

Daring to reach high: strong universities for tomorrow's Spain

Report of the Committee of International Experts EU2015

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Disclaimer: All committee members worked on this report in their personal capacity as higher education experts. The findings, interpretations, and conclusions expressed in the report are entirely those of the authors and should not be attributed in any manner to the institutions to which the committee members are attached or to the countries where these institutions are located or which they represent.

Executive summary

In a world facing many complex problems which cannot be solved by technological or regulatory means alone, but which require, more than anything, a real change of mindset, most countries expect their universities to play a much larger and more decisive role in finding solutions than in the past.

The Ministry's well-accepted, far-sighted and comprehensive strategy, the first of its kind, entitled *ESTRATEGIA UNIVERSIDAD 2015: the contribution of universities to Spanish socio-economic progress* (EU2015), sets out objectives for reform, expected outcomes and defines indicators for assessment. The International Expert Committee, established by the Minister, was invited to evaluate and comment on this strategy and subsequent updates or supplementary texts. Building on this document and others, such as *La contribucion del talento universitario en el futuro de la España 2020* (see Annex 3), the Committee proposes some specific concrete, pragmatic and hopefully realistic recommendations, buttressed, whenever possible, by examples of good practice from Spain or from countries which have dealt with similar problems.

The Committee's report is divided into three substantive chapters as follows: building excellence in teaching and research (chapter 2); supporting the socio-economic environment more effectively (chapter 3); and, strengthening and streamlining governance (chapter 4). The Committee considers internationalization, defined most simply as a comprehensive openness to the world at all levels of the higher education system, to be still insufficient, despite recent efforts, especially if Spanish universities are to meet the challenges posed by the EU2015. The Committee believes this to be a major weakness which requires urgent action. For this reason, internationalization is treated as a transversal theme which permeates all three substantive chapters of the report.

The importance of the reforms proposed requires bipartisan support, to use a US expression. No political party will win an election because of its sound university policy, but the future wellbeing of the country depends on just such a policy focusing on modernizing universities, on investing in the Education and R&D system and on offering increased opportunities for access to quality higher education to the population. It is a *sine qua non* condition that Spanish politicians and decision makers recognize this. The higher education reform must also be supported strongly and proactively by the regional governments. A strictly central governmental policy will not be sufficient. The Committee is conscious that this is difficult, but the stakes are immense and it is very unlikely that Spain can belong to the club of highly developed countries if its university system is lagging behind.

The following table summarizes the recommendations put forward in the report, indicating, in each case, the level of difficulty of implementation, the cost and the potential impact.

Recommendation	Difficulty	Cost	Impact
<i>International calls and recruitment of university leaders and professors</i>	low (professors), high (deans and rectors)	medium	high
<i>No more inbreeding: casting the recruitment net wider</i>	Low	low	high
<i>Mastering English</i>	Low	low	high
<i>Giving promising academics good career prospects and individual autonomy</i>	Medium	low	high
<i>Institutional autonomy to manage academic and administrative careers, promotion, rewards: offering attractive conditions</i>	High	medium	high
<i>Shifting towards a simple external QA system supporting institutional quality management and improvement</i>	High	low	high
<i>Launching specific, improvement oriented actions in QA</i>	Low	medium	high
<i>Consolidation of the equity promotion strategy</i>	Low	low	high
<i>Increased financial aid package made up of need-based scholarships and student loans</i>	Medium	high	high
<i>Strategy for removing non-financial barriers</i>	Low	medium	high
<i>Increased mission differentiation</i>	Medium	medium	high
<i>Expanding Labor market feedback mechanisms</i>	Low	low	high
<i>Closer linkages with industry and other employers</i>	Medium	low	high
<i>Expanding lifelong learning opportunities</i>	High	medium	high
<i>Financial incentives to scale up demand-side interventions</i>	Medium	high	high
<i>Strengthened interface between universities and the national / regional innovation systems</i>	Low	low	high
<i>Strengthened capacity of universities to contribute to innovation</i>	Low	low	high
<i>High Level Strategic Advisory Board</i>	Low	low	high
<i>Mobilizing CRUE and CU</i>	Medium	low	medium
<i>Toward a new landscape: mergers and CEI</i>	Medium	medium	high
<i>Integrated management of Higher Education, Science and Research</i>	Low	low	high
<i>Creating a single University governing body</i>	High	low	high
<i>Improving leadership/selection of Rector</i>	High	low	high
<i>Towards more block-grant funding and financial management based on full cost accounting</i>	Medium	high	high
<i>Communication respectful of organisational cultures</i>	Medium	low	high

The aim of a report such as this one is not to explain in detail all what has been done correctly, but rather to suggest a few other venues for improvement, to identify a few aspects which might block progress, and to insist on the importance of a broader strategic long-term view of the future university landscape. Its purpose is also to urge the continuation of reforms regardless of short or medium-term changes of governments.

One central axis of this report is to propose fundamental changes to the governance system. To implement this set of core recommendations, the Committee suggests the creation of a small expert group whose members would not represent any institution, and who would be commissioned by a joint mandate of the central government, the regional governments, the university associations and the main business associations. The expert group would prepare an action plan to implement the most urgent governance recommendations of this report. It should be given at most one year's time for intense work.

An excessive use of successive new regulation, laws and decrees, might seriously jeopardize the possibility of future modernization. Mature strategies should come before legislation. The Committee also noticed that all too often interesting legal possibilities are not used: this reflects deeper problems - usually governance related - which block the proper development of legislation. "We have to be prudent" was also heard too often; reform requires will and courage more than prudence.

Universities should be given the freedom to succeed and to fail. Being held on a short leash by Government will not lead to excellence. Some Spanish universities are in fact already showing remarkable improvement, in spite of all the difficulties; this should be publicly acknowledged and they should serve as role-models - *mutatis mutandis* - for the others.

Recruiting outstanding staff will always be the crux of the matter, and it is only possible by making recruitment open and international. Again, a very few universities already manage to do it and the others should learn from them. Of course many universities might choose to play a more local role, supporting social and economic development of their community, which might require a different type of recruitment, but it should still be open and excellent.

There are sterling examples of how much has already been achieved in Spain if one dares and wants, but more is needed. The citizens of Spain deserve more and better. **We call upon the country to dare and to want.**

1. Introduction

In a world facing many complex problems which cannot be solved by technological or regulatory means alone, but which require, more than anything, a real change of mindset, most countries expect their universities to play a much larger and more decisive role in finding solutions than in the past. This leads to a redefinition of the remit of higher education, a redefinition which is not always accepted by the academic community. Furthermore, ever tighter budgets are leading many governments to fund higher education more selectively in order to incite universities to profile themselves and become more relevant locally and more competitive globally.

Spanish universities, as universities in any other country, have some specific features that must be taken into account when policies and measures for their modernization are proposed and developed. Detailed analysis and diagnoses of the strengths and weaknesses of the Spanish higher education system have been made during the last decade by different Ministries, professional associations, as well as by the OECD. The Ministry of Education has also produced a wealth of documents which describe and analyze different aspects and dimensions of the system, its potential as well as its shortcomings.

The Ministry's well-accepted, far-sighted and comprehensive strategy, the first of its kind, entitled *ESTRATEGIA UNIVERSIDAD 2015: the contribution of universities to Spanish socio-economic progress* (EU2015)¹ sets out objectives for reform, expected outcomes and defines indicators for assessment. The International Expert Committee, established by the Minister, was invited to assess and comment on this strategy, most particularly with regard to the actions envisaged and the strategy's overall implementation. Building on this document, the Committee proposes some specific concrete, pragmatic and hopefully realistic recommendations, buttressed, whenever possible, by examples of good practice from Spain or from countries which have dealt with similar problems.

The Committee considered that it could not add anything substantial to the comprehensive reviews and assessments of the Spanish higher education system which have been prepared recently and which the Committee Members deemed both accurate and relevant. In a nutshell and among the key findings of these reports (OECD, 2009; EU2015), confirmed by the interviews held by the Committee, the assessments have determined that:

The Spanish higher education system is, on the whole, offering a mixed performance:

(System level)

- the higher education system is insufficiently differentiated at institutional level
- there is real risk of over-regulation of the system;
- an appropriate balance between regulation, steering and institutional autonomy needs to be found at the system level;

¹ <http://www.educacion.gob.es/eu2015>

- equitable access to and successful participation in higher education, though improving, still present a challenge for students of low socio-economic status and from immigrant families due to insufficient incentives;

(Institutional level)

- universities have limited interaction with the external environment, despite the existence of the Social Councils;
- there is a large and complex web of categories of academic and administrative staff at each institution, but universities have relatively little flexibility to hire, promote and set the level of compensation for their academic staff and other employees;
- the level of internationalization of Spanish universities is on the rise but is still insufficient, particularly in scope, with Latin America still an important focus;
- there is insufficient awareness of and exposure to international trends in university reform among academics and students.

The Committee notes that the International Campus of Excellence (CEI) initiative, a cornerstone of the Government's EU2015 strategy, addresses many aspects mentioned in the list above and seeks to serve as a catalyst to transform a number of universities and ensure that they play a central role in an 'ecosystem' dedicated to teaching, research and innovation in Spain and internationally. (EU15, page 172). Given the relatively early stage of the initiative's implementation, the Committee did not feel it could assess the overall program's effectiveness. At the same time, members of the Committee agreed that the goals and objectives pursued by the CEI were those needed to address several of the challenges facing the system and noted that the overall program concept was well-accepted by the academic community.

The present report is divided into three substantive chapters each focusing on a different aspect as follows: building excellence in teaching and research (chapter 2); supporting the socio-economic environment more effectively (chapter 3); and, strengthening and streamlining governance (chapter 4). The Committee considers internationalization, defined most simply as a comprehensive openness to the world at all levels of the higher education system, to be insufficient especially for Spanish universities to meet the challenges posed by the EU2015. The Committee believes this to be a major weakness which, though being addressed already requires even more urgent actions. For this reason, internationalization is a transversal theme which permeates all three substantive chapters of the report. As well, the report adopts a time horizon somewhat beyond 2015, because some of the more fundamental changes proposed, need time and proper preparations. Yet, the Committee is convinced that without such changes, fundamental reforms will remain a chimera.

In preparing the report, the Committee posed a series of simple but provocative questions that serve to illustrate the most important challenges facing the Spanish higher education system:

- How many full professors (catedráticos) have had a significant research or teaching experience in another country (at least one year)?

- How many courses, programmes, departments, faculties or schools have been dropped, shut down or merged with others in recent years to avoid duplication or redundancies or simply due to reduced student demand?
- Is the quality assurance system bringing major improvements?
- Are students from all socio-economic groups well-represented in higher education enrolment numbers? Are the gaps narrowing?
- How many university Chairs are financed by service or industrial companies?
- How many PhDs are CEOs of IBEX 35 companies?
- How many rectors of Spanish universities are foreigners?
- How many steps are required in the hiring process for faculty or administrative staff?
- How well does the present division of competencies between the national government, the Autonomous Communities and various other bodies, serve to guide and coordinate university development?

Spain's universities have a unique opportunity in the next 10 years to introduce fundamental changes, as nearly a third of the academic staff members will retire. They can be, at least partially, replaced by the relatively large number of well-trained researchers who have spent long periods abroad and who may bring new insights and experience for reinforcing and/or creating excellent universities. If this generational change is complemented with the integration of well-chosen foreign staff, the country could make a sea change in a time-frame, which, compared to the age of many universities, is only a blink of an eye.

Many countries, particularly in Northern Europe and South-East Asia, are reforming their systems quickly and efficiently. Spain cannot afford, in today's highly competitive world, to be static since where the country stands relative to others is increasingly important. It is doubtful that all countries will or even can transition successfully into a knowledge-based economy. However, if Spain wants to be among those nations that do succeed, it must, without a doubt, and as recognized in the EU2015, give absolute priority to the modernization of its universities.

The importance of the reforms requires that this be a bipartisan priority to use a US expression. No political party will win an election because of its sound university policy, but the future wellbeing of the country depends on just such a policy focusing on modernizing universities, on investing in the R&D system and on offering increased opportunities for access to quality higher education to the population. It is a *sine qua non* condition that Spanish politicians and decision makers recognize this. The higher education reform must also be supported strongly and proactively by the regional governments. A strictly central governmental policy will not be sufficient. The Committee is conscious that this may be difficult, but the stakes are immense and it is very unlikely that Spain can belong to the club of highly developed countries if its university system is lagging behind.

Not only is constructive coordination between the central government and the governments of the autonomous regions important; so is a real cooperation between the universities and the public research centers, such as the Spanish National Research Council (*Consejo Superior de*

Investigaciones Científicas, CSIC), and with those centers recently created by the autonomous governments, such as ICFO (*Institut de Ciències Fotòniques*). Such cooperation and coordination is essential for the higher education and research landscape of the country. This has been partially addressed in the International Campus of Excellence (CEI) initiative which clearly places the universities at the heart of such a coordinated landscape, but is particularly true in the current economic circumstances, when it is safe to affirm that the country will encounter major difficulties in adequately funding each part of such a system if it remains uncoordinated.

The current dispersion of research activities is certainly not the most effective way to leverage Spanish research output, nor is it helping to place Spanish universities in the upper tiers of global rankings, no matter how much credibility is accorded to such rankings. France, which was facing a similarly uncoordinated dual system, with research mostly taking place in departments of the *Centre national de la recherche scientifique* (CNRS) rather than in universities, has taken measures to start addressing this issue.

The Committee recognizes that profound reforms will also need funding; yet, as noted above, funding will probably be scarce in the next few years in Spain. However, there are reforms and preparatory work that can be undertaken with little funding. Such steps and actions need to be relevant and chosen well. Spain's strategy must give highest priority to creating an adaptive and flexible legal framework, suited for a future in which changes are likely to be rapid and unforeseeable. This is not financially expensive but can be politically delicate.

Reform will benefit from involving Spanish researchers, who have spent long periods abroad, and who are encountering difficulties to find their place in the Spanish universities; they may propose innovations that will be opposed by the mandarins. It may require courage on the part of the government to undertake unpopular measures. However, slow, incremental, prudent changes may come much too late to actually be relevant. What is needed, to put it bluntly, is radical change. And, there are enough examples of good practice and success stories in Spain which can easily serve as blueprints for quick and bold improvement.

One of the major threats identified by the Committee in the current developments in Spain is the idea that the system can be modernized by regulating what is already an overregulated system ("a golpe de decreto"). Such regulation might well make the system even more rigid and even more isolated at a time when flexibility and the capacity to respond rapidly to changing circumstances and opportunities is required. Control is never a substitute for trust. The recommendations in this report go in the direction of helping universities become more worthy of trust and more independent in their decision-making. We understand that some of the approved or proposed regulation aims precisely at deregulating the legal HE frame; this is of course welcomed.

While the Committee recognized that some of the recommendations proposed may be more difficult than others to implement within the Spanish legal, cultural and financial context, such considerations did not prevent the Committee from making them. For each recommendation the Committee assessed the level of difficulty, the cost, and the potential impact of any action it suggests.

The Committee met with a large number of individuals representing universities, university Social Council chairs, faculty members, student associations, most political parties in Parliament and in the Senate, representatives from the autonomous regions and researchers in non-university centers. Overwhelmingly, in all of these meetings, the reaction to the government's higher education reform strategy was positive. The Committee's findings and recommendations are, for the most part also in line with suggestions made during these short but highly informative interviews. There is a real sense of collective desire and commitment to change the Spanish system of universities so that it can better meet the country's economic and social challenges in the years to come. This provides a unique opportunity to make major and lasting changes and trace the direction for future system and institutional development.

2. Building excellence in teaching and research: open up

This chapter makes recommendations to open the higher education Spanish system and thereby improve its competitiveness and quality. While some measures are easy to implement without delay, others need statutory changes. As human resources are the key success factor of any university system, our suggestions deal mainly with the selection and management of academic staff. The Committee thinks that universities should have the authority to recruit, evaluate and promote their employees, both academic and administrative, in order to be more effective in achieving their missions.

2.1. University leadership and staff recruitment

In order to improve the quality and diversity of university leadership and academic staff, the following measures are recommended:

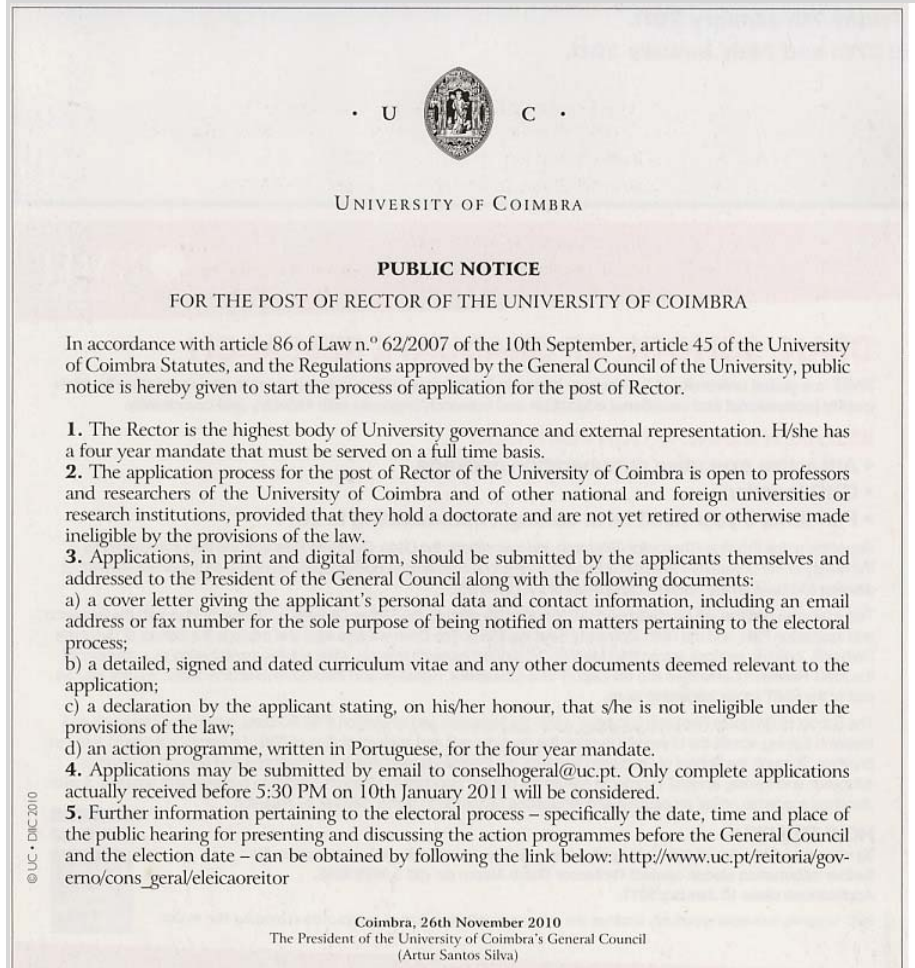
2.1.1. International calls and recruitment

All senior positions (professors, deans, senior administrators and rectors) should be published not only at the national, but also at the European/international level² and selection committees should include external members, drawn from i) the institution but outside the discipline, ii) the discipline but outside the institution, seeking members both within and outside the country.

The Committee members note that at present, Rectors are elected and not appointed in Spain, so that this recommendation might imply a statutory revision. However, such innovation is not out of reach, as the Portuguese example shows (the position of Rector at the Coimbra University has been recently advertised internationally, see box hereunder).

² E.g., in the international academic Web sites and in journals such as *The Chronicle of Higher Education*, *The Times Higher Education*, *The Economist*.

Box 2.1 A major Portuguese university adverting its rector's position internationally:



Implementation: because in a decentralized system, localism cannot be eradicated by decree or detailed national regulation, incentives may be more effective. Possibilities include: i) according special grants for recruitment procedures following the good practice; ii) conditioning the granting of (other) financial support to universities upon respecting the good practice, etc.

- Difficulty: low for professors, high for deans and rectors
- Cost: medium
- Impact: high

2.1.2. No more inbreeding: casting the recruitment net wider

As has been standard practice for decades in leading US and European universities and, more recently, recommended by a Study Report published by the French *Institut Montaigne*³, universities should be strongly discouraged from recruiting their own PhD holders before 3 to 5 years after they have completed their doctorate. This would, i) drastically reduce academic inbreeding, ii) create an open and flexible academic job market for young Spanish researchers and iii) encourage (the best of) them to take up postdoctoral positions outside their *alma mater* without fear of being ousted by purely local candidates.

Implementation: same as in 2.1.1, namely through incentives.

- Difficulty: low
- Cost: low
- Impact: high

2.1.3. Mastering English

As the English language has, without a doubt, become a necessary tool in the academic world, all senior positions (see 2.1.1) should be held by academics either with sufficient knowledge of English or willing to learn this language within a specified time period. There can be no real internationalization of Spanish Universities without overcoming the problem of English language capacity.

Implementation: through incentives whenever possible, but relying mainly on autonomous university policies.

- Difficulty: low
- Cost: low
- Impact: high

2.2. Managing academic staff

2.2.1. Giving promising academics good career prospects and enough individual autonomy

In general, the “European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers” (March 2005 recommendation of the EU Commission; <http://ec.europa.eu/euraxess/rights>) should be implemented, not only signed, in order to follow accepted good practice. More specifically, one of the means to achieve this goals of providing more autonomy could be to introduce a Tenure Track System (in Spanish: sistema de pretitularización condicional), by which a young academic becomes certain to be granted a permanent professorship, provided that he/she demonstrates the quality of his/her accomplishments at the end of a set period of time (for example 4years) following a clearly

³ Ioanna Kohler, « *Gone for Good ? Partis pour de bon ? Les expatriés des l'enseignement supérieur français aux Etats-Unis* », Etude – Novembre 2010, Institut Montaigne, p. 112 (to be found at : <http://www.institutmontaigne.org/les-expatries-de-l-enseignement-superieur-francais-3251.html>)

designed procedure involving assessment by outside experts⁴. As this system is both attractive (rather high level of autonomy granted) but risky in that it is a 'pass or fail' system (nomination is granted in case of success but exclusion is the result in case of failure), it is tailor-made for the best young academics.

More generally, Spanish universities need to develop a more supportive academic culture, encouraging and enabling young researchers and academics to apply for research grants on their own, to present their results widely and to gain respect in the national and international academic community.

Implementation: implies the capacity of universities to design their own hiring policies and conditions for academic staff; a pilot project could be a good way to start.

- Difficulty: medium
- Cost: low
- Impact: high

2.2.2. Academic and administrative career, promotion, rewards: offering attractive conditions

As a pre-requisite for implementing the recommendations that follow, all universities should, as a rule, have the full authority/capacity to employ all academic staff directly (and not as state employees assigned to them) on the basis of a permanent or open-ended contract⁵. Then, they should become responsible for the evaluation and promotion of their staff, for negotiating the salary conditions, and for the management of all types of bonuses, not only for research activities, but also for teaching, community service, technology transfer and dissemination activities. Rigid job descriptions should be replaced by a much more adaptive description of the responsibilities and accountabilities: the workload of professors would be differentiated, not in intensity, but in kind (research, teaching, administration, services, etc.), so as to help them to develop fully their strengths.

In addition, a greater level of professionalization of administrative and service staff should be achieved. This is particularly important in the case of careers such as "technology and science manager", a key function in higher education and research institutions that has undergone major change in recent years, and requires highly specific skills.

The Committee is fully aware that moving towards this employment system would represent a dramatic change from the current arrangement, and that it would imply a major revision of at least the Organic Law, which does not point in that direction. However, the right to decide on the hiring and promotion conditions is at the core of university autonomy, and it has been amply demonstrated that quality is clearly correlated to autonomy. Thus public money gets a much

⁴ For an example of a Tenure Track Procedure, see the University of Lausanne 2005 Directive, which is largely followed in other Swiss Universities:

http://www.unil.ch/webdav/site/interne/shared/textes_leg/1_ress_hum/dir1_4_pr...

⁵ See OECD Review, p. 122.

better return if it is invested in autonomous institutions⁶. In addition, mobility inside Spain can be expected to be greatly improved, should universities have more freedom in hiring academics.

Implementation: implies major statutory changes.

- Difficulty: high
- Cost: medium
- Impact: high

2.3. Quality and quality assurance (QA)

2.3.1. *Towards a simple external QA system supporting institutional quality management and improvement*

The hearings have shown that, as in other countries (e.g. Germany), the current system of program accreditation is creating a great deal of “QA fatigue”, without bringing clear benefits in improvements. In order to create the indispensable feeling of « owning the QA system » among the institutions and their staff, the setting up of the (internal) QA systems should be left mainly to the universities according to their own strategies and goals. In turn, the external evaluations should be focused on evaluating these internal systems, thus shifting from the accreditation of programs to the evaluation of institutions.

Three basic questions should form the basis of the external and periodical QA exercise, dedicated to accrediting institutions (for purposes of financial support and legitimacy): i) which are your institutional quality objectives⁷? ii) how do you know to what extent they are being achieved? iii) what did you do to improve the problematic areas? In addition, by evaluating universities according to their own strategy and goals, such an approach would promote increased institutional differentiation.

Implementation: through a revision of the QA regulatory framework and the development of an internal QA culture. Good examples to follow: Irish QA framework, among others.

- Difficulty: high
- Cost: low
- Impact: high

2.3.2. *Launching specific, improvement oriented actions*

In order to demonstrate that the main goal of QA policy is quality enhancement, specific actions should be reinforced, and launched regularly under the QA banner. For example, the awarding of the label of excellence to Doctoral programs on a competitive basis seems to have shown good

⁶See “Higher Aspirations: an Agenda for Reforming European Universities”, by Philippe Aghion et al., Brussels 2008 (<http://www.bruegel.org/publications/publication-detail/publication/1-higher-aspirations-an-agenda-for-reforming-european-universities/>)

⁷In research, teaching, technology transfer, student services and employment, human resources, etc.

results and should be reinforced and implemented in other areas, implying a real assessment of teaching quality.

Implementation: through a special grant competition.

- Difficulty: low
- Cost: medium
- Impact: high

3. Supporting the socio-economic environment more effectively: build up

This chapter makes recommendations aimed at improving the contribution of Spanish universities from the viewpoint of equity, employability and innovation. In this context, the following aspects must be considered as a matter of priority:

- What are appropriate measures to overcome remaining disparities in access and success for disadvantaged groups?
- How can the linkages between universities and industry / society be strengthened to increase employability for graduates? and
- How can universities contribute better to innovation for improved competitiveness?

3.1. Responding to Student Demand: Access and Equity

Considerable progress has been achieved in terms of overall expansion of Spanish higher education's enrolment capacity. The share of the population aged 25-34 with tertiary qualifications grew from 16% in 1991 to 39% in 2006, while the average OECD levels went from 20% to 33% during the same period (OECD, 2009). Spain is also one of the OECD countries that has most improved in terms of women participation. In 2009, 54.2% of students enrolled and 59.7% of graduates were women (Ministry of Education statistics).

However, overall progress masks enduring disparities. Access and success remain serious issues for specific equity groups such as children from low-income families, children of immigrant families, and Roma children. Almost a third of all entering students overall (30%) never complete their first degree. While detailed statistics are not available, it is highly likely that many of these failing students come from disadvantaged groups. A 2003 study (*Consejo de Coordinación Universitaria, CCU*) had shown that merely 13% of young people whose parents had only primary education are enrolled in higher education, compared to 65% for those whose parents had completed a long-cycle university degree.⁸ Recent PISA results for Spain also confirm that the aspirations of 15-year olds depend heavily on their socio-economic status.

While 84% of 15-year-olds belonging to the highest quartile of the PISA student's economic, social and cultural status index expressed aspirations to complete tertiary

⁸Consejo de Coordinación Universitaria (2003). "Informe sobre la evolución del alumnado universitario de 1994-95 a 2001-02", Vicesecretaría de estudios. Madrid: Ministry of Education.

studies, only 37% of 15-year-olds belonging to the lowest quartile revealed the same aspirations. (OECD, 2009)

The secondary education participation rate of Roma children is much lower than the general population, and 80% of those enrolled drop out before graduating from high school (Arnhold, 2007).⁹

3.1.1. Consolidation of the equity promotion strategy

In its EU2015 Strategy, the Spanish government reaffirms the principle that circumstances beyond an individual's control, such as birth place, gender, ethnicity, religion, language, disability, or parental income, should not influence a person's access to higher education opportunities and ability to take advantage of them. To make this laudable goal reality, the Ministry of Education has defined a series of measures and actions consistent with the European Union's plan to strengthen equity in higher education and has started to implement them. The Ministry's Action Plan includes the following main elements:

- Improvement of the information system dealing with equity dimensions
- Elimination of access barriers (financial, socio-cultural, legal and physical)

The Committee suggests that the Ministry of Education could go one step further by transforming this Action Plan into an official comprehensive equity promotion strategy bringing the national government and the Autonomous Communities together in their commitment to the removal of all significant financial and non-monetary barriers faced by students from disadvantaged groups.

Naturally, it is important to acknowledge fully the impact of disparities in primary and secondary education which shape the size and characteristics of the pool of potential university students. Therefore, to be effective, the equity promotion strategy at the tertiary level should be complemented by measures to increase inclusion and retention at the lower levels of education. At the tertiary level, improvements in equity can be achieved by combining measures to remove financial barriers and interventions that provide incoming students from disadvantaged families with better information, motivation and academic preparation.

Very few countries in the world have articulated such an equity promotion strategy. Spain is well on its way to following in the pioneering steps of Australia, Ireland and South Africa, countries that have formulated a comprehensive set of goals and actions to improve access and success in higher education for various equity groups. (see Box 3.1 below)

⁹Arnhold, N. (March, 2010). *General and EU education policy instruments and their use for Roma inclusion*.

Box 3.1 Ireland's Equity Promotion Strategy

Ireland is among the few countries that have formulated a comprehensive strategy in support of increased equity in tertiary education. In 2004, it published the *Action Plan on Equity of Access to Higher Education*, followed by a National Plan for Equity of Access to Higher Education 2008-2013. The 2008-2013 plan proposes a series of clear targets and policy interventions in the following areas: (i) institution-wide approaches to access; (ii) enhancing access through lifelong learning; (iii) investment in widening higher-education participation; (iv) modernization of student supports; and (v) widening participation in higher education for people with disabilities.

The main targets of the plan include: “The evidence base and relevant data collection systems will be enhanced; Institutions will develop and implement access plans and processes for evaluation; A national participation rate of 72 per cent of the relevant age cohort will be achieved by 2020 (55 per cent in 2004); All socio-economic groups will have entry rates of at least 54 per cent by 2020; Mature students will comprise at least 20 per cent of total full-time entrants by 2013 (13 per cent in 2006); Flexible/part-time provision will increase to 17 per cent by 2013 (7 per cent in 2006); Non-standard entry routes to higher education will be developed so that they account for 30 per cent of all entrants by 2013 (estimated at 24 per cent in 2006); Ireland will reach EU average levels for lifelong learning by 2010 and will move towards the top quartile of EU countries by 2013; The number of students with sensory, physical and multiple disabilities in higher education will be doubled by 2013”.

Source: Higher Education Authority. (2008). *National Plan for Equity of Access to Higher Education 2008-2013*. Dublin: HEA.

Implementation:

- Difficulty: low
- Cost: low
- Impact: high

The comprehensive equity promotion strategy could include two complementary dimensions:

(1) Financial aid package made up of need-based scholarships and student loans. Financial aid covers two complementary dimensions. First, the Ministry should negotiate with the Autonomous Communities an expansion of the existing scholarships programs, based on clear targeting criteria (eligible students) and reasonable amounts (covering educational and living

expenses) to which they would be expected to adhere. The national and autonomous governments should, together, be committed to protecting the budget for need-based scholarships in time of crisis and indexing the value of scholarships to inflation and tuition fees. One way of implementing this expansion program effectively would be to involve the universities themselves, through the Rectors' Conference, in consultation with student representatives.

Second, the Ministry of Education should carry out a technical and financial feasibility study to explore the possibility of expanding the existing loan mechanism that exists for graduate and postgraduate students to undergraduates, retaining the 0% interest level, or, if possible, offer a dual system which includes scholarships. Box 3.2 discusses the pros and cons of the three student loan models that are most commonly found throughout the world.

Under any scenario, all scholarships and student loans should be directly linked to academic quality criteria, both at the level of eligible higher education institutions (public and private) and the results achieved by the individual beneficiaries.

Box 3.2 Student Loan Models

The seventy or so existing student loan schemes world-wide fall under three main approaches: (i) direct loans financed by the government, (ii) indirect loans financed by the private sector with government guarantees, and (iii) universal income-contingent loans.

The mortgage-type, direct loans are the most common approach. Public resources are used to fund mortgage-type student loans to be repaid after graduation. The main drawback of this approach is that it relies on public resources exclusively to start the scheme and bring it up to scale. To maintain the financial sustainability of these schemes, administrative costs, interest subsidies and repayment default must be kept at a minimum.

In the second case, the government works in partnership with private banks. The government may offer an interest rate subsidy, and generally provides a guarantee for default. The private banks fund the student loan themselves. The universities are sometimes involved in sharing the risk of default of their students (as in Chile). This approach presents the great advantage of mobilizing private sector resources with limited government contributions. International experience shows that a leverage ratio of up to one to seven can be achieved.

Large-scale programs of this nature have had a mixed record, however. In 2000, Canada went back from a shared-risk system to a traditional public funded direct loan scheme because the private banks were not

diligent in seeking repayments from graduates. The Obama administration has also eliminated the guaranteed-loan part of its student loan portfolio, maintaining only the direct loans.

Universal income-contingent loan systems, such as the ones implemented in Australia, New Zealand and England can, in theory, achieve a better balance between effective cost recovery on the government side and risk to the borrower. Administration is generally simpler and cheaper under such schemes because loan recovery is handled through existing collection mechanisms, such as the income tax administration or the social security system. Income-contingent loans are also more equitable and satisfy more fully the ability-to-pay principle, since graduates' payments are in direct proportion to their income.

Implementation:

- Difficulty: medium
- Cost: high
- Impact: high

(2) Strategy for removing non-financial barriers. The Ministry of Education and some of the Autonomous Communities already have a number of outreach programs towards secondary school students from under-privileged groups aiming at increasing their access to information about academic and professional careers, boosting their motivation and aspirations to pursue tertiary level studies, and improve their academic preparation. Program, such as the 'summer inclusive campus' or 'campus without limits', funded under the CEI initiative, with the collaboration of Foundations should be carefully evaluated with a view to scaling up the most successful ones. (see Box 3.3)

A similar approach towards expanding the most effective retention programs should be followed in order to reduce the existing high levels of drop outs among students belonging to the various equity target groups.

Box 3.3 –

Campus Mare Nostrum Summer Inclusive Campus, Campus with no Limits

The International Campus of Excellence Campus Mare Nostrum led by the Universities of Murcia and Cartagena organized in July 2011 the first summer inclusive campus hosting 10 Secondary and High School disabled students for 2 weeks, after passing a technical audit on the accessibility of the campus site. The goal is to demonstrate and confirm that disabled students can continue their studies at universities that are well prepared to cover their specific needs. These programs help to improve the protocols of welcome and accessibility as well to adjust the education systems, methods and materials for disabled students, facilitating the development of their skills and the acquisition of competences in equal conditions with the other students.

Implementation:

- Difficulty: low
- Cost: medium
- Impact: high

3.2 Strengthening Linkages for Increased Human Resources Quality and Relevance

To increase the employability of university graduates, the Ministry of Education and the Autonomous Communities can encourage higher education institutions to rely on several mechanisms, including: (i) increased mission differentiation, (ii) more effective labor market feedback mechanisms, (iii) closer university-industry linkages, and (iv) expanded lifelong learning opportunities.

3.2.1. Mission differentiation

The proliferation of bachelor's and master's programs that has accompanied Spain's participation in the Bologna Process has not always brought increased mission differentiation. In many cases, Spanish universities offer similar programs and redundant programs can be found across universities in the same region. In addition, many if not most universities aspire to be recognized as research institutions even when their human and financial resources capacity to achieve that goal are limited.

Each university should be encouraged to concentrate on areas of strength rather than aiming at doing everything. In some cases, it could be advisable for some departments to focus on the preparation of qualified professionals to meet the manpower needs of the region. Each institution, each department should engage in a profiling exercise in order to set priorities and decide on how best to build on its comparative and/or competitive edge. As universities work towards enhancing their specialization assets and developing what makes them different from others, efforts should be made to eliminate redundant programs.

An appropriate system of assessment (consistent with the QA system – see section 2.3) and rewards is needed to facilitate the prioritization efforts by universities. The Campus of Excellence initiative appears to have succeeded in starting movements in the right direction. Thus, to promote greater mission differentiation, the national Government and the Autonomous Communities should continue to offer financial incentives.

Implementation:

- Difficulty: medium
- Cost: medium
- Impact: high

3.2.2. Labor market feedback mechanisms

More widespread use of labor market information and systematic reliance on feedback from employers and alumni can provide universities and students with valuable information on the quality and relevance of their programs. This can be accomplished in several complementary ways. First, for those disciplines that have a direct relationship with the world of work, practitioners from industry can participate in regular curriculum review committees to help universities orient and update their programs. Second, universities can undertake ad-hoc employers and labor market surveys to monitor developments in terms of skills demand, paying attention not only to specific professional aptitudes but also to generic competencies such as problem-solving abilities, communication skills, and team work.

The last but not least important instrument would be a well-functioning Labor Market Observatory, building on what is already foreseen in terms of insertion surveys and employment reports by universities in the report entitled *La contribucion del talento universitario en el futuro de la España 2020*. The Ministry of Education should try to evaluate whether the data collected and disseminated by *Objovem*, the labor market observatory managed by the Youth Council (*Consejo de la Juventud de España*), offers the kind of up-to-date and relevant information that can usefully guide universities, employers and students with respect to the labor market outcomes of various higher education programs (time required to find a job, types of jobs, levels of remuneration, progression in the profession, etc.). Annex 1 gives an overview of current labor market initiatives.

Implementation:

- Difficulty: low
- Cost: low

- Impact: high

3.2.3. Closer linkages with industry and other employers

Strengthening linkages with industry is an effective way of increasing the relevance of university programs, as already recognized by many universities which have created the *Cátedras de Empresa*. Universities can use a large variety of mechanisms, including internships for undergraduate students, in-company placements of research students and academics, practitioners from industry as visiting lecturers, as well as cooperative programs whereby studies combine periods at university and periods in companies (Box 3.3). Incorporating training for entrepreneurship into regular university programs can also help bring them closer to the productive sectors.

Box 3.3 Co-operative Programs

Principles and advantages

Co-operative education is a model that alternates academic studies with relevant work experience in a field directly related to a student's academic or career goals. The advantages of this model are considerable: it allows students to gain relevant work experience, apply theoretical knowledge gained in the classroom and clarify career plans. It also helps students to build contacts with employers and establish networks to facilitate finding employment upon graduation. Working as part of the studies program helps finance education; it is also useful for learning on how to behave on the job and in general to develop the skills which employers want. The advantages for employers are also significant since they have “access to well-prepared short-term workers, flexibility to address human resource needs, cost-effective long-term recruitment and retention, partnerships with Schools, and cost-effective productivity” (The National Commission for Cooperative Education, USA)¹⁰

Co-Op at the University of Waterloo in Canada

Waterloo is home to the world's largest co-op program – 15,800 undergraduate co-op students (more than 56% of the full time undergraduate population at the University and more than twice as many students as the

¹⁰The National Commission for Cooperative Education (NCCE) is dedicated to advancing cooperative education throughout the United States. At: <http://www.co-op.edu/aboutcoop2.html>

next largest program in the world) and 3,500 partner employers around the world (StudyinCanada.com)¹¹. A Co-op student at Waterloo graduates with the same number of study/academic terms as a non-co-op student, plus up to two years of work experience in different professional areas. The student has 4 to 6 work terms (usually four months long each), to try out a variety of careers to find out his/her interests before graduating. On average, by the time the student graduates, he/she has already earned from \$25,000 to \$74,000, resulting in smaller student loans than other students and a greater capacity at paying them back. Graduates of Waterloo's co-op programs earn about 15% more upon graduation than graduates of non-co-op programs (University of Waterloo).¹² Furthermore, Waterloo University offers the Enterprise Co-Op program where students obtain support (advice of experienced professionals and in some cases economic resources) to develop their own business.

Experiences at other Higher Education Institutions

Sandwich programs may have existed in the United Kingdom since 1840, and in 1906 the first cooperative education program was launched at the University of Cincinnati in the United States. It was followed by University of Waterloo where a Co-op program was founded in 1957. Other Institutions with co-operative education programs include:

- The Florida Institute of Technology which offers the most condensed cooperative education program ("ProTrack") allowing engineering students to graduate in four years with 3 semester work terms.
- Drexel University in Philadelphia, Pennsylvania and the Northeastern University in Boston, MA, have two of the largest co-operative education programs in the United States. A student graduating from a 5-year degree usually has a total of 18 months of internship with up to three different companies.
- Steinbeis Center of Management and Technology of Steinbeis University, Berlin, offers an international master's program (Master of Business Engineering) that integrates work and academic learning.

Source: The World Association for Cooperative Education (WACE); The

¹¹ StudyinCanada.com. "University of Waterloo". At: <http://www.studyincanada.com/english/schools/profile.asp?SchoolCode=uwatl08&ProfileType=University&URL=index>

¹² University of Waterloo, Canada. "Co-op at Waterloo". At: <http://findoutmore.uwaterloo.ca/coop/>

National Commission for Cooperative Education; StudyinCanada.com; University of Waterloo, Canada; and The National Center for Tertiary Teaching Excellence, New Zealand.

It is often assumed that efforts to bring universities closer to industry apply only to engineering and applied science programs, not to the social sciences and humanities. But in reality, it is more a matter of mindset than academic discipline. For example, a cooperative program does not have to be confined to engineering studies but could equally well be set up for a history degree, for instance, whereby students would alternate between formal periods of learning at the university and periods of study / research while attached to a museum or a cultural centre (or even a company).

Expanding the role of the university Social Councils could also contribute to improving the relationships between universities and industry. Social Council members should have a clear mandate and be strongly encouraged to (i) facilitate access to firms for students and academics, and (ii) ensure that universities are opening up to the needs of industry.

The matrix presented in Annex 2 shows the whole range of possible channels to strengthen linkages between universities and industry.

Implementation:

- Difficulty: medium
- Cost: low
- Impact: high

3.2.4. Expanding lifelong learning opportunities

Human resources development does not consist solely in educating and training the younger generations. In a lifelong learning context, individuals must be able to access learning opportunities as they need them rather than because they have reached the age to enter higher education. Among European countries, Spain stands out as one of the few countries that have articulated a clear policy of alternative access to higher education for mature learners.

While this is an important step, it remains partial. To participate more fully in this process, Spanish universities should make appropriate structural adjustments to mainstream lifelong learning opportunities for adults at work, adults not currently active in the work force, and persons wishing to change careers. This would require (i) flexibility in recognizing and validating prior non-formal and informal learning - already allowed by the legislation and

practiced by some universities (Box 3.4) -, (ii) organizing preparatory programs for non-traditional applicants, as exist in France, Iceland, Ireland and the United Kingdom, and (iii) providing alternative modes of studies such as part-time studies and distance education beyond those offered by the National Open University (UNED) and the Catalonia Open University (UOC).

Box 3.4 Recognition and Validation of Prior Learning in Europe

In the **Flemish Community of Belgium**, regulations allow higher education institutions to grant access to bachelor's programs on the basis of a candidate's overall knowledge and skills which are assessed by the board of the institution. Prior non-formal and informal learning can also be taken into account for access to doctoral programs for those who do not hold a master's degree.

In **Germany**, in 2009, the *Länder* established a standard procedure under which master craftsmen, technicians and those with vocational qualifications in a commercial or financial area are eligible to enter higher education if they have at least three years' experience in their professional field.

In France, the validation of experience-based learning (*Validation des Acquis de l'Expérience*) allows individuals to get full or partial recognition of the skills and professional qualifications acquired on the job. Any individual, regardless of age, nationality or legal status, can participate in this process after three years of salaried, non-salaried or voluntary professional activity or experience. The outcome is a diploma or professional certificate inscribed into the National Registry of Vocational Qualifications.

In **Spain**, each year, universities reserve a certain number of places to be allocated to higher education candidates who fit into specific categories. These categories include three groups of mature students: students older than 25, 40 and 45 years. Candidates aged over 25 who comply with traditional entry requirements may be admitted to higher education programs on successful completion of a special university entrance examination. This examination consists of a general part (including three tests) and a specific part to assess the skills, abilities and aptitude for the studies chosen. People over the age of 40 who do not possess a qualification which permits access to higher education can have their prior professional experience accredited if it is linked to the courses they want

to take. Universities define the accreditation criteria and the professional experience required for different study programs. The admissions procedure always includes a personal interview. Those aged 45 and over who do not possess a qualification which permits access to higher education, and who do not have a relevant professional experience, may be admitted to higher education on successful completion of a general test and personal interview.

In **Portugal**, students over 23 years of age with no formal qualifications, together with students who have the appropriate post-secondary qualifications, may gain admission to higher education via specific examinations that prove their ability to undertake the course in question. These examinations are set by individual higher education institutions.

In **Sweden**, since 2003, all higher education institutions have been obliged to assess, on request, the prior and experiential learning of applicants who lack the formal qualifications. In 2006, around 5 800 applicants asked to have their non-formal and informal learning accredited and almost 2 000 applicants were considered to meet the admission requirements for the program or course they applied for. Due to competition with other students, only around 1 000 non-traditional applicants were subsequently admitted to higher education.

Source: Eurydice Network (2011). *Adults in Formal Education: Policies and Practices in Europe*. Brussels: Education, Audiovisual and Culture Executive Agency. French Ministry of Education website (http://www.vae.gouv.fr/pdf/accueil_version_anglaise.pdf)

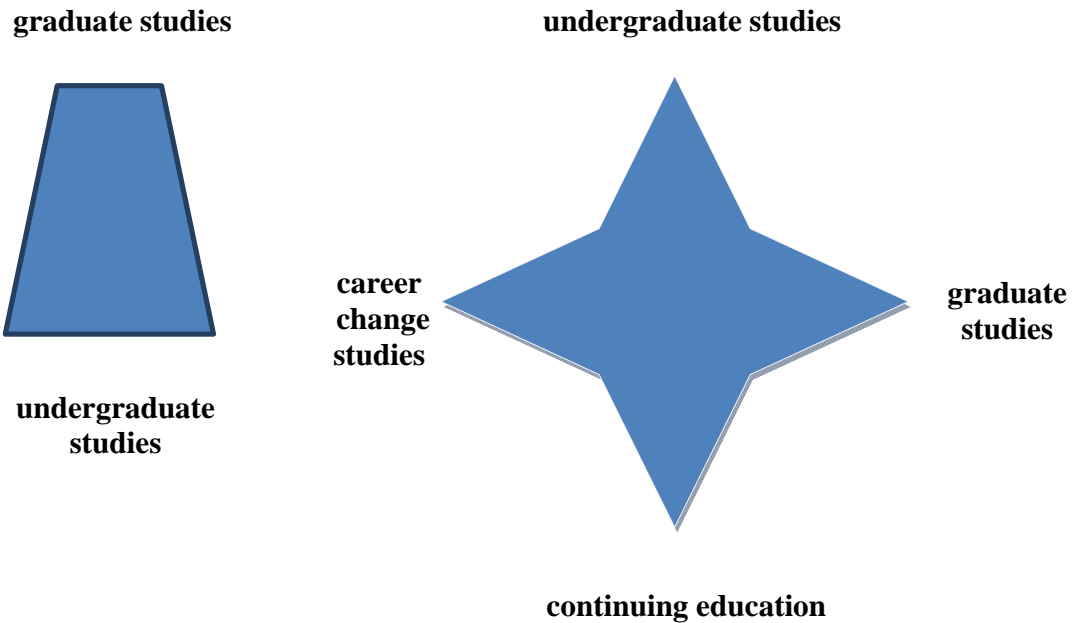
Furthermore, in times of acute economic crisis, universities should also pay special attention to the learning and training needs of unemployed youths. The Autonomous Communities could provide financial incentives to support re-skilling and skill upgrading programs.

As is the case with universities in most parts of the world, Spanish universities look today like a pyramid where most students are high school graduates, with a small share of postgraduate students. Taking the lifelong learning mission seriously would transform the shape of universities, as illustrated by Figure 3.1. Undergraduate students would be just a small part of the picture, as would graduate students. A growing proportion of programs would be designed to address the continuing education and career change needs of the adult population.

Figure 3.1 – The Evolving Shape of Universiti

Traditional Model

Lifelong Learning Model



The Employment Promotion Master Plan (*Plan Director de Empleabilidad Universitaria*) prepared by the Minister in July 2011 contains many of the same measures advocated by the Committee. Their adoption and implementation by the national government and the Autonomous Communities would go a long way towards improving the relevance of university programs in Spain.

Implementation:

- Difficulty: high
- Cost: medium
- Impact: high

3.3. Supporting Innovation in the Economy and Society

For centuries people assumed that economic growth resulted from the interplay between capital and labor. Today we know that these elements are outweighed by a single critical factor: innovation... The most important factor is our workforce. Bill Gates¹³

To improve the contribution of universities to the national and regional innovation systems, the central government and the Autonomous Communities can (i) offer financial incentives to boost the demands of firms for university services, (ii) help strengthen the interface between

¹³B. Gates (2007). "How to Keep America Competitive". The Washington Post. 25 February 2007, p. B7.

universities and innovation systems, and (iii) build up the technology transfer capacity of universities.

3.3.1. Financial incentives to scale up demand-side interventions

A relatively small proportion of firms appear to be fully appreciative of the positive contribution that universities can make to their productivity, development and innovative endeavors, either through their PhD graduates, through their research results and through consultancies. Strategic communication campaigns to raise awareness about the potential role of universities and financial incentives to stimulate the demand for university services can go a long way towards improving the situation. Among the most effective financial mechanisms that can be used for that purpose are (i) subsidies for hiring PhD graduates, (ii) subsidies for business / university mobility that finance practitioners attached to a university research team or university researchers seconded to firms, and matching grants for joint research projects and chairs financed by service and industrial companies (see Box 3.5). The E2I Strategy on innovation (*Estrategia Estatal de Innovación*), launched in July 2010 by the Spanish government, provides a favorable framework for scaling up these incentives as soon as the financial situation of the country recovers.

Box 3.5 The Power of Matching Funds

The experience of countries that have set up matching grants shows that they can be very powerful fund-raising mechanisms. In New Zealand, for instance, the Partnerships for Excellence program launched in 2002 helped leverage about 110 million dollars in private sector donations. Started initially as a matching grant only for the University of Auckland's business school, it was later extended to all tertiary education institutions in New Zealand.

Hong Kong's matching fund program has been so successful that the UK put in place a similar scheme to encourage its universities to seek private donations. In April 2008, the British government announced the formal launch of a 200 million pounds matching grant scheme administered by the Funding Council (HEFCE), with a sliding matching proportion (from 1:1 to 3:1) depending on the fund-raising experience of the participating universities.

Similarly, in the Canadian Province of Alberta, the government underestimated the potential of its Access for the Future Fund established in March 2005. Philanthropists responded so generously to the scheme that, by the end of 2006, the government had exhausted the money set aside to match private donations.

Source: OECD (2011), *The Contribution of Higher Education to Regional*

Development in Southern Arizona. Paris: OECD.

Small firms, in particular, find it difficult to attract investors in support of their innovation projects. In recent years, several OECD governments have decided to fund the development of new technologies in small companies through R&D contracts allowing them to hire scientists and test the feasibility of their innovations, following the model of the US Small Business Innovation Research Program (SBIR) launched in 1981. The United Kingdom, the Netherlands and Victoria State in Australia, for instance, had SBIR initiatives in 2001, 2004 and 2008 respectively.¹⁴

Implementation:

- Difficulty: medium
- Cost: high
- Impact: high

3.3.2. Strengthened interface between universities and the national / regional innovation systems

The role of local cities and regions as key engines of development has been increasingly recognized. Although most Autonomous Communities have put in place structures and mechanisms to facilitate partnerships between universities and industry, their effectiveness remains to be assessed and existing bottlenecks need to be identified.

The International Campus of Excellence (CEI) Initiative has been instrumental in facilitating the creation of regional networks around common technological platforms and shared infrastructures (Box 3.6). The Autonomous Communities, with support of the national government, should encourage the further development of technology parks in universities with high potential for transfer of knowledge and technology. They should establish knowledge sharing platforms to facilitate mutual learning and opportunities for building on promising examples from the more experienced regions. The country's top private universities should be included as much as possible as potential contributors to the regional innovation systems.

¹⁴OECD (2011). *Demand-Side Innovation Policies*. Paris: OECD.

Box 3.6 Andalucía TECH: a Multi-University Technology Park

In 2010, the University of Malaga and the University of Seville successfully competed in the International Campus of Excellence Initiative with their joint application for establishing a single international campus of excellence. Their project, called Andalucía TECH, was designed with the purpose of generating synergies in support of the scientific and technological development of both universities. Operating as an autonomous foundation—seen as the only way of efficiently managing the relationship between the two universities and its industry partners—, the joint venture focuses on technology development in three main areas: production technologies, biotechnology and ICTs.

Andalucía TECH defines its mission in the following terms: “to attract, integrate and develop talent by creating an ecosystem of knowledge and innovation generation, committed to society so that the excellence level of educational and research activities increases through a sustainable, open and universal Scientific-Technology model of Campus”. One of its core ambitions is to foster multi-disciplinary research programs within and across the two universities. It has already been instrumental in the development of a robotics engineering program replacing electronic engineering and automatics that were organized and operated separately.

To cultivate partnerships with foreign firms, Andalucía TECH has opened two offices overseas: one in Inchong, South Korea, and one in Tampa, Florida.

Source: field visit and <http://www.andaluciatech.org/>

The matrix shown in Annex 2 describes the whole range of possible mechanisms that can be used to strengthen the interface between universities and the national / regional innovation systems.

Implementation:

- Difficulty: low
- Cost: low
- Impact: high

3.3.3. Strengthened capacity of universities to contribute to innovation

The last part of the equation, after ramping up the demand for university services and developing the interface between universities and the innovation system, is to strengthen the capacity of the universities themselves to contribute to innovation. This requires at least three sets of actions. First, universities that host specialized research institutes need to integrate fully the research activities of these institutes with those of regular university departments. The model developed

by the Autonomous University of Madrid is a good example of how it can be achieved in the context of a Spanish public university.

Second, each university that is heavily involved in contract research and technology transfer should clarify the administrative and financial rules for organizing the legitimate consultancy activities of professors, defining patent ownership, and coordinating their participation in spin-offs.

Third, there is a need to assess the governance implications of having separate administrative structures—in the form of foundations—to manage the type of applied research activities and linkages with industry promoted by the International Campus of Excellence Initiative. This may indeed be the most effective way of overcoming the administrative and financial rigidities of public universities, but it would be important to look at the advantages and limitations of this approach. The experience of other European countries indicates that, in the medium and long term, it may be more appropriate to reform the governance of the entire university rather than continuing with dual structures.

Implementation:

- Difficulty: low
- Cost: low
- Impact: high

Finally, to facilitate the implementation of the recommendations put forward in this chapter in a coherent and consistent manner, two interventions are needed at the national level. In the first place, the Ministry of Education in partnership with the Ministry of Science and Innovation should encourage each Autonomous Community to elaborate a strategic human resources development and innovation plan. Box 3.7, which presents the experience of the State of Minnesota in the US—a State that has put higher education at the heart of its economic development strategy—provides an interesting example of how to plan and monitor the contribution of higher education at the sub-national level.

Second, the national authorities should put in place a coordination mechanism to encourage closer harmonization of the research and development priorities of Autonomous Communities with those of the Spanish economy as a whole. The goal would be to move from the present patchwork of divergent national and regional policies to a better coordinated and mutually reinforcing system.

Box 3.7 State-wide monitoring and accountability: the example of Minnesota's higher education system

Since 2005, the Minnesota state legislature has mandated the preparation of an annual report that measures the progress of the higher education system in supporting the state's economic development strategy. Minnesota's leaders recognize that in order to lead

consistently in these areas, the state must first embrace a system of accountability that can measure progress toward the achievement of its ambitious agenda. As outlined by Governor Tim Pawlenty, “building Minnesota’s world-leading status in the knowledge economy requires us to set goals for higher education and measure results. This report gauges outcomes so we can focus on strategies for improvement in productivity and student success.”

The report reflects the results of a consensus-building exercise that brought together educators, policy makers, employers, and Autonomous Community leaders in 2005 and 2006. Together they identified five broad goals that define the public agenda for higher education and 23 indicators that measure success towards these goals. The five goals are to:

- improve the success of all students, particularly students from groups that are traditionally underrepresented in higher education;
- create a responsive system that produces graduates at all levels who meet the demands of the economy;
- increase student learning and improve the skill levels of students so they can compete effectively in the global marketplace;
- contribute to the development of a state economy that is competitive in the global market through research, workforce training, and other appropriate means; and
- provide access, affordability, and choice to all students.

For each indicator, the report benchmarks the results of Minnesota against the top three US states, the national average, and a group of peer states selected on the basis of common characteristics such as geography, tertiary education structure, economic situation and demographic features.

Source: Minnesota Office of Higher Education - MOHE (2009)
<http://www.ohe.state.mn.us/mPg.cfm?pageID=1733>

4. Strengthening and streamlining governance: speak up and loosen up

4.1. Lighter Systemic Higher Education Governance: Enabling With Strategic Oversight

In the Spanish context, the articulation of the various levels within the higher education sector (between the central government, the Autonomous Communities and the universities themselves) and between the public and the private sector (with its various stakeholders) is a major challenge.

Often initiatives are marred by a lengthy decision-making process, overly bureaucratic traditional forms of public administration, competing levels of power and ideological cleavages. In fulfilling its legitimate role of organizing, in the most efficient way, the various levels and components of higher education and research, the authorities should apply the ‘subsidiarity’ principle in determining the right level of decision making: institutional, regional, national, European or international.

Box 4.1 - Do Governments Care about Higher Education? Lessons from the Football Field

For the sake of argument, let us consider the following: how would Barcelona’s professional football team (FC Barcelona) perform if it were constrained by all the rules that burden our universities? What would happen if all the players were civil servants with salaries determined by a government ministry and if they were allowed to continue playing every day regardless of their performance during official games and behavior during practice sessions? What would happen if the club’s income were not linked to its game results, if it could not pay higher salaries to attract the best players in the world or if it could not rapidly get rid of the under-performing players? What would happen if team strategy and tactics were decided by the government rather than by the coach? Wouldn’t such an approach risk relegating the Barcelona team to the sidelines of mediocrity? If we agree that such an approach is unwise for a sports team, why do we allow our universities to operate under such conditions? This suggests that deep down we care more about football than about the education of our children.

Adapted by Jamil Salmi and Richard Hopper from Sala i Martín, X. (2006). “A great sense of humor”, *LaVanguardia*, 17 November 2006.

At the university level, despite the present overregulated context, there is some room to manoeuvre and to take initiative. Several Spanish institutions have taken these opportunities and became success stories. In line with the trend advocated in the EU2015 strategy, new legislation should always aim at trimming down the complex web of rules in existing law in order to allow for more flexibility and freedom. The Committee feels very strongly that the Universities are not

fully exploiting the existing possibilities to be more responsible and proactive. There is increasing need for each institution to develop its own strategy and to take charge of its future.

The changes being pursued and required in Spanish higher education and research favour an approach which combines both a top-down and a bottom-up process and allows for real creativity, independent thinking, supported by an in-depth knowledge of emerging trends and success stories worldwide.

4.1.1. High Level Strategic Advisory Board

EU2015 put in motion major changes that will need some time for full implementation and results to take place. It is extremely important to secure the continuity of the strategy being implemented, despite political changes. There is thus a need not only to create a consensus for long-term transformation but also to put in place a mechanism that allows for adapting to changing circumstances, monitoring progress and thinking forward creatively.

In order to achieve this strategic oversight, the Committee proposes the creation of a “High Level Strategic Advisory Board” that will advise the Minister of Education, as requested officially and/or acting on its own initiative.

A possible composition for the group could be as follows:

Rectors: 2 / Autonomous Communities: 2 / Social Council representatives: 2 / Business representative: 2 / Scientists: 2 / Students: 2 / Foreign experts in HE and Research: 5 / Ministry of Education: 1 (plus secretarial support). The Committee would suggest that the following basic operating rules should apply to the group:

- Members serve in their personal capacity,
- Members cannot delegate others to represent them at meetings
- No more than 2 members from the same Autonomous Community
- Regular meetings are held, for example at least twice a year, plus one intensive three-day seminar each year on a specific topic with deliverables.

Implementation:

- Difficulty: low
- Cost: low
- Impact: high

Box – 4.2 Role of high level strategy advisory body

(as suggested in: *Achievement and accountability. Report of the independent review of higher education governance in Wales, March 2011*)

High level strategy advisory body

36. For Our Future represented a significant step forward, but further futures thinking is required if higher education in Wales is to develop a capacity for flexibility, responsiveness and innovation and ensure sustained competitiveness at a global level. Currently there is no such independent group offering this service to the respective elements of higher education in Wales – government, regulatory body or sector.

37. There would be value, therefore, in establishing a body that would have a responsibility for predicting future trends, identifying challenges and suggesting responses. Its function would be to identify current and long-term strategic and policy issues facing higher education and impacting on its future in Wales, to provide an independent evaluation of the issues and alert, assist and advise senior decision makers at ministerial, government, national and institutional level across Wales. Through seminars, online discussion

and published reports, it would promote and disseminate new ideas and encourage inclusive debate, dialogue and discussion amongst institutional practitioners, those who influence policy and the wider Welsh public.

This High Level Strategic Advisory Board could consider the following themes:

- Strategic positioning in the regional, national and international landscape,
- Striking a balance between long term perspective and relevance to pressing local problems,
- Monitoring the impact of the ICE projects and distilling relevant lessons,
- Prioritising thematic research and teaching areas, building on existing strong areas and identifying new development opportunities,
- Criteria and mechanisms for phasing out irrelevant, out-dated or underperforming areas, and departments,
- How to develop cooperation with other public institutions and private companies,
- Strategic internationalization,
- The legal density and complexity of laws and regulations.

4.1.2 Mobilizing CRUE and CU

The Spanish Rectors' Conference (CRUE) and the Universities Councils (CU) should be encouraged to take initiatives and be more involved at an early stage in the national policy-

making process, provided that they are willing to shape the road map for the future of higher education and research, rather than merely reacting to proposals formulated without their direct involvement. They could also play a role during the implementation phase of reforms.

Rectors should play a major role in gathering intelligence and attempting to influence the direction of policy and to expand the horizon beyond regional and national borders. In the area of higher education and research, no important initiative should be taken without prior consultation of the CRUE.

These measures would enhance cohesion and active participation of the universities in the implementation and further elaboration of the EU2015 and subsequent strategies.

Implementation:

- Difficulty: low
- Cost: low
- Impact: medium

4.1.3. Toward a new landscape: mergers and CEI

In several instances, strategic aggregation of several Spanish universities and/or research institutions may make sense, preferably, but not necessarily, within the International Campus of Excellence (CEI) Initiative.

New governing models may be tested on a voluntary basis. The Committee advocates as much flexibility as possible in dealing with the challenge of aggregating and managing those new structures. This is a major opportunity to experiment with new forms of governance. The Committee strongly recommends that future calls for new proposals within the CEI again focus explicitly on inviting pilot projects proposing innovative or alternative governance models and that future project evaluations focus attention on assessing the effectiveness of new governance approaches.

Box 4.2 – Merging of University Units at University of Oviedo

A good example of internal reorganization of university faculties and schools can be found at University of Oviedo. In the frame of its Campus of Excellence project called Ad Futurum, the university carried out a process of reorganization of their teaching programs resulting in the merging of 15 university schools and faculties into 6 large centres grouping similar teaching programs:

1. A new Faculty of Economy and Enterprise grouping former Faculties of Economic and Entrepreneurial Sciences, University School of Entrepreneurial Studies and University School of Labour Relations;
2. a new Faculty of Medicine and Health Sciences grouping the former Faculties of Medicine and University School of Nursing and Physiotherapy;
3. a new Faculty of Philosophy and Arts grouping the former Faculties of Philology, Philosophy and Geography and History;
4. a new Faculty of Teacher Training and Education grouping the former Faculty of Education Sciences and the University School of Teaching (Magisterio);
5. a new Polytechnic School of Engineering in Gijón grouping the former University Schools of Informatics Engineering, Industrial Engineering and the Higher Polytechnic School of Gijón;
6. a new Polytechnic School of Mieres grouping the former Higher Polytechnic School Guillermo Schulz and the University School of Technical Engineering of Mieres

Implementation:

- Difficulty: medium
- Cost: medium
- Impact: high

4.2 Integrated Management of Higher Education, Science and Research

Today's knowledge economy moves on two legs: creating knowledge and transmitting knowledge. The current split between a Ministry of Higher Education and a Ministry of Science and Technology is not conducive to the creation of an effective knowledge and innovation system. Ideally, there should be one body responsible for science, research and innovation, at the national level and at the level of each region. If this is not possible, the various actors should work closely together, as they do, for example, today in Catalonia and as was recently decided in Switzerland.

Implementation:

- Difficulty: low
- Cost: low
- Impact: high

4.3 Agile Governance of Universities and Public Research Institutions

The Committee does not believe that, in this much controversial and ideologically loaded field, there is a single best governance model in the present ever changing and increasingly challenging situation. Worldwide, governance of universities varies from strong state regulation to academic or managerial self-governance, with more or less stakeholder guidance and an increasing competition for resources¹⁵. Despite those differences, universities around the world are converging in their structure and practice toward a stronger role for the rector and his/her leadership team within a context of more autonomous and accountable universities. As mentioned earlier in Chapter 2, recent studies have shown unequivocally that quality is positively correlated to autonomy.¹⁶

4.3.1. *Creating a single university governing body*

To bring greater coherence to the decision-making process, to increase the range of interactions between institutions and their various stakeholders, and to clarify decision-making responsibilities, the Committee recommends that in each university the Social Council and the Governing Council or Board be replaced by a single new body. Clear decision-making responsibilities and accountabilities should be granted to this single governing body (for example appointment of the rector, endorsement of the strategic plan, approval of the budget, etc.). To function effectively, the governing body should have no more than 20 members, including a significant number of external members. Such a change in the governance structure of Spanish universities would greatly enhance the likelihood of success of the EU 2015 strategy.

The legal framework should offer interested universities the possibility to move to this governance model on a voluntary basis at least initially. Box 4.3 illustrates good practice in this area.

Implementation:

- Difficulty: high
- Cost: low
- Impact: high

¹⁵Kehm and Lanzendorf 2006, Germany: 16 Länder Approaches to Reform, in Kehm, B. and Lanzendorf (eds), *Reforming University Governance – Changing conditions for research in four European countries*. Bonn: Lemmens

¹⁶See “Higher Aspirations: an Agenda for Reforming European Universities”, by Philippe Aghion et al., Brussels 2008 (<http://www.bruegel.org/publications/publication-detail/publication/1-higher-aspirations-an-agenda-for-reforming-european-universities/>)

BOX 4.4 - EFFECTIVENESS AND PERFORMANCE

REVIEW OF GOVERNING BODIES

Governing bodies should regularly monitor their own effectiveness and the performance of their institution against its planned strategies and operational targets and their primary accountabilities.

Governing bodies should further review their effectiveness regularly. Not less than every five years they should undertake a formal and rigorous evaluation of their own effectiveness, and that of the committees, and ensure that a parallel review is undertaken of other internal boards and committees. Effectiveness shall be measured against the statement of *The Primary Accountabilities of the Governing Body*. The governing body shall revise its structure or processes accordingly.

In reviewing its performance, the governing body shall reflect on the performance of the institution as a whole in meeting long-term strategic objectives and short-term key performance indicators.

The governing body should also ensure that it is able to discharge its responsibilities through a clear and accurate understanding of the institution's overall performance through a regular process of review. Any such review of performance should take into account the views of the academic board, and should be reported upon appropriately within the institution and outside. Where possible, **the governing body should benchmark institutional performance against the performance of other institutions (at home and abroad).**

In considering their own effectiveness, **governing bodies may wish to engage persons independent to the institution to assist in the process.**

The results of effectiveness reviews, as well as of the institution's annual performance against appropriate indicators of performance, should be published widely, including on the Internet and in its annual report.

Source: Good Practice Guide for Governing Bodies of Indian Technical Institutions, World Bank-NPYU/Ministry of HR Development and States Governments of India, 2011.

4.3.2. Improving leadership/selection of Rector

As noted in Chapter 2, the position of Rector is crucial in today's context. (S)he must be able to act simultaneously as the Chair of the Board, as the Chief Executive Officer, (in charge of the daily management and the general organization) as the Primus inter Pares (responsible for academic leadership in teaching and for scientific leadership in research) as Ambassador, representing the University locally, nationally and internationally and increasingly as a Fundraiser.

Needless to say, balancing these functions is a task requiring a wide array of skills and is not, in the long term, for the faint-hearted.

This is why, increasingly, the choice of a new university leader is the result of an appointment after an extensive international search rather than the outcome of an internal process culminating in the election. This suggestion is fully consistent with the proposal to have a single governing body. Such a rigorous and transparent recruitment and selection process would reinforce the leadership role of the rector in strengthening the contribution of the university to socio-economic progress.

The Committee believes that the combination of a single governing body and a strong rector is a key success factor for implementing the EU2015 Strategy.

Implementation:

- Difficulty: high
- Cost: low
- Impact: high

4.4 Ensuring Viability, Change and Excellence

4.4.1. Funding and financial management

Although the on-going economic and financial crisis brings with it major uncertainties on the future level of financing of Spanish universities, EU2015 does not dwell much on this key aspect, though a new financial model, including an analytical accounting system has been proposed. In allocating limited resources strategically, difficult choices will have to be made to achieve critical goals, provide adequate infrastructure and gain international excellence. An appropriate appraisal and reward system is required.

In the view of the Committee, a significant part of funding for universities should be allocated at all levels on a performance-based system of block grants (lump sum with possibility to keep unspent balances) with pre-established and agreed-upon output and input indicators. New funding models are taking shape and should be encouraged. In this respect, some of the Autonomous Communities have been experimenting with new ways of allocating funds to the public universities through mostly quantitative Performance Indicators. Some lessons could be learned from these experiments.

Detailed financing plans in line with the institutional strategic plan should be elaborated, and their execution closely monitored. In research, moving to a full cost accounting system is necessary. Accounting procedures should be reorganized accordingly. These are perhaps the two most important changes to bring about in order to strengthen the ever-more crucial careful management of finances in Spanish universities.

The constraints and rigidities in the current financial system lead universities to create their own foundation in order to have more flexibility for undertaking fundraising and to supplement public funding with funds from private sources. While this may offer a useful stop-gap approach, a more autonomous public university reorganized according to the recommendations of the Committee should no longer need this kind of dual administrative structure.

Box 4. 5 Recommendations from EUA 2011 study:
*Financially Sustainable Universities II:
 European universities diversifying income streams*

7.1 Universities

Integrate income diversification in your institutional strategy

- Apply a proactive approach in diversification and identify opportunities
- Incorporate partnerships with broader implications across the whole institution
- Engage the academic community in the diversification strategy and its actions

Invest in people

- Invest in the development of institutional human capital to improve further capacities and competences to engage in income diversification
- Establish and nourish strong leadership and management

Incentivise faculties & staff to take an active part in income diversification

- Increase the use of untapped potential within the universities
- Design resource allocation models that provide incentives for income diversification at faculty/departmental level (performance agreements, development plans)
- Provide incentives that foster the commitment of the academic staff to the strategy

Interact smartly: set up professional stakeholder management

- Create a professional stakeholder management (create a "brand" around the university)
- Enhance the awareness that the university is creating value for external stakeholders and identify areas of mutual benefit with local and regional partners

7.2 Public authorities

Invest in higher education

- Provide sufficient and reliable public funding and ensure that complementary funding will not replace public funding
- Aim at achieving the 3% GDP target of investment in Higher Education
- Invest in leadership development training for higher education leaders and managers

Introduce the right framework conditions

- Increase institutional autonomy in particular in financial aspects, human resource management and capacity to design governance structures
- Establish funding incentives to engage in partnerships and foster donations from the private sector such as matched funding schemes

Integrate & simplify funding rules

- Simplify funding rules in order to reduce costs
- Streamline eligibility conditions and accountability requirements to reduce the administrative burden on universities
- Reduce co-funding requirements and replace wherever possible by funding on a full cost basis

7.3 European Institutions

Intensify simplification efforts

- Implement measures fostering simplification of funding schemes
- Increase the attractiveness of structural funds

Invest in European higher education

- Streamline eligibility conditions and accountability requirements to reduce the administrative burden on universities
- Reduce co-funding requirements and replace wherever possible by funding on a full cost basis

Involve all funders

- Engage with governments and funders to create incentives for governance and autonomy reforms and further income diversification
- Create funding mechanisms to foster leadership and human resource development for higher education leaders and managers

7.4 All funders

- **Take action to streamline eligibility conditions and accountability requirements in order to reduce the administrative burden on universities.**

Implementation:

- Difficulty: medium
- Cost: high
- Impact: high

4.4.2. Organisational cultures

In universities, a heavy-handed change in structures, organisation and management style is unlikely to succeed if not enough attention is paid to communications and cultural concerns.

- *Internal communication* with a fair amount of transparency is crucial to create a sense of ownership and in building the sense of urgency needed to put change in motion, and to take all key players on board by involving them in strategic choices. It is also crucial in order to stimulate and maintain a collaborative culture in support of excellence.
- *External communication* needs also more attention in the perspective of an outward focus for universities. It is crucial in establishing new partnerships, be it with other HE institutions or with research centres, with the secondary education sector or with the private sector, and this at the local, regional, national or international levels.
- *The aim* of EU2015 is to “bring about structural and cultural changes in Spanish universities”. Ultimately, its effectiveness will depend to a large extent on changes in institutional, regional and national cultures. This will generate more opportunities for individual initiatives and inputs¹⁷.

Implementation:

- Difficulty: medium
- Cost: low
- Impact: high

5. Conclusion: the way forward

The EU2015 strategy is a well-thought out initiative which accurately takes into account the aspirations of the Spanish academic community and proposes relevant measures. It definitely goes in the right direction and the interviews held by the Committee showed that it receives wide support and acceptance by most stakeholders.

¹⁷Reichert 2006: 40-43, *Research Strategy Development and Management at European Universities*, EUA

However, EU2015 is largely incremental in its present form. The Committee believes that more radical change is needed to achieve the Strategy's goal, especially in the governance area. A new, powerful governance system will not emerge by itself. Without it though, modernization and internationalization of Spanish universities will be very difficult to attain.

The Committee's goal was to be pragmatic, useful and constructive. The recommendations it proposes are addressed to all higher education stakeholders in Spain. On purpose, they focus on only a few, albeit, central dimensions of higher education reform.

The Committee is aware that some of the recommendations in this report cannot be implemented within the current legal frame. This does not diminish their value. Some, or several, of the reforms recommended are already under consideration or even implementation; so much the better.

Many European countries have recently gone through similar process to modernize their HE governance systems and there is nothing better than learning from what they have done; taking on board what suits Spain. Universities in Germany and Austria were part of the rigid civil-servant systems, and have been able to make major advances on the modernization path. Even such a sterling system as the Swiss one had to go through reforms. Canada is another country from which much can be learnt, also because of its more European character as compared to other Anglo-Saxon countries. But then, much nearer to Spain, a country like Portugal has gone through a remarkable evolution, one even could say revolution in its higher education policy reform. The change was led by a very strong Minister, often against the wishes of the rectors. Nowadays though, many, if not most of the Portuguese rectors are positive about the changes which are taking place. Some of the universities are now foundations or charities; they seek candidates for rectors worldwide, and enjoy more efficient governance.

Times in which funding is scarce are often times which allow us to do things which otherwise, for different reasons, would not be possible. The laying of new foundations for the introduction of fundamental changes is what the Committee has in mind.

The aim of a report such as this one is not to explain in detail all what has already been accomplished and done correctly, but rather to suggest a few other venues for improvement, to mention a few aspects which might block progress and to insist on the importance of a broader strategic long-term view of the future university landscape. Its purpose is also to urge the continuation of reforms regardless of short or medium-term changes of governments.

Implementation Strategy

The central axis of this report is to propose fundamental changes to the governance system. To implement this set of core recommendations, the Committee suggests the creation of a small expert group whose members would not represent any institution, and who would be commissioned by a joint mandate of the central government, the regional governments, the university associations and the main business associations. The group would prepare a detailed action plan to implement the most urgent governance recommendations in this report. The expert group should be given at most one year to complete this work.

From Reform blocking aspects to Reform catalysts

An open mind-set that allows learning and listening to others is a *condition sine qua non* for reform. Being a user of higher education, being an employee of a higher education institution, being a member of a union, even being an elected rector of a university does not make one automatically an expert in higher education. Modern higher education is today so complex, so torn between divers and often divergent demands, that the insights and support of experts is essential. They may not know everything, but they do know something and their input, especially if it is disinterested can go a long way to diffusing tensions and conflicts while opening up new avenues.

An excessive use of successive new regulation, laws and decrees, might seriously jeopardize the possibility of future modernization. Mature strategies as well as pilot testing should come before legislation. The Committee also noticed that all too often interesting legal possibilities are not used: this reflects deeper problems - usually governance related - which block the proper development of legislation. Too often, those interviewed by the Committee stated “we have to be prudent”; reform requires will and courage more than prudence.

Business will have to contribute actively and with a certain degree of generosity towards the modernization of the universities. For that it will have to comprehend fully that Spain will not be a modern advanced nation without a university system to which the same adjectives can apply. Business has to believe in the potential of the Spanish universities, only so will their essential contributions materialize.

Structural changes in decision-making bodies of government can stimulate change in policy and strategy. They are not, however a panacea. Research and universities should always go together in policy making: separating the transmission of knowledge (teaching) from generation of new knowledge (research) is unnatural and ineffective. They both transform public and private investment into knowledge. Innovation, on the other hand, transforms knowledge into money. It is thus central to economic development and while closely linked to research and teaching, innovation can be motivated and evaluated by a different set of rationales and indicators. Thus universities are key cornerstones of innovation as they lay down its foundation; it is not, however, their only role and responsibility. To combine, under one policy-making umbrella all these aspects may offer interesting possibilities which are being explored in some places. The soundness and long-term effects of such a move, however, are not guaranteed. In the Committee’s view, no matter where the heart of the policy nexus for higher education, research and innovation may be, support for autonomous and strong universities, assessed on the basis of their academic, scientific and social performance is key.

Areas for immediate improvement

The recommendations presented and argued throughout the report may seem like an insurmountable list of difficult measures to put in place. The actions and suggestions below, reiterate in a straightforward manner the considerations that the Committee submits for further

reflection and action by decision-makers and institutional leaders at all levels in the Spanish higher education and research sector.

- *The clever use of performance indicators*: performance indicators are needed but not 50 different ones, whose use only leads to endless discussions of what weight to assign to each, eventually making it impossible to reach clear conclusions. A few, relevant, and easily measurable – with small margins of error – indicators are much better.
- *Incentives and matching funds*: these are instruments which do not require legislation and which allow for profiling and building of excellence. They also allow for “unplanned” excellence, something often forgotten by policy-makers.
- *The role of Latin America*: rich relations with Latin American institutions should not be taken as a proxy for internationalization, but rather as a booster. Just as large Spanish companies started being international by working in Latin America, but have since become truly international, so should universities expand their relations. A good command of English is today not an issue for debate, but a must for internationalization.
- *Building trust without additional regulations and accountability measures*: universities should be given the freedom to succeed and to fail. Being held on a short leash by the government will not lead to excellence. Some Spanish universities are in fact already showing remarkable improvement, in spite of all the difficulties; this should be publicly acknowledged and they should serve as role-models - *mutatis mutandis* - for the others.
- *Recruiting outstanding staff*: this will always be the crux of the matter, and it will only be possible by making recruitment open and international. Again, a very few universities already manage to recruit in this manner and others should learn from them. Of course, many universities might choose to play more of a local role, supporting social and economic development of their community, which might require a different type of recruitment. It should still be open and seek excellence.

Learning from successes

It is important to underline that Spain can already boast a number of success stories which show that meaningful change is possible and underway. In the area of internationalization, for example, the following cases can be mentioned:

- a) The University of Barcelona and more recently the Pompeu Fabra University usually appear in international rankings among the top 200 universities in the world. This last example is particularly noteworthy given that the institution is only about 20 years old. The Pompeu Fabra University is also exceptional in that it has a relatively large number of professors who have been professor abroad. It also has larger salary flexibility than other Spanish universities.
- b) Joan Massagué, Ignacio Cirac and Jordi Galí were all listed by Thomson Reuters in their Nobel Prize predictions of the last 8 years. The first two researchers are working abroad, but the last one is in Spain, though he has spent more than 10 years in the US.
- c) Based on relative citation indices, physics is the best discipline in Spain, placing the country in position 9 or 10, while Spain globally is in positions 20 to 23. It is one of the few

disciplines where young PhDs were sent abroad as post-docs as early as more than 30 years ago.

These are sterling examples of the importance of internationalization, and of how much can already be achieved in Spain if one dares and wants. **We call upon the country to dare and to want.**

The members of the International Advisory Committee express their thanks to the Ministry of Education for inviting them to review and provide advice on the current higher education reform strategy underway in Spain. It has been an honor and a privilege to examine, learn and comment on the ambitious goals and important challenges facing the Spanish higher education and research system in the years to come. We thank all of the experts, higher education leaders, policy makers and student representatives that we have met for sharing their views and insights with us. We thank the staff of the General Secretariat of Universities, and Luis Delgado particularly, for the excellent and efficient support they have provided the Committee in both substantive and logistical terms throughout its consultations and drafting process.

Annex 1- The Role of Labour Market Observatories (LMO)

Three innovative initiatives intend to respond to the challenges of orienting students in the evaluation of academic and employment opportunities: AlmaLaurea in Italy, Futuro Laboral in Chile and Graduados Colombia, Observatorio laboral para la educación in Colombia. These projects seek to provide useful, practical and easy-to-use online information on career perspectives and job opportunities. The overall idea is to equip all tertiary education stakeholders, in particular students and families, with relevant information to make the right choices. Whereas AlmaLaurea focuses more on the after-graduation steps, Futuro Laboral gives priority to the previous stage of tertiary studies and Graduados Colombia offers both approaches.

AlmaLaurea provides the largest Italian database of graduates resumes (900,000 from 50 universities as of June 2007) and now gathers 67% of all Italian graduates' profiles. AlmaLaurea was created in 1994, is currently managed by a consortium of Italian universities and supported by the Ministry of Education, Universities and Research. The services offered to graduates and students include the following: online posting of graduate resume, advices to improve resume, and possibility to update it regularly; access to a large bank of job offers and enterprises characteristics, and possibility to answer job offers online through AlmaLaurea Website; postgraduates programs are also described to better match students' needs for further education; alerts are sent via emails to keep the user on track and facilitate his or her proceedings.

The incentives for universities to subscribe to AlmaLaurea are significant: provide more options to their students, think about new curricula and orientation, and develop internships/first jobs options. AlmaLaurea also provides annual information on the occupational conditions of graduates, including PhDs, gathers archives of graduate and doctorate thesis titles, validates the administrative records of graduates, and helps promote post-graduate and master courses through the website. Employers, for their part, have online access to the largest Italian database of graduates' resumes, and can easily purchase CVs, select best candidates through criteria matching, announce new job offers and describe their company to attract best graduates.

Futuro Laboral focuses more on the orientation stage. Supported by the Ministry of Education and mutually organized by the University Adolfo Abáñez School of Government and the University of Chile's Department of Industrial Engineering, it aims to provide orientation tools to youth and students. As such, Futuro Laboral provides information on the occupational situation of graduates of hundred different professional and technical careers that represent 75% of technical and professional graduates. These hundred careers are thus described, with salary ranges, the type of study they imply and employment opportunities they generate.

As with AlmaLaurea, Futuro Laboral's approach is very practical and user friendly. Through its website, students can look for a program by level, by area, or by career, they can visit foreign websites containing information on career and work in other countries, and have access to an online library referring to a large database of information on the employability of technical and professional graduates.

Graduados Colombia, Observatorio Laboral para la Educación was launched in 2005 and is managed by the Ministry of Education. It contains information on the demand and supply of Colombian labor market. Students, families, tertiary education institutions, researchers and the productive sector have access to statistics on the academic level of technicians; graduates and postgraduates, the salaries they receive, average time to find the first job, as well as the cities where they work. The website serves as a tool for students to better choose their careers, and it is also useful for tertiary education institutions to renew and adapt the programs they offer according to the labor market needs.

As with the Chilean and Italian initiatives, Graduados Colombia is very practical and user friendly. For students and graduates, it provides information on scholarships, grants and loans to continue studying, as well as information on academic programs (including postgraduate degrees). There are links to access job offers in Colombia and in other countries as well as advice and tips on how to write and present a CV. Graduados Colombia allows tertiary education Institutions to learn from graduates' follow-up mechanisms and obtain ideas for developing alliances with the productive sector at the national and international levels. The productive sector can also avail themselves of ideas from existing experiences on partnerships with the education sector; and better understand the link between the labor market observatory and the national and regional competitiveness strategies. Visitors are able to look for the results of the surveys administered to graduates and employers; as well as the studies on specific knowledge areas and sectors.

These three initiatives show particular examples of labor market observatories that aim to provide a better understanding and match between individuals' professional aspirations, tertiary education, and occupational trends. As such, they offer concrete responses to one of the main challenges of tertiary education: its relevance to individuals and societies.

Most OECD countries have LMOs or employment observatories, such as the Bureau of Labor Statistics in the USA (www.bls.gov), and the European Union employment observatory (www.eu-employment-observatory.net). There are also sub-national LMOs, such as the learning and skills observatory in Wales (www.learningobservatory.com/lmi-home) and the sub-regional Employment and Training Observatories(OREF) in France.

References:

1. AlmaLaurea, Italy: <http://www.almalaurea.it/>
 2. Futuro Laboral, Chile: <http://www.futurolaboral.cl/>, <http://www.sies.cl/>
 3. Graduados Colombia, Observatorio laboral para la educación: <http://www.graduadoscolombia.edu.co/>
-

Annex 2 - Matrix of Knowledge- and Technology-Transfer Mechanisms

University-Industry Linkages	Role of National Government	Role of Local Authorities	Comments
<p>Public space function Contacts and networking Conferences, fairs and forums Publications and dissemination of findings Alumni associations</p>	<p>Develop and fund programs to create and support sector clusters and networks</p>		<p>With education and training, this function is seen by firms as the most important contribution of universities</p>
<p>Human capital formation Student participation in firm R&D (internships and co-op programs) Employment of first-level and master graduates Employment of postdoctoral graduates in R&D Participation of industry practitioners in teaching and curriculum development Joint diploma thesis or PhDs University researcher participation in firm Participation of firm employees in university training course (on-campus or on-site)</p>	<p>Priority setting and incentives for establishment of new programs (emerging & inter-disciplinary fields) Targeted scholarships Mobility scholarships Employment flexibility (sabbaticals, leave without pay)</p>	<p>Funding and tax incentives to facilitate insertion of PhD graduates</p>	<p>Primary role of universities in support of innovation</p>
<p>Research Research contracts Joint R&D projects Research consortia Industry researchers seconded to university labs</p>	<p>Funding (direct / matching) Tax incentives Assessment of research capacity of universities Criteria for evaluating the performance of researchers</p>	<p>Funding Attracting “anchor tenants”¹ Helping cluster formation Targeted support for SMEs Intermediary agencies</p>	<p>Increased returns at the intersection of traditional disciplines</p>
<p>Problem-solving and consulting Consulting contracts Testing, standards, prototypes, and proof of concept designs</p>			
<p>Technical infrastructure Use of university labs Common lab Common use of machines (on campus or in firm) Science parks</p>	<p>Funding</p>	<p>Funding Serviced land and infrastructure</p>	<p>Need for clear revenue sharing arrangements within universities</p>
<p>Knowledge commercialization Licensing of university-held patents Incubators Start-ups Spinoffs</p>	<p>IPR legal framework Financial autonomy of public universities</p>	<p>Funding Technical assistance</p>	<p>More likely to happen in biotechnology and biomedical sciences, also nanotechnology, new materials and IT</p>

Source: Elaborated by Jamil Salmi, based in part on material included in Yusuf., S. and K. Nabeshima (2007). How Universities Promote Economic Growth. Washington D.C., The World Bank

¹ Agrawal, A. and I. M. Cockburn (2002). "University Research, Industrial R&D, and the Anchor Tenant Hypothesis." NBER Working Paper 9212, National Bureau of Economic Research, Cambridge, MA.

Annex 3 - Participation of the Ministry of Education, dates and place of the meetings and documents made available to the Committee of International Experts

The participation of the Ministry of Education in the work was coordinated by Dr. Luis Delgado, Deputy Director General of Modernization and Internationalization of Universities, acting on behalf of the Secretary General of Universities, Professor Màrius Rubiralta. The Ministry of Education provided the Committee with a comprehensive list of relevant documents listed in this Annex, prepared information notes and interview guides for the interviews with stakeholders, summaries of the meetings as well as organizing the following review meetings:

Dates and place of the meetings

Kick-off meeting, Tuesday 23rd and Wednesday 24th November, 2010, Madrid

Working meeting, Wednesday 26th January, 2011, Brussels

Working meeting, Thursday 28th April, 2011, Madrid

Working meeting, Tuesday 17th May, 2011, Paris

Closing meeting, Monday 25th July and Tuesday 26th, 2011, Paris

Documents

Background

- OCDE Report on HE in Spain: OECD Reviews of Tertiary Education
- ES – Country fiche tertiary education
- EPC–WG-OPF: Higher Education in Spain
- El Sistema Universitario Español ante la apertura del curso académico 2010-2011. Consejo de Ministros, 1 de octubre de 2010
- Datos y cifras del Sistema Universitario. Curso 2009/2010
- Estadística de tesis doctorales año 2008
- La universidad en cifras 2010 (vols. 1, 2, 3)

General Strategy

- Strategy University 2015. Modernising the University. June 2010
- Estrategia Universidad 2015. The contribution of universities to Spanish socio-economic progress 2010-2015. October 2010
- Estrategia Universidad 2015. Contribución de las universidades al progreso socioeconómico español 2010-2015. Octubre 2010.

- La contribución del talento universitario en el futuro de la España 2020: Internacionalización, Excelencia y Empleabilidad. Junio 2011

Strategic Axes

➤ **Missions**

Education

- Acuerdo Consejo de Universidades Formación Permanente
- La formación permanente en las universidades españolas
- R.D. 99/2011, por el que se regulan las enseñanzas oficiales de Doctorado (BOE 10-2-2011)

R & D

- Proyecto Ley de la Ciencia, Tecnología e Innovación

Third Mission

- Estrategia Estatal de Innovación E21
- Resumen Estrategia Estatal de Innovación E21
- Ley 2/2011, de 4 de marzo, de Economía Sostenible (BOE 5-03-2011)
- Ley Orgánica 4/2011, de 11 de marzo, complementaria de la Ley de Economía Sostenible, por la que se modifican las Leyes Orgánicas 5/2002, de 19 de junio, de las Cualificaciones y de la Formación Profesional, 2/2006, de 3 de mayo, de Educación, y 6/1985, de 1 de julio, del Poder Judicial (BOE 12-03-2011)
- La Dimensión Social de la Educación Superior en Europa. Informe del Ministro de Educación al Consejo de Ministros. Enero 2010

➤ **People**

- R.D. 1220/2010, de 1 de octubre, por el que se crea el Observatorio Universitario de Becas, Ayudas al Estudio y Rendimiento Académico (BOE 16-10-2010)
- R. D. 1791/2010, de 30 de diciembre por el que se aprueba el Estatuto del Estudiante Universitario (BOE 31-12-2010)
- Plan Director de la Dirección General de Formación y Orientación Universitaria
- Plan Director de Empleabilidad Universitaria. Junio 2011

➤ **Capacities**

Funding

- Modelo de Contabilidad Analítica para Universidades. Particularización del modelo C.A.N.O.A. para Universidades
- Documento de mejora y seguimiento de las Políticas de Financiación de las Universidades para promover la excelencia académica e incrementar el impacto

socioeconómico del Sistema Universitario Español (SUE) (Eje de la EU2015) (Consejo de Universidades – Conferencia General de Política Universitaria). Abril 2010

Governance

- La Gobernanza de la universidad y sus entidades de investigación e innovación. MEDU – Fundación CYD - CRUE

Internationalization

- Estrategia de Internacionalización. Plan Director de Internacionalización 2010/11

➤ **Environment**

- Campus de Excelencia Internacional. Convocatoria 2010. Presentación de los proyectos seleccionados.
- International Campus of Excellence. Promoting critical mass at national level: policies and incentives. Lisbon, 19-9-2010
- CEI: El programa español de Campus de Excelencia Internacional

Implementation

- Plan de Acción EU 2010-2011

Tools

- Information Note on aspects where further discussions and inputs are needed within the development of SU 2015
- Information Note on new lines and achievements reached during the development and implementation of SU 2015
- Information Note on the consistency among the OECD Review of Tertiary Education in Spain and SU 2015
- International Commission Strategy University 2015: Interview Guide
- Summaries of International Commission SU2015 meetings