

## Policy Analysis

### **Contracting for Quality Improvement and Financing in Public Universities of Catalonia, Spain**

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### **Abstract**

The present article analyses the contract-based strategy used in the Catalan university system (Spain) for improving academic quality and funding. Since 1997, the autonomous government of Catalonia (Spain) and the public universities have developed a new tool for university management: The four-year *programme-contract*. This tool represents a pioneering initiative in Spain. An initiative based on the formulation of objectives for improving universities' institutional and academic quality, reflecting both the priorities of government higher education policy and the individual strategies of each university. This article describes in detail the characteristics of the initiative and the principal repercussions and results, as well as giving a critical evaluation from the perspective of university policy and public management.

## Introduction

The university system in Catalonia and in all of Spain has, in the last few years, experienced spectacular numerical growth. As a result of the improvement in living standards, which are approaching those of Western Europe, access to public universities has become more widespread. At the same time, there has been a sustained increase in all elements of the universities' offer: from courses to research groups or support infrastructures.

For this reason, the requirements of university management have seen a radical modification (and in very few years). Today, it is more complex to manage both the university system and each individual university, faculty, school, service or laboratory. This is the case not only because of the volume of resources or the size of the academic and student populations, but also because the university is converting itself into a key element in the new 'knowledge society'.

The information in Table 1 illustrates the evolution which the Catalan university system has undergone in very few years. The number of universities, the size of university floor space or the number of courses offered are all examples of this *explosion* in the university system. The sudden expansion has produced, on occasions, a disorganised growth, difficult to manage without the necessary resources.

**Table 1. Evolution of the university system in Catalonia.**

Number of universities	<u>1986</u> 3	<u>2003</u> 12
Courses offered	<u>1986-87</u> 35	<u>2002-2003</u> 160
Floor space (area) of university buildings	<u>1985</u> 580,983 m2.	<u>2001</u> 1,636,544 m2.
Quality evaluation processes (AQU)	<b>Between 1996 and 2001:</b> 234 titles 27 departments 24 processes or services 15 Improvement plans	
Funds transferred to the public universities and UOC* (in thousand Euros)	<u>1995</u> 367,351	<u>2002</u> 517,108
Total number of students	<u>1982-83</u> 105,706	<u>2002-03</u> 221,417
R&D funding, Public university system (in thousand Euros)	<u>1993</u> 82,909	<u>2000</u> 150,331

Source: DURSI. \*UOC is Universitat Oberta de Catalunya (Open University of Catalonia).

In Table 2, the figures show the present state of the university system in Catalonia. The sector is important in its scope and even more important from a strategic point-of-view. Universities are the motors of social, economic, technological and cultural development, within a context of growing international competition.

**Table 2. Principal indicators of the Catalan public university system, 2001-2002**

Students enrolled	- first cycle studies	58,903
	- first or second studies	101,965
	- second studies	13,911
	TOTAL	<b>174,779</b>
First-year students	- first cycle studies	16,169
	- first or second cycle studies	20,119
	- second cycle studies	6,186
	TOTAL	<b>42,474</b>
First cycle and second cycle graduates		23,063
Doctorate students (2000-01)		8,825
Postgraduate students (2000-01)		48,820
Doctoral theses read (2000-01)		1,063
Teaching staff (number of people)		13,143
Teaching staff (full-time equivalent)		10,407
Administrative and service personnel		6,516
Budget (total liquidated funds 2001, million Euro)		962.7
Net investment (2001, million Euro)		57.4
University floor space (2001, m2)		1,636,544

Source: DURSI. *Note: Data includes only the public system, not UOC, and refers to official studies in constituent centres.*

In general terms, there is no doubt that higher education is undergoing major changes and transformations in all Spain. These are mainly the result of new expectations and demands emerging in society: university education has gradually become mass education, and the university and its systems have had to respond to this new reality with innovative and occasionally imaginative new policies. The traditional teaching and research functions have become more complex and the various actors involved have highlighted new needs and adopted new strategies in keeping with their roles and the changing context in which they found themselves. All this has occurred in a setting of growing competition for public resources and demands for improved quality in public policy and management, and for more transparency with regards to the benefits obtained by the public.

These changes have also had an effect on the relations between the Government and the universities. The former has tended to become more regulatory (establishing the legal framework), more strategic (defining specific sector policy strategies) and more evaluative. The universities now tend to have more autonomy for developing their own institutional profile and projects. This has led to a tendency to establish objectives, analyse performance, and foster effectiveness and efficiency in the public universities within the context of an added-value inter-institutional network. In many regions, evaluation of the university and the quality of its services has become a central function of public higher education policy, and Catalonia is no exception.

Closely linked to this new situation and bound up with the concept of academic and administrative autonomy, we find the notions of accountability, transparency and the evaluation of the performance of public services.

All the above changes have been formally incorporated into the Catalan public university system since 1997. Programme-contract is one of the new policy instruments, which is designed to foster academic quality. The programme-contract has proved a useful instrument for the improvement of university quality through coordination between the Catalan Government's university and research policy and the Catalan universities' strategic planning. The contracts also try to promote transparency by making universities to publish their outcomes to the society. The Catalan universities have attempted to adapt themselves to this new framework and obtain both academic and management improvements.

The present article analyses what the programme-contracts represent for the Catalan public universities in the context of Spanish higher education system. It focuses on their function as tools for new public administration and as contractual initiatives between the government education authorities and the universities for the purpose of improving university activity and moving towards financial models which are increasingly based on objectives and results.

## Content of the policy instrument

At the beginning of 1997, the *Generalitat* of Catalonia -represented by the Universities and Research Commission (CUR) of the Presidential Ministry- and the Technical University of Catalonia agreed to formalise the first university programme-contract. This represented a new university planning and coordination departure for Spain, lining additional funding to the attainment of mid-term objectives for improved quality. The programme-contract was then extended to the majority of Catalan public universities in a first phase which lasted until 2001. After 2002, it was a *fixed strategic subvention* feature in the funding distribution model for Catalan public universities

At this time, the university system (and the public sector in general) was entering a period of public deficit control arising from the demands of European convergence. A process of reflection had also begun, in part motivated by the experiences of other countries and institutions, which pointed to the need to optimise the learning process and graduate employment, to improve teaching, academic performance and the general quality of university services, to use the new technologies to extend the scope of education and to innovate, to clarify and highlight the benefits of research for society as well as improving the quality and quantity of research and institutional management.

These new objectives required new instruments for observation and diagnosis, planning and decision-making. It was necessary to incorporate into daily university life the management criteria that are commonly found in other areas of society: *efficiency*, i.e. improved performance using existing assets; *transparency*, understood as accountability to society; *rationality*, establishing measurable objectives; and *quality*, understood as the measure of satisfaction achieved in responding to the needs of society by university teaching, research and services.

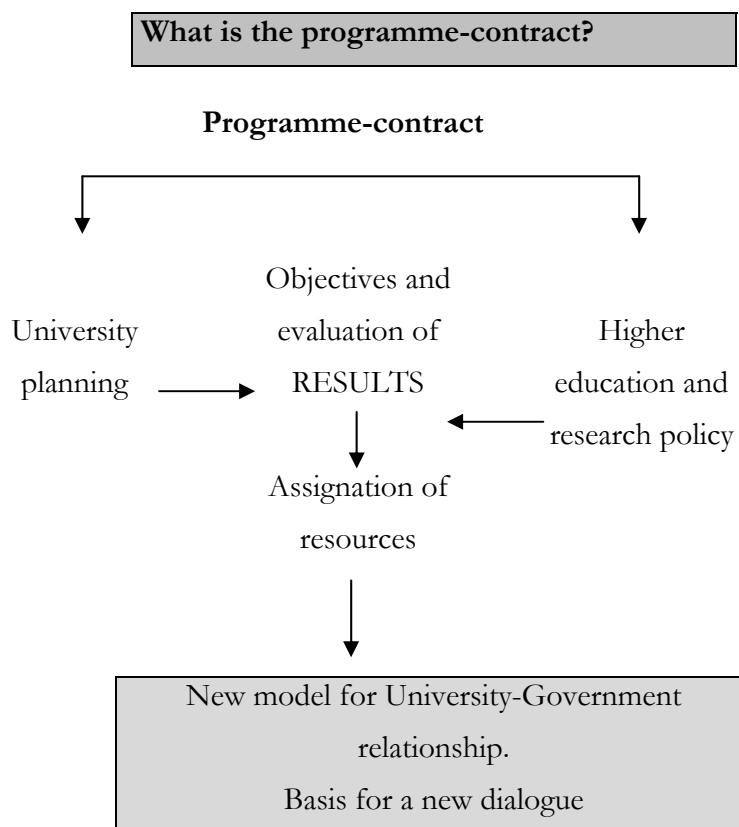
In response to these needs, the CUR introduced a set of multi-level instruments for cooperation between the Catalan universities and the government education policy bodies. These were founded on five basic pillars: the Pluriannual University Investment Plan (1995), the university teaching programmes, the beginnings of quality evaluation by the Agency for the Quality of the Catalan University System, AQU (1996), the Catalan Research Plan (1997) and the programme-contracts linking funding to achievement of objectives (1997).

A number of the Catalan universities had already just started similar processes, as set out in their strategic or quality planning, in the form of new organisational structures designed to facilitate change-management, with phased implementation of specific sector plans and the development of innovative (at that time) management techniques and tools appropriate for the new public management.

The programme-contracts have become a strategic instrument for management and quality improvement in universities and the university system in general. They are the result of an institutional pact between the government and each public university. The main characteristics of the programme-contract are:

- It establishes specific objectives for improved quality in the services offered by the university to society, for more effective management and for an improved service to users (with pluriannual time scales enabling definition of mid-term policies and plans spanning more than a single academic year).
- It provides for evaluation of the extent to which the objectives are achieved by means of pre-established indicators, mainly quantitative in nature.
- It determines specific public funding according to the extent to which the objectives are achieved. (In the first phase of the programme-contracts until 2001, this funding was in addition to funding to cover the university's basic activities. Later, it was integrated into the university funding distribution model).
- It includes provision for annual revision of the objectives, in accordance with an evaluation of the results of the contract and the evolution of the government's higher education policy and the priorities of the universities themselves.

**Graph 1. The Programme-contract rationality in Catalonia**



With varying degrees of effect, the programme-contracts have served for the development of different aims: budgetary purposes, improved quality and social transparency.

## Implementation

The Government of Catalonia – first through the Commission for Universities and Research and subsequently through the Ministry of Universities, Research and the Information Society- signed programme-contracts with the following Catalan public universities for the 1997-2001 period:

- Universitat de Barcelona (UB), 1999-2002 (This period was later shortened by one year, and the new funding distribution model was applied from 2002 on);
- Universitat Autònoma de Barcelona (UAB), 1998-2001;

- Universitat Politècnica de Catalunya (UPC), 1997-2000 and a transition period for 2001;
- Universitat de Girona, 1997-1999 and another for 2000-2001;
- Universitat de Lleida, 1997-1999 and another for 2000-2001;
- Universitat Rovira i Virgili, 1997-1999 and another for 2000-2001

Two programme-contracts were also signed with the Universitat Oberta de Catalunya (The Open University of Catalonia) for the 1998-2000 and 2001-2004 periods which, given the specific characteristics of the university, established public funding for each period on the basis of mixed parameters involving quantitative and qualitative evaluation based on pre-established objectives.

Two types of programme-contract can be distinguished in this initial period: *Type B* contracts or pre-contracts, and *Type A* contracts, or programme-contracts *per se*.

*Type B* contracts had a shorter duration (three years), and were established with the more recently created universities (University of Girona, University of Lleida and Universitat Rovira i Virgili). They were designed to contribute to reducing the structural deficiencies (human and material resources) linked to their process of creation, and to stimulate the establishment of overall quality policies. The increased public subvention for the purpose of structural consolidation and improvement was subject to the introduction of policies for quality and management.

Longer programme-contracts (*Type A*, four years in duration) were agreed with the three long-established universities (UB, UAB and UPC). To a large extent these contracts coincided with the governing periods of the rectoral staff. These contracts established specific objectives, annual evaluation of performance by a set of indicators, and additional funding linked to this evaluation. From the outset, these programme-contracts were defined as policy instruments designed to improve quality. Once concluded the initial three-year period, all the Catalan universities have had programme-contracts of this type.

The starting point for each contract was the individual university's Strategic Plan and the Government's specific university and research policy objectives. From these two pillars, a concrete number of objectives (between 14 and 19) were drawn up for each university. These were explicitly interrelated with the lines of action set out by the university's Strategic Plan and took into account the specific characteristics and needs of each university.

A number of basic lines of action were set out for each objective, along with a broad-based set of tools and instruments for their implementation and a set of between 50 and 70 indicators (mainly, but not exclusively quantitative). The few qualitative indicators employed corresponded to new actions. In later years, they were replaced by quantitative indicators. For each indicator, the starting point was specifically set out, namely: the situation immediately prior to commencement of the contract period and the values that were to be achieved for each of the contract years and by the end of the contract period. Annually, the programme-contract monitoring committee revised the required values in the light of the results achieved in earlier periods and the overall commitments made for the entire contract period.

**Table 4. An example of objectives in a Programme-Contract.** The 15 Objectives in the Ministry-Technical University of Catalonia Contract (1997-2000)

	<b>Programme Contract Objectives</b>	<b>Lines of action</b>	<b>Indicators</b>
1.	To improve student flow by increasing the number of graduates and assuring that course content and teaching load are compatible with the requisites of educational quality.	5	4
2.	To help graduates find work and evaluate the acceptance on the job market of their levels of qualification and preparation, and their ability to adapt to the needs of society.	4	4
3.	To plan the study programmes on offer in terms of needs and demands of society	2	4
4.	To reform the contents, norms and managements of doctorate programmes in order to increase the number of doctors in technological fields, reassess the value of doctorates within the business world, and adapt training to the needs of the socio – economic environment.	6	3
5.	To programme and promote quality continuing education adapted to the needs of society	4	3
6.	To consolidate quality R+D activity in the University's research teams, thereby ensuring that UPC as an institution achieves a reputation for excellence in the field of research and technology at the service of society	6	2
7.	To expand R+D activity at UPC by increasing the number of academic staff and research teams working in research and technology transfer, and by promoting the degree of self-funding of R+D activities	7	3
8.	To increase technology transfer to firms and other institutions by ensuring that R+D at UPC responds appropriately to social, industrial and technological needs and demand.	6	4
9.	To increase UPC links with other institutions and strengthen its ties with society.	6	4
10.	To provide graduates with the ability to carry out their professional activities with an awareness of the economic, social and cultural context of Europe. To consolidate and broaden European and international cooperation in research and technological development (RTD) as a guarantee for the future of scientific and technological standards at UPC	7	5
11.	To develop, with society in mind, an integral model for environmental protection and sustainable development based on the potential present in UPC institutions.	5	3
12.	To adapt the academic staff structure progressively to the established objectives in order to achieve the desired of quality	3	3
13.	To adapt the non – academic staff progressively to the strategic objectives by increasing professionalism and management efficiency and effectiveness	4	3
14.	To develop and implement planning, assessment and resource assignment systems on the basis of quality control criteria in order to improve UPC's activities at the service of society	5	4
15.	To evolve an active policy of obtaining resources which will provide new opportunities and collaborators willing to contribute to the funding UPC	4	3
	<b>TOTAL</b>	<b>74</b>	<b>52</b>



To evaluate the achievement rates for each objective, each contract included its own weighting system. The different indicators within each objective were assigned different weights. The weighting reflected the strategic value of the different elements according to their impact on the improvement of quality. Strategic objectives in the areas of learning and teaching, and research were given higher priority than the others.

Monitoring Committees comprise three representatives of the university and three of the government and they were appointed to monitor each programme-contract and determine the extent to which the objectives were achieved on an annual basis. These committees normally met once per semester.

**Table 5. Indicators to measure the main objectives of the Programme-Contracts**

<b>First and second cycle courses:</b>
- Percentage of students choosing courses as a first option relative to the number of places available
- PAU exam grade of a given percentage of students enrolled
- Student success rates in first and second cycle courses
- Student performance rates in first and second cycle courses
- Percentage of students graduating within pre-established time and/or within an additional year relative to initial cohort
- Percentage of total credits registered relative to total theoretical credits for each degree.
- Drop-out rate
- Percentage of students assigned a tutor
- Percentage of students/graduates completing work experience programmes in companies and institutions
- Credits registered for skills and universal competencies
<b>Third cycle and postgraduate courses:</b>
- Number of doctoral theses read
- Number of DEAs achieved
- Number of students registered on doctoral programmes / accredited doctoral programmes
- Number of accredited doctoral programmes
- Number of inter-university doctoral programmes
- Percentage of doctoral graduates / students with first degrees from other universities
- Total number of postgraduate class hours registered / number of students registered on postgraduate programmes
<b>Research and technology-knowledge transfer:</b>
- Resources obtained from competitive research funds
- Income from research agreements with companies and institutions
- Percentage of teaching and research staff participating in funded research projects

- Percentage of teaching and research staff participating in technology transfer projects
- Number of consolidated research groups
- Number of patents registered
- Number of predoctoral scholarships awarded
- Number of externally-funded postdoctoral researchers

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**International dimension and cooperation:**

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- Student mobility: number or percentage of students on exchange visits to other universities / number or percentage of students from other universities registered in the Catalan university
- Percentage of graduates having studied abroad
- Teacher mobility: total months spent by teaching and research staff on exchange visits at other universities, and by teachers from other universities at the Catalan university
- Number of development cooperation and volunteer projects

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**Catalan and foreign language skills:**

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- Percentage of first and second cycle teaching in Catalan
  - Number of books and manuals published in Catalan
  - Number of first and second cycle subjects taught in English
  - Number of doctoral and/or Master's subjects taught in English
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Leaving aside the formal procedures for implementing the programme-contracts, the experience in Catalonia may be useful to identify some of the main difficulties for launching this new policy tool. In this sense, we would like to underline two main shortcomings: the difficulties for both designing clear and quantitative policy objectives and obtaining the commitment of the University actors (professors, students, staff personnel).

First, getting clear and quantitative policy objectives and indicators is both needed and difficult. It is needed because the programme-contract is designed over such objectives and indicators, and it is difficult because there is no immediate answer to the question about what are we expecting from a public university system (*policy objectives*). Neither is it easy to measure complex issues such as teaching quality, technological transfer or research excellence (*indicators*). In front of these difficulties, the programme-contract makes pressure and seems to force the political actors to assume a simplistic (and therefore ready for use) approach to the objectives of the universities. Sometimes, there is not enough analysis about such objectives. There is no answer for the crucial question about why we need a public university system. The system is sometimes assumed without such a kind of ontological questions, and the policy objective is simplified to instrumental and ready for-use term: the objective is the economy and the efficiency of the system. Everybody understands such objectives and, moreover, they are easy to measure.

The second set of difficulties on the implementation phase is related with the lack of commitment among the majority of university actors. A contract is a commitment, and without the willingness of the partners to accept such a contract its force is limited. In our experience, it is often the case. Most of the academics, students and staff do not feel that it is “their contract” and,

therefore, they are not committed with its terms. Even more, some of the internal actors look at the programme-contract like a sort of managerial extravagance. For them, it is often a lost of time and efforts. Moreover, they have not been invited to discuss neither the terms of the contract nor their opinion about the managerial tool.

In front of the wide spread of such attitudes, there is no doubt about the initial weakness of process. It does not mean that the experience has failed, but that has been highly interesting not just for its own results, but also as a way of policy learning.

## Impact

All the programme-contracts set out objectives and actions in four common strategic areas:

- Teaching, education and the learning process;
- Research and technology-knowledge transfer;
- University-society relations (the *third function* of the university);
- Internal university organisation and management.

A number of universities also included other strategic areas of their own.

In the area of *teaching/learning*, the objectives included improved adaptation of university education to the needs of society through sensitivity to social demands and the needs of the learning process, placing emphasis on methodological renovation, flexible teaching, improved teacher training and the quality of the teaching provided. As we mentioned before, there are obvious difficulties to move from such generic objectives to particular indicators. The process of simplification that sometimes has been used to deal with such difficulty has not always been satisfactory. In this sense, some critics point out the distortion or danger of transforming the concept of “quality of teaching” into the indicators such as “academic success” (number of students passing the exams).

In *research and technology-knowledge transfer* the objectives concerned active collaboration of the universities in achieving high-quality, internationally competitive science, technology and innovation systems which would contribute to the progress of Catalonia. This would facilitate improvement and expansion in both the research itself and the impact of results. It was also meant to foster multidisciplinary approaches, integration in international networks and collaboration with companies, particularly companies which are technologically innovative. Here again the measurement difficulties has led, in some cases, to a certain degree of simplification. Moreover, the university culture –specially among academics- in Catalonia and overall Spain is quiet individualistic and, therefore, it is complex to design incentives for transversal research approaches.

In the area of *university-society relations*, the challenges were: To improve communication with society, so as to enable society to communicate its needs to the university and for the university, and to highlight the contribution the university can make to society; to improve the attention given to the new students entering the university, to graduate employment, and the promotion of entrepreneurial spirit among graduates; improving university services to companies and institutions, and the adaptation of continuing education to the needs of society and the changing demands of the

labour market. Other objectives sought to improve language skills in two areas: firstly, in fostering greater use of the Catalan language in university life and academic activities; secondly, in developing improved foreign language skills in response to increased international mobility in university life.

Giving the difficulties of evaluating such objectives and also the traditional gap between the Spanish university and the society, most of the programme-contracts have been weak in aspects related to the university-society relations.

Finally, with regards to the *improvement of management*, the emphasis was placed on the need for effective and flexible organisations, oriented to constant improvement, with qualified, motivated and well-trained staff, and the need to develop management systems and tools facilitating improved quality, effectiveness and efficiency. In particular, it was important to continue to foster use of information and communication technologies in all spheres of university life so as to adapt to the new information society.

Despite the fact that the objectives were ambitious and that the difficulties were quite impressive, most of commitments made in the various programme-contracts have been achieved, in many cases more than adequately. It is also the case, we have to recognize, that most of the commitments were designed to be satisfied –i.e. universities tend to sign contracts only when they are pretty sure about their capacity to satisfy or fulfil them.

In any case, if we refer to academic achievements, the improvements achieved included the following ten points:

- Improved quality in teaching, the learning process and teacher training, adapting university studies to the professional practice of graduates.
- Improved student performance, with a significant increase in numbers graduating and improved results in courses.
- Improved graduate employment rates due to the services provided to students by the university, the evaluation of labour market needs and, especially, due to equipping students with the flexibility required for continuous re-learning and to fostering contacts with the labour market.
- Improved range of doctoral courses and continuing education courses in response to needs for specialisation and updated skills. Also, an increase in the number of doctoral graduates in research and industry.
- Improvement in the activities, resources and results of research and technology-knowledge transfer.
- Increased “internationalisation” of the universities: More mobility programmes for students and teachers and exchange agreements with international research and teaching institutions and networks.
- Improved use of the Catalan language as the language of the universities and greater participation of the universities in their cultural setting. Improved foreign language skills among the university community.
- Improved harnessing of the professional skills of the teaching staff and the material resources in the university.

- Implementation of sustainable, integrated, environmentally-friendly, management systems, and development of professional health and safety policies.
- Strengthening and development of the use of information and communication technologies in all spheres of university life, thus harnessing the potential of the information society.

The gradual achievement of these objectives has been reflected annually by the programme-contract indicators. In all, the level of achievement has improved year after year, with annual percentages ranging between 85% and 95%. In some universities, the last year saw achievement rates of 100%.

**Table 6. An Example of a Programme Contract: Main Institutional Outputs. Ministry– Technical University of Catalonia Contract-Programme (1997-2000)**

	1997	2000
University graduates	3.418	5.126
University professors with PhD	45,3%	49,7%
Number of students in continuing education courses	4.672	8.296
Students with experience at business (practicum)	3.540	6.156
Average time for students to start working	---	2 months
Incomes by R+D activities	4.288	5.430
Research impact	320	535
Percentage of research self-financing	45,0%	52,15
Mass media impact at university activities	1.898	3.411
Incomes by companies agreements	1.509	2.345
International mobility at professors (in months)	82 months	210 months
Members at the University Association Friendship	1.304	2.627

Such high level of achievement is ambivalent. On one hand, it is obvious that most of the programme-contracts are very successful in terms of quantitative indicators. On the other hand, it is also possible to suspect that such high level of success could be spurious. Some critics could argue that the high level of success is, in fact, the proof of the irrelevance of the programme-contracts, contracts made –as we mentioned before- not for improving academic outputs but just to be satisfied and therefore getting some extra funding. Nevertheless, the real fact is that contract-programmes have led to a new university culture and policy orientation towards academic objectives, output oriented, and to the interrelation between academic outputs and funding mechanisms.

## Resources, costs and financial benefits

From a budgetary point-of-view, the contract represented additional funding of a total of more than 720 million Euros for the universities over the five-year period, 1997-2001. This represents an extra funding of around 5 % of total higher education expenditures.

The experience gained over the first period up to the year 2001, showed the programme-contracts to be an effective instrument for improving quality. The instrument continues to function as part of the funding distribution model for all Catalan public universities, which has been in operation since 2002.

The general objective of the funding distribution model is to establish criteria for distribution of public funds among the public universities. It is based on the principle of the equality of all students in the public system and aims to be objective. Calculations are by a system of easily determinable common parameters.

The model includes five forms of subvention:

- *Fixed funding*, equal for all universities, covering the minimum structural expenses necessary for their operation.
- *Basic funding*, which provides resources for their ordinary academic activity and related operating expenses. Based on common objective parameters.
- *Derived funding*, for expenses deriving from employment of teaching and research staff.
- *Strategic funding*, linked to Quality objectives in relation to the university strategy.
- *Competitive funding*, for certain measures established by the Ministry of Universities, Research and the Information Society (DURSI) and affecting all universities simultaneously.

The funding from the programme-contracts is included within the *strategic subvention* to the universities. Within the model, the programme-contracts assign funds to the universities for three purposes: firstly, in order to achieve objectives in the area of *quality*, secondly, for *specific purposes* in each individual university which cannot be included within a general model, and thirdly, in order to *align the funding of each university to the requirements of the transition phase*, in order to guarantee convergence with the model's target funding framework. As already pointed out, in this second period the programme –contracts have been fully integrated into the instruments for public funding management, and the aim is to increase their relative weight in the funding provided to each university.

In the case of the first two purposes mentioned above, the DURSI establishes an annual maximum sum which is determined by variables of scale but also by strategic considerations in the case of each university. The final amount assigned is determined by the overall extent to which the programme-contract objectives have been accomplished as reflected by the indicators. This is expressed as a percentage which is then applied to the maximum funding permitted.

With regards to their structure, the new programme-contracts are much more homogenous. All are for a duration of four years (2002-2005) and all are type A. The number of objectives has been reduced significantly (to between six and ten) as has the number of indicators, (around thirty). A similar weighting system has been maintained for objectives and indicators along with a system for evaluating the progressive accomplishment of objectives.

Regarding their contents; new objectives have been introduced in order to adapt the system and the universities to the new European higher education and research space and to new legislation. Also, in order to improve student intake, access and induction processes, to increase involvement by the universities in regional development through closer links with society and to improve the use of Catalan and enhance third-language skills.

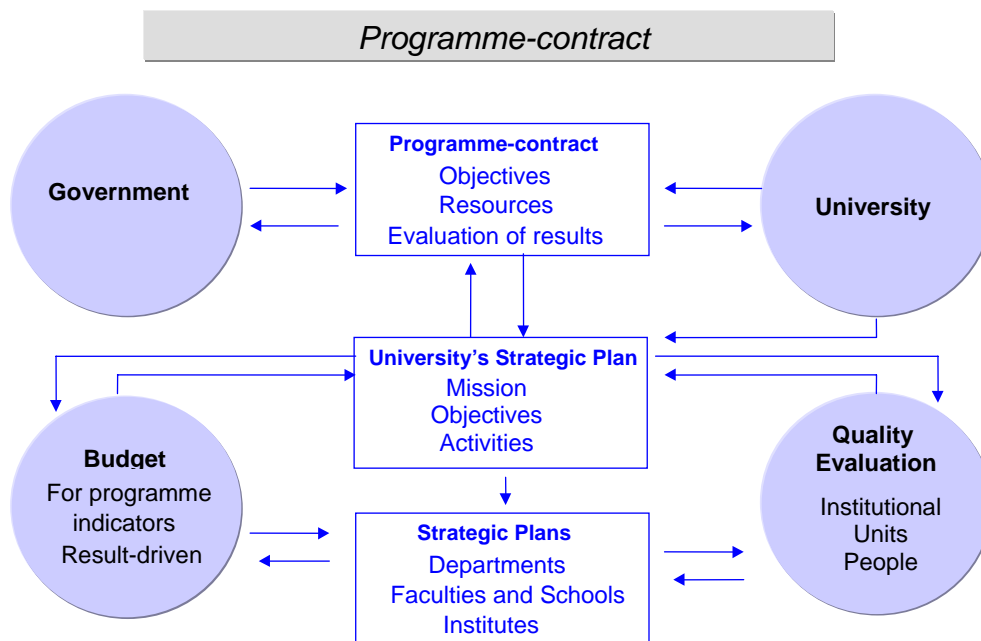
In this second phase the programme-contracts have been simplified, by identifying the main common strategic priorities of the university system and ignoring the bulk of ordinary activity. Similarly, a set of previously-tested output/outcome indicators has been established and the work of the Monitoring Committee has been facilitated.

**Table 7. Objectives of the new Programme-Contracts between the Ministry and each of the Catalan universities, period 2002-2005**

Objective	UA B	UB	Ud G	Ud L	UP C	UP F	UR V
Improvement of the quality of education provided and effectiveness and efficiency of the system	X	X	X	X	X	X	X
Improvement of measures to attract and enrol new students	X	X	X		X		X
Improvement of research and in attracting competitive external funding	X	X	X	X	X	X	X
Development of mechanisms for technology-knowledge transfer and for promotion of R&D&I	X	X	X	X	X	X	X
Promotion of high-quality third cycle education and employment for doctoral graduates	X	X	X	X	X	X	X
Strengthening active career guidance for graduates and fostering links with former students	X	X	X	X	X	X	
Consolidating the use of Catalan and improving the university's linguistic competence in third languages	X	X			X	X	X
Participation in regional development via closer links between universities and local society				X	X		X
Strengthening the international dimension of academic activities, university mobility programmes and development cooperation	X	X	X	X	X	X	X
Improvement of the quality of management processes and optimisation of human and material resources, with support of ICTs	X	X	X	X	X	X	X

In financial management and planning, the programme-contract aims to introduce new mechanisms for public funding of the university's day-to-day spending. Additional new resources were programmed which were linked to achievement of pre-established objectives. Under-achievement led to no funding, and could lead to revision of the university's quality policy and its overall funding. Therefore, full and wide cooperation from the university community was needed in

**Graph 2. The relationship between Programme-Contracts and internal university management policies.**



order to achieve the majority of the objectives established and thereby receive the additional funding.

Despite the fact that this additional funding was relatively low in comparison with the total funding resources provided by to the universities, it did lead to a major effort to achieve rational use of resources and foster a results-driven culture of efficiency. From a situation in which the university's funding was the subject of annual discussions largely steered by an incremental principle, we have moved to negotiation and an institutional pact which sets out the improvements the university is to achieve over a given period in order to receive a given level of funding.

The programme-contract has also served to disseminate the challenge of improvement in the four strategic areas established (teaching and learning; research and technology-knowledge transfer; the university-society-region link; and management, organisation and resources). The first programme-contract fostered establishment of strategic quality policies, priority setting, associated action plans, and evaluation.

The programme contract also led to assimilation of the concept of each university being accountable to society. Being accountable in terms of improvements achieved is relatively easy, bearing in mind that the contracts explicitly set out the use to be made of the public funding provided and that results were measured by means of a simple system of objectives and indicators. Through the programme-contract, each university set out the pre-established objectives for which it received additional funding. The progress made was monitored by the Government. The Catalan Government was also able to attach priority to aspects which it considered important, while still respecting the principle of university autonomy.



Introduction of the programme-contracts also had a positive effect in some universities with regard to internal functioning and dissemination of institutional objectives, and permitted adaptation of activity at different levels of the organisational structure to the academic and service objectives established in conjunction with the Generalitat. Some universities have even used similar mechanisms internally for the purpose of resource allocation.

## Evaluation and expectations

Overall evaluation of programme-contracts in the Catalan university system is positive, although some difficulties and shortcomings have also been identified.. Study of their application also enables us to draw conclusions which enrich the debate on the management of public universities. The following section attempts to highlight some of the most interesting considerations concerning the application of contractual mechanisms in the Catalan university system and also the elements which have to be corrected or improved in order to achieve greater effectiveness and efficiency in university management and policy.

Among the positive effects, are the *development of a policy of institutional co-responsibility and increased dialogue and cooperation between the government and the universities*. The programme-contracts have contributed to generating a climate of inter-institutional trust and cooperation which has led to a higher share of co-responsibility for universities in policy development, and multi-level cooperation based on negotiation, mutual understanding and increased government support. Nevertheless, some more efforts must be made to produce a real dialogue about the social role of a public university and on a public university system. Why do we need such a system? The programme-contracts must stem from the answer to that question and, now, it is not clear enough.

The contracts have also played a role in *promoting the autonomy, specific identity and strategy of each individual university*. They respect and promote university autonomy, which they link to the concept of accountability. At the same time they recognise the different contexts in which the universities operate. In addition to parametric criteria which are common to the entire system, the contracts are sufficiently flexible to incorporate the specific features, problems and projects of each individual university. It is also true that, comparing different universities, the substance of their programme-contracts is not very different. We can suspect, therefore, that the leading role assumed by politicians and experts has produced some standardisation in the process.

The contracts have proven to be an *effective tool for analysis, diagnosis and evaluation, in that they allow study of all aspects of the university's life*. Hitherto, standard practice was to focus on a given aspect of the university (teaching, research, mobility, teaching staff, resources and infrastructure etc) and it was rarely possible to carry out a comprehensive diagnosis of all aspects which would facilitate institutional decision-making and management. From another point-of-view, the participants in the definition, implementation and monitoring of the programme-contracts also consider them a valuable tool. This has reinforced the university authorities in their commitment to improvement and innovation. Such commitment, nevertheless, must be assumed for the whole university community. Part of such community do not participate in such commitment and it is one of the main weakness of the policy.

As previously mentioned, the programme-contracts have contributed to the *modification and modernisation of the university funding system*. The funding mechanisms now take account of academic and other results, as opposed to the *inputs* which predominated in previous models. Now, the pluriannual programme-contracts enable long-term financial projections rather than single year approaches. Since 2002 the Catalan system has had a model for the assignation of funding to public universities which utilises the programme-contract as one of its most important constituents. However, further consideration is required concerning what percentage of the total funding should be results-based.

Finally, there can be no need to insist on the *importance of transparency and the communication to society of the actions and results of the universities*. The contracts have played an effective role in achieving transparency, however it is evident that further improvements can be made in the area of university-society communication and public accountability.

To sum up, the programme-contracts can be improved in, among others, the following aspects:

*The contracts should highlight more effectively the value of the higher education and public services provided by the universities.* It is necessary to intensify and move forward the debate on the public value of university education, the challenges being faced, and the strategies which need to be developed.

*The contracts are not directly linked with other higher education policies in the area of university quality evaluation.* The initiatives taken and the outputs by the Catalan Agency for University Quality (AQU) and the Central Government (Ministry of Education and Science – National Agency for University Evaluation and Accreditation, ANECA) are not very much related with the experience of contracts-programmes.

*We must also better harness the full potential of the contracts for innovation in university policy.* They provide possibilities for the introduction of rarely employed mechanisms of benchmarking – between the institutions and within the general system. Clearly, this would bring the challenge of finding the balance between competition and cooperation among universities in a highly integrated system. Striking the correct balance will facilitate development of high-quality universities capable of serving society and being competitive at European and international level. To achieve this, the contracts will have to make increased provision for cooperation, synergy and implementation of large-scale, collaborative projects between the universities themselves and with other educational, economic and social institutions.

*Work must also continue on improving various aspects of the indicators employed and overcoming problems with some of the indicators:* Problems such as the influence of environment and other random external variables and temporal factors. Work must continue to define common indicators which will be valid for the entire system.

Finally, one of the most frequently voiced criticisms has been the *low level of participation by the different university collectives in the definition of the objectives of the contracts and in working for their accomplishment*. In this regard, the situation and context varies widely from one university to another and each has taken the approach most suited to its own context. Once again, work must be done to establish the right balance between participation by university personnel and strategic and management leadership by the university's management. Several universities have taken the opportunity to improve their internal management, by developing internal contract mechanisms. These instruments have enabled increased objectivity in analysis of the academic activity of the various departments, faculties, schools and institutes, and have fostered the development of new objectives agreed between the

university management and each unit. This is a practice which should be extended to all elements of the Catalan university system.

## Resources for policy makers

### *A. Institutional web pages:*

Ministry of Universities, Research and the Information Society, Government of Catalonia: [www10.gencat.net/dursi](http://www10.gencat.net/dursi)

Ministry of Education and Science, Central Government of Spain: [www.mec.es](http://www.mec.es)

National Agency for University Evaluation and Accreditation (ANECA): [www.aneca.es](http://www.aneca.es)

Catalan Agency for University Quality (AQU): [www.aqucatalunya.org](http://www.aqucatalunya.org)

### *B. Articles and other interesting documents:*

PALLAROLS, Esther; LACRUZ, Santiago; RIBAS, Josep: “El model de distribució del finançament de les universitats públiques catalanes. Coneixement i Societat, 2003, núm. 1, p. 104-113.

VILALTA, Josep M.; RIBAS, Josep: “La gestió dels contractes-programa entre les universitats públiques catalanes i la Generalitat de Catalunya. Coneixement i Societat, 2003, núm. 2, p86-99.

VILALTA, Josep M.; PERELLON, Juan F.: “Recent Trends in Higher Education Governance. A Comparative Analysis of Five European Countries”. Coneixement i Societat, 2004, núm. 4, p. 64-87.

VILALTA, Josep M.; SOLÀ, Francesc: «L'avaluació de la gestió i dels serveis universitaris. Creixement i processos de canvi en el sistema universitari català», a L'impacte de les avaluacions a les universitats catalanes (1996-2002). Agència per a la Qualitat del Sistema Universitari de Catalunya. Barcelona, 2004, p.239-272.