integration of the Disabled Act)
Law 1/1999	31/04/1999	--	45	17/04/99	<i>Ley de Atención a las Personas con Discapacidad en Andalucía</i> (Care for Disabled People in Andalusia Act)
Law 51/2003	02/12/2003	289	--	03/12/2003	<i>Ley de Igualdad de Oportunidades, no Discriminación y Accesibilidad Universal de las Personas</i> (Equal opportunities, Non-discrimination and Universal Accessibility for People Act)
Royal Decree 1742/2003	19/12/2003	19	--	22/1/2004	Royal Decree establishing the Basic Regulations for Access to University Degree Studies.
Royal Decree 696/1995	28/04/1995	131	--	02/06/1995	Royal Decree for the Organisation of Education for Students with Special Educational Needs
Decree 147/2002	14/05/2002	--	58	18/05/2006	Decree establishing the organisation of the Educational Attention for Students with Special Educational Needs Associated to their Personal Capabilities
Resources Guide (JA)	--	--	--	01/04/2007	Guide to Resources for Attention to Students with Disabilities in Andalusia's Public Universities
Declaration (CRUE)	--	--	--	13 y 14/12/02	Alicante Declaration from the Vice-Rectors for University Extension
Declaration (CRUE)	--	--	--	07/2001	University: Social Engagement and Volunteering
Protocol (CRUE)	--	--	--	03/04/2006	University Action Protocol for Situations of Humanitarian Crisis
Ethics Code (CRUE)	--	--	--	23/06/2006	Universities' Ethics Code for Cooperation for Development Issues

Source: Prepared internally.

Table A.5.2: Cultural, social and environmental responsibilities by university

Univ	Vice-chancellor's Office	Body responsible for services and activities:	Cultural					Social					Environmental	
			Skills Improvement	Art	Sport	Languages	Others	Volunteering	Disabilities	Social Equality	Health	Accommodation		
UAL	Vice-chancellor's Office for Postgraduate and Continuing Education	Secretariat for Continuing Education	X											
	Vice-chancellor's Office for Culture, University Extension and Sport	Secretariat for the University for Senior Citizens	X											
		Secretariat for Summer Courses	X											
		Secretariat for Culture and Spaces		X										
		Secretariat for Sport			X									
		Olympic Studies Centre and Olympic Foundation			X									
		Language Centre				X								
		Secretariat for Interculturality					X							
		The University of Almeria Press					X							
		Secretariat for Women								X				
	Vice-chancellor's Office for Students and Employment	Secretariat for Social Services						X	X	X	X	X		
		Secretariat for Volunteering and Cooperation						X						
		Secretariat for Educational and Professional Guidance							X	X				
Health Promotion Unit										X				
Psychological Support Unit										X				
Vice-chancellor's Office for Planning, Quality and Relations with Society	Secretariat for Relations with Society	X	X	X	X	X	X	X	X	X	X	X	X	
Vice-chancellor's Office for Infrastructures, Campus and Sustainability	Secretariat for Sustainability and Green Office	X											X	
UCA	Vice-chancellor's Office for Postgraduate and Permanent Education	Secretariat for PhDs and Permanent Education	X											
		Advanced Centre for Modern Languages	X			X								
	Vice-chancellor's Office for University Extension	Directorate General For Cultural Activities	X	X			X							
		Cadiz University Press					X							
	Vice-chancellor's Office International Relations and Cooperation	Latin American University Space					X							
		Hispanic-Russian University Space					X							
	Vice-chancellor's Office for the Bahía de Algeciras Campus	Gibraltar Straits University Space					X							
	Vice-chancellor's Office for Students	University Space for Senior Citizens	X				X							
		Sports Area			X									
		Secretariat for Students' Initiatives						X						
Psycho-pedagogical Support										X				
Accommodation Office											X			

Univ	Vice-chancellor's Office	Body responsible for services and activities:	Cultural					Social				Environmental			
			Skills Improvement	Art	Sport	Languages	Others	Volunteering	Disabilities	Social Equality	Health		Accommodation		
	Directorate General for Social Action and Solidarity	Secretariat for Services and Solidarity Action	X	X					X	X	X	X	X	X	
	Directorate General for Infrastructures and Sustainability	Green Office	X											X	
UCO	Vice-chancellor for Postgraduate and Continuing Education	Secretariat for Permanent Education	X												
	n/a	UCOIdiomas S.L.				X									
	Vice-chancellor's Office for Students and Culture	University Extension, Chairs and Spaces		X	X		X	X	X		X				X
		Sports Services				X									
		Cultural Activities			X										
		The University of Cordoba Press						X							
		Grants and Aids for Students								X	X				
		Psychological Support											X		
		Accommodation												X	
	Vice-chancellor's Office for Internationalisation and Cooperation	Area of Cooperation and Solidarity							X		X				
Vice-chancellor's Office for Management, Budget and Society	General Directorate for Prevention and Protection of the Environment											X		X	
	Sustainability Space													X	
UGR	Vice-chancellor's Office for Graduate and Postgraduate Studies	Permanent Space for Open University	X												
		Modern Languages Centre				X									
	Vice-chancellor's Office for University Extension and Cooperation for Development	University Extension Unit		X	X		X	X							X
		Contemporary Culture Centre			X										
		Institute for Latin American Studies						X							
		The University of Granada Press						X							
		Secretariat for Moveable Assets						X							
		Cooperation for Development Initiatives Centre							X		X				
	Vice-chancellor's Office for Students	"Casa de Porras" University Cultural Centre			X										
		Student Support Services										X			
		Psychological Office											X		
		Health Guidance Office											X		
		Accommodation Management Office												X	
	Chancellor's Office	Gender Equality Unit										X			
		Chancellor's Delegation for Attention to People with Special Needs								X	X				
Vice-chancellor's Office for Environmental	Sports Activities Centre				X										
	Olympic Studies Centre				X										

Univ	Vice-chancellor's Office	Body responsible for services and activities:	Cultural					Social				Environmental
			Skills Improvement	Art	Sport	Languages	Others	Volunteering	Disabilities	Social Equality	Health	
	Quality, Welfare and Sport	Social Action Office							X			
		Quality of Life and Ageing Office	X						X	X		
		Professors' Accommodation and Residences									X	
		Environmental Quality Unit	X									X
UHU	Vice-chancellor's Office for University Extension	Cultural Promotion Area	X	X								
		Sports Activities Service			X							
		S.A.R.U.H. (Religious Support Service)					X					
		The University of Huelva Press					X					
	Vice-chancellor's Office for International Relations	Modern Languages				X						
		Hispanic-Asiatic Cultural Centre				X	X					
	Vice-chancellor's Office for Students and Social Participation	University Community Support Service (SACU)	X					X	X	X		X
		10C Student Projects Space	X									
		Volunteering Space						X				
		Support Office for People with Disabilities							X			
Equality Unit									X			
n/a	Accommodation Office									X		
	n/a	Sustainability Office									X	
UJA	Vice-chancellor's Office for European Convergence, Postgraduate and Permanent Education	Secretariat for Permanent Education	X									
		Secretariat for Cultural Activities	X	X								X
	Vice-chancellor's Office for University Extension	University Programme for Senior Citizens	X									
		Secretariat for Cultural Foundations		X			X					
		Secretariat for Physical Activities and Sport			X							
		The University of Jaen Press					X					
	Vice-chancellor's Office for Students and Job Placement	Secretariat for Grants, Aid and Student Support						X	X	X	X	
		Students with Disabilities Support Unit								X		
		Secretariat for Halls of Residence									X	
Vice-chancellor's Office for International Relations and Cooperation	Linguistics Programmes				X							
	Secretariat for International Action								X			
UMA	Vice-chancellor's Office for Culture and International Relations	Secretariat for Culture and International Relations	X	X			X					
		Spanish for Foreigners				X						
	Vice-chancellor's Office for Welfare and Equality	Sports Activities Service			X							
		Secretariat for Social Action						X	X			

Univ	Vice-chancellor's Office	Body responsible for services and activities:	Cultural					Social				Environmental	
			Skills Improvement	Art	Sport	Languages	Others	Volunteering	Disabilities	Social Equality	Health		Accommodation
Univ	Vice-chancellor's Office	Secretariat for Equality and Quality of Life							X	X			
		University Residences Department										X	
	Vice-chancellor's Office for International Relations	Secretariat for Developing Countries								X			
	Vice-chancellor's Office for Infrastructures and Sustainability	Secretariat for Maintenance and Sustainability											X
UPO	Vice-chancellor's Office for Postgraduate Studies	Olavide Cultural Centre in Carmona	X										
	Vice-chancellor's Office for Students and Sport	Sports Office			X								
	Vice-chancellor's Office for Social Participation	Cultural Extension and Extracurricular Activities	X	X			X						
		Equality and Social Integration	X						X	X			
		Social Participation and Social Intervention							X				X
Vice-chancellor's Office for Institutional and International Relations	Integral Healthcare and Environment									X		X	
US	Vice-chancellor's Office for Institutional Relations	Permanent Education Centre	X										
		Experience Space (senior education centre)	X										
	Vice-chancellor's Office for Students	Sports Activities			X								
		Cultural Space		X			X						
	General Directorate for the Seville University's Cultural Initiatives Centre (Centro de Iniciativas Culturales de la Universidad de Sevilla, C.I.C.U.S.)	Halls of Residence and University Residences										X	
		Historical-Artistic Heritage		X									
	n/a	The University of Seville Press					X						
		Languages Institute				X							
	Directorate General for the University Community's Support Service (Servicio de Asistencia a la Comunidad Universitaria, S.A.C.U.)	Equality Unit								X			
		Social Work for Students Unit							X	X		X	X
Sustainability Space												X	
Vice-chancellor's Office for International Relations	Advice and Support for the University Community							X	X	X	X	X	
	Cooperation for Development Office									X			
Vice-chancellor's Office for Infrastructure	Office for Sustainability											X	
UNIA	Vice-chancellor's Office for University Extension and Participation	Summer Courses	X										
		Permanent Education	X										
		Artepensamiento (Art and Philosophy) Programme	X	X									
		Cultural Activities		X			X						

Univ	Vice-chancellor's Office	Body responsible for services and activities:	Cultural					Social				Environmental	
			Skills Improvement	Art	Sport	Languages	Others	Volunteering	Disabilities	Social Equality	Health		Accommodation
	Chancellor for International Relations and Cooperation	Cultural Relations and Cooperation					X			X			
	Facilities Secretariat	Residences										X	
n/a		Andalusian Centre for Latin American Studies					X						
		Andalusian Studies Centre for Rural Development							X				
		Sustainability Space											X

Source: Prepared internally with data from the Universities' websites.

**Table A.5.3: Cultural and Social activities decentralization
of Andalusian universities in their own province**

University	Localities where social and cultural activities are held	
UAL	Roquetas de Mar	Albox
	Vera	Algeciras
UCA	Chiclana	Tánger
	Puerto de Santa María	Tetúan
	San Roque	--
UCO	*UCO organizes learning activities for adults in different towns within the province but they do not have fixed seats.	
UGR	Almuñecar	Melilla
	Ceuta	--
UHU	Almonte	Lepe
	Aracena	--
UJA	Torres	Úbeda
	Jamílena	Linares
	Alcalá la Real	Cazorla*
	La Carolina	--
UMA	Antequera	Benalmádena
	Fuengirola	Marbella
UNIA	Baeza	La Rábida
	Malaga	--
UPO	Aznalcollar	El Coronil
	Carmona	Gilena
	Marchena	Salteras
	Alcalá de Guadaira	Herrera
	Gerena	La Puebla de Cazalla
	Almensilla	Mairena del Aljarafe
	Gines	Castilleja de la Cuesta
	La Rinconada	Bormujos
US	Montellano	Umbrete
	Arahal	Mairena del Aljarafe
	Carmona	Morón de la Frontera
	Cazalla de la Sierra	Osuna
	Écija	Útrera
	Estepa	Sanlúcar la Mayor

Source: Prepared internally from universities data.

* To be open in 2010.

Note: Andalusian universities have developed their adult and senior education centres as well as their cultural activities in all these localities. For decentralization in formal degree courses, see Table A.4.2.

Table A.5.4: Progress status of the university’s social responsibility report

University social responsibility report										
	UAL	UCA	UCO	UGR	UHU	UJA	UMA	UNIA	UPO	US
Have already developed at least one	X	X					X	X		
Currently developing the first report			X	X	X	X			X	X

Source: Prepared internally from universities data.

Table A.5.5: UNESCO Chairs

University	Name of UNESCO Chair	Date of creation
UCO	Chair in Conflict Resolution	2006
UCA	Chair in Best Practices in Coastal Areas for Sustainable Human Development, European Region	2002
UGR	Chair in Sustainable Development	1991
UGR	Chair in Bioethics and Society	1999
UGR	Chair in University Services Modernisation	1999
UGR	Chair in Tropical Medicine	1991
UMA	Chair in Communications	2007
UMA	Chair in Freedom of Speech	2007
UNIA	Chair in Interculturality and Human Rights	2007

Source: Prepared internally with data form UNESCO website.

Table A.5.6: Complementary information to Flora Tristan Project

Flora Tristán Project	
Opening year and motivation as social collaborator	<ul style="list-style-type: none"> - In 2004 was opened as a pilot project for 30 people - In 2005 it was fully working out - The contact with the district started in March 2003 with the Platform “Nosotros También somos Sevilla” (“We are also Seville”) and their entities. In total, they collaborate with more than 40 public and private entities (associations, social services, training centres, sport centres, etc.)
Members that have assumed part of the expenses	<ul style="list-style-type: none"> - Public Entities <ul style="list-style-type: none"> - Regional Ministry for Equality and Social Welfare - Public Enterprise of Andalusian land - City council of Seville - Provincial Office of Seville - Private Entities: Bancaja, Cajasol y Cáritas
Annual budget and origin of income	- Budget EUR 500 000: Residents payment EUR 320 000. Regional Ministry EUR 130 000 + City council EUR 30 000 + Provincial Office EUR 20 000.
Number of rooms	112 houses. 2 room per house (total: 224 rooms)
Number of hosted students	<ul style="list-style-type: none"> - Around 300 annually (included short stays). - Total of residents: 1 500 people
Nationalities represented annually in the hall	The attended nationalities are: Colombia, Ecuador, Bolivia, México, Perú, Costa Rica, Chile, China, Guatemala, Venezuela, Nicaragua, Uruguay, Argentina, Brasil, Spain, France, Belgium, Italy, Germany, Syria, Mauritania, Centro-African Republic, Mozambique, Santo Tomé y Príncipe, Guinea-Bissau, Guinea Conakry, the islands of Comoros, Morocco, Algeria and Egypt.
Number of volunteering students	66 people are collaborating in the “Polígono Sur” through this hall during the course.
Mentoring programme of students in the institute	The main purpose is to support young students in need of company and motivation to get access to the university. To this end, a selection of tutors is made between students of the hall who receive grants for their collaboration in the programme.

Source: Residencia Flora Tristán.

**Table A.5.7: Regional Ministry for Innovation, Science and Enterprise funding
in the Proyecto Atalaya**

University	Actions	CICE funding (EUR)
USE	<i>Barroco sin fronteras en red</i> (Networked Baroque without Frontiers)	160 000
UPO	<i>Pixeladas – 2nd phase</i> (Photography)	150 000
UJA	<i>Conciertos y conferencias - Visualidades Mediterráneas</i> (Concerts and Conferences)	225 000
UAL	<i>Radio Universitaria Online</i> (Online University Radio)	75 000
UCO	<i>Alfa Bética XXI</i>	75 000
UHU	<i>Contempoarte + Jornadas Interpretación</i> (Scenic Arts)	93 400
UMA	<i>Publicidad UU AA</i> (University Publicity)	124 000
UCA-UNIA	<i>Observatorio Cultural del Proyecto Atalaya</i> (Culture Observatory)	200 000
UCA	<i>Flamenco en RED</i> (Online Flamenco)	97 600
UNIA-UCA	<i>Patrimonio Universitario Andaluz</i> (Andalusian University Assets)	75 000
UGR	<i>CACOCU</i> (Online Cultural Channel)	175 000
UGR	<i>Patrimonio Universitario Andaluz</i> (Virtual Museum)	50 000

Source: Prepared internally with data from Regional Ministry for Innovation, Science and Enterprise.

Table A.6.1: Structure, human resources and organisation philosophy in andalusian universities

	UAL	UCA	UCO	UGR	UHU	UJA	UMA	UNIA	UPO	US	
Structures	Central Academic Administration & Management	Social Council - UAL Mixed Commission	Vice-chancellor Bahia Algeciras	No modification	Greater attention to knowledge transfer	Extensive non-specified modification	Quality and Innovation	Greater transparency, communication and information	Use of ICTs in teaching & management	Quality commitment	Vice-chancellor office for Transfer
	Strategic plan	Local Regional	International Local	Local Regional National International	Local International	Local	Local Regional National International	Local National International	Local International	International Local	Local Regional National International
	Management structure	Secretariat for Relations with Society	Autonomous region Campus management	Not specified	Not specified	Not specified	Strategic Planning and Quality Management Vicerrectorate	Not specified	Centre Management Board	Vice-chancellor's Office for Social Participation 2 Foundations	SACU Sustainability Office
	Experts	None use independent experts. UCA, UJA and UMA have counted on external participation for its strategic plans.									
	New technologies	They use the Andalusian Scientific Computer Network (<i>Red Informática Científica de Andalucía, RICA</i>), in the implementation of e-administration with tools in common with the regional government.									
HR & Finances	PAS – PDI training	Training on demand and external courses	Training offered since 2003	PAS training actions	OTRI personnel training	Internal and independent courses	Proposes joint training within the Andalusian University System	No answer	Posts specialised in rural development	Through the Foundation	PAS and PDI Training
	Rewards	None of the universities have a reward system for the regional engagement of their personnel									
	Funding management and decentralisation	Decentral. expenditure	No Decentral. expenditure	Decentral. expenditure	Little decentral.	Little decentral.	Internal engaged performance contracts	No answer	Internal engaged performance contract Extensive decentral.	Decentral. in Postgraduate Studies Centres	Expense decentral.
	PDI and financial management	Research management	Researchers claims for more support Reduction of teaching load	Reduction of teaching load for managers	Supports 20% admin. management	Research admin. management	Research Management	No answer	Does not have its own personnel	Admin. support for teaching staff	Admin. Support paid by research funding
	Resources and new funding	Resources come from public funding (76% approx.) and from private revenue (24%) (enrolment fees, research transfers, lifelong learning, etc). Improved funding in the future will come from: sponsorship, knowledge transfer and reinforcement of relations with external agents.									
Culture	Obstacles	None	Weak socio-economic fabric	None	None	None	None	None	Financial obstacles	Financial obstacles	None
	Conflict between aspirations	Regional	No answer	International excellence	International excellence	Local Regional	Local Regional	Regional International	Regional	International excellence	Regional International

Source: Prepared internally based on the questionnaire survey carried out among andalusian universities.

