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UNIVERSITY GOVERNANCE, ACCOUNTABILITY AND FINANCING

Miguel Ángel Escotet

ABSTRACT

The evolution of universities has been limited to their structure, governance and administration systems, financing mechanisms and a greater diversification of knowledge, form and content.¹ Universities have moved from one extreme to the other in the paradigm of participation and authoritarianism. The future of universities is closely linked to social leadership and its internal coexistence. The aim of this essay is to present a historical overview of how the relationship between forms of governance and institutional assessment has evolved and the effect of this relationship on the quest for quality in learning and systems of financing. Higher education has shifted to and from positions based on individuals who learn, to corporatist structures based on individuals who teach or administrate. The funding of higher education is not based solely on sources external to an institution but particularly on its own internal mechanisms of equity, efficiency, effectiveness and appropriateness and on the ethics of the university profession, whether in the role of student, professor, researcher or administrator.

MANAGEMENT FOR A CULTURE OF COEXISTENCE AND CITIZENSHIP

In the Early Middle Ages, only a minority had access to education, which was centred on monasteries. There, the people who were thought to be the most educated of their time, that is, the sons of the nobility and the ruling classes, received an education. It was conceived as a type of education for coexistence and citizenship. It comprised a period of residence in which students worked together to cultivate their spirit and intelligence, and it was a requisite if one wished to occupy leadership and management positions in society. The syllabus for this ‘training for coexistence’ was composed of civics, music and rhetoric. It also included studies in the exercise of abstract thought, such as grammar, logic, arithmetic and geometry, and studies in cosmology and astronomy. The culmination of this was the study of law and theology.

The centre of culture then moved away from

monasteries to cathedrals. At the start of the first millennium, cathedrals became the religious and administrative centres of Europe. The Cathedral of Notre Dame is a prime example of this. It was here that some of the administrative or academic posts that still prevail, such as that of councillor or dean, were first introduced, later to be taken on by the University of Paris in 1264 (Verger, 1973).

However, the role of cathedrals did not last long, due to the conflict that arose between the clergy and the teaching authorities, despite the fact that they sometimes carried out the same functions. One of the most fiercely contested issues during this period concerned the person to whom the qualification of *autoritas*, which enabled the holder to issue teaching licences, should be conceded. This dispute was one of the reasons for universities’ coming into being. The corporative system slowly became a professional guild that broke away from the so-called Bishop-in-Residence to give rise to the university as an interdependent system that was organized according to levels of craftsmanship, for which there were three classes: apprentice, journeyman and master.² It also threw off the influence of the cities, Cambridge being a case in point, which was created as a university as a result of an incident that occurred in Oxford in 1209 that led to the emigration of its professors. Academic language and the lack of material possessions gave universities greater power and undermined their control of medieval cities.

This new corporate group, *universitas*, was invested with the right to recognize the capacity to teach and was given autonomy that was to be protected by the Pope or the King. This model led to the creation of the universities of Paris and Oxford. Before this, however, the University of Bologna had developed a corporate system that did not include professors but students, a model that would later be adopted by the University of Salamanca.

FROM ACADEMIC ETHOS TO ADMINISTRATIVE ETHOS

The academic ethos of universities has changed

very little since the Middle Ages until the present. However, there is a significant difference between the origin of universities as social institutions and contemporary universities. At first, their structure was more informal and, contrary to what one might think, more flexible. It was students who sought out professors on the basis of their epistemological and deontological authority. The university structure was built upon the *studium generale* or *particulare*, which was governed or run by a rector-student who, as in the case of Bologna, was from the Council of Scholars or congregation of students. That is, teaching was based on the *individual who learns*. Therefore, university institutions were basically centred on that person, that is, the student.

Subsequent modifications were part of a move towards the *facultas* or ensemble of persons who had the ‘faculty’ of teaching and the ‘faculty’ of administering teaching on the basis of their epistemological authority. One of the most relevant aspects of the period is the university as a universal, Eurocentric institution, with a common language, Latin, and with a coherent culture – which was not necessarily the best – based on Aristotelian principles influenced by Christianity and aimed at organizing coexistence in society, more in accordance with the system of principles than with the practice. This Medieval culture prescribed behavioural norms through the authority of the Church, but also by means of universities. Let us not forget Stephen Langton, the English priest and councillor of the University of Paris who rooted out tyranny at the University in the early thirteenth century, was later radically opposed to King John of England and was to be one of the authors of the bill of rights, the *Magna Carta*.

From the fourteenth century onwards, the evolution of the sovereign state and the consequences of the Western Schism weakened the transnational perception of universities and led to more nationalist models, such as those of the universities of Vienna, Heidelberg and Prague. That century marked a new period for universities. Their structure was modified and they began to depend more heavily on the state. In educational terms, there was a move away from meditation on the theme of nature to a utilitarian education. The transition was, however, protracted and complex. For example, surgery and common law remained outside the scope of universities for many years, and physical, chemical and mineral research, which was largely responsible for industrial development, took place outside universities, in the science colleges that existed at the time.

Universities in the Middle Ages later gave rise to models that were increasingly rigid, which had three focal points: the English model or residential university system, such as that of Oxford, the French model of the *grandes*

écoles (the so-called Napoleonic system) and the German model of research, which originated at Humboldt University. Mixed models appeared sometime later, including the Chicago model, which followed the English system but with an emphasis on the liberal arts. Universities as we know them today are similar, in a greater or lesser measure, to one of these models or a combination of several of them. Among all of them, the *facultas* or faculty have been the centre of the university structure and have been the quintessential collegiate authority.

The schools, departments, institutes and sections are basically organized around the professors and the teaching content that they design, often on an individual basis and in isolation. That is, universities are today centred on the *individual who teaches* and this is making way for another model taken from the private corporate system in which education is centred on the *individual who administers*. Both models are in some measure authoritarian, in detriment of the individual who learns, whether this individual is a student, professor or administrator. The backdrop to many university crises has been precisely these dichotomies: the crisis of the relationship between the individual who teaches and the individual who learns, between the member of the ‘academic ethos’ and the member of the ‘social ethos’ and also between the individual who teaches and the one who administers.

Between universities and society, would it not be necessary to replace the academic ethos with an ethos of learning and not by an administrative ethos? If anyone in society requires continuous learning, it is the university community, and particularly professors, given the fact their teaching depends on their constantly learning and renewing their knowledge. This is the objective justification for developing an ethos of learning. But universities, as we shall see later on, are moving in a different direction.

ACCOUNTABILITY: CONTROL, AUTONOMY OR BOTH?

University reform has been characterized by partial changes in the system. Universities have rarely undertaken all-encompassing reforms. These reforms have been associated with changes in the legislation that governs the ways in which the academic and administrative systems are organized. There is clearly a tendency to confuse reforms with legal changes. Paradoxically, the frequency and quantity of legal transformations of universities has been one of the main obstacles to their development. The excessive amount of legislation in place is, to a certain extent, a stranglehold on universities and one of the factors that hinder their creative and inno-

vative capacity. The university legislation system reinforces institutional rigidity and the programmes that it administers. Any attempt to instigate change that conflicts with the prevailing legal framework is generally doomed to failure. However, if the reform is given the go-ahead, the time between the petition until its approval tends to be so protracted and bureaucratic that the reform no longer constitutes a change, or it lags behind social change. The most radical critics suggest that the best law on university action is that which only refers to the missions entrusted to it and obliges it to fulfil them.³ That is, control is a necessary mechanism in as much as its objective is to teach institutions to develop mechanisms for self-control and self-regulation, but never with the aim of perpetuating control itself or 'vertical authority' systems.

Another current trend at universities addresses the efficiency and effectiveness of the institutional system. The relationships between aims and means and between internal and external achievements are part of the accountability process. In the second half of the twentieth century different approaches to managing and administering the conduct of universities have been applied to the organizational, administrative and managerial development of these institutions. Recently, techniques for strategic planning, project assessment, management by objectives, management by skills, total quality and institutional assessment have been incorporated, techniques that partly stem from the organizational systems of businesses in the services sector.

Academic and administrative processes at universities have improved as a result of adopting these techniques, in conjunction with information and management technologies. Managerial skill-building is indeed lacking among university staff in developing and intermediately industrialized countries, and in Eastern European countries in transition. However, business techniques have not been sufficiently adapted to universities and new technologies for university administration have not been created.

Research in this field is limited but it is clear that administration techniques that are appropriate for manufacturing companies or service providers may not be effective in the administration of knowledge generation and transfer processes in university environments.⁴ It is a source of great concern to see how certain universities are being dominated by administrators from corporations who have no academic experience, and by bureaucratic and management structures and managerial techniques that equate an institution that generates and disseminates knowledge with a washing powder manufacturer or a multinational travel agency.⁵

We should remember that the Latin name for university is *universitas litterarum*, which, etymologically

speaking, gives the idea that human beings are immersed in the social body and that the entire universe is the object of knowledge. A lack of freedom, however, limits the quest for knowledge. Freedom is associated with governability and the concept of autonomy at universities according to most of the diagnoses carried out. This autonomy is not a recent development, nor does it refer to the movement of the so-called Córdoba Reform, which began in 1918 and had a significant effect on the development of the Latin American model of university governance.

References to university autonomy can be traced back to the very origin of higher education institutions. The Magna Carta of European universities (University of Bologna, 1088) is perhaps a reflection of the oldest legal statute, which is attributed to Federico Barbarroja's *Authentica Habita* from 1158. The independent role of universities in the set of laws that appear in the *Seven Divisions of Law of King Alfonso the Wise* (1256–1263), which included specific legislation on the figure of the rector, who until 1422 was often a student, and who possessed academic authority, as occurred in Bologna and in Salamanca by means of the so-called *maestrescuela*, or head of studies.

In any case, universities in the West have historically been party to a dialectical tension between the university community's pursuit of independence and the pressure exerted by social forces, whether public or private, with a view to controlling them. Autonomy is an indispensable requisite in face of dependence and the intervention of any type of political or social authority. The concept of university autonomy, however, has been and still is a trend that lends itself to different interpretations.⁶ The genuine autonomy of universities has been replaced in many cases by a system of pursuit of power as an extension, within universities, of the work of political parties in democratic societies, or of the debasement of autonomy in single-party societies or those ruled by autocratic governments.

Paradoxically, under the pretext of strengthening autonomy, these practices have hindered universities' independence, to the extent that the governing party controls universities or the opposition uses this independence as a weapon against the government. At all events, this interference is contrary to the university spirit and leads to dependence on external influences that have different objectives. The most significant example of political or economic control has been the subordination of universities' sources of funding to the control, not of society at all levels, but rather to changing political interests and economic pressure groups.

In the case of private universities, the situation is sometimes similar. Private institutions are often subject to political forces as much as public ones are. Other fac-

tors related to strictly private economic groups also play a part, as well as the control exerted over them by the state or the government, which is sometimes greater than that held over public institutions. Aside from that, I believe there are no intrinsic differences between public and private universities, or at least there should not be. Whichever of these models they follow, universities are a public service. There cannot or should not be universities offering a private service: private for whom? To a certain extent, the efforts to curb personal initiative, which were inherent to the statist and bureaucratic model of Napoleonic France, unintentionally created the division. Essentially, what we should be concentrating on is the fact that universities are the same save for the types of management to which they are subject, that is, public management, private management or even mixed management. The only valid distinction is between universities of a high standard and universities that do not deserve to be qualified thus.

In other words, this should be the ultimate aim of the process of accountability,⁷ to guarantee that universities maintain the principles and ethical practices that are inherent to them to protect society from fraud, the type of fraud that can result from incongruence between what is said and what is done, between what is offered in academic terms and what is taught. Therefore, intervention is only justifiable with a view to ascertaining whether the qualitative and quantitative indicators that each institution uses to measure quality are met. Other types of intervention, whether direct or covert, threaten creative processes, research and the pursuit of truth.

This coercion of freedom, when it occurs, has been a significant factor in many university crises. It has, however, resulted in a new ethos, whose values, attitudes and beliefs have moved away from academic and administrative independence and have, paradoxically, served to reinforce the disengagement of universities from civil society on a national and international scale. This politicization of higher education is a symptom that affects, to a greater or lesser extent, universities all over the world. Universities demand national and transnational state agreements that overcome these forms of polarization and interventionism.

On the other hand, democratic and independent universities are also crying out for control and counter-control systems that combine the freedom to create, teach and learn with the obligation to disclose the fulfilment of objectives or lack thereof. In a real democracy, it is the duty of governments to submit to the permanent control of civil authorities and particularly of citizens.

As stated, independent universities, whether public or private, cannot be exempted from internal and external

control. Thus, since the end of the twentieth century there has been a clear move towards implementing institutional assessment and accountability processes. Accountability should become standard practice in the scientific and technological activity of an institution, but politics should never play a part. The process of accountability should never be influenced by the government in power or by political bias within universities. This is the domain of the university community, through self-assessment and through the society to which it belongs. Therefore, in the pursuit of autonomy the close relationship between universities and society must be considered, and the former should commit to being accountable to the latter.

We must not forget that universities, which have formal and non-formal components, are a part of the education system and are thus closely related to other educational levels and components, as well as to the industrial sphere. Thus, universities and the rest of the education system must combine their programmes to ensure that the transition from one level to another is integrated and flexible. In the same way, communication channels must be created between the different non-formal and informal education systems that exist in society. Autonomy must be subordinate to the necessary response of universities to the needs, demands, characteristics and transformations of the social system of which they are a part. Today more than ever, the trend is for universities to make their autonomy compatible with their inevitable interdependence.

GOVERNABILITY AND LEGISLATION

In their present form, universities' legislative and regulatory bodies are a significant obstacle to the process of constantly having to adapt to changing conditions. The greater the amount of university legislation, the more difficult it becomes for higher education to be flexible, diverse and innovative. There are cases of organic laws that are detailed to the point of restricting the higher education systems that they govern to mechanical teaching-learning processes, and essentially leave no room for manoeuvre. There is an inherent contradiction in the fact that many of these laws protect the autonomy of universities whilst dictating their structures, plans, programmes and qualifications, forms of academic organization, criteria for the admission of students and professors and forms of financing. In some cases, these laws also define the specific aims of an institution and how these should be attained and they may even hold sway over the appointment of university managers. There are other models for autonomy, in which universities establish their own

legislation, although the laws that govern them in practice are carbon copies of the organic legislation models of the state or other universities. The only advantage lies in the fact that if the decision is taken to change the legislation or leadership, the authority is the university itself. In any case, the authoritarian processes of a state as seen in the appointment of university leaders can be similar to the manipulation of these choices by internal and external pressure groups. In other words, the appointment of university authorities by the university community does not guarantee that this process is genuinely participatory.

These directed or autonomous models are extremes that come together. Essentially, they are part of a sociological and psychological problem that is the result of an irresponsible attitude to the assignation of rights and duties and to the necessary self-control of individuals. Efforts have been made to advance the idea that the best organic law a university can hope for is one that contains a single article that stipulates it must change relentlessly. That is, a general law that talks of a university's rights and duties to the society to which it belongs and that lets it create the regulations that will enable it to fulfil those duties.

If the aim of university legislation is to reflect the essence and philosophical basis of all education and, consequently, of all creative effort, it should be as brief as possible and should simply act as a guide that is flexible, instructive and incentivizing.⁸ University legislation should reflect the missions and policies of universities as horizons for their development, whilst distancing them from any obstacles that might divert them from their missions. Standards must accommodate needs and satisfy or direct expectations. Legislation must evolve at the same pace as society changes and knowledge is transformed.

Flexible legislation goes hand in hand with flexible administration. Administration should facilitate the teaching, learning and creative processes that the university community is engaged in, and never hinder or act as an obstacle to their work. In administration, the most up-to-date management techniques should be employed. Furthermore, models that have proved useful in other business or public administration fields should be adapted to the context of university administration.⁹ In all of its functions, university administration should be subject to at least the following criteria: appropriateness, efficiency, effectiveness and opportunity. An administration system must be shared by the academic community as a whole, which should cooperate in those management programmes that are a direct part of teaching-learning and research processes, such as the writing and assessment of theses, studies and applied research, programmes of technical assistance to companies, public and community services, academic timetables, student guidance and oth-

ers, in which teaching and administrative bodies need to collaborate. That is, a university community of students, professors and administrators should work together constructively.

A university's administration system should make significant modifications to its behaviour as an organization to be in tune with the demands of an institution that is constantly undergoing change.¹⁰ It is important to emphasize here the need to curb the formalization of structures in order to make administration more effective and integrated in a university's other subsystems. The administration of a university is not an isolated stratum within it; its management is also the responsibility of the academic community. In fact, university administration should be a responsibility that is shared by the administrative and academic sectors. There is also a great need for reducing 'macro-faculties' and 'macro-schools' into smaller units of knowledge and for making discipline compatible with interdisciplinarity and basic areas of knowledge compatible with specialized areas of knowledge. The system must comprise multiple structures that are both functional and interlinked to facilitate the flow and feedback of knowledge between students.

TAKING DECISIONS: EXERCISING SHARED AUTHORITY

Charismatic, dictatorial or democratic authority has slowly been replaced by competent authority. That is, technical, administrative and academic training is more relevant when it comes to managing institutions than the power of empathy or innate leadership qualities, although these are of course important. The evolution of the world of knowledge requires university leaders who combine general education with specialized training in the management of services. The university sphere, which is dominated by a 'knowledge elite', by a multitude of prima donnas and by an excessive loyalty to academia, has rejected participating in the process of administration. In fact, administration is looked down on by many university groups.

The role of the university rector or president is associated with political, economic or social power, not as in previous centuries, in which this figure was associated with academic, cultural or spiritual power. Moreover, most top-down power systems at universities or those in which a president is the highest authority, whether democratic or otherwise, place almost total responsibility in the hands of the rector. Because of the power exercised by the rector, it is often impossible to know whether he or she depends on the management board or vice versa.

This is the result of legislation that reinforces centralized and even sometimes autocratic power. In contrast to this, the tasks that a rector is required to carry out are, in academic and administrative terms, clearly absurd. Thus it is often joked that the essential qualities of a rector are that he or she should possess the wisdom of King Solomon, the strength of Hercules, the shrewdness of Machiavelli, the patience of Job and the psychological insight of Freud. That is a lot to ask. And perhaps today we might even add the entrepreneurial vision and financial know-how of Bill Gates.

The governability models employed and the manner in which decisions are taken at a university tend to be closely linked to whether the university exists within a society that is democratic or authoritarian. The leader of a university is conditioned by this fact, especially in his or her relationships with political authorities or pressure groups and the manner in which he or she exercises his or her functions in relation to the university community. It should also be noted that not all management processes in the entrepreneurial system can be transferred directly to universities. Concepts such as productivity, order and effectiveness lend themselves to very different interpretations when one is talking about an educational process as opposed to manufacturing cement blocks. Nothing is more frustrating for the body of students and professors than for an authority to be unacquainted with university problems, particularly when that authority tries to solve these problems by implementing measures that are strictly administrative or political. Academic problems, scientific debate and attitudes that are critical of the system or of society are typical of the university community. They will always exist, but they are diffused and mediated by an understanding and conciliatory authority who is able to accept the differing loyalties of the heterogeneous academic community. This authority should never attempt to quash debate over ideas and problems, because it is precisely this debate that is one of the mainstays of university life.

Therefore, even in more extreme cases a non-belligerent approach to the university, as a platform for social criticism, in light of the times and the social, cultural and economic situation of the national or international community, cannot be curtailed by imposing rigid or authoritarian lines. It is precisely this criticism and controversy that push society to seek a reformist consensus that improves quality of life.

However, there is a trend at universities large and small to develop authoritarian systems of centralized, top-down government or to form systems of academic resistance. Decision-making is made evident by a hierarchical system that is based strictly on the delegation of power and

hardly ever on epistemological authority. Certainly, it is easier to take decisions under an imposed or self-imposed authoritarian system, especially in an environment such as a university, in which every member thinks themselves an *autoritas*. For this same reason, decisions are taken but never fully implemented. Thus, I have always maintained that any educational reform is doomed to failure if the people who are affected by it are not the protagonists of this reform and are not convinced of its worth.

The exercise of authority at a university requires a dialectical discussion that flows on a three-dimensional plane, as life does, from top to bottom, from bottom to top and from one side to another, making it a spherical relationship and not a circular one. It is a system of multiple entry and exit points, which must be viewed in a holistic and not a fragmented way. It can only be measured with instruments that are able to detect its volume and not just its length. That is, whilst most companies outside the realm of education move in a linear, Newtonian manner involving relative prediction, an educational enterprise moves in a world of uncertainty and, therefore, one of complex processes. For this reason, authoritarian systems at universities are usually just short-term solutions, which makes one wonder what may happen in the future.

The authority of governing is gained through the existence of levels of participation and cooperation in decision-making, but it also requires of its members that they be highly skilled in carrying out their functions and that they engage in a participatory education or, at least, a 'hierarchical consensus', as Levy (1993) calls the process that makes freedom consistent with democratic practice. Thus, there is no point discussing democratic practice at a university if the university culture itself is not inherently democratic, nor is there any point in studying ethical treatises if one governs from a utilitarian and individualistic standpoint, nor expound the virtues of participation and teamwork for modern companies if at the university itself what is practised is individualism and authoritarian decision-making. There is clearly a discrepancy with what one aims to transmit. This is the first step leading to cognitive dissonance in students, when they are taught theories that have nothing to do with the practices of the institution itself.

Therefore, it is indispensable for university leaders or managers, whether rectors, deans, directors or collegiate bodies, to be convinced that the way of governing a university is by seeking consensus rather than resorting to ruling by decree. Consensus in university administration is based on the principle that the person who presides over the institution is *primus inter pares*, that is, first among equals. In academic terms, the majority is not always right. It is worth mulling over Russell's claim that the fact

that an idea is shared by the majority does not make it true; and in view of how stupidly much of humanity acts, an idea conceived by the majority is more likely to be false than true. Although – logically – it has limits, consensus is a means for decision-making in university development that is of enormous value because it accepts the fact that both majorities and minorities may be right or that both may be wrong. Borrero (1993, p.65) claims that consensus in decision-making at universities is both legitimate and necessary. Research has in fact shown that the practice of consensus tends to have a unifying effect, whereas the triumph of the majority over the minority leads to confrontations that make the implementation of these decisions much more difficult.

Management professionals are generally well acquainted with techniques that seek consensus and they know when a discussion should continue and when it should end. Undoubtedly, consensus is a system for decision-making that is much more complex than other forms of participation. However, the governability of a university is built up by negotiating with people and convincing them, that is, by accepting the nature of what is an institution of people and not of objects and by nurturing the spectrum of the human condition. It is in itself simply one more aspect of the education of students and professors (who are permanent apprentices), just as authoritarian attitudes and habits would be if these students and

professors operated in an environment in which there was no dialogic or tolerance.

In short, we need to build a new university culture that breaks away from a mission to satisfy the corporatist yearnings of the professor or the authoritarian appetite of the administrator, leaving the true protagonist, the individual who learns, on the fringe of the essence of the university. It has been endlessly repeated that the student is the main actor in the learning process—and the opposite has been endlessly practised. It is time to leave behind demagogic approaches to teaching.

SOURCES OF FINANCING AND THE SUSTAINABLE DEVELOPMENT OF HIGHER EDUCATION

This new culture also requires a commitment, from society and the university itself, to lifelong education that is promoted by the state as a guarantee of equality. All social forces should subscribe to this guarantee and enable, therefore, the sustainable development of different forms of further education and of university education in particular.

We know that medium- and long-term economic growth is unlikely to occur if it does not go hand in hand with vocational training and university education. University education is developing, or is attempting to

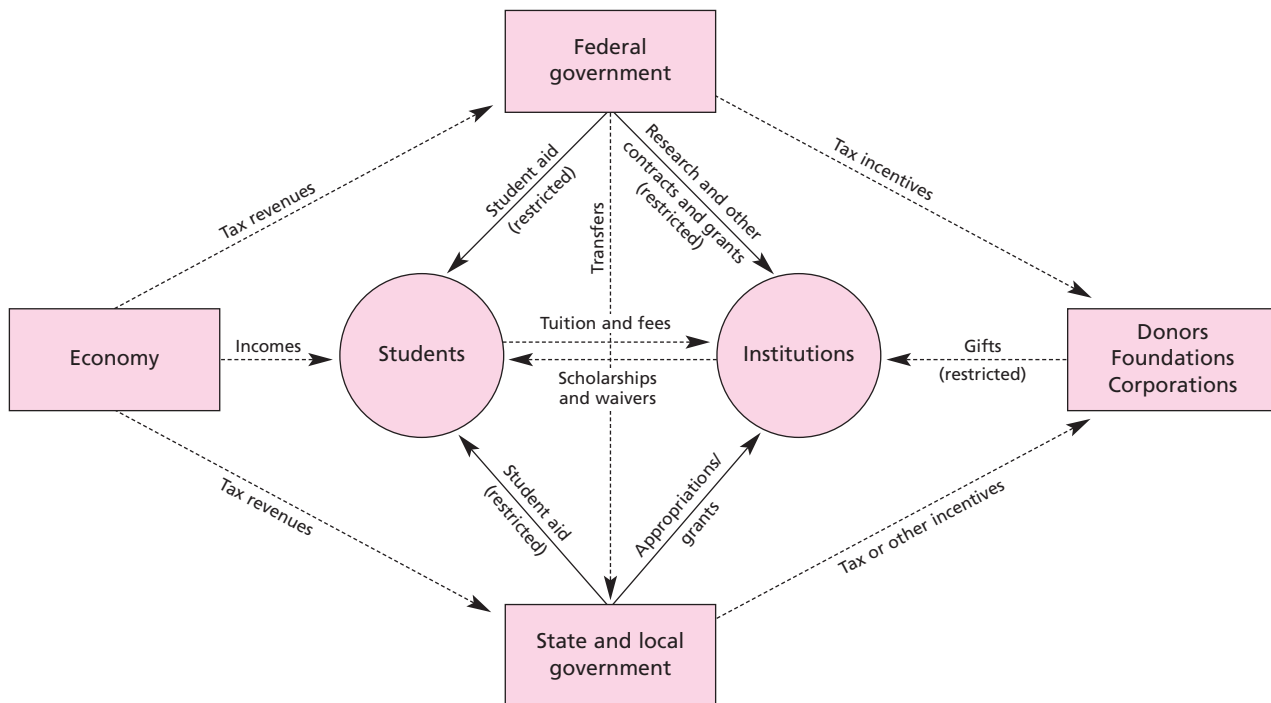


FIGURE I.2.1 The university financing system of the United States

develop, along four lines: demographic change, technological change, human capital and the ethical dimension of decisions (with reference to the first three points, see Bassanini and Scarpetta, 2001, Wolf, 2002, and several OECD studies since 2003). In general terms, higher education is directly related to economic growth, social inclusion, wealth distribution, security and freedom. This fact is hardly contested. Up to now, higher education all over the world, with the exception of private institutions with their own resources, has been financially supported by the public system, whether partly or completely.

In the system of the United States,¹¹ as shown in Figure I.2.1, there is perhaps a greater parity between different sources, although the federal, national and local sectors weigh very heavily in the balance. This is not the case when it comes to private universities, even though this distinction in the United States is relatively insignificant in comparison with the European system.

According to the National Center for Educational Statistics of the United States,¹² 51 per cent of university funds are from federal, national and local governments, 38 per cent from student fees (tuition and registration fees) and 11 per cent from the private sector, in the form of donations of various types. However, in the case of public universities, federal, national and local resources make up 69 per cent, student fees make up 25 per cent and donations and contracts account for 6 per cent. The situation is different in England, although it is not neces-

sarily representative of European reality. Figure I.2.2 clearly shows the distribution of English universities' income, in which the public sector provides 58 per cent of their budget.¹³

The great expansion of middle education, the increase in ordinary expenditure and in the costs of investment, in addition to the high level of competition in seeking to provide quality education, have led to a progressive increase in the cost per student. On the other hand, public financing has been drained by healthcare, other levels of education, the building of infrastructure, significant social expenditure, and of course, in sustaining the highly costly development of military technology. In most cases, universities have not shown exemplary equity and efficiency in terms of managing and administering the scarce resources available to them, nor have these resources been distributed rationally between institutions. Moreover, as governments' lump items for universities have been reduced, the allocations for investment in institutional development were used to cover the alleged deficit in ordinary expenditure that was, essentially, the result of staffing costs. In the light of current trends and forecasts, it seems that a progressive increase in funding for higher education is highly unlikely. Nevertheless, if economies are to grow sustainably, educational systems must develop in the same way.

There are a number of studies in which these topics are analysed and defined in detail, although they do not lie

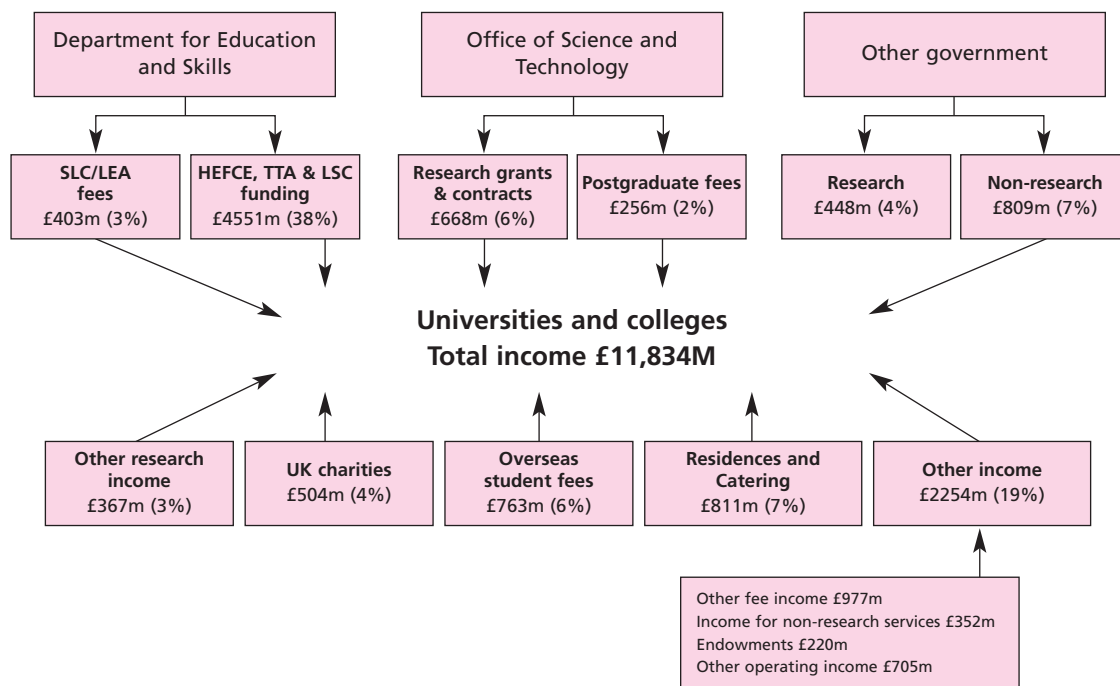


FIGURE I.2.2 Sources of financing for English universities 2001–2002

within the scope of this paper. However, it is necessary to emphasize ideas that have arisen in relation to the search for new sources of funding for higher education. These interconnected spheres may be classified as follows:

SOURCES IN THE PUBLIC SECTOR

These sources can be divided into five areas:

1. Funds for maintaining a majority percentage of ordinary expenditure on research and teaching, based on accountability results.
2. Funds for investing in development programmes whose objectives are shared by universities and public bodies, whether the latter are national and subregional or international bodies.
3. Matching funds provided by the public sector for investing in and modernizing the system, which may be as much as, less or more than sums the institutions themselves may acquire by their own initiatives, through private or international initiatives.
4. Funds from gambling, such as the lottery, bingos and so on, which citizens would surely sympathize with and support as a fair option for investing in the future. These are sources of financing in various places and are sometimes the primary source of income for the entire education system, as is the case in Florida in the United States. Many countries use part of this income for other, non-educational activities, such as in Spain, where 30 per cent goes to the public treasury for social services.
5. Funds for students with limited financial resources as payments for social work and not as straightforward subsidies.

SOURCES IN THE PRIVATE SECTOR

These sources have played an important role in several countries, particularly the United States, in the form of donations, grant schemes, programmes for investment by former students, financing of university chairs, and so on. They also clearly contribute to closing the gap between universities and society and may lead to tangible results in the form of stabilizing the relationship between them. The higher education system does not have all that many strategic alliances with the industrial system that would give rise to a spirit of commitment and collaboration between them, and which would provide a foundation on which to build a supplementary system of funding. The aims behind such a system of alliances must, above all, include the following:

1. The participation of all sectors of the economy in universities' basic and applied research programmes.

2. The participation of experts from the industrial sector in the utilitarian programmes and courses taught at universities.
3. The inclusion of universities in a system for continuing and lifelong education within companies or other employment sectors.
4. The linking of individuals who learn, that is, professors and students, to the professional world and to social cohesion.
5. The extension of the field in which universities and businesses typically collaborate to include the value system and the culture industry.
6. The participation in business services and projects in response to the socialization of the market.
7. The funding of programmes in compensation for patents, rights over technological processes and copyright.
8. The development of systems for sharing scientific and technological infrastructure with the aim of enhancing and accelerating transfer processes.
9. The financial return from companies to universities according to the number of university graduates that they employ.

It is precisely this last point that leads us to put forward a proposal that has already been tested in the fields of vocational and technical training, which would involve both the public and the private sector.¹⁴ Who are the direct or indirect beneficiaries of what universities produce? Who are the recipients of the scientific, technological and social training provided by universities? The policy that drives this model is that the industrial sector, whether in a case of a public or private company, should contribute to the training of their own workforce, through fiscal or parafiscal measures designed specifically for this purpose. The main beneficiaries of university graduates' skills are those who use this human capital in some way and who do not generally compensate the institutions that have trained them in return. Certainly they contribute in the form of taxes, but then citizens do, too, and they also contribute towards their own training, although these taxes are not sufficient for the state to cover learning costs. There might be a number of ways of establishing a 'training fee', although they should be divided into two areas: national and international.

NATIONAL AND INTERNATIONAL TRAINING FEES

At the national level, many countries have different public funding systems for vocational training based on resources obtained by taxation or parafiscal contributions

for specific purposes, especially in relation to the training of company employees. There are various formulas for the funding by companies of their employees' training, such as taking a percentage of their salaries or a proportion based on their social security contributions, as occurs at INCE in Venezuela, SENA in Colombia, SENAI in Brazil and FORCEM and OBETUS in Spain.

There are no procedures in place for companies to reimburse universities for using their resources and human capital. It would be fair for training costs to be covered by industry, whether public or private, by means of the proportional reimbursement of the costs of training each of the university graduates who is employed at a company, to the institution or institutions that trained them.

This model would require the establishment of alliances or associations between the state, universities, other accredited institutions of higher education and business organizations, as well as public enterprises and government bodies in their role as employers. Public and private companies would have to contribute, over a given number of years, a training repayment percentage or tax to be determined from the total sum of the wages, salaries and remunerations of any kind, paid to the university graduates who are employed at those companies. At the same time, the state would have to establish a system of tax incentives to allow companies to indirectly recover their investment in human capital. Finally, universities should be subject to academic auditing to ensure that they use training repayment funds appropriately, beyond the accountability processes that already govern the university system.

In the international sphere, the problem is even more complex. The brain drain problem may be seen as a subsidy paid by poor nations to wealthy nations for the purposes of vocational and university training. The country that takes in the professionals benefits from the investment in human capital made by the issuing country. This includes not only the cost of higher or technical education, but also the cost of schooling at primary and secondary levels. The situation is even more calamitous if we consider the fact that, for a developing nation, the financial effort required is ten times that which a wealthy country would have to make. That is, the wealthier a country the more money it can put towards education and the cheaper the cost of this money. The situation is exactly the opposite in poor countries.¹⁵

It would be necessary to establish an international justice and solidarity system in which the country that receives the qualified emigrants reimburses the country that invested in those human resources. This is one of the most pressing issues that must be addressed internationally and one of the gravest problems faced by poor or

developing nations in terms of financing their education systems. Not only do they lose their human capital but there are countries that benefit from this investment without incurring any costs whatsoever.

It is imperative that we address this problem, which is worsened by globalization and the creation of supranational structures that tend to exacerbate inequalities and a lack of symmetry in the processes of generating and transferring knowledge, as well as impoverishing the countries that are on the receiving end of technology.

INNOVATION IN UNIVERSITY MANAGEMENT AS A STRATEGY FOR DIVERSIFYING SOURCES OF FINANCING

Funds may not only be acquired through obtaining material goods or implementing external financing mechanisms. There are also internal sources of funding that stem from the efficiency, effectiveness and appropriateness of the institution itself. Endeavours such as new ways of focusing on teaching and learning, improving quality and relevance, reinforcing systems for communication and interaction with the community that universities provide a service to, enhancing institutional planning and assessment processes and programmes and, indeed, renewing an institution's management processes and promoting the lifelong learning of its academic and administrative personnel would all be appropriate courses of action.

Universities require university managers to observe the principles of participation, tolerance, effectiveness and efficiency referred to above. These attitudes are not generated spontaneously, just as a surgeon's skills are not acquired without effort. There are two models in the training of university managers: one that is designed to retrain academics and another that is designed to train university managers from scratch.

The first has the advantage of having first-hand knowledge and experience of university life but at the cost of having to renounce their academic careers; and the second has the drawback of a lack of experience in the difficult task of being the *primus inter pares*. There is no reason why one model should be favoured over the other, as they are in fact complementary. Furthermore, it will be necessary to return to university management strategies from the past and to certain contemporary models taken from the English-speaking world, in order to perhaps restructure the government bodies by creating two differentiated management roles, that is, political and administrative management in the form of the chancellor or a similar post and that of the rector as the representative of academic management. This distinction,

which, it must be stressed, is not a division, of authority based on the collegiate model, would allow two spheres that are not necessarily concentrated in one person or body to be combined.

All of the above should be combined with collective structures that represent the society they serve, whether by means of boards of governors, boards of trustees, boards of managers and trade union representatives. It would be useful to test, on the basis of previous experiences, new forms of governance that combine effectiveness and excellence and to implement training programmes that would make university management a truly professional exercise applied to systems for generating and transferring knowledge. New information and communication technologies should also be applied in this regard.

In general, current trends in university management largely continue to be an authoritarian exercise of power that is incompatible with the essence of university practices that demand greater levels of participation. The development of universities and the intermittent reforms that they undergo are a reflection of the whims of their leaders, although these may sometimes result in appropriate decisions being taken. Reforms and counter-reforms are

almost always the result of the appointment of a new rector or dean, and not of a consistent line of reasoning or of the exercise of common sense.

In short, we need to begin by considering the problem of financing not as a one-dimensional but a multidimensional issue, whose dimensions are, moreover, all interconnected. Accountability in itself is not a sound enough basis for assessing the efficiency and effectiveness of a university, particularly with regard to the quality of creative and teaching/learning processes and the willingness to continue learning throughout one's life. Nevertheless, at least some government and university policies must be modified, to which McGuinness (2002) and Escotet (2004) refer, in addition to other variables such as those shown in Table I.2.1 below.

GOVERNMENT FOR CONTINUOUS CHANGE

Reform and innovation do not arise, therefore, from a given situation nor do they occur intermittently: it a continuous, endless process. To remain in the same place one must keep moving; otherwise, one would get left behind. This dynamic that is life itself requires social organiza-

TABLE I.2.1 Changes in the role of the state and universities in higher education	
CHANGES IN:	TOWARDS:
Rational planning for static institutional models	Strategic planning for dynamic market models
Focus on suppliers, particularly public institutions	Focus on users, individuals who learn (students), companies and governments
Areas of service defined by geographic limits and monopolistic markets	Areas of service defined by the requirements of clients that are met by multiple suppliers
Trend towards centralized control and regulation, in which there are clearly defined institutional aims, financial accountability and retrospective disclosure	Increasingly decentralized management that implements policies to stimulate desirable response (for example incentives, financing of performance, information for the consumer)
Policies and regulation to limit unnecessary competition and overlapping	Policies incorporate the market in the public name and direct competitive forces towards public aims
Quality is defined above all in terms of resources (such as professors' credentials and libraries), according to what is established within higher education	Quality is defined in terms of results and performance according to what is defined by the various clients (individuals who learn, entrepreneurs, the government)
Policies and services carried out above all through public institutions	Increasing use of non-governmental organizations and public and private suppliers whose aim is to meet user requirements (for example syllabuses and learning modules that are subject to continuous change, student services, skills determination, quality guarantee)
Regular financial and quantitative accountability methods and methodologies	Internal and external continuous assessment systems that are part of academic management and administrative processes
Teaching systems that are based mainly on oral transmission and the distance between professors and students	Teaching systems that are based on new technologies and tailor-made methods for professors and students to share knowledge
Culture based on the individual who teaches and the individuals who administrates	Culture based on the individual who learns (student, professor/researcher, administrator)
Universities isolated from society and from the industrial fabric and companies isolated from universities	Higher education that is involved in social capitalization processes and is linked to society's creative and industrial systems
Public and private industrial system that is not involved in funding society's system for training qualified professionals	Public and private companies that contribute financially to universities according to the number and type of graduates they employ (training repayment)
Universities that perpetuate traditions, corporatism and the slow evolution of processes, technologies and value systems	Universities that innovate, are continuously changing and are rooted in a profound sense of ethics and aesthetics

tions that are prepared to be passive onlookers. Universities should be at the cutting edge. They should develop their capacity for anticipation so that they are able to respond to the trust placed in them and the privileges awarded to them by society, acting as a compass that guides society's progress and well-being. Universities should have a long-term vision, nurture innovation and foster creativity. Universities of this type do not need to pause to institute reform, nor do they need a new academic leader, because reform and innovation come naturally to them.

All university crises, acts of political reform and modifications made by the government or by university authorities have been superficial changes. These acts have led to lengthy and complex laws and regulations that have reinforced the rigidity of universities' structures and processes, even when they have been well-intentioned. The general trend has been to equate university reform with changes in legislation, and a greater emphasis has been placed on the form than on the content. An excess of regulation is one of the main reasons why contemporary universities do not change. It is the responsibility of the university community to create a culture of change, a sense of constructive self-criticism and the capacity to rectify in time. Continuous reform and innovation require open and flexible regulatory bodies and a desire for change that should be imprinted on the consciences of the members of the university community. Whilst these conditions are not in place, any attempt to push for change will be a lost opportunity, or in the best of cases, a move forward that will simply serve to widen the gap between universities and change itself. If, on the contrary, the aforementioned conditions are met, or an attempt is at least made to bring universities closer to them, reforms will cease to exist, because universities would be undergoing continuous change. Herein lies the key to all universities' aims, as I have said on countless other occasions: 'to educate human beings for continuous change and even for the crises that will be the result of transition' (Escotet, 1992b). Universities should be rooted in change and innovation. Universities should have a sense of ethics and of citizenship (Bringle et al., 1999).

Dogmatism is not a part of university culture. Rigid thinking clashes with the principles inherent to the pursuit of truth and with the endless breadth of knowledge. Just as diversity instigates creativity, flexibility fosters change. In the absence of flexibility, everything remains the same. Dogmatism and rigidity are sources of intolerance, authoritarianism and conflict. Moreover, flexibility is not a synonym of weakness; on the contrary, it is a symbol of spiritual fortitude that grows when it rectifies mistakes and when it discovers its ignorance. The expansion of know-

ledge and the degree of certainty are inversely proportional. In the measure in which one is educated, the more one knows, the more one discovers, the more one becomes certain of one's lack of knowledge of the universe, which drives one to keep learning. For this reason, intellectual vanity is not an attribute of those who know their limits, but rather of those who pretend to know what they do not know. Knowledge does not admit vanity, or egotism. Participation is the opposite of authoritarianism and to know in order to share and to give honours humankind. Governing universities in the absence of the full participation of the university community and society will inevitably push them towards forms of authoritarianism that are contrary to their spirit and their ethical practice.

Miguel Ángel Escotet

NOTES

- 1 For further information, see the works of Borrero (1993); Tünnermann (1997); an excellent summary by Harold Perkin (1991), *The History of Universities*, in the first volume of the work by Altbach (1991a); Helene Wieruszowski (1966); A. Cobban (1975); and the classic works by H. Rashdall (1895) and Charles H. Haskins (1965).
- 2 Reeves (1969) *The European University from Medieval Times*. p. 64
- 3 Miguel A. Escotet (1992a), *A Look at 21st Century Universities: A Dialectic of the Mission of Universities in an Era of Change*; Escotet (1996), *Universidad y devenir: entre la certeza y la incertidumbre*. See also Altbach (1991b), *University Reform*; Torsten Husén (1991), *The idea of the University: Changing roles, current crisis and future challenges*; Tünnermann (1992), *Universidad: historia y reforma*; UNESCO (1992), *L'enseignement supérieur en Afrique: tendances et enjeux pour le XXIe siècle*; UNESCO (1991), *Trends and Issues facing Higher Education in Asia and the Pacific*; and a summary of educational reform in general by Juan Carlos Tedesco (1993), *Current Trends in Educational Reform*.
- 4 UNESCO and the University of Pittsburgh (1991) carried out a study covering multiple aspects of institutional research on universities in developing countries, entitled *Research on Higher Education in Developing Countries: Suggested Agendas and Research Strategies*. Lewis and Smith (1994) and the OECD (*Survey of Higher Education Systems*, 2004) have carried out similar works.
- 5 See the article by Escotet (1998b) that discusses these corporatist influences.
- 6 An author who has devoted himself to the in-depth study of university autonomy is Carlos Tünnermann. His classic work, *60 Years of the Córdoba University Reform* (Caracas: fedes, 1979), is a collection of books and articles, and he is also the author of more recent works, such as *Contemporary Trends in the Transformation of Tertiary Education* (2002), *Historical Approach to Universities and Their Current Problems* (1997), *New Horizons for Universities* (1993) and *Universities: History and Reform* (1992). Other relevant works include *Autonomy and Accountability in Higher*

- Education* by Orlando Albornoz (1991), *Academic Freedom* by Edward Shils (1991), *Address on Academic Freedom and University Autonomy* by Federico Mayor (1992); and Alfonso Borrero's most recent work, *The University as an Institution Today: Topics for Reflection* (1993).
- 7 *Accountability* is a restricted term used in institutional assessment. The need for social control of universities has led to the creation of this concept, which is intended to be modern and innovative. However, its scope is extremely limited and it constitutes only one of the stages in an institutional assessment process. *Accountability* is better defined by the internal and external assessment of a university, which involves studying both specific and overall effects in relation to its objectives, processes and results. See M.A. Escotet (1990), *Evaluación Institucional Universitaria*; Borrero, Op. cit.; Klaus Hüfner (1991), *Accountability*; H.R. Kells (1992), *Performance Indicators for Higher Education*; Carl Loder (1990), *Quality Assurance and Accountability in Higher Education*; and Bikas Sanyal (1992), *Excellence and evaluation in higher education*. See also Vessuri, Hebe (1993), *Evaluación Académica*.
 - 8 University change and legislation are topics that I give ample coverage to in my aforementioned study of tradition and change at universities, *A Look at 21st Century Universities*.
 - 9 University management and administration are part of what has been referred to as a total quality system by Lewis and Smith (1994). Financial restrictions and therefore the urgent need to optimize limited resources must be added to the need to improve the efficiency and effectiveness of universities in terms of their accountability. Institutional assessment as a permanent practice and the improvement of management and organizational processes are crucial factors in the present and future of universities. A great many works and studies have appeared as a result of the challenge of modernizing university administration. With reference to developing countries, the works of Bikas Sanyal, two of which are included in the bibliography, are particularly worthy of note, as are the endeavours of UNESCO's International Institute for Education Planning in the fields of education and training.
 - 10 The idiosyncrasies of complex organizations such as universities may limit their ability to innovate. Seven factors of organizational change are analysed in the classic work by J. Hage and M. Aiken, in which they claim that the greater the degree of formality of the structure and rules, the greater the degree of centralization, and the more stratified the levels of incentives and salaries and output in detriment of quality and the greater the emphasis on efficiency in detriment of effectiveness and appropriateness, *the slower* the speed at which an organization can respond and adapt to change. Contrarily, the greater the degree of complexity (interdisciplinarity, for example), diversity and interaction of the organization and the higher the levels of job satisfaction, *the more rapidly* an organization changes.
 - 11 See the work presented to the WICHE by D.P. Jones (2003) *Financing in Sync: Aligning Fiscal Policy with State Objectives*.
 - 12 The income obtained from sales, services, hospitals and other sources. The results can be consulted in more detail at the National Center for Education Statistics, *Digest of Education Statistics: 2001*, Table 334.
 - 13 Source: *HESA Finance Record 2001–2002*, cited by the OECD (2004) *Financial Management and Governance in HEIs*: England. Paris: OECD.
 - 14 See, for example, the case of the financing of vocational training in Latin America from the 1950s onwards, with reference to independent learning bodies, such as CINTERFOR and OIT.
 - 15 See the analysis of investment in higher education carried out by M. A. Escotet (1996), entitled *Universidad y Devenir*. Buenos Aires: Lugar Editorial, pp. 86–90.

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SPECIAL COLLABORATION I.3

THE CONTRACT-PROGRAMME FOR UNIVERSITY FINANCING ON THE BASIS OF ACHIEVING OBJECTIVES. THE UNIVERSITAT POLITÈCNICA DE CATALUNYA (UPC) EXPERIENCE, SPAIN



CONTEXT

By the mid-1990s, the need emerged to set up new instruments for observation, diagnosis, planning, decision-making, greater openness, effectiveness, efficiency and quality, in order to measure the results of teaching activity, research and university services. This was the consequence of effects on demand, caused by demographic decline, and also due to the need for a general framework to contain the public deficit, imposed by the criteria of European convergence. In this light, and among other instruments, the Contract-Programme (CP) came into existence, bringing about a significant change of focus regarding funding systems, both for the university and for the Catalan autonomous education administration.

By 1997, the government of Catalonia, through its Department of Universities, Research and Information Society (DURSI), and the Universitat Politècnica de Catalunya (UPC) formalized the first university CP for four years. This system would allow the establishment of an instrument that tied middle-term improvement objectives to the funding

of the university. It was the first time a Spanish university had implemented such a scheme.

Through such experience, the CP was confirmed as an effective incentive instrument for improving university quality. It was extended to the rest of the Catalan universities, and to other Spanish autonomous regions. It has also had continuity in the UPC which is currently managing its second CP signed with the Catalan University administration for a further period of four years (2002–05).

CHARACTERISTICS:

The main features of the CP are as follows:

- It assumes cultural change both for the university and for the Catalan government, since part of the budget received by the university is based on negotiating around the objectives to be fulfilled and around the results obtained within a specified period of time.
- The CP is configured as a strategic managerial instrument aimed at improving quality in the teaching, research and services provided by the university to society. Greater involvement and participation are gained with this system in the achievement of

specific results from university parties (political, academic and managerial).

- It allows accountability regarding the use of resources invested by society at the university, as an act of social commitment. It ties public funding to the achievement of objectives, increasing transparency and objectivity in the distribution of public funds, and at the same time allowing financial autonomy and the diversification of funds devoted to improving quality policies.
- It reinforces university strategic planning, allowing priorities of the Catalan public university system as well as the university strategic lines objectives and commitments to be incorporated.

PROCESS DESCRIPTION

Negotiation is undertaken and some objectives to be achieved by the university in a period of time are agreed, taking into account the lines of activity prioritized by the financial administration, in the areas of teaching, research and university management, respecting the principle of university autonomy.

Quantitative and qualitative indicators that have previously been weighed are used to measure the achievement of objectives. A starting situation is established for each indicator and a number of values to be reached are fixed for each

objective and for each period, throughout the agreed four-year period. A mixed follow-up commission made up of UPC members, and the administration, once a year evaluates the achievement of the annual objectives. Based on the performance of the results, additional funding is determined, calculated on the basic university funding.

To achieve CP aims, a joint responsibility for the basic units (teaching centres, departments and university research institutions), the general services and the university president's office is required. To that end, UPC has made internal provision to use the same system for assigning economic resources to academic units. The institutional planning of the UPC is displayed by section plans and is developed by means of planning its basic units through programme agreements, through which commitments are fixed and resources are associated to their fulfilment. These programme agreements share most of the objectives of the global administration, CP administration and the UPC. This set of instruments – strategic institutional plan, plans by sector, programme agreements of the basic units and CP – makes up the strategic management system of the UPC. Its purpose is to be an instrument for permanent adaptation to the changes and

attainment of results in relationship to the needs of society.

WHAT HAVE WE DONE?

The CP is configured in 10 objectives and 31 indicators which are structured in the four strategic UPC areas: teaching, research and transference of results, society, territory and staff, structure and organization.

The same CP assumes a follow-up and control system based on obtaining systematized and reliable information through an information management system, directed by the Technical Office of Planning, Evaluation and Studies (GTPAE, Gabinet Tècnic de Planificació, Avaluació i Studies), which gathers the data provided by 17 services, 58 basic units and the university president's office. UPC works with Catalan administration technical services, using electronic and computer means, in order to speed up information procedures, management of CPs and decision-making.

GTPAE technical personnel prepare the report of results for each period and supporting evidence. The CP follow-up commission, which is made up of three representatives from each institution, evaluates the performance of each one of the periods on a yearly basis. This is grounded on the information periodically

supplied by UPC and determines economic allocation derived from the results obtained. It also reviews the values to be reached for each 12-month period, taking into account the initial forecasts throughout the four-year period, and the results obtained in the previous years.

RESULTS OF THE SECOND CONTRACT-PROGRAMME (2002–2005)

- The CP has reinforced the university's strategic planning (reinforcing internal orientation to the achievement of goals and objectives). In this second CP, the level of correlation between the objectives of the basic unit strategy plans and those of the CP itself has been increased, and therefore joint responsibility between different UPC units has been reinforced.
- Throughout the first four-year period, overall results obtained by the University represented an additional funding of 12 million Euros.
- The results obtained by UPC in the three years that followed the second CP have been very satisfying. The level of achievement of settled objectives has been higher than 100 per cent on average, and has meant additional funding of 7.4 million Euros.
- Among the results obtained by UPC included in the CP the following should be highlighted:
 - Improvement in placing university graduates into the labour market (the percentage of UPC university graduates who have participated in educational cooperation agreements carried out in businesses, institutions or public bodies has increased by 14 per cent in three years) regarding steps that UPC Office of Employment has taken. Also there has been a significant increase in final year dissertations carried out in private enterprises and public institutions (from 10 per cent to 16 per cent in three years).
 - Offer of doctorate with accredited programmes. Of the 47 doctoral programs offered by UPC, 30 have obtained the quality of honourable

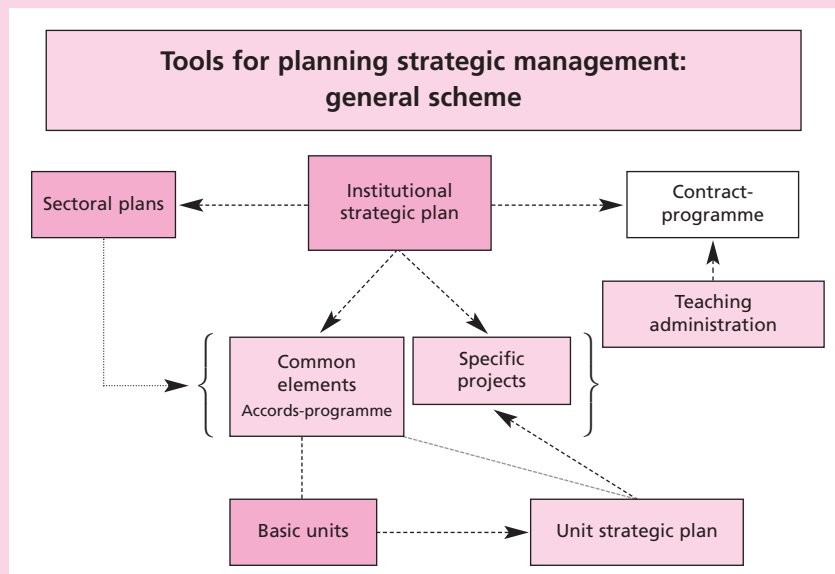


FIGURE 1 Strategic management as a driver for change

mention awarded by the Spanish Ministry of Education and Science.

- Increase in scientific production activities and technology transfer (the volume of contrasting quality scientific production has increased by 18 per cent in three years. It has reached 21 per cent in the achievement of competitive resources of public funding and 41 per cent in income which corresponds to agreements and services). This being the results of the relationship between the university and the economic area.
- A stimulus to integrate UPC studies into the European Higher Education Area (EHEA) through the participation of the university in forums and workshops launched by quality agencies and the EU. Also by adapting five degrees at a graduate level and two at a post-graduate one to meet EHEA requirements.
- Improved preparation of human resources and equipment (staff training courses have increased by 24 per cent in three years) by means of quality training and by an evaluation of the labour risks for those jobs involving risk.
- Increase in the use of information technologies and communication in teaching, stimulating the use of and access to university digital plat-

forms and connectivity to wireless network points of access.

- The CP has been an important tool to increase transparency in accountability and also to deepen relationships of cooperation and shared work between the university and the government of Catalonia.

CONCLUSIONS AND RECOMMENDATIONS

Instrument benefits:

- Joint responsibility in the achievement of objectives: Allowing the definition of main objectives and priorities settled by both institutions, taking into account the Catalan government's universities policies and respecting UPC specificity as a technical university, as well as its autonomy in establishing internal policies to achieve its objectives, and the means for managing the institution in order to reach them.
- It allows middle- and long-term planning, avoiding immediacy and efficiently managing new developments and changes.
- It helps improve communications and participation between the units and collectives of the university involved in achieving the CP objectives.
- It helps to organize and prioritize decisions and assignment of resources.
- It promotes a learning process and organizing development suitable for

the improvement of policies and university institution activities.

Determining factors or requirements for implementing the experience:

- Experience in the administration of strategic management and planning processes.
- Project leadership by institutional representatives at a university level (high-level faculty and managers).
- To sum up efforts and obtain maximum involvement of the various units and university collectives in order to achieve results by means of an adequate internal communication policy providing information about the process purpose, and also with the function of joint responsibility with the programme agreements.
- To have an adequate technical structure available as well as reliable information systems towards the development, start-up, control and follow-up of the project.
- Confidence in the common tasks carried out by the two institutions (government and UPC).
- To avoid excessive weight of bureaucracy on the system: the CP development, performance and follow-up must be a clear process.