



**The Role of  
Universities in  
Innovation and  
Regional Development**

**UAB**  
Universitat Autònoma  
de Barcelona

# **Balancing Regional Engagement and Internationalisation: The Case of Autonomous University of Barcelona**

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**12th Regional Innovation Policies Conference  
University of Santiago de Compostela**

**Galicia, Spain  
October 2017**



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Marie Skłodowska-Curie grant agreement No. 722295.

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# 1. Paper Overview

Universities are increasingly recognised as important actors in innovation and regional development.

- ❖ Third mission of universities;
- ❖ Quadruple helix of innovation;
- ❖ Regional innovation system.

At the same time, in a globalised context, there is a need for universities to implement strategies to promote their international engagement.

## **How a university with an internationalisation orientation can contribute to region's innovation and development?**

This paper explores the phenomena through a case study of the Autonomous University of Barcelona (UAB) and the region of Barcelona city and Catalonia's AP-7/B-30 industrial agglomeration.

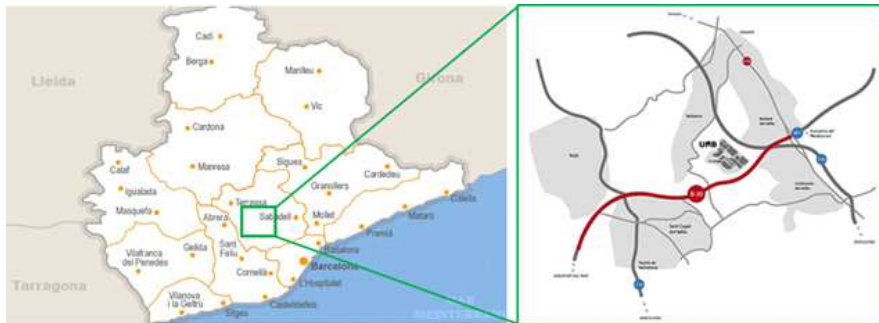
## 2. Contextualization: UAB (1)

- ❖ Ranked amongst the 200 best universities in the world and included within the top 10 of young universities at the main university rankings.
- ❖ More than 35,000 students.
- ❖ One of the largest employers in the region. With a workforce of 3,676 people in teaching and research staff, and 2,348 people in administrative staff, distributed in 57 departments and 24 research centres → decentralised structure.
- ❖ UAB has a yearly budget of almost 312 million euros, and almost 25% of it is used for research activities.
- ❖ Member of strategic alliances such as the European Consortium of Innovative Universities (ECIU).
- ❖ Host of several education and research centres and institutions, as well as firms (spin-offs, start-ups, NTBFs and affiliated and derived companies).

**Internationally-oriented university** (mobility, collaboration, and attraction of talent) & Recognised as a **"Campus of International Excellence"** to reinforce the international standing of the UAB and of the Barcelona Metropolitan Area.

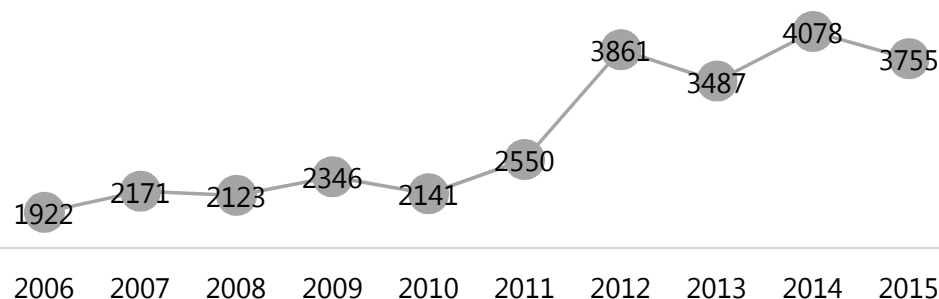


## 2. Contextualization: Barcelona Region (2)



- ❖ UAB main campus is located at Bellaterra district, in Cerdanyola del Vallès city, part of Vallès Occidental (Western Valley) county.
- ❖ The county partially makes part of the Metropolitan Region of Barcelona in Catalonia, one of the 17 autonomous communities in which Spain is divided in territorial and administrative terms.
- ❖ Catalonia is considered as the driving economic force in Spain contributing with 20% of GDP, 25.5% of industrial activity and 17.5% of trade operation.
- ❖ For innovation purposes, the university considers itself as a part of B30 area which includes a group of 23 local councils in the AP-7 and C-58 motorways. Leading industrial agglomeration in Catalonia and Spain.
- ❖ B30 area covers a 50km route, a surface area of 485 km<sup>2</sup> with a population of 1,018,166 habitants, and a total of 30,173 companies and 387,478 jobs with 195 industrial estates.
- ❖ UAB main campus is 20 km far away from Barcelona city, the capital of Barcelona province and Catalonia region, which is claimed as the home of UAB.

### 3. Research Activities



**Scientific Production**

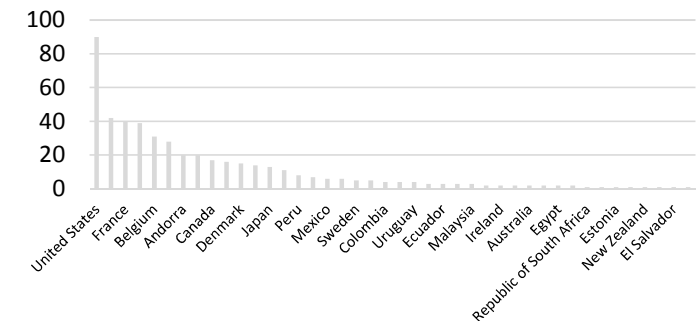
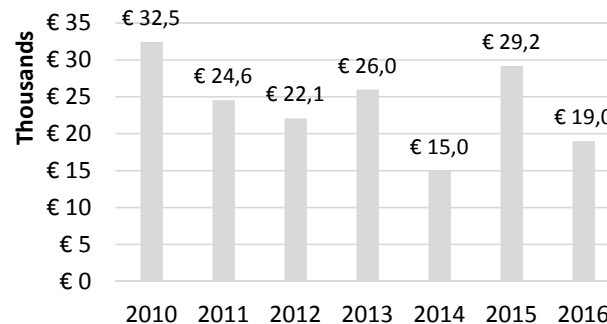
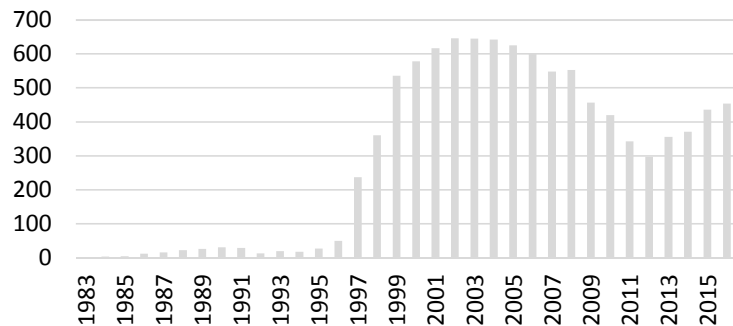
Type of Organization	Import	%
STATE ADMINISTRATION	€ 27,670,652.69	35.55%
FIRMS	€ 21,662,363.47	27.83%
EUROPEAN ADMINISTRATION	€ 14,108,557.61	18.12%
REGIONAL AND LOCAL ADMINISTRATION	€ 8,462,640.38	10.87%
BILLING FOR SERVICES	€ 4,947,762.63	6.36%
UNIVERSITIES	€ 990,585.73	1.27%
<b>TOTAL</b>	<b>€ 77,842,562.51</b>	<b>100.00%</b>

**Research Budget Sources 2015**

- ❖ The scientific production (articles, reviews, editorial materials and preceding papers, among others) at UAB in the last 10 years has had an increasing behaviour, in harmony with the university growth.
- ❖ UAB developed its research activities with a budget surpassing 77.8 million euros in 2015, which funding came mainly in the form of international aid, agreements and projects.
- ❖ The most relevant organizations working as UAB funders are firms and national and European administrations, while other higher education institutions and income from billing services have minor contributions.
- ❖ UAB has been ranked among the best Spanish universities in different rankings related to research activity: 2° in Scimago Institution Rankings World Report -SIR WR 2014- for volume and impact of scientific activity, 2° in Leiden Ranking 2016 for volume of papers, and 2° in ISSUE Rankings 2017 for research productivity.



## 4. Collaboration Practices



### UAB Agreements Evolution

- ❖ Real launch of university collaboration practices at UAB took place by 1997 (200+ agreements), and got to its highest point in 2003 (646 agreements). Next years showed the effects of economic recession until 2013, when growth is observed again.
- ❖ Signed agreements include research and education projects, public innovation programs, patents developments, university services provision and grants/subsidies, among others, either in the framework of university-firm collaboration or in other collaborations taking place with other region stakeholders like communities and public institutions.
- ❖ Spanish institutions and firms represent an 83% of the historic agreements.
- ❖ The list of foreign countries from which firms and institutions collaborate with UAB is led by USA, followed by France and Belgium. A 15% of UAB agreements taking place abroad may indicate partly internationalisation goals.

### Agreement Average Budget

### Agreement Country Distribution

## 5. University Initiatives: Ítaca Campus (1)

### *Creating Social Impact by Immigrants Education*

This social-educational programme offers a summer school of 3-4 weeks to local 15-year-old students and primarily aims at non-EU migrants.

#### **Organised by:**

- ❖ UAB
- ❖ Cerdanyola del Valles city council & Institute of Education Sciences
- ❖ Santander group & Solidarity Autonomous Foundation.

#### **Purposes:**

- ❖ To provide an overview about university life
- ❖ To encourage students to move to higher education level.
- ❖ To offer the opportunity for students with diverse social background to understand each other.

**Achievements:** From 40 students in 2004 to 388 students in 2016. 33 city councils, 7 county councils and 77 centres have participated.

Ítaca Campus project contributes to internationalization goals of UAB in terms of training and attraction of foreign talent. Additionally, trained immigrants are meant to become change agents and contribute positively to the development of the region





## 5. University Initiatives: COREs Network (2)

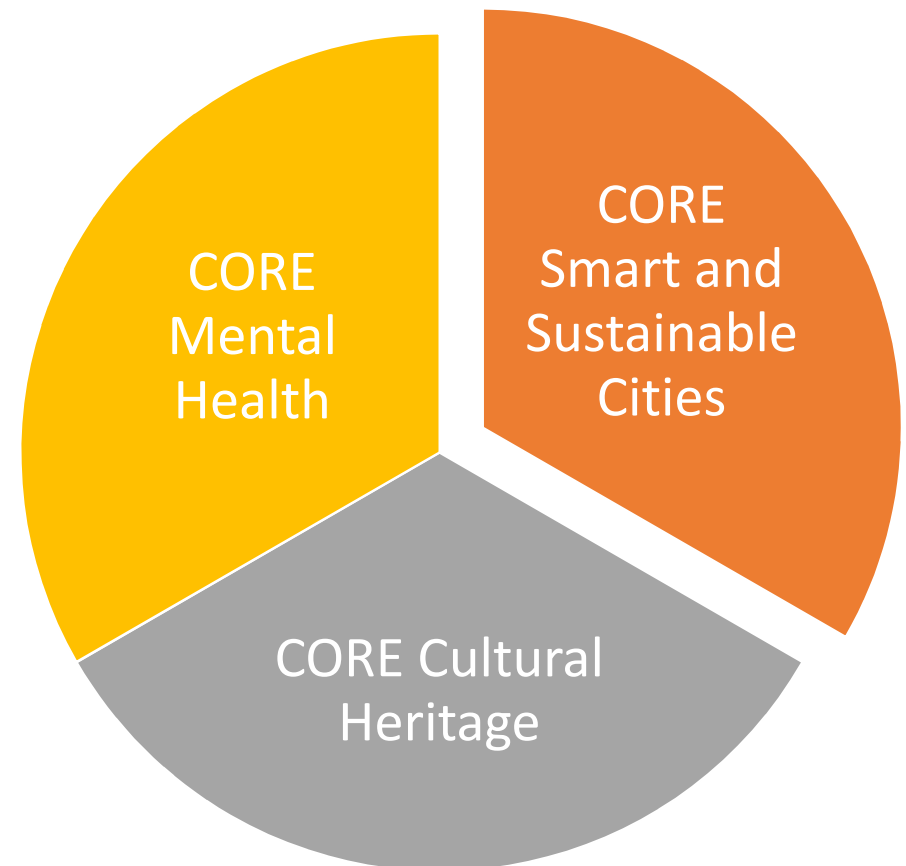
### *Network of Strategic Research Communities (Comunitats de Reserca Estratègica – COREs)*

#### **Objectives:**

- ❖ To promote and manage R&D&I activities conducted by the UAB and aggregated institutes by offering support to the development of new strategic policies and projects.
- ❖ To create a stable research network for members visibility, research groups competitiveness, resources sharing and actions coordination.

#### **Characteristics:**

- ❖ Synergies of innovation and knowledge transfer, as the driving force of the UAB-CIE sphere.
- ❖ Multidisciplinary and innovative approach to face society challenges at global, European (Horizon 2020, RIS) and national scale.



## 5. University Initiatives: DGSV (3)

### *Training Change Agents for Sustainable Development*

This programme, launched in 2017 and subsidized by the Catalan government and the European Social Fund (ESF), includes: 1) training in technology and green skills, entrepreneurship and personal and methodological competences, 2) detection of new opportunities through a platform of open innovation and co-creation and 3) proposals and pilot experiences to be included in a catalogue, open to firms, which should help participants to improve their profiles and to develop new employment opportunities.

**Participants:** UAB (Department of Telecommunications and Systems Engineering), Western Valley County Council and Eurecat (Technology Centre of Catalonia).



Digital  
& Green  
SKILLS VALLÈS



per una economia sostenible



**Purposes:** 1) To develop and disseminate digital and green competences -skills- among academics, practitioners, citizens and firms, 2) to allow citizens to access digital and sustainable transformation by mobilizing social agents, 3) to develop new employment opportunities in unexplored fields, 4) to fit new professionals profile into current and future tendencies, and 5) to make these professionals become change agents for developing a new economic and social framework.

## 6. Discussion on University Engagement (1)

### *Passive Role*

Economic benefits that UAB brings as a large university in the region.

UAB is an important element of economy of B30 area and Barcelona city, especially in the stage when the region aims to become an innovation and knowledge-based economy, in alignment with Catalan strategy.

Three forms of impact can be distinguished:

- ❖ University employment and expenditure in regional economy.
- ❖ Positive impacts of student and academic populations on the living and working environment of region.
- ❖ Human capital effects by providing graduate workers in regional labour markets.

## 6. Discussion on University Engagement (1)

### *Active Role*

University's impacts on innovation and regional development thanks to its dynamic activities.

### **How?**

- ❖ UAB has strong impacts to innovation and development of the region by its intensive "knowledge spillovers" and "technology transfer".
- ❖ Human capital effect: connect the research priorities with public concerns, and include culture activities.
- ❖ UAB is increasingly considered as a key stakeholder in negotiating and decision-making process for innovation and regional development, as B30 area consistently pursues the strategy of linking local actors for innovation and its development.



Digital  
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SKILLS VALLÈS

## 7. Conclusions

- ❖ As a top ranked institution in Spain and Europe, UAB has a strong point of view towards the importance of internationalisation focusing on three central actions of mobility, collaboration, and attraction of talent.
- ❖ UAB also aims to contribute to innovation and regional development beyond its educational and research activities.
- ❖ The role of UAB in innovation and regional development has been strengthened especially since 2008 when Barcelona city expressed its particular interests in engaging universities as a joint strategy to improve the international competitiveness of the economy and later in 2009 with UAB's achievement of Campus of International Excellence.
- ❖ The study reveals that UAB has a strong impact by its intensive knowledge spillovers, technology transfer, and several projects developed to solve regional public concerns. Lastly, UAB is increasingly considered as a key stakeholder in negotiating and decision-making process for innovation and regional development.

However...

- ❖ Firms in the region of Catalonia in general do not have culture/ideas to collaborate with universities. Hence, it is important to effectively manage the interface (e.g. cluster associations) and develop evaluation frameworks based on some good practices in the region to encourage the collaborations.
- ❖ The need of publication from university normally does not go along with the priorities and goals of industry or community.



## The Role of Universities in Innovation and Regional Development

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Thanks!  
Questions?



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