

Journal of Contemporary European Research

Volume 11, Issue 1 (2015)

Research Article

Policy Change and Differentiated Integration: Implementing Spanish Higher Education Reforms

Laura Cruz-Castro *CSIC Institute of Public Goods and Policies, Madrid*

Luis Sanz-Menéndez *CSIC Institute of Public Goods and Policies, Madrid*

Citation

Cruz-Castro, L. and Sanz-Menéndez, L. (2015). 'Policy Change and Differentiated Integration: Implementing Spanish Higher Education Reforms', *Journal of Contemporary European Research*. 11 (1), pp. 103-123.

First published at: www.jcer.net

Abstract

Over the last two decades, the Spanish higher education and research sector has undergone profound changes, but little is known about the implementation of recent reforms and how university actors responded to policy change and institutional pressures within a changing resource environment. Drawing on the insights from institutional and resource-dependence theory, we show how Spanish public universities have coped and implemented their human resources policy over the past 15 years and whether individual universities converged in their employment behaviour. The aggregate evolution of university employment trends reveals adaptation to the institutional normative pressures and financial constraints. Our results also show that some universities are more responsive to changes in the resource environment than others, and that compliance is not the only strategic response. In so doing, we aim to contribute to existing research on strategic behaviour of actors and coalitions facing policy change, and to the construction of analytical bridges between environmental changes (institutional and economic) and organisational dynamics underlying policy implementation.

Keywords

Higher education; organisational change; policy change; Spain; university reforms

University reform has been, and still is, a hot topic in the political agenda in many European countries. Financial constraints and greater demands for accountability of publicly-funded organisations have led several governments to explore new models of higher education (HE) policy, in some cases inspired by new managerialism (Paradeise et al. 2009). The pressures for international benchmarking have often been combined with measures to provide universities with greater autonomy. This is meant to enhance competition and responsiveness of higher education institutions to their environments (Frolich et al. 2013). In the context of debate about performance and excellence, Spanish HE policy has moved from a very decentralised system of hiring and promotion towards a model that includes elements of centralised evaluation in the hiring process¹; however, the degree of autonomy that universities wield in terms of hiring and promoting faculty is still considerable (Estermann et al. 2011).

In the past two decades a series of higher education and research policy reforms and initiatives have affected human resource models, management, recruitment, promotion and governance in the Spanish university system. In parallel, the Spanish HE environment has undergone significant changes that include the establishment of new academic research institutions (Cruz-Castro et al. 2012; Sanz-Menéndez and Cruz-Castro 2012), often under the form of semi-private foundations, focused on research rather than teaching. These new institutions, having flexible human resource management, have led to more differentiation and competition in the sector. More recently, the economic crisis and the public budget consolidation are producing additional pressures in the university realm (Cruz-Castro and Sanz-Menéndez 2015). In sum, there is a growing demand for accountability, excellence, and relevance when it comes to publicly funded research. At the same time, little is known about the effects of recent reforms on the strategic behaviour of university actors facing policy change.

We set out to achieve two objectives in this article. First, by monitoring how universities adapt to policy reforms in relation to hiring and recruitment, we aim to analyse the strategic responses of Spanish universities facing policy reforms in human resources management over the last 15 years. Second, we identify the initial trends and effects of the recent economic crisis. Since our focus is on the management of human resources, we examine the rules for recruitment and promotion of faculty and the diverse ways in which universities have coped with policy changes. Based on an approach combining institutional and resource dependence theories, we explore how individual Spanish universities deal with institutional reforms, and empirically analyse their management of human resources. This issue is relevant for theory and practice. Instead of merely focusing on policy outcomes, we shed light on the effect of policy on the changing role of actors, their resources, and their responses to environmental changes. In so doing, we attempt to build analytical bridges between environmental changes (institutional and material) and organisational dynamics. From the policy side, we believe that higher education policy design can benefit from the feedback provided by empirical research about university behaviour in the face of change.

We organised the study as follows. We first review the relevant literature with a focus on classifications and typologies of universities, and on two of the classical approaches for analysing organisational change: resource-dependence and institutionalism. Next, we present the basic features of the Spanish university system and a brief historical account of policy reforms. We then elaborate the methodology, with an empirical analysis of employment in public universities over the past decade to identify adaptation patterns and differentiated strategies within policy frameworks. Finally, we offer some preliminary conclusions.

ANALYTICAL BACKGROUND

The classification of universities into different models has received much scholarly attention and, indeed, they are useful to broadly locate universities descriptively. Drawing on Burton Clark's (1983) and Johan Olsen's (2007) classifications, Michael Dobbins and Christoph Knill (2011) propose three ideal-types taking into account the organisational structure of universities, including personnel and funding issues, the state regulatory approach, and the relations between universities, stakeholders and society. Key to their proposed types is the allocation of autonomy. They distinguish between the state-centred model, the Humboldt model (self-governing community of scholars) and the market-oriented model. These models reflect different visions of universities and their organising principles. Within this classical classification, the Spanish universities would fall into the *Humboldt model*.

Taking variations in strategic autonomy further, Richard Whitley (2012) applies the concept of organisational actorhood² to distinguish among hollow, state-contracted, state-chartered and private-portfolio universities. His ideal types are closely related to decision-making capacities regarding resources, employment, research and teaching at the organisational-level *vis-à-vis* governance relations. Whereas hollow universities would largely lack actorhood and have no weight in major decision spheres, state-chartered ones would have greater autonomy. Hence, the latter, while being formally set up as separate organisations with their own governance structures and powers to award degrees, hire staff etc., do so within the general framework of the national HE system and conform to its policies. The private-portfolio universities would have the greatest discretion with respect to the state, yet they are also constrained by scientific elites in providing project funding and reputational assets. Within Whitley's classification, the Spanish universities could be depicted as *state-chartered organisations*.

Classifications may serve to depict general perspectives and locate particular systems descriptively, but they tend to be static in nature. Organisational change in higher education can be analysed from two complementary perspectives: Resource-dependency theory and neo-institutionalism (Gornitzka

1999; Gornitzka and Maassen 2000a). Institutional theory emphasises the value of conformity to the institutional environment and adhesion to external rules, predicting isomorphic³ or convergent dynamics across organisations in the same field⁴. Resource-dependence theorists stress the organisational need for adaptation to control resource flows, and how organisations make active choices to manage resource dependence. Institutional theory states that the cognitive, normative, and regulative structures and activities lend essential meaning and stability to social behaviour in a common organisational field. We believe the combination of these two approaches is appropriate for examining organisational internal processes and shifting coalitions, especially since a key empirical dimension of university autonomy is the decision-making capacity over employment and human resources.

Applying institutional and resource dependence approaches to studying strategic responses to institutional pressures, Christine Oliver (1991) argues that organisations are not limited to conformity and passive adaptation to institutional pressures. Accordingly, strategic responses would include: Acquiescence, compromise, avoidance, defiance and manipulation. The choice of responses would depend on the origin and causes of the pressures, the means of implementation, and the perceived gains and costs. Following Oliver, we highlight the following as relevant for analysing university reactions to HE policy reforms. Modern universities share three key features in relation to their environment: a need for external resources, the multiplicity of actors or constituencies with whom they relate, and, as professional organisations, a quest for autonomy. As universities are strongly dependent on external financial, material and human resources, the lower the gain (in terms of resources) perceived as a result of conformity to institutional pressures, the greater the probability of resistance. In other words, if conformity enhances economic efficiency and social legitimation, then acquiescence will be the most likely response. Moreover, since universities relate to several constituents — the state, the students, the academic profession and elites, interest groups, unions, etc. — acquiescence to institutional demands from one constituent is unlikely if it implies conflict with others. Thus, universities would be more likely to engage in compromise and avoidance strategies to cope with multiple conflicting pressures. Finally, strategies other than conformity may respond to a perceived loss of decision-making discretion for the organisation, especially in core organisational decisions such as resource allocation and acquisition or hiring and promotion. When pressure is interpreted as a threat to autonomy, it is likely to spawn a variety of avoidance and defiance strategies, including ‘window-dressing’ or ‘decoupling’ behaviour given the fact that universities as public institutions only have a limited capacity to resist legal changes.

Nicoline Frolich and her colleagues (2013) argue that more attention should be given to the interaction between the environment surrounding the organisations and the ways in which the environment is interpreted by the organisation. One way is to view strategic processes as bridges between environments and organisations, explicitly acknowledging the possibility of differences rather than homogeneity among entities sharing an organisational field. We use these elements of organisation theory as a way to test if universities belonging to the same classificatory type and subjected to similar institutional pressures (governmental reforms and policy actions) could employ different strategic responses in line with some expectations described in the literature. Universities might not behave as a homogenous group. Local conditions may affect the perceived gains and costs in the context of internal power coalitions. The case in point is human resources management, that is, the hiring and promotion strategies adopted by universities.

THE SPANISH UNIVERSITY SYSTEM AND RECENT POLICY REFORMS

Table 1 presents key features of universities, with special attention to human resource management in the Spanish HE system.

Table 1: Institutional features of the public university system in Spain: Snapshots

FEATURES	DESCRIPTION
Publicness	The Spanish university system is similar to other European systems like those of France, Italy, and even Germany, where public universities account for the greatest share of the system. For a more recent and detailed comparative analysis see: Estermann, Nokkala and Steinel (2011)
Governance and autonomy	It is a state-delegated model managed by professional academic corporations, constitutionally autonomous from Government but subjected to public sector rules as regards budgeting, human resources management, contracting, etc.
Funding	Universities are financially dependent on regional governments. On average the direct transfers represent up to ¼ of the total budget, the rest comes from students' fees and research activities. Direct funding is not provided on the basis of performance (Gonzalez Lopez 2006), but mainly on the number of students and type of degree. While direct funding is not mandatory earmarked, the universities have to guarantee first the civil servant salaries (faculty and staff). The contribution of research overheads to their overall funding is small.
Status of academic staff	The university academic employment structure is dual: <ul style="list-style-type: none"> - Temporary professors or researchers working on fixed-term contracts, under lectureships, PhD fellowships or temporary contracts for research projects. - Permanent (tenured) professors (with civil servant status and life employment guaranteed by the State) after winning a public "tournament". (Mora 2001). There are no positions under the model of the "tenure track", as a probationary system for a fixed term period, after which the subjects go "up or out".
Capacity of departments to manage its own human resources and positions	Departments have some capacity over the creation of temporary positions but very little about the creation of new permanent ones, a function highly centralised in university authorities, which are democratically elected. Departments or Institutes do not manage their positions in an autonomous way to fulfil objectives. If a permanent faculty member leaves the institution, the position is often completely lost for the Department and new rounds of negotiations with authorities start from scratch to try to get a new one in competition with other units at the university. This context of authority distribution creates some pressure for the Department to support and reward "loyal candidates", who will not leave or go away; in doing so, departments minimize the risk of losing positions that are costly to get. There are no salary negotiations in academic recruitment. In Spain, as in many other European countries, permanent university faculties are civil servants and their salaries are set up on the basis of bureaucratic rules. This feature limits the negotiating capacity of departments and its ability to incentive their members once recruited. Evaluation of performance in research and teaching is poorly developed and set up in a national exercise; it has only positive consequences for those well evaluated, with very small increases of salary (Osuna et al 2011).
Tournament call and selection procedure for tenure	The creation of a new permanent position has to be approved by the university central administration and is allocated to the department after a complex political process and negotiations. Once approved, the Department controls to a large extent the final choice of the successful candidate. From 1983-2001, the way of filling out the new permanent position was a public call for a tournament. All PhDs could apply and compete in a <i>quasi</i> public exams system. The composition of the examining committee was determined by a national Law (5 members, being the Chair and one member proposed by the Department). 2002-2007 <i>Habilitation</i> system for tenure. Centralised evaluation by seven-committee members randomly selected by lottery. 2008- Accreditation system by a central agency for both tenure and temporary academic positions.

Source: Sanz-Menéndez et al. (2013)

Spain's public university system, before the transition to democracy, followed a hollow model. The central government coordinated almost all aspects of higher education: admission rules, curricula, exams, recruitment and promotion of professors, salaries, appointment of Rectors, etc. National exams centralised access to permanent faculty (civil servant) positions. Successful candidates were matched with available positions nationwide, and academic authority was structured around professorial chairs. A dual structure governed in terms of academic employment, yet most positions (over 80 per cent at the time) were locally managed, with fixed term contracts controlled by Chairs. Universities were "hollow" organisations.

Over the last three decades, three sets of university reforms were introduced. The first was in 1983, with the University Reform Law (LRU); the second in 2001, under the Organic University Law (LOU); and the most recent, in 2007, was a partial modification of the LOU. All three stipulated changes to available academic positions and options for managing human resources.

The 1983 reform, promoted by the social democrat government, contained some elements of the Humboldt model, viewing the university as a self-governing community of scholars (Sánchez-Ferrer 1997). It established that university academic staff should be civil servants (Mora 2001) with two different categories [Professor (CU, *Catedrático de Universidad*) and Associate Professor (PTU, *Profesor Titular de Universidad*)]. An additional category (Contracted Assistant, *Profesor Ayudante*) was created as a temporary or fixed term contract (for a maximum of 4 years), mainly for PhD students, and another for part-time teaching (Contracted Lecturer, *Profesor Asociado*). Given the weak management and prevailing collegial control, the 1983 reform released the departments from the control of a single chair, introducing a more decentralised means of access to permanent academic positions through selection committees, which the department effectively controlled, even though they included members of other universities⁵.

In the 1980s and 1990s, Spain's university system grew considerably (number of universities, both public and private, student enrolment, and faculty positions). For example, the number of students in higher education doubled between 1983 and 1998, surpassing enrolment of 1.5 million. During roughly the same time, however, a series of problems emerged: corporatism and clientelism, inbreeding, parochialism, quality and excellence deficits, and lack of technology transfer, among others (e.g. Bricall 2000; Navarro and Rivero 2001). Such shortcomings, in the context of the transfer of public university supervision to the regional governments, led the central government to promote reforms. The Conservative Government launched the 2001 University Law with the objectives of improving governance and responsiveness, increasing quality, and fighting academic inbreeding, which at the time was perceived to be a very important flaw in the recruitment and promotion system⁶. In the area of academic human resources, in addition to the civil servant positions the Law established new types of contractual arrangements (visiting professor, contracted doctorate professor, etc.). The Law allowed universities to decide how to manage these human resources, by hiring and recruiting based on the traditional civil servant positions (mainly Spanish citizens) with life employment, or to start hiring with potentially more flexible labour conditions and salaries under private employment regulations.

The 2001 reform also recentralised the academic evaluation and selection process, and strengthened the role of the regional authorities, many of which thereafter enacted legislation about higher education.⁷ To gain access to the academic profession with civil servant status, a centralised national *habilitation* exam system was set up. National Committees of seven tenured professors were randomly selected through a lottery procedure to evaluate and habilitate (successful) candidates as associate or full professors by means of these national exams (Zinovyeva and Bagues 2012). *Habilitation* was a requirement for tenured professorial employment at any Spanish public university. The Law further established that some new positions for contracted professors would be managed locally, while a central agency (ANECA) was created to provide accreditation to PhDs willing to be

contracted under those arrangements⁸. In theory, the system would foster academic mobility and reduce the inbreeding bias, thereby levelling the power of departments and strengthening external academic ties⁹. The new design did not take complete control on hiring away from the universities, but it facilitated a more competitive “quality control” over the pool of eligible candidates. In short, a dual structure for academic staff was established. While the Rectors rejected the new *habilitation* system and opposed the government’s reforms, in parallel, universities and departments developed strategies to cope with the “new rules of the game”¹⁰. As departments lost control over *habilitation* and accreditation evaluation processes, they gained discretion in more strictly departmental decisions regarding tenure appointments and contracts among those habilitated or accredited.

The Social Democrat Government promoted the latest partial university law reform that took place in 2007. It abolished the *habilitation* system, introducing instead an accreditation process for all civil servant and contracted positions (Bosch 2006). ANECA, or a regional counterpart, was to carry out *accreditation*. However neither *habilitation* nor *accreditation* meant automatic access to tenure or contracted positions. The universities (departments) specified the positions to which habilitated or accredited professors could apply, and the final selection among candidates was left largely to the departments. The accreditation system (with success rates close to 70 per cent in the first round) gave rise to further decentralisation of the hiring and promotion processes at the university level. The power to create the positions remained in the hands of university management.

Having briefly outlined the different systems of hiring, promotion and access to civil servant positions, our attention now turns to the diverse strategic responses to these reforms. Universities could either take advantage of the 2001 stipulations to increase academic faculty through newly contracted staff categories, or they could continue granting civil servant status and life employment to newcomers. In theory, using the contractual categories would provide universities with more flexibility in terms of human resources management, particularly given the dominant employment stability model, and more ability to deal with potential changes in the environment (such as the reduction of funding). On the other hand, new civil servant academic positions would reduce the university’s flexibility. The first approach could be implemented through a managerial strategy, supported by a coalition promoting flexibility and the search for quality over other criteria; the second one would extend life employment providing security but lessen the university’s ability to cope with a potential budget crisis.

Spanish Universities have moved out of the “hollow” organisational category into a category that resembles state-chartered organisations in Whitley’s types, where collegial communities (Humboldt model) often preclude opportunities and capacities of coherent management. Overall policy reforms over the last twelve years have produced limited effects in changing the way universities function. Still, universities made choices, following different strategies in attempts to arrive at a balance between civil servants and contracted professors. Aside from policy reforms, the emergence of new academic research institutions signalled significant changes in the universities’ institutional environment. A new generation of government-sponsored centres was sown in the early 2000s, most often with the status of private or public non-profit foundations, at the national or regional level. Empirical data show that these centres have a number of common features (Sanz-Menéndez and Cruz-Castro 2012, Cruz-Castro et al. 2012), including flexible human resources management: they function under private labour market laws, with performance-based salary structures, individual negotiation and have no civil servants. Some distinctive characteristics involve their funding structures, whereby sources are diversified (between public block grant, competitive funding and private funding). Universities have thus seen their boundaries redefined, which has given rise to cooperation and competition modes with the new centres.

The most relevant change, however, stems from the ongoing economic crisis and the reduction of public funding, with the mandatory implementation of the budget balance principles in university finances. Three significant consequences are the suspension of civil servant openings without the

authorisation of the Regional Governments, changes in student fees, and new professor workload measures approved by the central government in April 2012 (Cruz-Castro and Sanz-Menéndez 2015). In sum, legal changes over the last two decades have influenced the capacity of universities to manage their human resources through introducing a variety of contractual figures and providing more room of manoeuvre.

ADJUSTMENT TO ENVIRONMENTAL AND POLICY CHANGES

In this section we address the general evolution of the employment in Spanish universities over the last 15 years, with attention given to the effects of more recent crisis in terms of hiring and recruitment. To do so, we focus on the specific combination of civil servant versus contractual status as the strategic response of Spanish universities towards environmental changes, especially in light of the general policy trend already present before the onset of the crisis.

Methodology

To explore the existence of adaptation patterns to policy frameworks, our empirical approach combines data analysis at the macro-level and at the level of individual public universities. The key indicator regarding human resource management was taken as the number of academic staff with labour contracts (fixed term or open-ended) as compared with civil servants (life employment), in the academic faculty. In other words, we determine the ratio of Contract (C) to Civil Servant (CS). Before the crisis, the university controlled the hiring process, and chose between creating new permanent positions or temporary contracts. These choices had clearly different consequences. In the event of budgetary problems, universities could adjust (fire, dismiss, or not renew) the fixed term contracts under model C. The CS model afforded no chance of dismissal. Taking the option of growth with C potentially provided certain universities more room to manoeuvre, to increase turnover, to be more selective, and to avoid rigidity in the management of human resources. At present, in the context of crisis, universities have lost control over the creation or replacement of civil servant positions.

For our data analysis, we took into account the reforms, the changes in types of available positions, and in the recruitment process approved by Law in December 2001. In 2007 the changes mainly affected the procedure surrounding civil servant positions (abolishment of *habilitation*). Our first empirical target, then, is the overriding pattern of employment behaviour of universities *after* 2001. The impact of the economic and financial crisis (in terms of funding from public sources) became evident in 2010/11. For this reason we chose the period between 1998/99 and 2010/11, obtaining data (made available annually) from the *Estadística de Educación Universitaria* produced by the National Statistical Office (INE). Additionally, to identify the effects of the crisis on the universities we used the data for the two following years (2011/12 and 2012/13), obtained from the Ministry of Education, Culture, and Sports.

We acknowledge that policy initiatives have delay effects, which take time to become visible in the data, and should also note the existence of some anticipatory behaviour of universities in the context of the policy process. In this sense, at the end of 2000 the universities reacted to the Parliamentary debates regarding the approval of the new Law, many of them acting to consolidate academic staff with civil servant positions. After approval of the Law, in December 2001, it took a few years before the new national *habilitation* system became operational and universities adopted a strategy in response. As regards the budget, the year 2010 still had an increase in comparison with 2009 in aggregate terms for public universities. It was only in the budget of 2011 that the general reduction became a reality, meaning that the reduction of staff was noticeable the following year.

Public statistical sources do not provide longitudinal data, but rather annual stocks of professors employed. This enabled us to monitor the stock of public university academic staff at the end of each year/academic course without considering the flows (entries and exits). We should underline that the number of students is a main variable influencing the amount of resources provided to public universities by their respective regional government. Our analysis is developed in two stages using descriptive statistical methods: after comparing the evolution of universities in terms of academic staff employed, we analyse the specific patterns of change in composition (contracted versus civil servants professors).

The impact of changing environments and policy reforms on academic staff recruitment/hiring policies

To assess the extent to which Spanish public universities¹¹ adapted to changes and responded to reforms in the hiring models available, we examine the balance between contracted and civil servants academics. Firstly, the different environments and changes in the number of students are identified. Secondly, changes in the academic staff at public universities is analysed for the whole period to detect different patterns. Thirdly, to compare the trends in the environment and the evolution of staff, the type of responses by universities is determined. Finally, for a better look at university responses, the different use and balance between academic staff categories is assessed.

Aggregate evolution of university system in Spain (1998-2010)

The last decade of changes in the Spanish public university system could be summed up in a series of snapshots. The number of students stopped growing; the expansive trend prevailing for decades had come to an end. The national aggregate number of enrolments decreased by 8 per cent, public universities losing 13 per cent of their students between 1998 and 2010. The number of students is a key element in the financial environment of Spain's public universities. While Regional Governments provide funding and direct transfers, the general funding models they implement to finance universities stipulated the number of students as the basic determinant of the main stream of funding (González-López 2006).

Universities secure approximately 80 per cent of their income from public sources; of this amount two thirds comes from the Governments' direct appropriations transferred as a basic support (block grant) for the teaching mission (Fundación CYD 2012); 15 per cent comes from tuition. Research mainly depends on public competitive funding and industry contracts. Most direct transfers (although the money is not earmarked) must first pay the salaries of academic and non-academic civil servants; therefore, the room to financially manoeuvre is more limited when the proportion of civil servants is higher. In fact, universities can only dismiss or fire the staff under the contract models. To respond to budget cuts, investments and operations costs could be cut. Debt cannot be issued without approval of the Regional Governments — something that was unlikely in the context of the crisis.

Against this funding context, reduction in student numbers meant reduction of income over time. Adjusting to this expectation may have been slowed down by the general trend, until 2009, of growing resources allocated by the Governments (CRUE 2012) and the high growth in public funding for research. Yet after the official start of the economic crisis and the annual reduction in the transfers, beginning with the budget of 2011, the effects became evident. According to a university survey regarding their budget outlays in 2009, 2010, and 2011, non-financial income dropped 8 per cent, current expenditure transfers declined 9.4 per cent, and capital transfers dropped 11.1 per cent. Regional dispersion was considerable (Parellada 2013). A more recent analysis (CC.OO. 2014),

comparing 2010 and 2013 aggregate budget levels of public universities, estimated reduction of the public budget at 13.7 per cent (amounting to 1,400 million euros), which would be 22.4 per cent in constant real terms (including inflation). One third of the budget reductions entailed the reduction of labour costs, reducing the number of employees (and their salaries) (Cruz-Castro and Sanz-Menéndez 2015).

The evolution of university employees in the context of student enrolment

Between 1998/99 and 2010/11, the stock of academic staff in Spanish public universities increased by almost 29,100 (from 79,700 to 108,800). In the same period, the aggregate number of students in public universities declined as a general trend, an average of 13 per cent. Certain specific situations across universities, however, can be distinguished.

In just eight universities enrolment grew. The common feature of this small set of growing universities (Group A) is that they were created in the late eighties and early nineties, as an alternative to the large old universities in big metropolitan areas (URJC, UC3M, UPF, UPO), or to introduce HE options in medium size cities where they did not exist previously (ULP, UJIC, UMH, UPCT). As expected, academic staff grew in all of them.

A second, more heterogeneous group of universities (Group B) reduced their number of students in absolute trends in line with national average (13 per cent). Within this group we find large old universities and medium size universities in all regions, all affected by the reduction of population cohorts and drop in access rates to university studies after years of economic growth and buoyant labour markets. Some showed an extraordinary increase in terms of academic staff (while losing students) with increases of 73 per cent (UA), 57 per cent (UH), 51 per cent (UJ), 42 per cent (UCLM), and 37 per cent (UPV and UBU). A secondary subset showed a moderate increase in total academic staff, or even stagnation (UAM, UPM, US, UGR, UCO), and a final subset of universities underwent a small decrease (UB, UAB, UPC, ULL).

The third group of universities (Group C) shares the common feature of undergoing serious reduction — more than 25 per cent — in enrolment. Altogether, this group includes a dozen universities, most having over 30,000 students in 1998 (UNIOVI, USC, UCM, UZ, EHU/UPV, USAL), though a few are medium-sized new universities (UAL, UDL). Again, in some cases there are discrepancies between the trend in the evolution of students and academic staff: the most striking ones were UAL with 25 per cent reduction in students and 40 per cent increase in staff in the period; or UDL, with 28 per cent reduction in students and 33 per cent increase in staff. Other showed smaller reductions (UOVI, UCM) or stagnation (USC, UVA, USAL) in academic staff. This noteworthy trend, not of reduction, but rather of a significant increase, is an observation calling for further discussion.

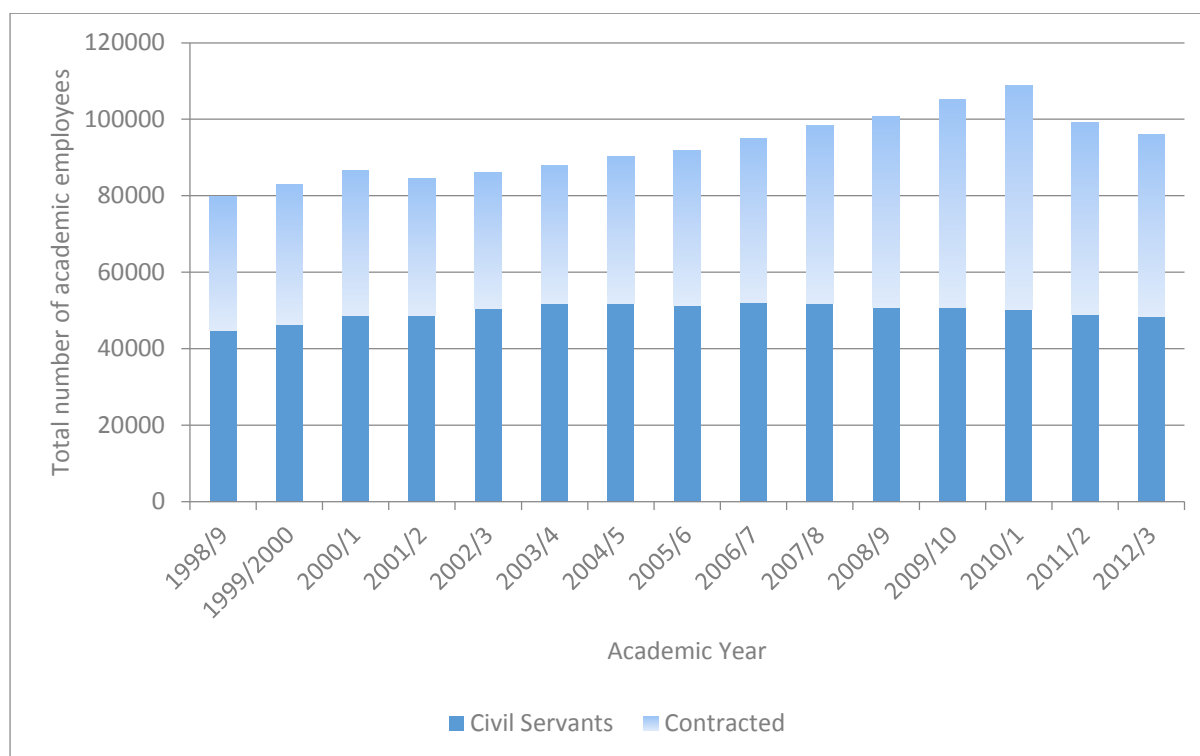
Organisation theory analysts would expect an adaptive response of universities to the changing environment, leading to a process of convergence (isomorphism) in the organisational field. However, as the evolution of employment numbers reveals, this was not the case. Despite the fact that most universities were losing students (with the expectation of reducing financial transfers from Governments based on student number), most significantly increased their academic staff, including the number of permanent civil servant academics who could not be dismissed at a later date. This phenomenon should be considered in the context of increased public budget allocated to universities during the previous decade. However, what matters is the choice about the composition of employment types, which calls for examining the evolution of the different universities with respect to their aggregate employment and its categories.

EMPLOYMENT, RECRUITMENT, AND EVOLUTION OF ACADEMIC STAFF IN SPANISH PUBLIC UNIVERSITIES

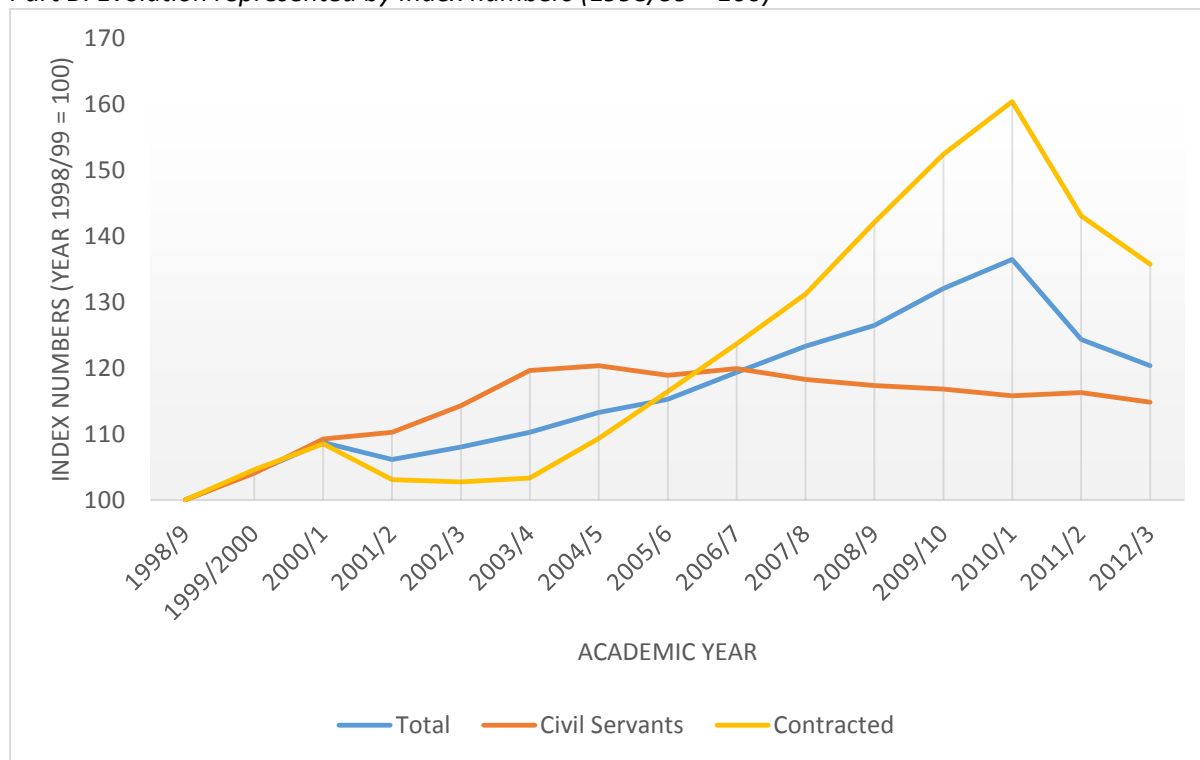
While the stock of academic staff in Spanish public universities increased by almost 30,000 in the period under analysis, only 6,700 had permanent civil servant positions (entries would have been more, considering retirement). The aggregate increase in the period was close to 37 per cent, but its internal distribution by status [permanent versus temporary] was significantly different, and changed over time (see Figures 1A and 1B.).

Figure 1: Academic staff of Spanish public universities by main categories. 1998-2012

Part A: Evolution in absolute numbers



Before the university reform became an issue, in the first three years of our observation, the rate of change (in index numbers) was the same for academic civil servants and contracted employees. The prevailing trend between 2001 and 2004 is characterised by a significant reduction in the number of contracted staff and an increase in the number of civil servants. This data could only be understood as the university system's reaction to the political debates regarding changes in the recruitment models. Just before the approval of the new Law (21 December 2001), and once the debate in Parliament was developing, many universities decided to approve new permanent positions and issued the calls before approval of the legislation, still under the previous decentralised selection system. The effect was a reduction in temporary contracted academic staff over the same years; many professors previously under contracts attained civil servant status. At the end of 2004, the process was almost over. Since that year there has been stagnation or even a reduction in the number of permanent academic staff, and a radical increase in the number of contracts, in those years completely under the university's control. The national *habilitation* system in use between 2002 and 2007 had a delayed effect in the statistics, visible between 2004 and 2009. Many universities opted to increase academic staff through the new contractual types.

Part B: Evolution represented by Index numbers (1998/99 = 100)

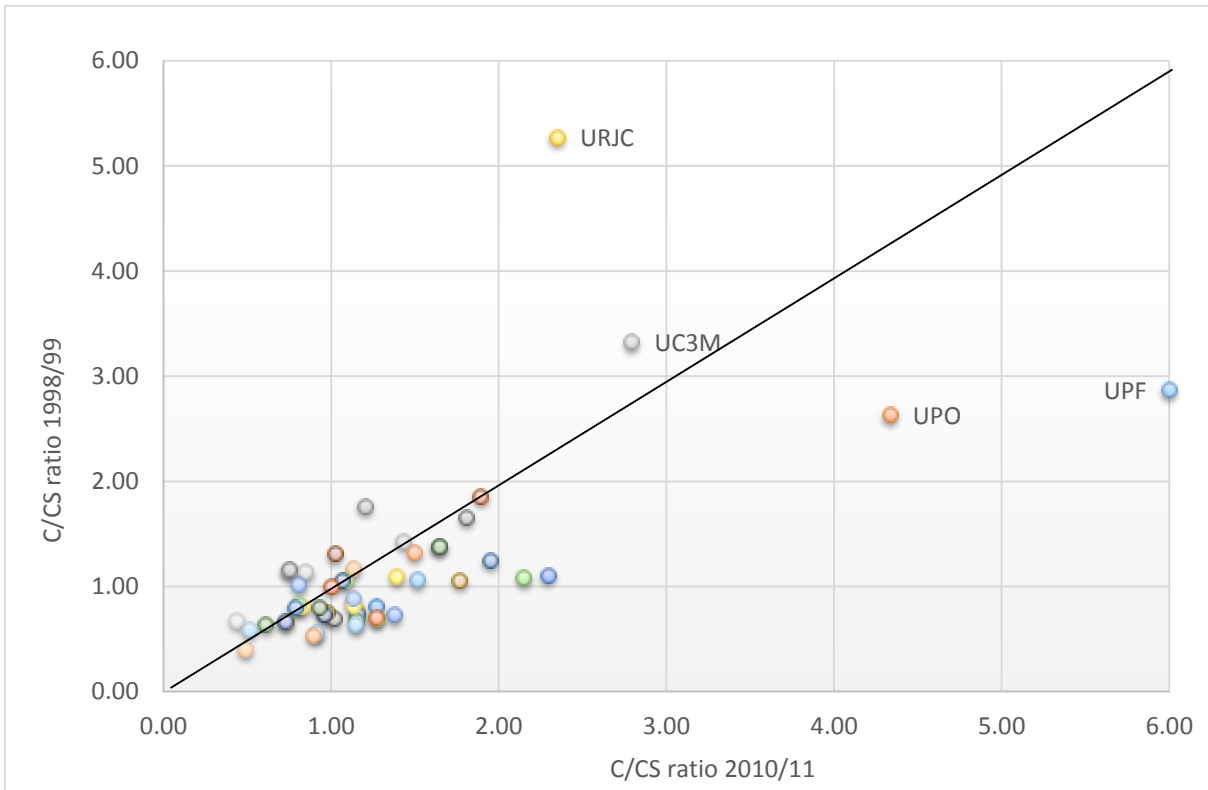
Source: INE and MECD. *University Statistics, various years*

Then the crisis came. The year 2010/11 was the peak in terms of employment of the total academic staff of public universities. It was followed by significant reduction, to 96,000 in 2012/2013 (12,800 less, mostly contracted academic staff). Potentially, universities that chose to increase capabilities with contracted academic staff were in a position to better adapt to the consequences of the crisis. Those with a bigger share of civil servants among its academic staff had less room of manoeuvre, due to the comparatively rigid employment situation. While most universities dismissed people with fixed-term contracts, universities with higher shares of civil servants under more serious financial problems approved collective layoffs of contracted employees (e.g. UPM). In a context of shrinking resources, personnel costs, which differ across employment categories, are of paramount importance. The salary of most contracted PhDs is lower than the cost of permanent staff, which made it a wise choice for the time being. Promoting staff growth through contracted employees, instead of civil servants, proved the most adaptive response to changes in the environment and to institutional pressures. Universities that increased their ratios of C/CS regarded the choice among human resources management strategies in the years of budgetary growth as an opportunity. In analytical terminology, this could be seen as the “compliance” or “conformity” response. However, many universities did not respond with conformity, and some even increased the absolute number of civil servants and reduced the ratio of temporary versus permanent academic staff (even in the context of a radical reduction of students, the main funding source). This pattern is interpreted as avoidance or defiance. This type of response grossly reduced flexibility in human resource management in the face of the crisis.

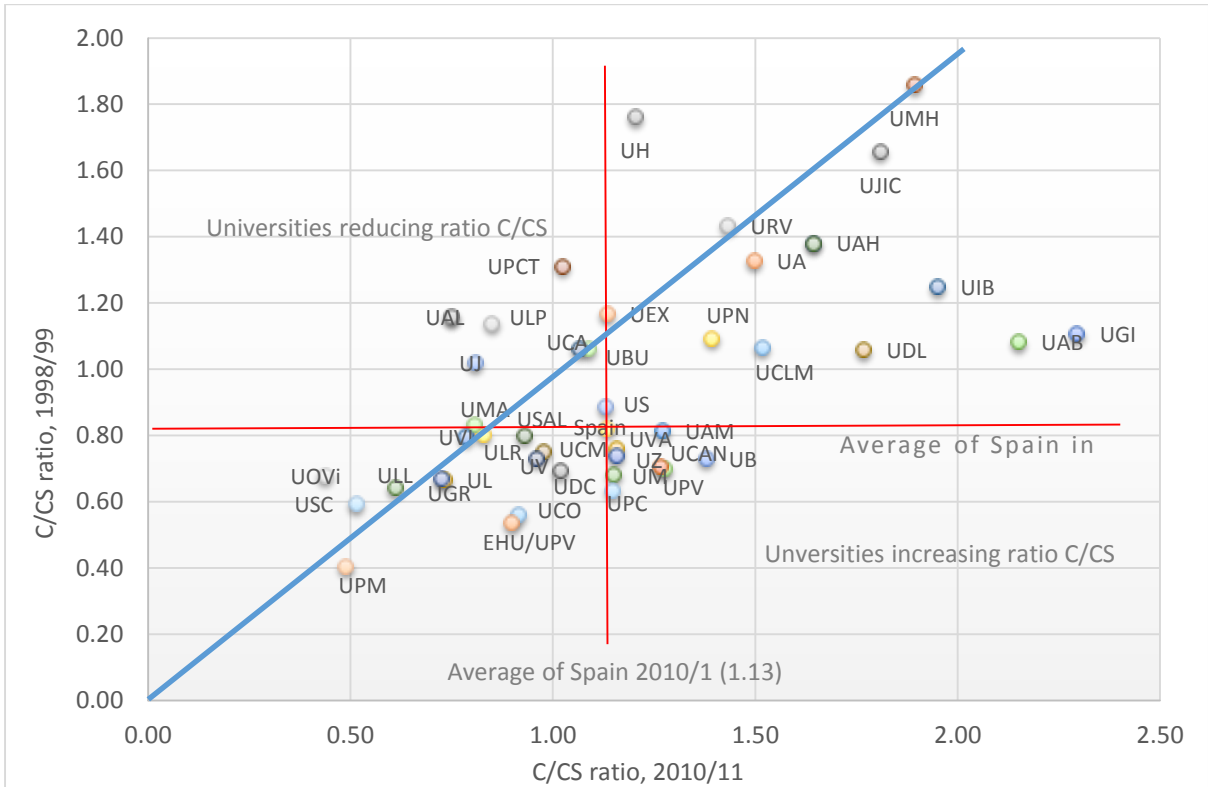
As we can observe in Figures 2A & 2B the C/CS ratios were already different at the beginning of the observation period (1998/99) and became more diverse at the end (2010/11). In the upper right area, we see universities that increased their academic staff through contracts, while the group of universities that have favoured the increase of civil servant academic staff is in the lower left; a reference on the evolution of the national average is provided in this figure¹². Again, it is important to note that this rigid employment structure offers almost no managerial capacity to refocus the areas of expertise of universities by shifting human resources.

Figure 2: Ratio of Contracted / Civil Servant academic staff in Spanish public universities. Changes between 1998/99 and 2010/11

Part A: Position all universities



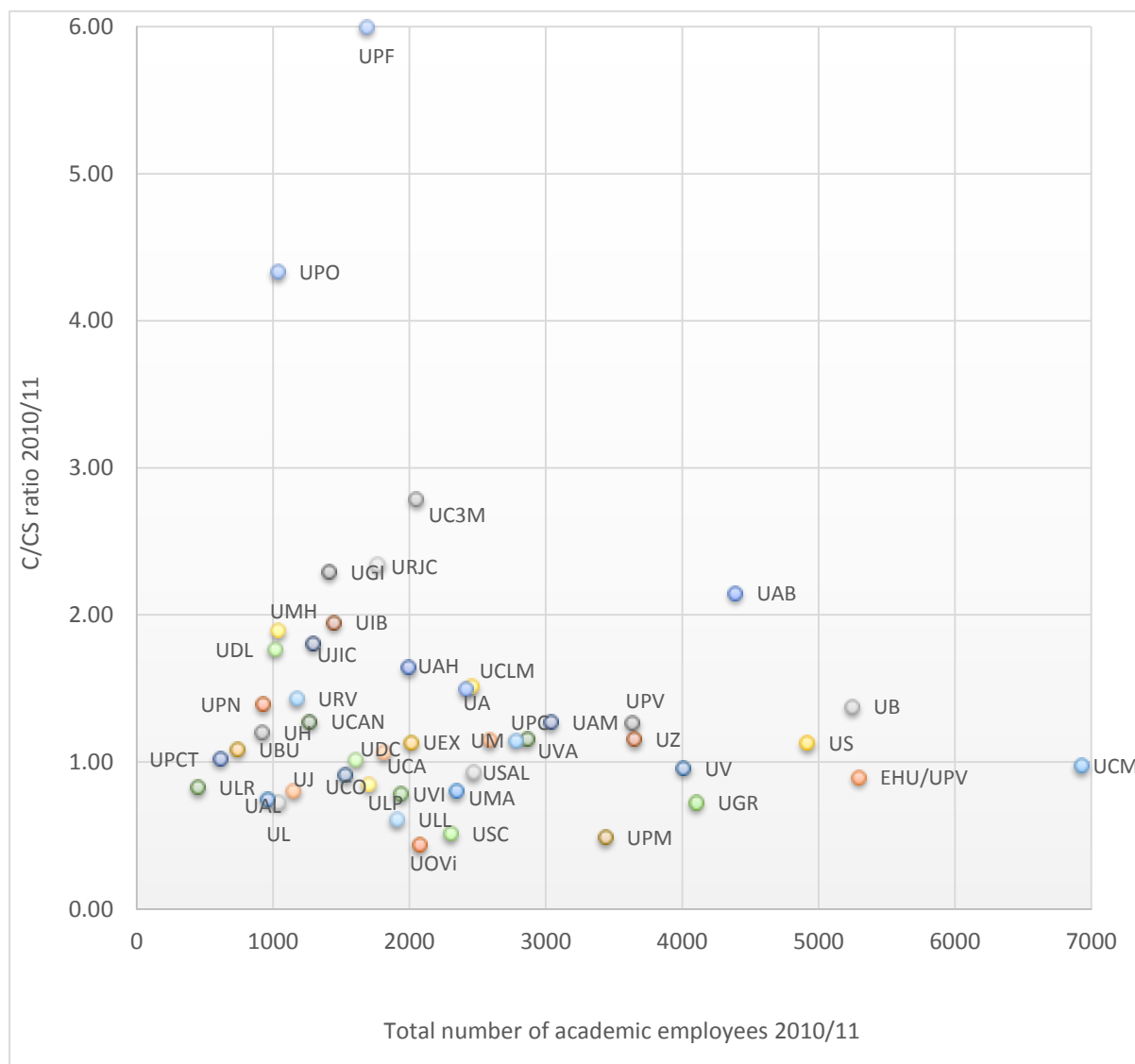
Part B: Magnifying some universities (exclude 4 high values)



Source: INE and MECD. University Statistics, various years

These results do not appear to correlate with the size of the university. Just before the crisis, in the UPF there were six times more contracted academics than civil servants, while in others, like UOVi and UPM, there were less than 0.5 contracted per one civil servant (Figure 3).

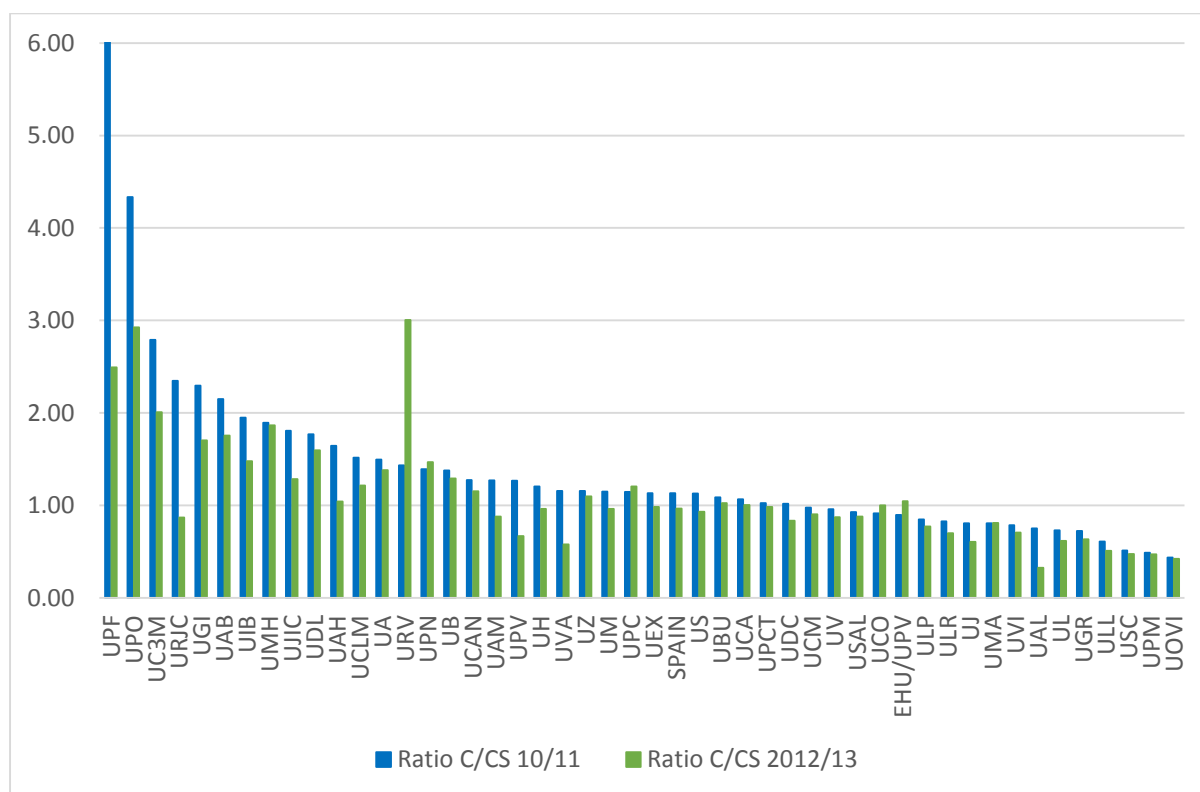
Figure 3: Ratio of Contracted / Civil Servants academic staff of Spanish public universities, by total size of the university, 2010/11



Source: INE. University Statistics, 2010/11.

Since the onset of the crisis, the C/CS ratio has diminished in all Spanish universities and the national average has gone down as a part of the adjustment process, reflecting that universities reduce where it was easier¹³. However, in terms of specific universities, the diversity of strategies followed as a response to policy reforms in the last decade, had left them in a very different position at the time of budget cuts. Having a higher C/CS ratio implies more strategic flexibility to cope with budget cuts in better conditions. In theory, a lower ratio means having less flexibility to choose. Universities with low levels of flexibility are potentially in a worse position to be selective in terms of performance assessment (see Figure 4 representing the ratios “before” and “after” the crisis).

Figure 4: Ratio of Contracted/Civil Servant academic staff in Spanish public universities. The effects of the crisis: Changes before (2010/11) and after (2012/13)



Source: INE and MECD. University Statistics, various years.

CHANGING THE ACADEMIC EMPLOYMENT MODEL IN SPANISH UNIVERSITIES

Beyond the evolution of aggregate figures for academic employees in Spanish public universities, we identify different dynamics or responses regarding the different types of academic categories. Some universities, despite changes in terms of student numbers, have accelerated and reinforced the trend of increasing staff employed in civil servant categories. The number of the two main permanent civil servant categories (CU & PTU, respectively equivalent to full professor and associate professors) has increased by over 6,500 in the 10-years period of study. The promotion of academic staff through internal university negotiations explains the significant increase in the stock of permanent faculty in the two top permanent categories. This behaviour could be interpreted as a way of ignoring the changes lending more flexibility to human resource management. Still, the degree of divergence with regards to the institutional pressures varies: One group of universities is seen to significantly increase the number of students, while another group, despite a drop in enrolment, increased the number of academic permanent staff. In this case, the environmental pressures pushed in one direction but many universities apparently decoupled.

It should also be mentioned that, in aggregate terms, a number of universities reduced the total number of academic civil servant employees over the period 2001-10 (among them UB, UCM, UB, UPC, ULL, UOVI) mainly due to a lack of replacement for those professors reaching retirement age. This group of universities (most of them in Catalonia and Madrid) that reduced academic staff under the civil servant categories, usually radically increased the number of new categories of contracted academic staff (contracted PhD, visiting professor, researcher, etc.). Regardless of enrolment, these universities opted to increase their flexibility in terms of managing the resources and their power *vis-à-vis* the interests of corporate groups and unions, thereby improving their ability to respond to

subsequent budget reductions. Finally, a major group shows a pattern of higher increases in permanent versus contracted categories, expressing resistance of the governing coalition in those universities to pressures from main stakeholders outside the universities. The effect was a radical reduction of the flexibility and management capabilities of universities.

To sum up, the evolution of the aggregate employment and its structure in public universities provides an opportunity to test responses to institutional pressures in different contexts. The institutional pressures create opportunities for internal coalitions in the universities, with effects and changes that modify the coalition in subsequent iterations. The current economic context offers an opportunity to see whether some universities made choices that put them in a better position to cope with new environmental pressures resulting from the on-going financial and economic crisis.

CONCLUSION

We set out to explore how Spanish universities responded to HE policy reforms concerning human resources. The aggregate evolution of employment shows a general trend of adaptation to institutional normative pressures, reflecting a sharp increase in temporary employment over the last decade, together with a stagnation of the civil servant employees. Yet some universities have moved in the opposite direction, reinforcing the civil servant base. Despite being the same population and the same organisational field, our results indicate that institutional pressures do not produce a single type of response (*sensu* Oliver): acquiescence, compromise, or avoidance. Years of observation after the onset of the crisis, however, reveal that some universities are more sensitive to changes in the resource environment. Some have reduced their payroll (contracted), whereas others mainly reduce investments and operational costs.

Acknowledging the general limitations of country case research, as well as the aggregate level of analysis adopted (university versus faculty or departments), we believe our findings have analytical and policy relevance. Our analysis of Spanish universities is more supportive of frameworks that view organisations as active participants that respond differently to common pressures, as opposed to strong “conformity” models. We might venture to name some determinant factors: a) Universities with less pressure from their Regional Governments might perceive that compliance or conformity do not increase efficiency or produce legitimation gains, among them UM, UGR, UOVI, etc.; b) Larger and older universities might have developed more complex constituencies that defend the “traditional model of human resources management” (civil servants) that helps support coalitions, such as UCM, USAL, etc.; c) Small and new universities may appear more coherent in terms of their management’s ability to implement flexible models of hiring, helping universities to respond better to new excellence and quality performance challenges, like UPF, UC3M, UPO, UMH, etc..

On the policy outcomes side, in retrospect, the consequences of the 2001 reform appear complex. Indirectly, the Law promoted the expansion of contractual temporal academic hiring (albeit with a diversity of rationales among universities). However, the reform was largely based on the policy principle that coercive institutional pressures would lead to compliance and conformity from universities. The *habilitation* system was based partly on distrust and control, and policy change did not reveal clear “winners”. Moreover, when the organisation perceived institutional change as leading to a conflict of goals, its likely response was compromise, if not avoidance (Oliver 1991). The top universities, recruiting and promoting on the basis of meritocratic and universalistic criteria, may have perceived the reform as an administrative hurdle for good candidates (leading them to try more flexible contracts). By contrast, universities that opted to promote local candidates, with less regard of their relative merits, may have viewed the reform as an obstacle in their internal labour markets. In both cases, the perceived balance of the reform was that of sacrificed decision-making capacity in a key governance issue, and in some universities “decoupling”¹⁴ was the strategic response.

The lesson offered to Governments revolves around institutional autonomy: Instead of hindering institutional university autonomy, they should modify material resources as an incentive mechanism. Some authors even question the extent to which organisational change is the outcome of deliberate reform (Gornitzka and Maassen 2000b). The problems of steering the higher education sector through regulations from above links well with Clark's argument of a sector that is bottom-heavy and difficult to reform. Furthermore, university managers may play critical roles interpreting environmental pressures that subsequently translate into organisational action (George et al. 2006). Indeed, no reforms from the last three decades have attempted to change the core of university funding. Funding higher education through the number of students is almost certain to have severe sustainability consequences.

In James March's categories¹⁵, one could argue that a main driver to the observed changes in Spanish universities was "regeneration" dynamics, reflected in the demographic turnover of scholars socialised in accordance with different principles and practices. In coping with a common environmental condition regarding resources, Spanish universities nevertheless engaged in different employment-strategy behaviours. Public funding reduction evolved into an institutional pressure from the policymaking sphere, although the real financial impact was not yet visible until the recent economic crisis. Temporary contract academic positions existed before, but the 2001 reform and its implementation signalled the gradual cementing of a two-track employment system in the Spanish higher education sector.

Acknowledgements

An early draft of this paper was presented at the International Conference on Public Policy (ICPP 2013), Grenoble 26-28, 2013, in Panel 12-S2. We thank participants for the comments and discussion as much as the very constructive and useful comments from two JCER anonymous reviewers and the editors. This research has been funded by the Spanish National R&D Plan (Ministry of Economic Affairs and Competitiveness grant: CSO2011-29431).

Correspondence address

Laura Cruz-Castro and Luis Sanz-Menéndez, CSIC Institute of Public Goods and Policies, Albasanz 26-28, D1, 28037 Madrid, Spain [laura.cruz@csic.es] and [luis.sanz@csic.es]

Annex: University Acronyms

UA	Alicante	ULP	Palmas (Las)
UAB	Autónoma de Barcelona	ULR	La Rioja
UAH	Alcalá de Henares	UM	Murcia
UAL	Almería	UMA	Málaga
UAM	Autónoma de Madrid	UMH	Miguel Hernández de Elche
UB	Barcelona	UOVi	Oviedo
UBU	Burgos	UPC	Politécnica de Cataluña
UC3M	Carlos III	UPCT	Politécnica de Cartagena
UCA	Cádiz	UPF	Pompeu Fabra
UCAN	Cantabria	UPM	Politécnica de Madrid
UCLM	Castilla-La Mancha	UPN	Pública de Navarra
UCM	Complutense de Madrid	UPO	Pablo de Olavide
UCO	Córdoba	EHU/UPV	País Vasco
UDC	Coruña, A	UPVL	Politécnica de Valencia
UDL	Lleida	URJC	Rey Juan Carlos
UEX	Extremadura	URV	Rovira i Virgili
UGI	Girona	US	Sevilla
UGR	Granada	USAL	Salamanca
UH	Huelva	USC	Santiago
UIB	Islas Baleares	UV	Valencia (Est. General)
UJ	Jaén	UVA	Valladolid
UJIC	Jaume I de Castellón	UVI	Vigo
UL	León	UZ	Zaragoza
ULL	La Laguna		

¹ For the analysis of the scientific performance evaluations in Spain see for example: Sanz-Menéndez (1995), Cruz-Castro and Sanz-Menéndez (2007) or Osuna et al. (2011).

² In this context, organisational actorhood is understood as the combination of two sets of collective capabilities (Whitley 2012): First, to exercise discretionary authority over the acquisition, use and disposal of resources; and secondly to generate particular kinds of problem-solving routines that are organisation-specific.

³ In sociological terms, isomorphism is defined as the similarity of processes or the structure of one organisation to those of another, be it the result of imitation or independent development under similar constraints. There are three main types of isomorphism: normative, coercive and mimetic.

⁴ An organisational field is defined as a 'set of organisations that, in the aggregate, constitutes a recognised area of institutional life; key suppliers, resource and product consumers, regulatory agencies, and other organisations that produce similar services or products' (DiMaggio and Powell 1983: 145).

⁵ Two out of five members (usually chair and vice-chair) were from the department; the other three members would be randomly selected among the pool of permanent professors of public universities in the same knowledge area, so the establishment of networks among the academic elites within disciplines and across universities became important. Access was by an open tournament procedure, but the management of the process limited competition and usually the participation in the exams was only from a single candidate.

⁶ For an empirical analysis of access to tenure and promotion under this system see: Cruz-Castro and Sanz-Menéndez (2010) or Sanz-Menéndez et al. (2013).

⁷ In this sense, the most active regional governments have effectively influenced the institutional environment of universities in their regions. The decentralisation of competences to this level has meant that funding models may show variations across regions, but homogeneity within them.

⁸ It was established that universities could have up to 49 per cent of their academic staff under contracts (non tenured). This accreditation requisite represented an important change with respect to the previous situation in which departments were free to contract temporary academic staff with their own criteria.

⁹ The ANECA was replicated in different regions; then having local institutions providing local accreditations.

¹⁰ For instance, most of them created new positions massively in the year before the approval of the 2001 law to promote their local candidates to associate and full professorships under the old department-controlled committee model (the figures mentioned at the time were "10,000 new tenured positions approved by universities to resist the reforms", but now we could confirm that the aggregate number was much less – see section 4). After the approval, the dominant university strategy was to jeopardise the implementation of the new system through the control of the employment demand by not offering new positions to which habilitated candidates could apply.

¹¹ We do not include in the analysis the private universities because they represent a small part of the system (approx. 12 per cent of the undergraduate students in 2010) and they function under a significantly different institutional environment. We also have excluded the public open (virtual) teaching university (UNED).

¹² Since in many regions there is only one university, we consider the reference of the national average more suitable than regional ones.

¹³ With the current data available it is not possible to analyse changes in contracted staff in disaggregate terms by type of contract to see if cuts affected some categories more than others; this could be an interesting issue for further research.

¹⁴ John Meyer and Brian Rowan (1977) use the term "decoupling" which consist of adopting a structure for purposes of legitimacy but not implementing it in practice. The behaviour of many Spanish public universities during the *habilitation* period is an example.

¹⁵ March (1981) identified six key drivers of organisational change: rule following, problem solving, learning, conflict, contagion, and regeneration.

REFERENCES

- Bosch, X. (2006). Science, Spain reconsiders its university reform Law. *Science*, 314(5801): 911.
- Bricall, J. M. (2000). *Informe Universidad 2000*. Madrid: CRUE, Conferencia de Rectores de Universidades Españolas.
- CC.OO (2014). *Evolución de los Presupuestos de las Universidades Públicas 2009-2013*. Madrid: Comisiones Obreras de la Enseñanza. Available at: http://www.fe.ccoo.es/comunes/recursos/25/1793265-Estudio_Evolucion_de_los_presupuestos_de_las_universidades_publicas_%282009-2013%29.pdf. Accessed 28 June 2014.
- Clark, B. (1983). *The higher education system*. Berkeley: University of California Press.
- CRUE (2012). *La universidad Española en cifras 2012*. Madrid: CRUE, Conferencia de Rectores de Universidades Españolas.
- Cruz-Castro, L. and Sanz-Menéndez, L. (2007). 'Research Evaluation in transition: individual versus organisational assessment in Spain', in: R. Whitley and J. Gläser (eds.) *The changing governance of the sciences. The advent of the Research evaluation systems. (The Sociology of Sciences Yearbook, vol. 26)*. Dordrecht: Springer: 205-224.
- Cruz-Castro, L. and Sanz-Menéndez, L. (2010). Mobility vs. job stability: Assessing tenure and productivity outcomes. *Research Policy*, 39(1): 27-38.
- Cruz-Castro, L., Sanz-Menéndez, L. and Martínez, C. (2012). Research centers in transition: patterns of convergence and diversity. *Journal of Technology Transfer*, 37(1): 18-42.
- Cruz-Castro, L. and Sanz-Menéndez, L. (2015). The effects of economic crisis on public research. Submitted to *Technological Forecasting and Social Change*.
- DiMaggio, P.J. and Powell, W.W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organisational fields. *American Sociological Review*, 48(2): 147-160.
- Dobbins, M. and Knill, C. (2009). Higher education policies in Central and Eastern Europe: Convergence towards a common model?. *Governance*, 22(3): 397-430.
- Estermann, T., Nokkala, T. and Steinel, M. (2011). *University Autonomy in Europe II. The Scorecard*. Brussels: European University Association.
- Frolich, N., Huisman, J., Slipersaeter, S., Stensaker, B., and Pimentel Botas P.C. (2013). A reinterpretation of institutional transformations in European higher education: strategising pluralistic organisations in multiplex environments. *Higher Education*, 65(1): 79-93.
- Fundación CYD (2012). *Informe Conocimiento y Desarrollo 2011*. Barcelona: Fundación CYD.
- George, E., Chattopadhyay, P., Sitkin, S. B. and Barden, J. (2006). Cognitive underpinnings of institutional perspectives and change: A framing perspective. *Academy of Management Review*, 31(2): 347-365.
- González López, M.J. (2006). Towards decentralized and goal-oriented models of institutional resource allocation: The Spanish case. *Higher Education*, 51(4): 589-617.
- Gornitzka, Å. (1999). Governmental policies and organisational change in higher education. *Higher Education*, 38(1): 5-31.
- Gornitzka, Å. and Maassen P. (2000a). 'Analysing organisational change in higher education', in R. Kalleberg, F. Engelstad, G. Brochmann, A. Leira and L. Mjøset (eds.) *Comparative Perspectives on Universities (Comparative Social Research, Volume 19)*. Emerald Group Publishing Limited: 83-99.
- Gornitzka, Å. and P. Maassen (2000b). Hybrid steering approaches with respect to European higher education. *Higher Education Policy*, 13(3): 267-285.
- March, J. G. (1981). Footnotes to organisational Change. *Administrative Science Quarterly*, 26(4): 563-577.
- Meyer, J. W. and Rowan, B. (1977). Institutionalized organisations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2): 340-363.
- Mora J. G. (2001). The academic profession in Spain: between the civil service and the market. *Higher Education*, 41(1-2): 131-155.

- Navarro, A. and Rivero, A. (2001). High rate of inbreeding in Spanish universities. *Nature*, 410(14): 14.
- Oliver, C. (1991). Strategic responses to institutional processes. *Academy of Management Review*, 16(1): 145-179.
- Olsen, J. (2007). 'The institutional dynamics of the European University', in M. Peter and J. Olsen (eds.) *University Dynamics and European Integration*. Dordrecht: Springer: 25-54.
- Osuna, C., Cruz-Castro, L. and Sanz-Menéndez, L. (2010). Overturning some assumptions about the effects of evaluation systems on publication performance. *Scientometrics*, 86(3): 575-592.
- Paradeise, C., Reale, E., Bleiklie, I., and Ferlie, E. (eds.). (2009). *University governance: Western European comparative perspectives*. Dordrecht: Springer.
- Parellada, M. (2013). La contribución de la Universidad al crecimiento de la economía española: las reformas pendientes. *Presupuesto y Gasto Públicos*, 72(3): 47-66.
- Sánchez-Ferrer, L. (1997). From bureaucratic centralism to self-regulation: The reform of higher education in Spain. *West European Politics*, 20(3): 164-184.
- Sanz-Menéndez, L. (1995). Research actors and the State: research evaluation and evaluation of science and technology policies in Spain. *Research Evaluation*, 5(1): 79-88.
- Sanz Menéndez, L. and Cruz-Castro, L. (eds.) (2011). *La investigación y sus actores: Institutos y Centros de I+D y sus desafíos*. Barcelona: Fundación CYD.
- Sanz-Menéndez, L., Cruz-Castro, L. and Alva, K. (2013). Time to Tenure in Spanish Universities: An Event History Analysis. *PLoS ONE* 8(10): e77028. doi:10.1371/journal.pone.0077028.
- Whitley, R. (2012). Transforming universities: National conditions and their varied organisational actorhood. *Minerva*, 50(4): 493-510.
- Zinovyeva, N. and Bagues, M (2012). *The role of connections in academic promotion*. Berlin: IZA DP 6821. Available at: <http://ftp.iza.org/dp6821.pdf>. Accessed 28 June 2014.