

“Research excellence and academic differentiation: organizational responses to the European Research Council in Spanish Universities”

By **Luis Sanz-Menendez**, **Alberto Benitez-Amado** and **Laura Cruz-Castro** (CSIC-IPP, Spain)

October 2015, Rome (IRCRES CNR)



EU-SPRI

**Early Career Researcher Conferences (ECC)
IRCRES Rome, Italy 14-16 October 2015**

“Crossing boundaries in scientific knowledge creation and transmission: trends, challenges and policy implications”

**Rome IRCRES CNR
14th October 2015**

Summary table

Title	<p>"Research excellence and academic differentiation: organizational responses to the European Research Council in Spanish Universities"</p> <p><i>Luis.Sanz@csic.es – Laura.Cruz@csic.es - Alberto.Benitez@csic.es –</i></p> <p>*CSIC, Institute of Public Goods and Policies – IPP - Madrid, Spain</p>
Objectives	<p>This paper analyses the involvement and participation of Spanish universities in the European Research Council (ERC) funding calls in the last seven years in order to understand the way in which HE organisations respond to changes in the institutional environment of research funding.</p>
Methodological design	<p>Type of paper: Exploratory research – Case study.</p> <p>Case selection: A representative sample of the universe of Spanish Public University System. 18 public universities selected geographically (out of a total of 47 classroom public universities) in 6 Spanish regions (out of 17 regions with budgetary and regulatory competences).</p> <p>Criteria's for case selection: (1) regional diversity in the ruling political party and type of government; (2) different levels of local or regional competition; (3) different levels of research quality of universities; and (4) different types of universities.</p> <p>Period of analysis: from 2007 to 2013.</p> <p>Methodology: two step procedures. first, we have built up ideal types of university responses inspired on the literature on organization theory to guide our analysis. Second, we have constructed empirical indicators to position a sample of selected cases in a taxonomy based on the ideal types</p> <p>Analytical framework: using some elements of the theory of organisations and resource dependence, we develop a two dimensional typology built upon the adherence to the new institutional logic of research excellence in the universities and the existence of promotion instruments, incentives or rewards to participation. We identify four “ideal types”: committed, transformative, hesitant and neglected.</p>
Research questions	<ol style="list-style-type: none"> 1. What involvement and participation have been Spanish universities in the ERC funding calls in the last seven years? What differences are there in the responses to the Council's policies? 2. Have universities promoted specific actions associated to the idea of excellence that the ERC represents? Do they have new instruments and incentives to promote participation? What do universities do once they have a grantee? 3. What factors could help to account for the way in which organisations respond to changes in the institutional environment of research funding?
Relevance	<ul style="list-style-type: none"> - Policy: it seems relevant to know whether European policy is producing convergence towards excellence or growing differentiation. - Theory: Institutional theory predicts isomorphic developments of organisations in the same field.

The ERC supports excellence in frontier research through a bottom-up, individual-based, pan-European competition

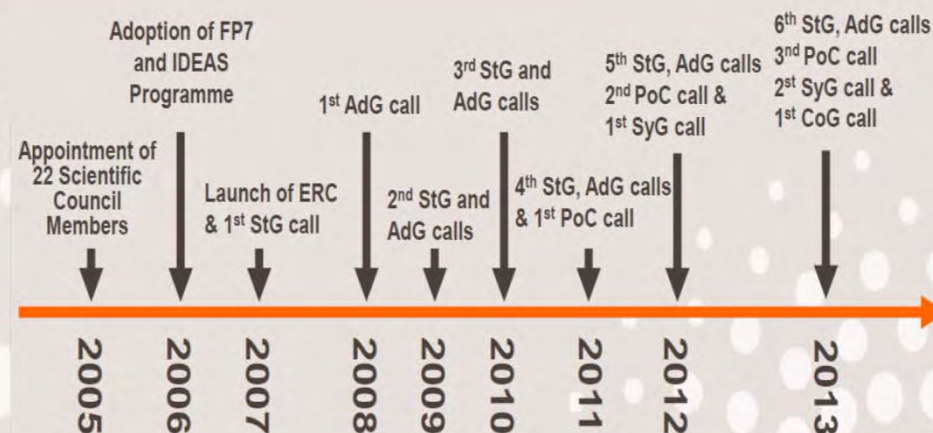
Budget: € 7.5billion (2007-2013) - 1.1 billion €/year

Legislation

- Scientific governance: independent Scientific Council with 22 members; full authority over funding strategy
- Support by the ERC Executive Agency (autonomous)
- Excellence as the only criterion

Strategy

- Support for the individual scientist – no networks!
- Global peer-review
- No predetermined subjects (bottom-up)
- Support of frontier research in all fields of science and humanities



Starting Grants

starters
(2-7 years after PhD)
up to € 2.0 Mio
for 5 years

Consolidator Grants

consolidators
(7-12 years after PhD)
up to € 2.75 Mio
for 5 years

Advanced Grants

track-record of significant research achievements in the last 10 years
up to € 3.5 Mio
for 5 years

Synergy Grants

2 – 4 Principal Investigators
up to € 15.0 Mio for 6 years

Proof-of-Concept

bridging gap between research - earliest stage of marketable innovation
up to €150,000 for ERC grant holders

ERC grant distribution to countries of HI

ERC Starting and Advanced grant calls 2007-2012

European Research Council

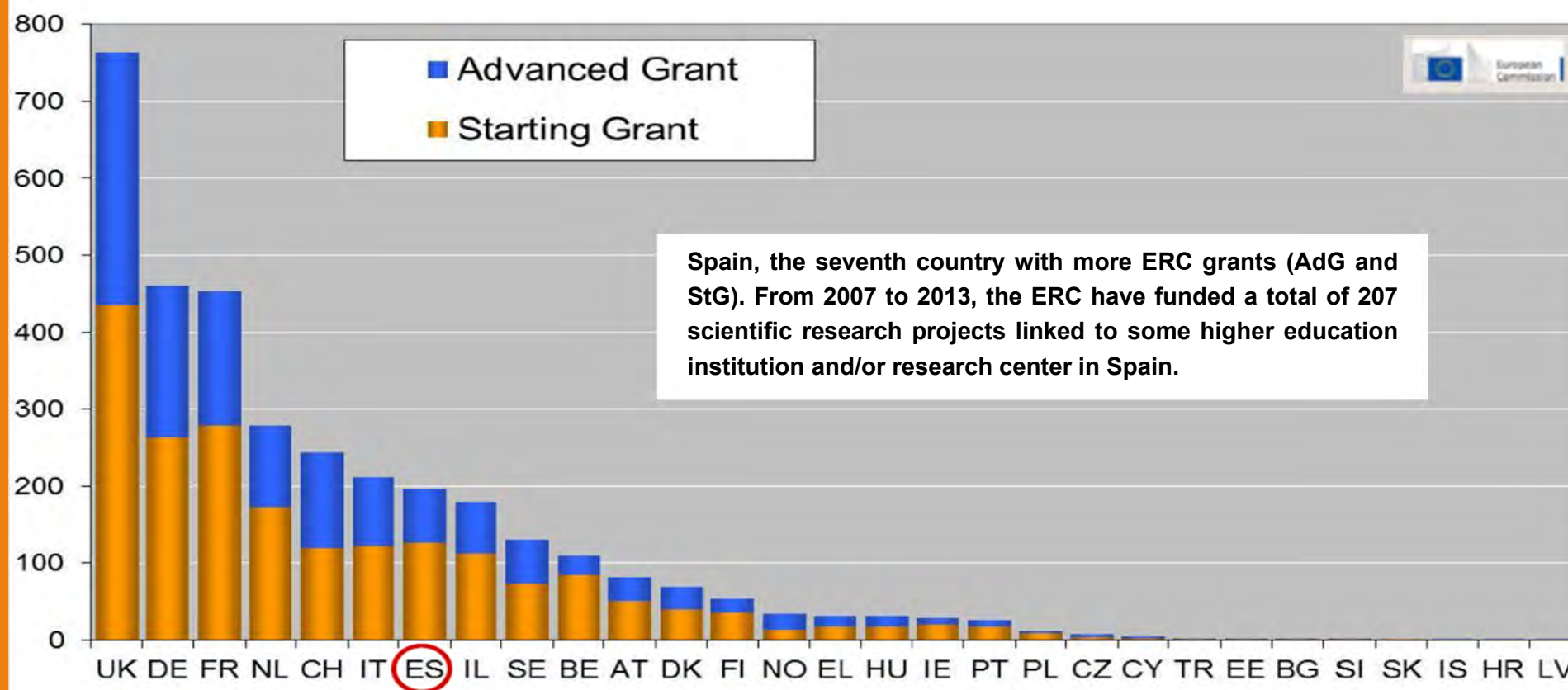
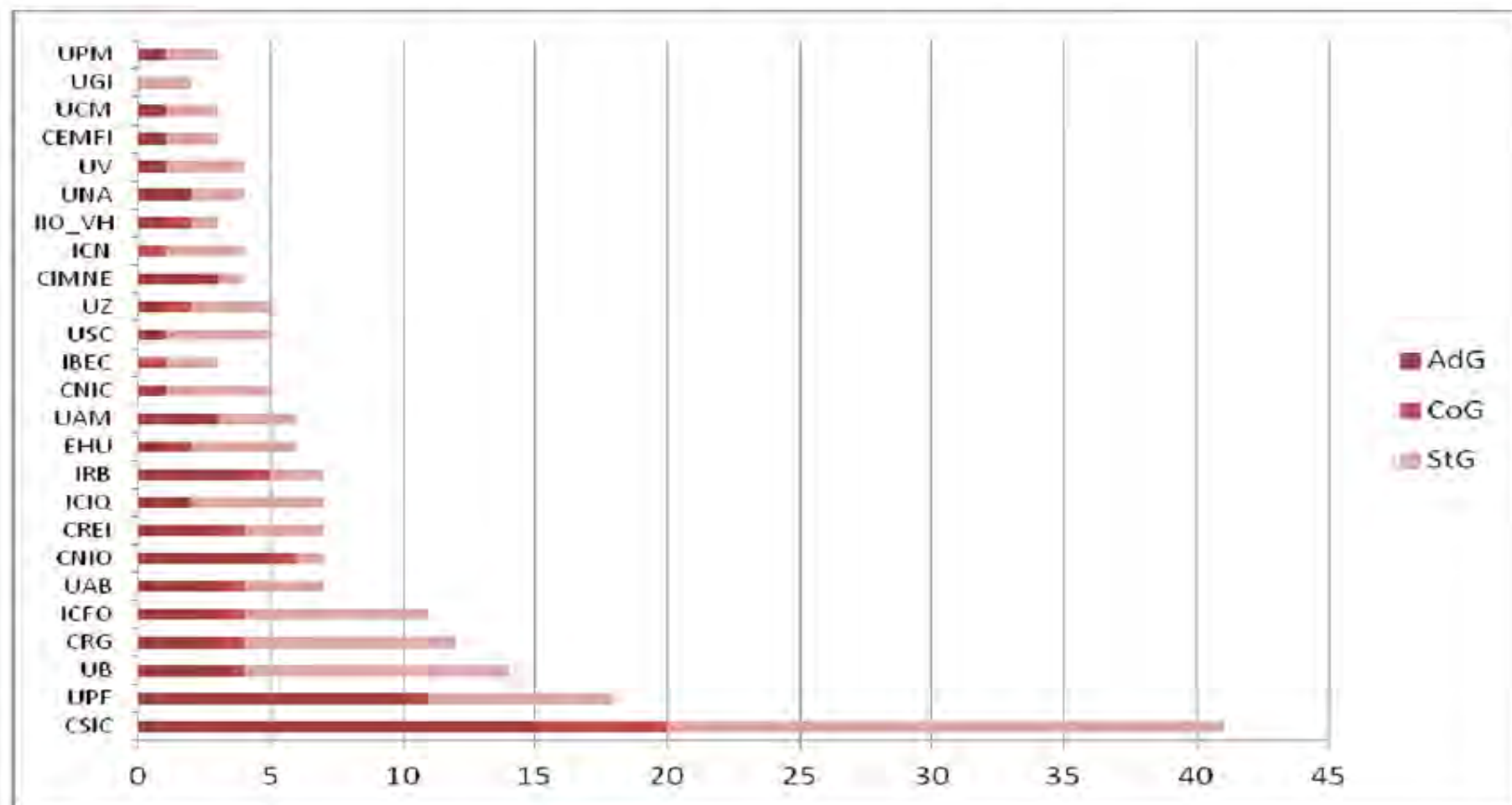
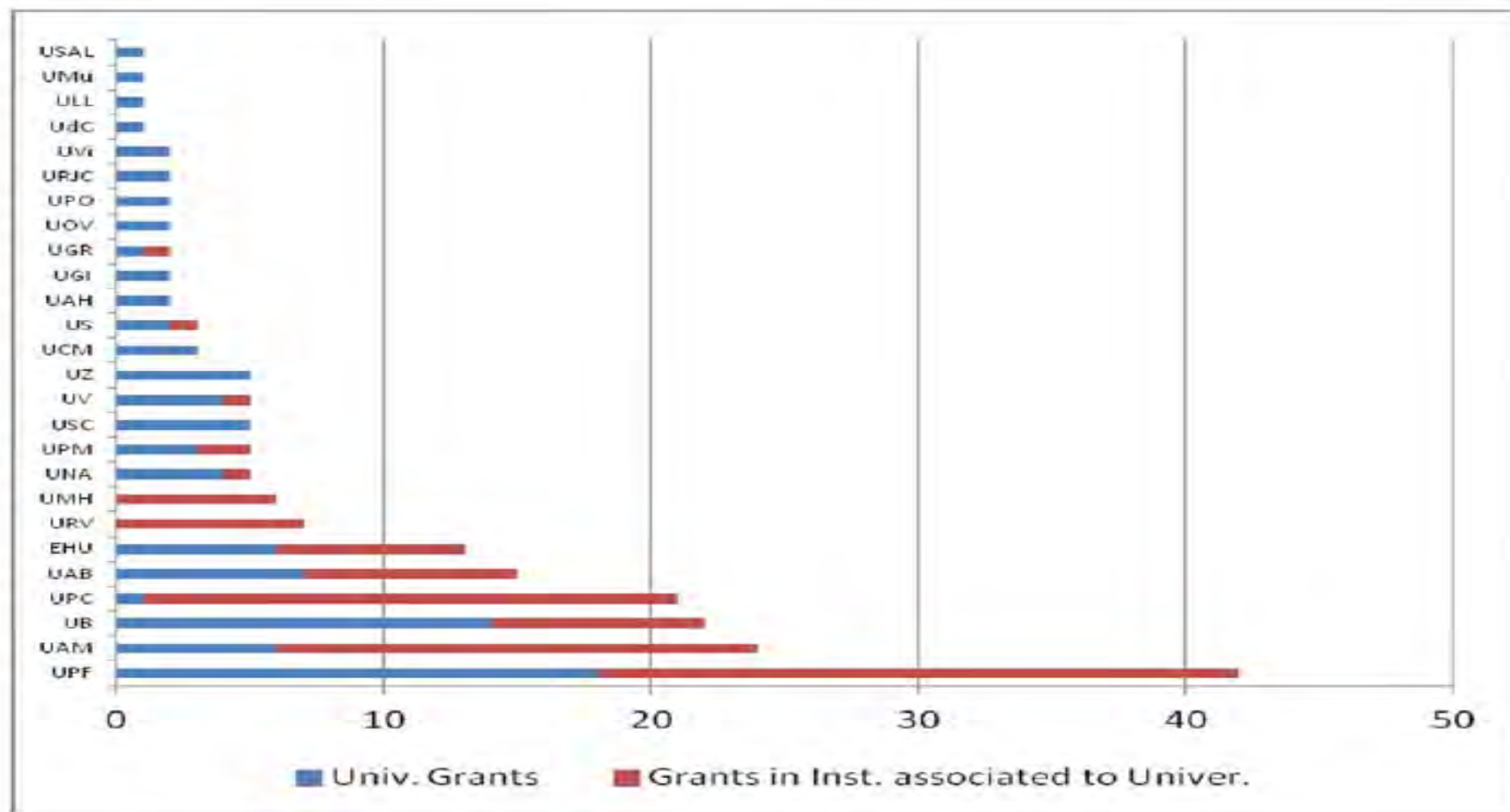


Figure 2. Total ERC grants to hosting Spanish Institutions (2007-2013)



Source: Own elaboration with ERC data



Source: Own elaboration with ERC data

- The creation of the European Research Council has attracted a lot of attention among researchers.
- Previous works about the ERC, its instruments, functioning and effects, have focused very little attention to the study of the effects or impacts of the ERC on organisational actors and their reactions.

Some exceptions: EURECIA project (EC 2012) or Edler et al. (2014) analysing the impact of the ERC existence on research organisations in general.

- The ERC affects organisation by potentially providing three types of values: material, symbolic and normative (Edler et al., 2014).

Universities as organisations (Petersen, 2007):

- institutions affect the incentives confronting individuals and their resulting behaviour;
- institutions define the context within which organisations interact with each other, and
- organisations change in response to pressures and values imposed by powerful actors in their environment.



Institutional theory based models predict convergence, however, empirical observations confirm diverse organisational responses.

- Institutional theory: the alignment with the ERC principles and values has become a dominant “institutional logic” (DiMaggio, 1997; Suddaby and Greenwood, 2005). A growing homogenisation and organisational isomorphism? A convergence process?
- Organisational theory (Oliver, 1991): organisations, even those in the same field, may follow a diversity of strategies, ranging from acquiesce to defiance, and different degrees of compromise in between.

Our basic idea, inspired by Oliver (1991), is that it is possible to develop a typology of strategic responses to institutional pressures which would vary according to the extent to which there is active agency or resistance from the organisation.

The study of the empirical responses from organisations that move from compliance to neglecting with respect to the environmental pressure is relevant from an analytical perspective.

Mapping universities into an empirical taxonomy based in the ideal types: two step approach

1. Construction of ideal types (typology):

- ❖ Dimension 1: adherence of the university to the excellence values embedded in the ERC:
 - Aggregate effort of the institutions and academics. Variation across universities. Internal disparities inside the organisation among sub-units
- ❖ Dimension 2: existence and use of specific instruments, incentives and rewards systems for the promotion of research (specifically excellence research) as a mechanism to get funding and reputation for the university.

2. Developing empirical indicators to position university cases in a taxonomy.



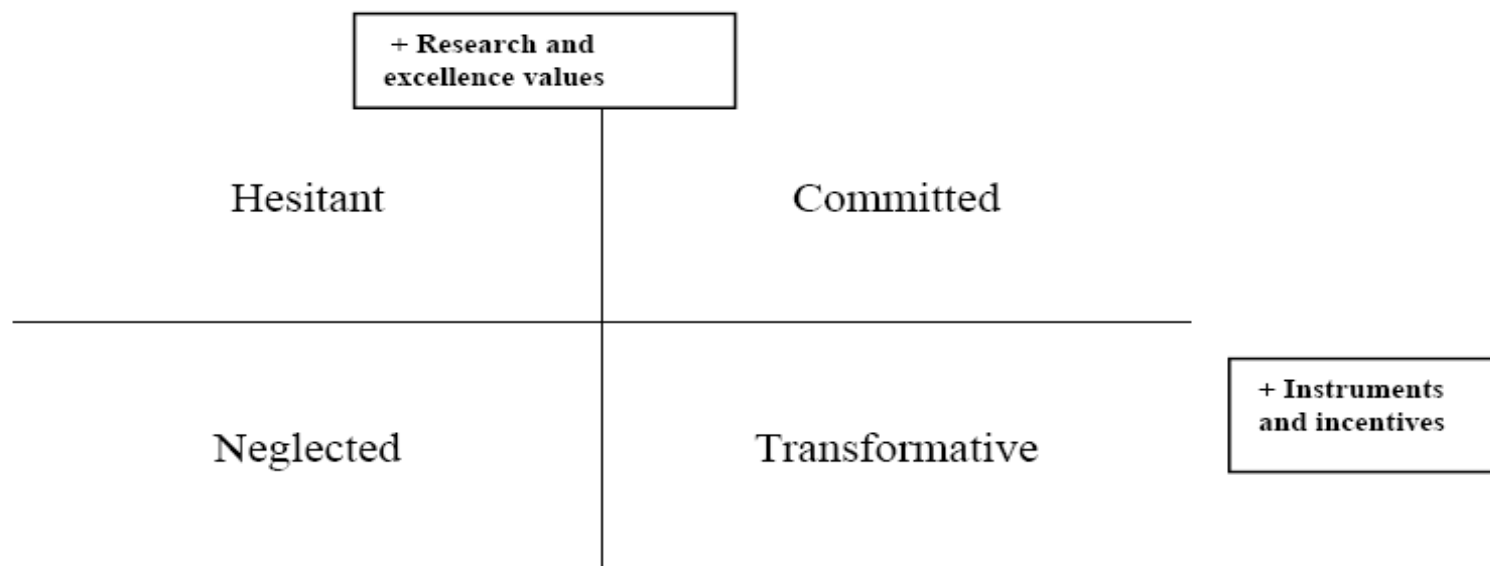
Indicators for positioning universities in the taxonomy:

- ❑ Dimension 1: adherence to research excellence values is measured by number of proposals presented to the ERC with the university as the host entity in the period 2008-2013, normalised by per thousand academic staff).
- ❑ Dimension 2: instruments and incentives are measured with a system of rating (with values 0 to 10 allocated by three independent coders) with five categories:
 - ✓ explicit instruments for ERC;
 - ✓ general instruments for research promotion, especially regarding EU competitive funding;
 - ✓ organisational improvements to support application and management of big and complex projects;
 - ✓ provision and dissemination of information about ERC calls;
 - ✓ rewards and recognitions (ex-post) of the efforts made for ERC applications.



- **Methodology:** two main dimensions that serve our analytical purpose: (1) the adherence of the university to the values embedded in the new model of research guided by the idea of ERC excellence; (2) the second dimension is connected to the availability, existence and use by the university management of specific instruments, mechanisms, incentives and reward systems.

Figure 1. Ideal type of universities according their responses to the emerging institutional logic of excellence and ERC

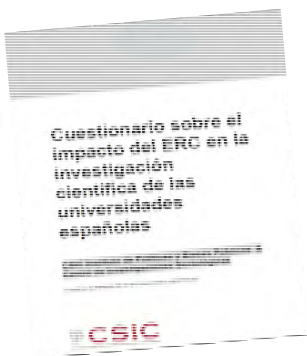


Source: Own elaboration

▪ **Selection of study cases:** 18 public universities.

▪ **Criteria for case selection:**

- (1) regional diversity in the ruling political party and type of government (conservative, nationalist or social-democrat government, both stable and changing over time);
- (2) different levels of local or regional competition: universities of three regions with multiple public universities, and 3 universities of regions in which there is a single university in the territory;
- (3) different levels of research performance of universities in terms of high, medium and low research impact (measured by Normalized Impact factor for the University by Scimago-CSIC IPP, 2009-2013);
- and (4) different types of universities [generalist (usually big), Engineering Universities and more specialised (usually new and smaller)].



▪ **Period of analysis:** from 2007, year in which the ERC began its work to 2013

▪ **Sources of information:** participation of universities in the ERC calls, documentary analysis of universities' reports, legislation, plans, etc.; and 40 semi-structured interviews with University top managers.

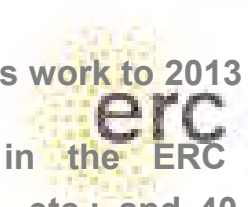
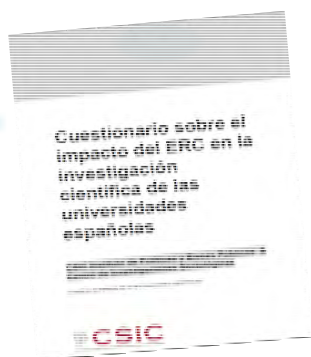


Table 1. Aggregate features of the selected sample of universities over the total population

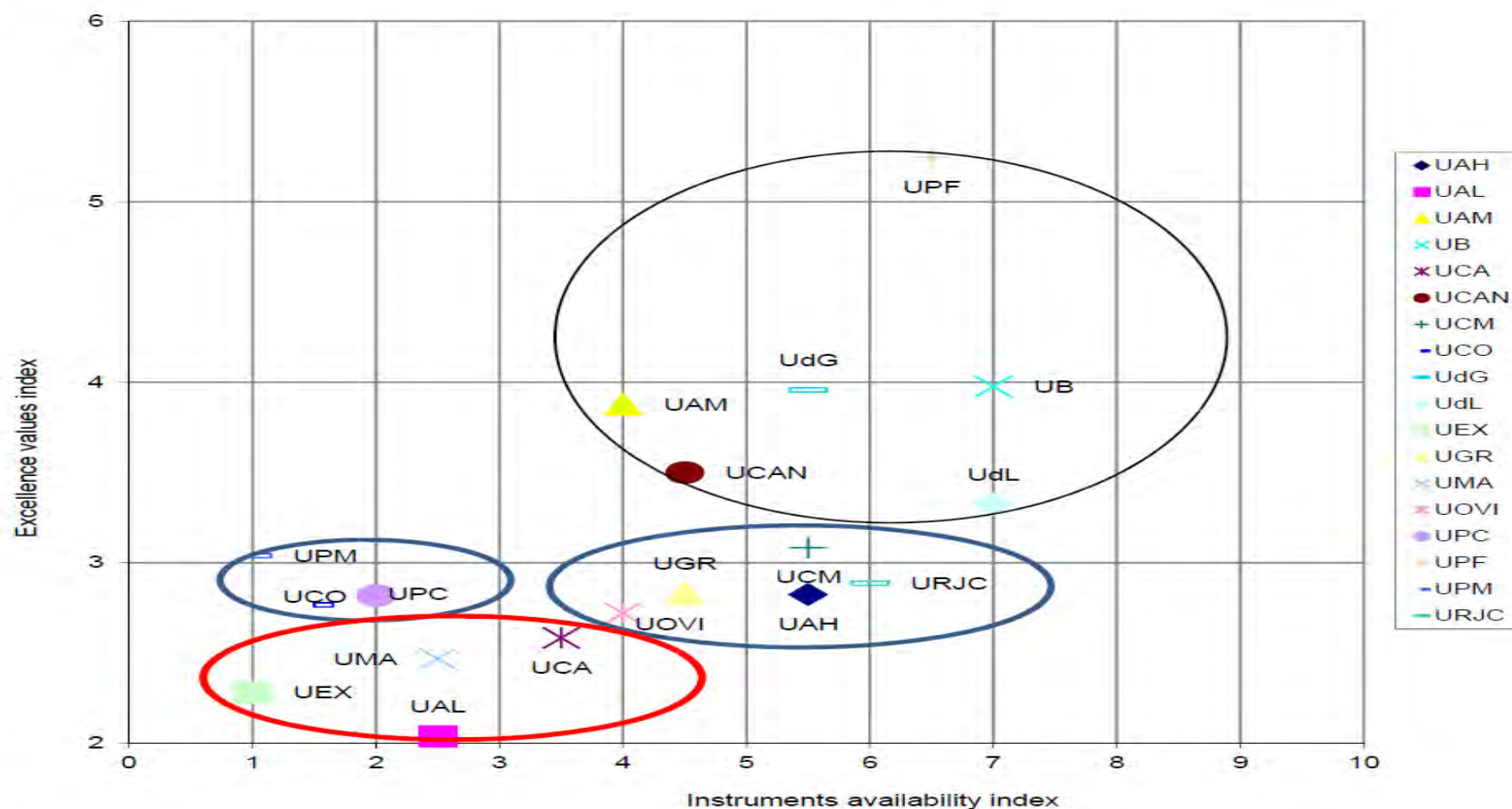


	Total	Sample	% Sample / Total
Number of Public Classroom Universities	47	18	38.3
Num. of Total Academic Staff	98,930	42,158	42.6
Num. of civil servant academic staff	48,681	21,341	43.8
Num. of temporary contracted academic staff	49,210	20,265	41.2
Num. of enrolled students	1,225,047	564,249	46.1
Number of Ph. Dissertations	9,782	4,737	48.4
Average Normalized Impact Factor (2009-2013)	1.14	1.15	
Average position in Publication rankings	24	23	

Source: Own elaboration



Figure 4. Positioning indicators of selected Spanish universities



Source: Own elaboration

It is possible to identify four main groups:

I. Committed university responses:

- A clear commitment with research and excellence values (a shared values among the majority of the academic community).
- The research mission is fully integrated in their organisational culture.
- Are generally internationalised universities with a consolidated record of participation in competitive international funding programmes.
- Show a strategic interest in excellence and internationalisation.
- Adopt and implement well defined and stable instruments to incentivise research economically and academically.

“Our great interest is in Europe, it is almost an obsession, we have duplicated EU project funds”

“We give the ERC the maximum relevance, it is part of the political agenda of the university, we are constantly thinking about new actions to have more and more ERC grants. We were already an excellence-oriented university before the creation of the ERC”

“There are not significant measures, our academics are active and do not need much incentive; they are highly motivated researchers with a strong will to get an ERC grant, they are socialised in the value of external fund raising”

“Having an ERC practically secures a tenured position or a promotion ... it is not written anywhere but it is unthinkable we would not retain him/her”

“They get priority and are much better treated than the rest. We treat them very well, we anticipate their needs, and make them feel we want them to stay”



II. Hesitant university responses:

- An ad hoc reactive approach to the emerging institutional logic of excellence of the ERC.
- A general commitment with research (although not explicitly with the idea of excellence or the ERC).
- Generally do not adopt or implement incentive instruments to recognise, differentiate, reward or support staff with better research performance (making of singular decisions).
- Organisational characteristics and governance dynamics might have limited the adoption of explicit positive differentiation measures.

“If a researcher comes to us and ask for some kind of help or support, in some cases we have responded positively; cases are dealt with when they appear... if they bring up a need or a problem we help in all we can”

“What we do regarding European projects, including the ERC, is to negotiate case by case with the researchers depending on their needs”

“The attraction of ERC grantee would need to have the previous consensus and approval from the affected department because this issue generates a lot of internal tension”



III. Transformative university responses:

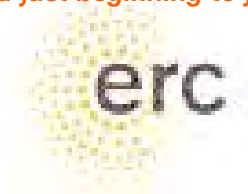
- Low and slow responses to the normative changing predominant values but lever with the use of some general instruments.
- Research is not the dominant organisational logic and there is a stronger focus on teaching or transfer.
- Universities that combine both missions but in which excellence oriented professors are a minority.

"We are now focused on increasing the number of publications, research projects and competitive funding....we aim to a change of model and for that we have set up several incentives"

"ERC grants are like the other European funds...this is why the incentives we apply are the same in general for all competitive calls (teaching loads reduction, returns of the overhead, etc), they are not specific"

"In a generalist university like this, where not all researchers or even the majority are excellent researchers, some measures may encounter problems (...). To incentivise some professors or researchers economically when there is a majority of professors who are not project PIs and therefore are not eligible, can be very unpopular"

"ERC was never a strategic aim of the university, it was seen as something difficult ...we are too young and just beginning to join this type of projects"



IV. Neglected university responses:

- Scientific research is clearly not the dominant logic,
- A strong teaching orientation and low specialisation profile.
- Tensions between the research and teaching missions are more salient in the discourse.
- The availability of research funding at the local level as a factor discouraging the efforts to compete internationally.
- Not specific instruments for the promotion of ERC participation (the issue is not in the political agenda).
- Some universities show internal fragmentation and lack of consensus about the values of research and excellence.

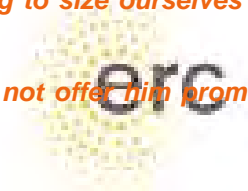
“Research cannot be imposed top-down, changing the inertia of academics is difficult, is an important obstacle”

“It is difficult to identify researchers willing to participate in these excellence calls”

“The regional government has provided a lot of resources and this may have led professors to be satisfied with the given and not apply elsewhere”

“We have the feeling we are not up to it, it is probably too much for us, and many times we have not been willing to size ourselves up with others...or maybe we are just aware that we do not reach those excellence levels”

“We had a postdoc who got an ERC Starting grant and left to another university because the department would not offer him promotion to tenure. He would have brought research equipment and a research team but his department did not feel up to it”



- 1) The existence of the ERC has transformed the European academic environment (consolidation of a new institutional logic based on the idea of excellence research).
- 2) The lack of convergence across universities and characterise the different university responses. Findings more supportive of analytical frameworks that allow for organisational variance than isomorphic dynamics.
- 3) Two critical dimensions in these adaptive responses (adherence of universities to the values of research excellence in a normative sense and availability and use of instruments) and the resulting ideal types (committed, hesitant, transformative, and neglected) help in the understanding of the reality.
- 4) The mapping of the Spanish universities participation in the ERC calls shows a high regional concentration.
- 5) University responses to excellence programmes are no homogeneous. Our findings are therefore more supportive of analytical frameworks that allow for organisational variance than isomorphic dynamics.
- 6) Research quality does not seem to explain per se the position of a university within a specific type.
- 7) Universities do not confront pressures from their regulatory regional environments to comply with the new European logic we would expect to find more decoupling responses.
- 8) Universities with a very heterogeneous composition in terms of fields of science will probably encounter more difficulties to develop coherent and consistent actions in favour of the emerging model of excellence.

- ✓ The current situation and the recent financial crisis is a very influential contextual element: limitations in discretionary resources available for the university management and the stagnation of public openings for tenure positions.
- ✓ As regards our methodology, in this paper we have chosen to gather information mainly from the university management level. In further research it could be complemented with information from other levels.
- ✓ Another line for further analysis is the regional dimension, specially the regional political and policy environment.





Contact with me in:

Alberto.Benitez@csic.es



INSTITUTO DE POLÍTICAS Y BIENES PÚBLICOS

Research excellence and academic differentiation: organizational responses to the ERC in Spanish Universities

Cruz-Castro, Benítez-Amado and Sanz-Menéndez (CSIC-IPP, Spain)