

# CHAPTER

## Reinventing the European Higher Education and Research sector: the Challenge for Research Universities

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### INTRODUCTION

**T**he European higher education and research sector, as well as the European research universities, are facing issues and challenges that are sometimes different in magnitude and more often quite different in nature from those in North America. In any case, the continuous transformation of the European higher education and research sector has been subject to a strong acceleration over the last five years, which will provoke deep changes in the coming decade.

By far the main consequence of these significant changes is the fact that the environment in which European universities function will become more transparent and competitive. All universities will therefore have to take initiatives and implement clear strategies to better position themselves. This will clearly require major transformations. The question of whether institutions should really “reinvent” themselves depends on the definition we give to this word. In any case, it is certain that universities will have to change more over the next 10 years than they have over the last 50 years, during which they had to adapt to the massification of higher education. During this latter period, they faced the major challenge of boosting their capacity to absorb additional students. But few changes were made regarding their missions, structure and decision-making processes. Today’s environment requires

strategic decisions affecting the missions and the structure of each institution, that is measures and decisions which are much more difficult to make and implement.

In this second introductory chapter, we shall mainly describe and comment on the main policy developments in Europe, and briefly analyse how they will affect research universities.

## **THE TRANSFORMATION OF THE EUROPEAN HIGHER EDUCATION AND RESEARCH SECTOR**

### **Introduction**

Both Europe, as a continent, and its higher education and research sector have entered a period of rapid and deep change. The European integration launched in 1957, with six countries deciding to create the European Economic Community, entered into a new phase at the turn of the millennium with the creation of a single currency for 12 countries – the Euro – and with the forthcoming integration of ten additional states from Central and Eastern Europe, enlarging the European Union to 25 countries in May 2004.

The European higher education and research sector itself has been shaken, in particular, by two political initiatives. The first one, launched in 1998 at the Sorbonne in Paris and confirmed in 1999 in Bologna, aims at creating a “European Higher Education Area” (EHEA)<sup>1</sup> without borders by 2010. The declaration signed in Bologna (1999) stressed the “central role of universities in developing European cultural dimensions”, and “it emphasized the creation of the European area of higher education as a key way to promote citizens’ mobility and employability and the continent’s overall development”. We shall later refer to this initiative as “the Bologna process” or EHEA.

The second initiative was taken in 2000 by the Council of Ministers of the European Union. It aims at creating a “European Research Area” (ERA), with the explicit ambition that Europe becomes “the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion” (Lisbon European Council 2000).

The political, economic and social changes, as well as these two initiatives, are giving rise to a series of reforms, some with profound consequences. These reforms were generally initiated by national governments and by the European Union, but diverse university organizations and individual univer-

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1 In order to shorten the text, several abbreviations are used. A list is available at the end of the chapter, after the references.

sities, as well as the Council of Europe, subsequently took a proactive role. The clear political objective is to improve the competitiveness of the European economy thanks to the promotion of knowledge creation and transfer, and to the improved efficiency of the higher education and research sector, globally and at the level of each institution. Universities themselves are using this opportunity to reaffirm their central role in the creation of new knowledge and in the training of researchers, as well as to reinforce arguments for their autonomy.

### **Characteristics of the European higher education and research sector**

When considering anything happening in Europe on the political as well as the higher education front, it is essential to realize that Europe is a conglomerate of 50 countries, 45 of them members of its largest governmental organization, the Council of Europe (2003), with a total population of 800 million people. Some countries are geographically large, like the Russian Federation and Germany, some very small, like Liechtenstein, Estonia, Luxembourg and Slovenia. Europe is moreover characterized by a broad cultural diversity of language, history, political system, economic development, attitude to work and studies, social aspiration and religious background and faith.

Therefore, it is not surprising that the European higher education and research system is also extremely diversified. Each country has its own system and there are even differences within federal states. In particular, some countries have a binary system, with a relatively clear division of tasks between the universities and the mostly teaching and vocational institutions, whereas the system is unified in other countries, which does not, however, mean that all institutions are alike. In some countries, basic research is done exclusively within universities, whereas, in other countries, part or most of the research is done in separate laboratories or centres.

Traditionally, European universities are public. This means that they are mainly financed and controlled by the state, which however grants them a more or less large degree of autonomy. However, the political “earthquake” provoked by the fall of the Berlin Wall in November 1989 was followed in East and Central Europe by the creation of well above 1,000 private universities, most of them focused on teaching and highly dependent on teachers employed in the public sector. Another characteristic is that the size of the European institutions varies enormously, from 100 to more than 100,000 students! Moreover, the huge majority of the approximately 1,000 public universities purport to do basic research, although few ask themselves whether the research they are doing is contributing to new knowledge or to solving important societal problems. This also explains why the average size of

research universities is clearly smaller in Europe than in the United States. Moreover, the geographical division of quality research is quite unbalanced, as most of the top research universities are concentrated in the north-west quadrant of the European continent. Finally, the lion's share of teaching is carried out in the language(s) spoken in the country, which means on the whole more than 20 different languages are used! Last but not least, it is not surprising that, with approximately 50 sovereign states, there are all sorts of barriers to mobility, of a political as well as of an administrative nature.

### **Towards a European Higher Education Area (EHEA): The Bologna process**

By far the most discussed topic in higher education is the implementation of the “Bologna Process”, which aims to create a European higher education area without borders – internal or external. The objective is to improve the quality of education and to develop the sense of a European community thanks to the mobility of students and teachers, and to make the European higher education system more understandable and therefore more attractive to overseas students. Launched in May 1998 by France, Germany, Italy and the United Kingdom – independently of the European Union – this initiative was adopted by 29 countries a year later in Bologna (city of the most ancient European University) (Bologna declaration, 1999). Realizing that the European higher education system was anything but transparent, and that there are numerous barriers to the mobility of students between countries, the ministers of education pledged to take the necessary measures to overcome these difficulties.

The central idea of the Bologna process is built on four pillars:

- Each country adopts a system articulated around “Bachelors” and “Masters” degrees. The first cycle, the “Bachelor”, should be conceived as a first period of education, which should also facilitate the entry of students to employment: basic skills are transmitted alongside scientific knowledge and methodologies. The second cycle, the “Master”, should allow students to deepen their knowledge, either by specializing in a discipline or by embracing a multidisciplinary or interdisciplinary approach.
- The development of the European Union students’ mobility programmes *Erasmus* and *Socrates* encouraged the introduction of the European Credit Transfer System (ECTS), which attributes to each course (or other learning activity) a number of credits corresponding to the effort required (ECTS, 2003). This is a very useful tool for validating credits obtained during a semester or a year spent abroad and for taking them into account towards obtaining a degree in one uni-

versity. The new system, which has yet to be put in place, is more ambitious as it should allow the accumulation of credits by students who would like to study at two or more universities, taking their degree from the final one.

- Obviously, an institution with high academic requirements will not accept students who have accumulated any number of credits if they have been acquired at an institution that they do not consider of a relatively equivalent level. Therefore, the quality of each institution is going to play an increasing role in the success of the process. In this respect, the three key words are accreditation, which means that a formal process assesses whether an institution has reached a standard of quality which can be considered as sufficient; quality assurance, which means that universities should pay greater attention to improving their quality in teaching and research; and recognition of degrees or years accomplished. We shall consider accreditation and quality assurance later. The issue of recognition of knowledge acquired has been considered earlier and independently of the Bologna process. The Council of Europe and UNESCO jointly developed a convention of mutual recognition of years of studies based on a set of principles accepted by all countries signatory to the convention (1997). Moreover, the Commission of the European Union, the Council of Europe and UNESCO developed the idea of the "Diploma supplement", that is a standardized document annexed to a final diploma, where the programme of studies is described in some detail. Developed first of all to respond to the needs of employers, these "Diploma supplements", if used on a broad base, might become another instrument to build trust and transparency between institutions.

The first phase of implementation of the Bologna principles has been rather chaotic: in some countries, governments have passed laws; in others, the universities or their national organization have been allowed to conceive their strategy. Hence, it appears obvious that the system, which will eventually work, will remain quite diversified, but will be more competitive: each institution will be forced to develop Bachelors and Masters where they are best in order to attract students.

The Bologna Declaration has foreseen a follow-up procedure and the ministers agreed in Bologna to meet again within two years in order to assess the progress achieved and the new steps to be taken. In May 2001 the ministers meeting was organized in Prague. A progress report was presented (Lourtie, 2001), together with a survey of trends in learning structures in higher education – Trends II (Haug & Tauch, 2001). The ministers acknowl-

edged that the goals laid down in the Bologna Declaration have been widely accepted and are used as a basis for the development of higher education in most signatory countries. Four additional countries have been accepted to join the process, thus enlarging it to 33 members.

The Prague meeting confirmed the six objectives from the Bologna Declaration – synthesized above as four pillars – adding three additional points: lifelong learning in higher education, the involvement of higher education and student organizations into the process to secure its “social dimension”, and the promotion of the attractiveness of the European Higher Education Area (Prague Communiqué, 2001). Finally, the ministers encouraged the follow-up group to arrange a series of thematic seminars during the next two years and decided to meet again in Berlin in 2003.

Thus, the central activity of the follow-up period 2001-2003 was organized around “official Bologna seminars”, focused on six problem areas: quality assurance and accreditation, recognition issues and the use of credits, development of joint degrees, degree and qualification structure, social dimensions of the Bologna process and lifelong learning. Moreover, the European University Association (EUA) and the National Union of Students in Europe (ESIB) organized important conventions.

### **THE EUROPEAN RESEARCH AREA (ERA)**

Observing the continuous rapid growth of the U.S. economy during more than a decade, Europe realized that this success was in large part due to the fact that knowledge was becoming a production factor as important as labour and capital, and that information technologies were becoming a crucial tool of development. The European Council, that is the Council of Heads of States of member countries of the European Union (2000), decided in 2000 in Lisbon that the European Union should increase its investments in research and technology development in order to become “the most competitive and dynamic knowledge-based economy in the world” (Lisbon European Council – President’s conclusion, 2000). The basic strategy proposed was to create the “European Research Area” (ERA) (COM, (2000) 6 and (2000) 612 final).

The belief is that, in order to unleash the great potential of European research, it is essential to better integrate national efforts by encouraging researchers to work better together at the European Union level, by promoting cooperation between university and industry and by lowering administrative and political barriers to that cooperation.

The tools enacted or considered to reach this target are manifold:

- To introduce new tools in the traditional “European research programmes”, starting with the sixth framework programme 2002-2006

(2002). These are first the *networks of excellence*, which aim at pooling a critical mass of competence and skills in order to advance knowledge on a defined theme and, second, the *integrated projects* created to reinforce European competitiveness or to contribute to the solution of important societal problems through the mobilization of a critical mass of research and technological development resources and skills.

- To integrate, at least partially, the European Union and the national research programmes in order to break the tendencies to protectionism of the national programmes. This remains a long-term target. However, the creation of a “European Research Council”, which is currently on the agenda, could contribute to reaching this target. This Council would act as an international research funding body at the European level to finance European projects, essentially in basic and curiosity-driven research. If the leading research countries are generally favourable to this project, there is opposition from those countries that do not expect to gain much from it; therefore, it will be necessary to conceive accompanying measures for the latter to secure its implementation.
- Very recently, the European Commission issued a communication “More Research for Europe, Towards 3 % of GDP” (2002), stating that the only way to reach the ambitious target set up in 2000 was to increase the general effort made in research to reach 3 % of gross domestic product (GDP) and that a great part of the additional effort should be made by the private sector. An implementation plan has just been published (2003).

The creation of the European research area focuses not only on questions of organization and funding. It tries also to address the European paradox in that the excellent level of basic research – probably as good as in the United States – does not translate into new applications as well as in the United States. This is partly due to the division of Europe into numerous sovereign countries. This requires that Europe – but it means in most cases each European country – takes many political and administrative measures to:

- Reduce the barriers to the mobility of researchers,
- Promote the transfer of knowledge, e.g. in creating a European patent,
- Find new ways to finance research,
- Develop a set of rules to secure fair university-industry collaboration,
- Clarify the ownership of the intellectual property rights,
- Attract the best researchers worldwide,

- Avoid bureaucratic behaviour, which is consuming too much of the best researchers' time.

### **Berlin Summit 2003: connecting the two pillars of the knowledge-based society**

On September 18-19, 2003, the ministers responsible for higher education from countries that are participating in the Bologna process met in Berlin for the third time to assess the progress and to trace future developments. A progress report was presented (Zgaga, 2001) together with a survey of trends in learning structures in higher education – Trends III (Reichert & Tauch, 2003). The summit reaffirmed the nine action lines from the two former meetings and took some important new decisions, in particular the politically sensitive decision to further enlarge the process to Andorra and the Holy See, four countries of South East Europe (Bosnia and Herzegovina, Serbia and Montenegro, Macedonia and Albania) and, last but not least, to the Russian Federation. The Bologna process now encompasses 40 European countries and, even after the enlargement of the European Union to 25 members in May 2004, the process will still include 15 members more than those concerned by the E.U. framework and agenda. The next summit will be in Bergen (Norway) in May 2005.

The real issue of the follow-up period 2003-2005 will be the decision to speed up the process. In the Berlin Communiqué (2003), the ministers stressed the need to intensify the efforts at institutional, national and European level, and committed themselves to three intermediate priorities for the next two years: promotion of effective quality assurance systems, effective use of the system based on two cycles and improvement of recognition system of degrees and periods of study.

Even more important, the Berlin Communiqué brought about a 10th “Bologna objective”: to connect the European Higher Education Area and the European Research Area, as the two most important “pillars of the knowledge-based society”. Criticisms had often been made that the Bologna process concentrates predominantly on “mass higher education” at undergraduate level and did not consider seriously the role of doctoral degrees in the emerging EHEA. The necessity of linking higher education and research on a broad European level had been stressed at various occasions before the Berlin summit, in particular among the academic community and in particular by the EUA. Therefore, it was good news for universities to learn that the ministers consider it necessary to go beyond the present focus of two main cycles of higher education to include the doctoral level as the third cycle in the Bologna Process. (Berlin Communiqué, 2003). In other words, ways have been found to bridge the gap between the EHEA as a European intergovernmental process and the ERA, as a European Union process. These new

developments are obviously of direct concern to the research-led universities, which could see with some anxiety that all the attention was focused on the teaching part or their mission.

## RELATED OR ONGOING CHALLENGES

If there is no doubt that the discussion around higher education and research in Europe is at present largely dominated by the Bologna process and the creation of the ERA, many other issues – related or ongoing – deserve as much attention. This is in particular the case regarding financing, quality, university autonomy, governance and management, and the negotiations of the general agreement on trade in services (GATS).

### **Under-funding of the higher education and research sector**

Financing higher education and research is obviously an ongoing issue in Europe, but apparently not of the same magnitude as at present in the United States. However, some countries and the European Union (2002) are now recognizing that the funding of universities and research is globally too low. The large increase in the number of students over the last 30 years was never matched with an equivalent increase in funding. Therefore, over the years public subsidies have been more or less stagnating or even decreasing per student in many countries, and industry support, mainly to research, although slightly increasing, has not compensated for the diminishing public input. Recent willingness expressed by the European Union and some countries to significantly increase financial support to universities and research is today threatened by the sluggish or stagnant economy. This explains why one of the most sensitive issues in Europe is the determination of an increasing number of political or university leaders to introduce – or to significantly increase – student fees (see chapter 13).

It is worth noting that in its communication *Towards the European research area* (2000) the European commission did not mention even once the role of universities, which prompted strong reactions from the university community. The crucial role of universities in the training of researchers and the development of new knowledge was recognized in further communications and in particular in the communication mentioned above: *The role of Universities in the Europe of knowledge* (2003). Supporting the creation of the ERA, the Communication openly stresses in its introductory part that “the European universities are not at present globally competitive with those of our major partners, even though they produce high-quality scientific publications”. One of the main reasons is that there are “insufficient means” for their complex activities. Considering the critical need to adapt and adjust to a whole series of profound changes, it is crucial that European universities

have sufficient and sustainable resources. The Communication tries to identify possible points of increasing and diversifying universities' income and using the available financial resources more effectively. Moreover, it also stresses the need to apply scientific research results more effectively, to create the right conditions for achieving excellence and to develop European centres and networks of excellence. It concludes that "if it is to achieve its ambition of becoming the world's most competitive and dynamic knowledge-based economy and society, Europe simply must have a first-class university system – with universities recognised internationally as the best in the various fields of activities and areas in which they are involved."

### **Necessity to promote a culture of quality assurance**

The quality of teaching and research has become one of the most important issues at governmental, as well as at institutional levels. This is a direct consequence of the increasingly competitive environment, and a necessity for the success of the Bologna process. The debate is presently concentrated around different issues and tensions.

One of the tensions concerns who should be responsible for evaluation. Many governments are setting up accreditation or evaluation agencies to audit and control the universities. There is clearly mistrust about the ability of universities to take quality assurance seriously.

Another tension concerns what should be done – accreditation or promote quality assurance procedures – and how? In this context, different initiatives deserve mentioning. Established on the basis of the European Council Recommendation of 1998, the European Network for Quality Assurance (ENQA) is a network of quality assurance agencies set up to disseminate information, experience, good practices and new developments in quality assessment and quality assurance in higher education. To this end, it initiated, among other measures, a useful survey (The Danish Evaluation Institute, 2003) to identify shared protocols of quality assurance among European countries.

The experience in countries which put great hopes into very comprehensive approaches shows that these efforts are extremely costly and do not bring the expected results with respect to improving the quality of teaching and research, and even induce negative strategic behaviours. This situation encouraged England, for example, to abandon its ambitious evaluation procedures and to envisage replacing it with a system of institutional evaluation. This is also why the EUA is firmly advocating the adoption of a system of quality assurance which takes into account the fundamental characteristics of universities, in particular their autonomy and the high quality of their human resources. At its Graz convention in May 2003, the EUA adopted a

position paper stating that any evaluation system should be based on the following principles (EUA, 2003):

- **Autonomy:** the institution's autonomy must be respected and promoted. It is also the responsibility of an autonomous institution to continuously enhance quality,
- **Trust:** if the State considers that universities must be autonomous, it must trust them to be able to take the necessary measures to improve their quality. However, trust does not mean absence of control; control must be *a posteriori* and limited to the institution,
- **Subsidiarity:** the responsibility should always be left at the lowest level possible. Consequently, universities are best placed to control quality within, and evaluation agencies should control that they are doing it correctly. Obviously, the latter should also be evaluated,
- **Pay due respect to the complexity of the teaching and research missions of a university:** the quality of a university cannot be reduced to a couple of tangible criteria,
- **Avoid bureaucracy:** it has a high cost, without contributing to value (to better teaching and research).

At their Berlin meeting the ministers stressed also that “the primary responsibility for quality assurance lies with each institution itself”, and confirmed their call made in Prague (2001) to the different university and quality assurance organizations to develop until 2005 an agreed set of standards, procedures and guidelines on quality assurance” (Berlin Communiqué, 2003).

This decentralized strategy is certainly valid for established institutions whose main concern should be to enhance quality. However, we consider that the new institutions (public or private, national or foreign) have to be accredited to guarantee that they reach a minimum standard of quality in the interest of the protection of the students-consumers. In other words, it is important to make sure that only institutions which guarantee a satisfactory level of quality can call themselves a “University”. In order to support this aim, the representatives of 13 accreditation organizations from eight countries (Austria, Belgium/Flanders, Germany, Ireland, Norway, Spain, Switzerland, the Netherlands) met in June and November 2003 to create the European Consortium for Accreditation (ECA) in order to contribute to the development of a concept of accreditation that serves not only national needs, but also the needs of the emerging EHEA. As the ultimate objective, participants aim at a mutual recognition of accreditation, either bilaterally or multilaterally.

All these initiatives – to which should now be added the decision of the Steering Committee for Higher Education and Research of the Council of

Europe, taken on October 10, 2003, to put “quality” in its agenda for the forthcoming years, next to the ongoing recognition agenda – show how important these issues are for the future EHEA and how difficult it is to link systems of different traditions and to negotiate commonly agreed standards.

### **Autonomy, governance and management**

The topic of university autonomy, governance and management is also receiving increasing attention in Europe. The main reason is that the fast-changing environment and permanent budget shortages are revealing the limits of the present decision-making mechanisms. University decision-making mechanisms have always been complicated and heavy due to the willingness to apply a system of shared governance, mainly between university professors. Things became even more complicated – not to say more cumbersome – in the 1970s when many European universities introduced the participation of other stakeholders, in particular the students. At present a move backwards can be observed, aimed at streamlining the decision process to make it more hierarchical and hopefully more favourable to decision-making, in particular unpopular ones.

This situation has led to increasing dissatisfaction on the part of the political authorities, which complain ever more frequently that university decisions are not transparent or even that universities are unable to make decisions. This has led to increasing pressure for better accountability and to a clear tendency to political micro-management.

### **General agreement on trade in services (GATS)**

The new round of negotiations to liberalize trade in services will cover education and higher education, as many countries have requested. It is a fact that higher education and research are becoming more and more international and this internationalization can take many forms:

- Cross-border supply with distance education and virtual universities,
- Consumption abroad with students studying in another country,
- Commercial presence with branch campuses and franchises.

However, the higher education community in Europe as well as in North America stresses that higher education and research are a public responsibility and therefore fears that a greater “commercialization” of higher education will in particular neglect some fundamental aspects like equal access to all those who have the capacity, and will lower the diversity and quality of higher education, and even threaten governmental support to higher education.

### **Other issues of lesser concern**

Although the present discussion in Europe is dominated by the Bologna process, the ERA, quality, governance and management, as well as financing and international issues, many other questions are on the agenda in different countries or in different institutions. Let us briefly state some of them:

- Promotion of learning: many universities do not realize that the implementation of the Bologna process is a fantastic opportunity to revise and improve the pedagogy, globally at the level of programmes and individually at the level of teachers. It offers in particular an opportunity to promote an education process focused on learning instead of teaching.
- Use of information technologies in teaching and distance learning: European institutions are aware of the potential and limits of the use of new technologies in teaching. However, apart from dedicated organizations like the Open University in England, the range of courseware available at distance or within institutions is still not very large. A great number of scattered initiatives can be observed at the level of teachers, departments, institutions or even countries, but most have an exploratory character or are of rather local use.
- Lifelong learning: the situation regarding lifelong learning is rather similar to that regarding the use of information technologies in teaching and distance learning. There are many local initiatives within universities, but it does not appear that the universities will gain a position in this market as important as with the traditional students. These initiatives are often hindered by inflexible, traditional higher education structures (enrolment, part-time study, financing, etc.).
- Under-representation of low-income social classes: in most countries, universities are open to any student with a high school certificate and are extremely cheap (less than \$1,000 a year). Therefore, the financial barriers to entry are still relatively low. This does not mean, however, that the situation is satisfactory. There is an obvious under-representation of students of low-income parents or living in remote places. Encouragement policies based on free – or quasi free – access to university have not brought the expected results. This raises two issues. First, should European governments take proactive measures to encourage children of low-income parents to go to high school and then to the university? It appears that Europe is not yet ready for proactive measures. Secondly, we could argue that if free access has not served its purposes, this should be abandoned as it has many drawbacks (see chapter 13).

- A particular problem has appeared in many countries of Central and Eastern Europe where the former “socialist model” with no fees (but limited enrolment) has been widely substituted by a “transitional model”, where students are divided into two groups. The first group is selected on basis of their former academic achievements (e.g. final examination results in high school, entrance examination, etc.) and do not pay fees, while the second group of students, with lower achievements, have to pay. Obviously, this change was influenced by severe budget restrictions, but it produces huge problems in access and equity issues.
- Quality of pre-college education: this is an issue, but the real facts are difficult to appreciate. There is a general feeling that the quality of pre-college education is decreasing in Europe, but this is very difficult to prove.
- Relationship and responsibility of universities to their community: this is also a source of increasing pressures; universities must develop their “third mission”, service to the community, which is often a costly and/or time-consuming additional responsibility. In some countries, some new “regional” universities have been also established.
- Political correctness: this is not really a subject of discussion in Europe. However, it does not mean that the university community is totally independent of external pressures or that it is easy to take firm positions opposing the views of governments or criticizing the economy on delicate societal issues. Many professors therefore prefer to write or speak for their colleagues rather than participate in political debate.
- Replacement of the teachers who are leaving: most of European universities are subject to mandatory retirement, most frequently at the age of 65. The increasing number of professorial positions currently falling vacant is becoming a real challenge as it is not always easy to find highly qualified people to fill them. This should encourage universities to recruit internationally, but in many countries this is not the tradition. Moreover, the salary and working conditions may often not be attractive enough. In the future, however, the difficulties faced by pension funds and an ageing population may force postponing the legal retirement age by 2-5 years. For special reasons, this is already occurring in some Central European countries. However, it opens another issue: the problem of obstacles to the renewal of faculty members in higher education institutions.

## **A PROVISORY CONCLUSION: CONSEQUENCES FOR THE EUROPEAN RESEARCH UNIVERSITIES**

It is obvious that the European higher education and research sector has entered a period of profound changes that will deeply transform it within a decade. This has obvious consequences for institutions, national systems and even for European higher education and research. The aim of this book drawn from the Fourth Glion colloquium is to identify the challenges facing research universities and to propose lines of action for them. Herewith, we shall very briefly identify the main consequences, as well as the main lines of action. The latter will nevertheless form the core of the book (chapters 4 to 16) and the concluding chapter of the book will try to identify more precisely which strategies research universities should pursue to maintain their leading position as research-led universities.

### **Identification of the most important challenges**

Our reading of the recent and expected developments is that the challenges for the next ten years will be concentrated mainly around the three following issues:

- **Increasing competition:** Globalization and the move towards the creation of the EHEA and ERA will create more transparency and therefore increase competition between institutions and national systems. This will force each institution to better profile and position itself in order to become more visible and attractive. This means in particular strengthening strong points and abandoning weaker ones, as well as searching for broad domains of activity or niches in order to exploit comparative advantages.
- **Secure enough funding:** quality research and teaching in a competitive world will continue to become increasingly expensive. Research requires more and more expensive scientific equipment or investigations as well as bigger teams, as it becomes more complex and interdisciplinary. Quality teaching and in particular teaching at an advanced level, and teaching focused on the promotion of a learning culture will remain labour intensive and therefore increasingly costly. The preparation of material for distance learning is also very costly, even if the work is spread over large teams. At the same time, state budgets are under increasing stress due in particular to the ageing population and the heritage of a non-sustainable social security system.
- **Regaining trust from the public authorities and the population:** universities no longer enjoy unlimited trust from the public authorities

and the population. The climate of increased competition in the private sector and induced by tight public budgets, the lack of transparency of their decisions, their great difficulty making decisions and the increasing sophistication and societal impact of science are provoking increasing mistrust in universities and in science. To guarantee the autonomy essential to their creativity, universities must therefore do their utmost to regain this trust.

### **Promising alternative strategies**

This new environment is obviously seriously challenging the European research universities. The fact that the climate of increased competition will encourage universities to specialize more in what they are doing best and even aim at being excellent in specific niches will clearly affect also the research universities. They could lose students to those institutions – even small, but specialized ones – that pay greater attention to the adaptation of their programmes to the short-term requirements of the labour market and to the right balance and coherence of their programmes. The Bologna process will also challenge them, as they will not be able – for quality reasons – to accept in their masters and doctorate programmes all students with a bachelor degree, whatever institution they come from. As they are active in basic research and postgraduate studies, they are expensive institutions that require ample funding. The present mistrust of science and basic research also affects them directly as they are principally active in research at the frontier of human knowledge; in other words, in a type of research which is particularly difficult to explain and justify to broad circles of the public. Below is a non-exhaustive shortlist of the main strategic questions research universities must consider:

- Revising the missions of research universities: research universities should revise the way they fulfil their most important missions, that is to produce new knowledge and to transmit knowledge. To us, these two missions, in particular the teaching mission, as well as part of the research mission, should not only be conceived as aims for the universities themselves, but as aims which should serve society. The right balance between curiosity-driven research, that may or may not serve society in the long run, and research that tries to be useful to society appears to be the main point of misunderstanding between universities and society. (This is also partly true of teaching). This may explain to some extent why external stakeholders are forever trying to intervene in university choices.
- Better profiling and positioning (strategic thinking): the European system is probably weakened by the fact that there are too many

institutions trying to do more or less the same thing (being universal institutions, covering most traditional disciplines) and that too few are really strong in most disciplines or in a selection of disciplines. This is a very serious academic and political issue, but Europe and the European countries cannot hide the question for much longer! It appears also that most of the present top research universities have not really been following strict voluntary strategies to position themselves. Their success can be attributed to a comparatively favourable environment regarding funding and autonomy from the state, and, indeed, to their recruitment policy. All these factors secured them an excellent position in the competitive search for research funding. In other words, they benefited from a “virtuous circle”. The most challenging question today is to know if such an attitude of “laissez-faire” at the level of the leadership of the institution will be sufficient in the decade to come. Our belief is that it will not, as the changes are of a much deeper nature than those of the past. These universities will be increasingly challenged by other institutions trying to better profile or position themselves to meet increased competition.

- Better leadership, governance and management: better profiling or positioning a university implies that the leadership can initiate the analysis and, more importantly, make decisions and implement them, which often signifies making structural changes that affect people. The observation shows unambiguously that this cannot be done without strong leadership and that these conditions are not currently satisfied in the overwhelming majority of European universities. However, the ideal solution is not easy to conceive. One cannot simply give greater powers of decision to the rector or president because in universities, as in no other institutions, there is a lot of knowledge at the bottom of the hierarchy (Weber, 2001). Therefore, there is a very serious trade-off between the creation of a streamlined as well as a more hierarchical process and counting on a more democratic system, which is necessarily heavy and cumbersome, but allows for the participation of all those who can make a contribution to the improvement of the institution. University activities – like all human activities – are becoming more and more complex. Moreover, human resources, representing almost 80 % of total expenditures, are so costly that their action must be better supported. This is why good management counts.
- Another crucial issue in Europe are the mechanisms of control and influence by the government: as has already been mentioned, the institutional autonomy of public universities is most often limited or threatened. One solution both public authorities and universities are

exploring to solve the problem is to create an administrative board between the state and the institution, and give it real decision-making power. This would allow for a clear separation between the bodies that propose a decision, make it and control it.

- Develop a culture of quality: it is also paradoxical that research-intensive universities are generally slow in introducing measures of quality assurance. This is partly due to the position of the researchers who get their scientific reputation outside the institution in their discipline; therefore, they tend to expect as much support as possible from their institution, but are not always as conscientious in serving the institution. This is also partly due to the broad autonomy given to the researchers to choose their field of research. However, even if research-intensive universities can be satisfied with being known in research circles, they should realize that they could improve their global performance by developing an effective culture of quality.
- Secure the necessary financial resources: last but not least, another topic of crucial importance is the funding issue. Even if the new university will be better positioned, therefore, better focused, it will continuously need more financial resources to develop the research infrastructure and to offer better learning opportunities, in particular at the postgraduate level.
- Recruitment policy: paradoxically, it appears to us that the most important action ambitious universities must take is to continue to apply with great rigour one policy that has been key to their success up until now, that is a very strict recruitment policy. More than any other institution, the quality of a university depends on the quality of its human resources. In particular, there is no doubt that to be among the best, a university must be able to keep or attract the best researchers and professors, those able to innovate or to offer solutions at a high level of complexity.
- Attracting the best students: this means also that top research universities must be able to attract some of the best students. To make this possible, the institutions must be visible and attractive. This implies also a selection process at the entry to different stages of a course of study, and, every year, at different levels.

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### **MOST FREQUENTLY USED ABBREVIATIONS**

- ECA: European Consortium for Accreditation
- ECTS: European Credit Transfer System
- EHEA: European Higher Education Area
- ENQUA: European Network for Quality Assurance
- ERA: European Research Area
- ESIB: The National Union of Students in Europe
- EU: The European Union
- EUA: European University Association
- GATS: General Agreement on Trade in Services (GATS).