The Catalan Research Policy in the context of the European Research Area

"Striving for excellence towards 2010 and beyond"

Bilbao, 13th of June 2003

Generalitat de Catalunya
Government of Catalonia

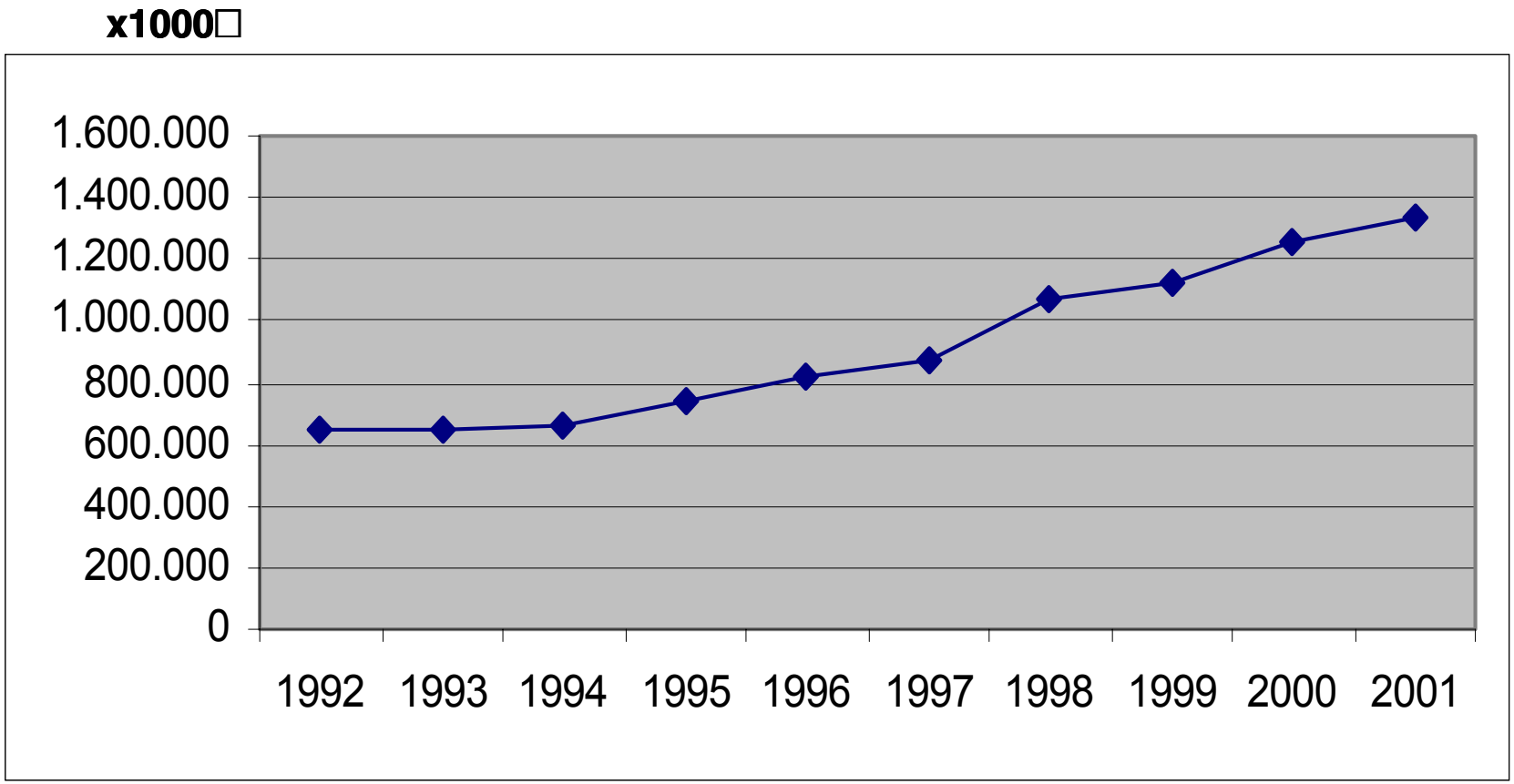
1. Basic R&D Indicators

EVOLUTION OF R + D EXPENDITURE/GDP

	1999	2000
Sweden	3,8	n.a.
Finland	3,2	3,4
Japan	3,0	3,0
United States	2,6	2,7
Germany	2,4	2,5
France	2,2	2,2
Denmark	2,0	n.a.
Netherlands	2,0	n.a.
European Union	1,9	1,9
United Kingdom	1,9	1,8
Austria	1,8	1,8
Canada	1,8	1,8
Belgium	2,0	n.a.
Ireland	1,2	n.a.
Euskadi	**1,2**	**1,2**
Catalonia	**1,1**	**1,1**
Italy	1,0	n.a.
Spain	0,9	0,9
Portugal	0,8	n.a.
Greece	0,7	n.a.

Data: INE, OECD, Eurostat (2002)

CATALONIA. TOTAL R&D EXPENDITURE (1989-2001)



Source: INE 2003

HEAD COUNT OF RESEARCHERS AS ‰ OF THE LABOUR FORCE (1999)

COUNTRY	NUMBER OF RESEARCHERS/ 1000 LABOUR FORCE
Canada	6,1
Japan	9,9
Sweden	9,6
Finland	11,3
Denmark	6,7
France	6,8
Germany	6,7
United Kingdom*	5.5
Ireland*	5.1
Netherlands	5,1
European Union	5,6
Catalonia	4,4
Euskadi	4,9
Spain	4,1
Italy	2,9
Portugal	3,3

Data:*OCDE, INE EUSTAT (2002)*

** Year 1998*

2. The 3rd Research Plan of Catalonia (2001-2004)

MAIN GOALS

Goal #1: Improve the growth and the quality of the Catalan System of Science and Technology

Goal #2: Boost human resources

Goal #3: Promote internationalisation of research

Goal #4: Encourage a better management and dissemination of R&D activities

Goal #5: Stimulate a more active participation of large companies and SME

ACHIEVEMENTS

A. #1. 1.4% R&D expenditure/GDP

A. #2. ICREA, "Distinctions"

A. #3. Research Centres

A. #4. Scholarship's Agency

A. #5. Communication Policy

A. #6. CIDEM's Innovation Plan

THEMATIC AREAS

- **Area for the General Progress of Knowledge**
- **Selected Areas:**
  - **Agricultural and Food Sciences**
  - **Culture and Society**
  - **Technological Innovation**
  - **Environment and Natural Resources**
  - **Health and Quality of Life**
  - **Information Society**
  - **Territory, City and Mobility**

GOAL #2 . ACHIEVEMENTS :

500 consolidated groups

“Distinctions”: teaching release program (30 awards per year)

Funding of some 800 predoctoral students. Doctoral education is hinge that articulates the European Area of Research and the European Area of Higher Education

Recruitment of senior researchers through the Catalan Institute for Research and Advanced Studies (ICREA)

Cofunding of the state-sponsored Ramón y Cajal post-doctoral program. Catalonia attracts 25% of appointments

GOAL #3. ACHIEVEMENTS:

RESEARCH CENTERS

- "August Pi i Sunyer" Biomedicine Research Institute (IDIBAPS)
- Center for Genomic Regulation (CRG)
- Institute for Photonic Sciences (ICFO)
- Telecommunications Technological Center of Catalonia (CTTC)
- Institute of Chemical Research of Catalonia (ICIQ)

2. The 3rd Research Plan for Catalonia

Institute of Cardiovascular Sciences of Catalonia (ICCC)

Animal Health Research Center (CRESA)

Classical Archaeology Institute of Catalonia (ICAC)

Institute of High Energy Physics

Institute of Nanotechnologies

THE SYNCHROTRON LIGHT SOURCE OF BARCELONA

Synchrotrons are particle accelerators that generate precisely-colored, extremely powerful luminic radiation, several orders of magnitude above that of conventional light sources.

Such radiation allows unprecedented studies on matter structure and has a wide range of applications in biotechnology, medicine, material science, nanotechnology, chemistry and many other scientific and industrial sectors.

The Barcelona synchrotron project consists of a ring that is 250m across and up to five light channels. Thanks to its projected configuration, it will provide a wide spectrum of applications both for academic and corporate researchers (up to 160 research groups and 750 researchers).

It costs 120 million € to build, and an estimated additional 12 million € anually to run (financed 50% by the Catalan Government, 50% by the Spanish Government)

Expected to be operational in 2008

3. From Research to Innovation: corporate research & campus centers

Activities of the Corporate Research Unit:

- **cRèDiT, financing of corporate R+D+T infrastructures**
- **Income Tax incentives for the attraction of foreign experts to come and work in Catalunya**
- **Improve commercial and management capabilites of universities and research centres**

cRèDiT, financing of corporate R+D+T infrastructures:

financial support to companies investing in research infrastructures

strictly not running costs, strictly research

long term, interest free loans

Income Tax incentives for the attraction of foreign experts to come and work in Catalunya:

Aimed at senior Ph.D with experience

hired mainly by private companies

through an automatic exemption of the autonomous leg of the tax

4. The European Dimension of Regional Research Policies

The role of regions in the promotion and financing of European research is on the rise

In Catalonia regional funding represents 1 out of every 3 euros of public money spent on R&D

The regions spend money to promote R&D activities in order to foster their own economies… and this is a good thing for the Lisbon and Barcelona objectives

No two regions are equal, but all over Europe the presence and research activities of regions are increasing

In spite of this, most of the sources of public funding of R&D in the European Union are still not at the European or regional level, but at the state level

Therefore the interplay of the regional, with the state and the European level is essential

Basic Fact

How Catalonia deals with the interplay between the region, the state and the European levels in R&D policy. Two examples of public policy:

- **We do not award grants for projects. We concentrate on strengthening our scientific and technological infrastructure so as to attract funds**

  European funds are a small fraction of state level funds, but they have a strategic character, essential for the regions

- **Matching. It is crucial from a regional point of view that regional and state policies be complementary rather than substitutive**

The importance of private funding and business expenditure:

The market for R&D knowledge is truly international

Thus, the local R&D institutions should look at the international market to sell their know-how

In Catalonia, our policy towards the promotion of corporate research tries to develop this international market outlook

The regions contribute to achieve the Lisbon and Barcelona objectives

It is important that the regions can have a say in the future of Europe

Comparison between European and US Research

CONCEPT	U.S.	EUROPE
Public funding	Mostly federal	Mostly by member states
Regional dimension	Very low	Increasing
Federal public funding constraints	Few	Limited to "European content"
Networks	Informal. Nodes more important than networks	Formalized: the network is the aim

Comparison between European and US Research

CONCEPT	USA	EUROPE
Long term vs short term	Balanced	Biased towards short term
Competition among institutions	Intense	Not a central object of policy
Business-university relations	Universities as leaders	Developing, not yet consolidated
Ph.D. Education	"The jewel of the crown"	Insufficiently developed and poorly funded
Overall funding	Leader	Follower

Many thanks for your attention!

Eskerrik asko zuen arretagatik !