

European Responses to Global Competition in Higher Education

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1 Introduction

Responses to globalisation and more precisely the growing global competition in which knowledge is a prime factor for economic growth, are increasingly shaping policies and setting the agenda for the future of European higher education. With its aim to become the world's leading knowledge economy, the European Union is concerned about its performance in the knowledge sector, in particular in research, (higher) education and innovation (the so-called "knowledge triangle") and aims to solve the "European paradox": whereby Europe has the necessary knowledge and research, but fails to transfer this into innovation and enhanced productivity and economic growth.

Indicators to "tell the story" refer to investments in higher education and research that lag behind those in the USA and Japan, as is the case with the level of higher education qualifications among the EU working-age population, and the number of researchers in the labour force. The fact that the share of European Nobel prize winners has declined throughout the 20th century, brain drain continues, too few European universities feature in the top of global rankings, they hold few registered patents, the US attracts more R&D expenditure from EU companies than US companies allocate to the EU, and that China may soon be spending the same percentage of GDP on R&D as the EU are fuelling further concern.

OECD's Secretary General commented recently that: "*Universities in Europe are not living-up to their potential. Funding is too low, and the rewards for excellence are not there yet. Links to the business world are also weak. Europe has no shortage of brilliant minds, but they are locked away in low performing institutions*" (Gurria, 2007).

Awareness and concerns are not limited to governmental levels, but are also acknowledged by the higher education sector: *It is evident that the European university system needs to broaden access on a more equitable basis, that it has to reach out to increased excellence and that it must allow for more diversification within the system. The American university system is, as the President of the American Council of Education, David Ward, put it, 'elitist at the top, and democratic at the base; the European university system seems to be neither [...]. Alarming for Europe is not only that China regards the US and Japan, and not Europe, as its potential peers to be matched in research and higher education. As announced officially, China aims at matching the US and Japan with respect to innovations by 2020. Given Europe's stagnation and the dynamics in East Asia, one can easily predict the day when East Asia –and not Europe - will possess 'the world's leading knowledge-based economy'* (EUA President, 2006).

Policy responses to the pressures of growing global competitiveness can not easily be captured as one single trend or strategy, as they are formulated and implemented at different levels: European, national, and institutional, with in addition the regional level sometimes cutting across the European – national distinction. Moreover they are underpinned by sometimes quite different perceptions of globalisation and the meaning of global competition for the sector and by major differences in the actual abilities (i.e. financial and human resources) to support action.

Consequently, European responses may seem to be somewhat preoccupied or confused. Clearly, it takes more political conviction than demonstrated so far to hold to the intended 3% GDP target for R&D expenditure and to accept the 2% GDP target for higher education expenditure, mainly through stimulating more private investments in these areas. Conceptual and practical issues are related to the need for convergence (system coherence and transparency) and more diversity (in order to allow for more access and excellence) at the same time. Other major questions in designing further policies focus on how global competitiveness can best be stimulated and achieved; what role do competition and cooperation-based strategies at national and European level play in this respect and what is the best mix?

2. EU policies in the field of higher education

For the European Union as a whole, with the European Commission (EC) being a major policy actor, we can distinguish different phases and approaches (Huisman & Van der Wende, 2004; 2005). Yet the way in which individual countries respond to these policy initiatives can be quite diverse.

2.1 *Brief historical overview: the ERASMUS era*

After the EC of the then countries of the European Economic Community became active in higher education, in the mid 1970s, its initiatives were for a long period restricted to stimulating cooperation and mobility between 'closed' national systems in which the controlling power entirely lay with the member states (based on the 'subsidiarity principle'). Such initiatives were successfully extended across levels and countries until the end of the 1990s. Beginning with an initiative to stimulate action at the level of individual academics and students, the first ERASMUS programme (1987); gradually through the SOCRATES program the curriculum and the institutional (policy) level were included. With the enlargement of the EU, especially after 1992 with preparations for the joining of ten new central and eastern European member states, the activities underwent a substantial geographic expansion. The rationales for these activities were seen as mainly academic and cultural, for example scholarly exchange, mutual learning processes and the role of foreign languages. The agenda was strongly focused on the European integration process, and consequently on intra-European cooperation. Yet it is also undeniable that the process of European integration, cemented by the completion of the European internal market in 1992, was driven by an important economic agenda. Mindful of this the EC launched in 1991 a Memorandum on Higher Education underlining the role of higher education in the economic and social cohesion of the EU. The response of the higher education community was particularly negative and critical of this use of an economic rationale for higher education.¹ It was ten years before the EC was able to come back with another message on the role of higher education in economic growth and competitiveness.

2.2 *Two major vehicles: the Bologna Process and the Lisbon Strategy*

In the late 1990s in European higher education, awareness of global competition was raised. It was realised that despite all the success that had been achieved in enhancing intra-European mobility², the picture in relation to extra-European mobility was a less successful one. Europe had lost its position as the number one destination for foreign students to the United States, was losing too many of its own graduates and researchers to R&D positions in the United States, and had substantially less efficient

¹ On a larger international scale (including notably developing countries) and later in time, the same type of response emerged from the 1998 UNESCO World Conference on Higher Education, which also strongly rejected the competitive, market-driven model and stressed that appropriate [national] planning must be based on cooperation and coordination between institutions of higher education and responsible state authorities.

² In 2007, the ERASMUS Programme will celebrate its 20 yrs, with over 1.5 million students exchanged (now 150.00 per year) and in the hope that in 2012 3M will be reached.

degree structures than the United States because its graduates entered the labour market at an older age than did American graduates. Awareness of these factors led to initiatives at various levels. First, in 1998 the ministers of four countries (the United Kingdom, Germany, France and Italy), called for the harmonisation of degree structures. This was the initiative that triggered the 'Bologna Process', launched in the signing of the Bologna Declaration by 29 countries one year later. This was an important bottom-up initiative - the EC joined the process only later - towards system convergence with a view to enhancing employability in Europe and the international competitiveness and attractiveness of European higher education as a whole.

The EC itself was able to become more active after 2000, which was the year that the heads of state and government declared in Lisbon that the EU should become by 2010 the most competitive and dynamic knowledge economy in the world. Shortly after that, education was defined as one of the key areas in achieving this goal. This provided the EC with an important political mandate in the area of education policy (though this mandate was not supported by any extended legal power). The EC quickly developed a wide range of initiatives under what became the 'Lisbon Strategy'.

The Bologna Process and the Lisbon Strategy are the main vehicles or frameworks guiding the European response to globalisation in higher education. Although they emerged in very different ways (bottom-up versus top-down), and thus have some different patterns and origins of ownership, and could be characterized as intergovernmental (Bologna) versus supra-national (Lisbon), they seem to converge slowly into one over-arching approach.

After the first phase of the Bologna process which focused strongly on the intra-European convergence and transparency agenda (i.e. reform of curriculum and degree structures for easier recognition with a view to employability in the European labour market), in the second phase, the process has become more oriented the "external dimension", on the aim of enhancing international competitiveness and attractiveness, and on its connections to other regions. This coincided and was paralleled by the creation of ERASMUS MUNDUS programme (in 2004) and the development of the European Higher Education Area (EHEA) and the European Research Area (ERA), as part of the wider of the Lisbon Strategy which aimed to make "Europe the most competitive and dynamic knowledge economy in the world by 2010". Lisbon clearly represents the wider agenda: 'The Education and Training 2010 work programme, recognising the extreme importance of modernisation of higher education, *over and above* the reforms called for in the Bologna process which, *a fortiori*, are also important for achieving the Lisbon objectives' (EC, 2005, p. 11). Also in a more technical sense the key instruments from the Bologna process have been integrated into the Lisbon Strategy (see 2.5).

Although convergence between the two agendas and processes can be observed, by many this is seen as a paradigm shift. The Bologna process is associated with mutual cooperation and an in principle equal position of all institutions and systems, whereas the Lisbon agenda is seen as more explicitly competition-driven and to produce more hierarchical and stratified impressions of the European higher education landscape (see 2.5).

Both processes and their outcomes so far, will be discussed in more detail below.

2.3 The Bologna Process: patterns of convergence.

The Bologna Process represents the totality of commitments freely taken by each signatory country (45 nations since 2005)³ to reform its own higher education system in order to create overall convergence at European level, as a way to enhance international/global competitiveness. Its non-binding character was a crucial facilitator, given the need to overcome reluctance in Europe towards

³.Membership of the EU is not required for joining the process, which explains the fact that the number of Bologna signatory countries exceeds the number of EU member countries (25).

standardisation and harmonisation. Its bottom-up character should be understood in terms of the limited competencies of the EC in the field of higher education policy.

The achievements of the Bologna Process have been substantial and influential. The range of policy issues included in the Bologna Process was extended, throughout the medium of ministerial meetings that took place every two years to follow up on the implementation of the process. The initial focus on a change of degree structures into a two-cycle (undergraduate-graduate) system, and the wider implementation of ECTS (European Credit Transfer System) with the aim of enhancing the readability and recognition of degrees, extended into the development of a European Qualifications Framework, the description and ‘tuning’ of competences and learning outcomes at curriculum level, and substantial initiatives in the areas of quality assurance and accreditation (see also Reinalda & Kulsza, 2005)..

Since the 2005 ministerial meeting in Bergen the work programme has been extended to the “third cycle” i.e. the reform of studies at the doctoral / PhD level. Reforms would focus on length and structure of these programmes, interdisciplinarity, supervision, the training of generic skills, systematic assessments, etc.

A series of bi-annual studies have demonstrated that the implementation of the two-cycle degree structure was established in almost all countries by 2005, although in various modes and at a varying speed of introduction (Reichert & Tauch, 2005). In-depth studies and comparisons between countries show that the actual implementation of the new structures can vary significantly. Lub et al (2003) found substantial differences between the Netherlands, where the new two-cycle system replaced the existing long first-cycle degree system; and Germany, where the new system was implemented in parallel to the existing system and despite quick growth in the number of new degree programmes, only a small fraction of the total student population actually participates in these programmes.⁴ Alesi et al. (2005) found in a comparison between six countries that there is no unified logic of the system of new degree programmes. This point applies both to the breadth of the introduction – in each country different groups of subjects are excluded from the new structure, and different time-frames set for the introduction – and to the duration of the new programmes. The 3+2 year model, a bachelor degree followed by a master degree, is the basic model; but there are many variations from this model. For example the United Kingdom is a notable exception: in that nation masters degrees mostly take one year. Likewise Witte (2006), in a comparison of England, France, the Netherlands, and Germany, found that there is variation in the degree of change following from the Bologna process, especially if one looks at implementation. She concludes that the four countries under study weakly converged between 1998 and 2004, in the direction of the English system.

Witte also concluded that although the changes leading to that convergence all occurred within the framework of the Bologna Process, this does not necessarily mean that they have been caused by it. Rather, the Bologna Process has often served to enable, sustain and amplify developments that have been driven by deeper underlying forces or particular interests at the national level; for example to the pressures to reduce study length, the time within which a student must complete a degree or drop out. Sometimes the Bologna Process has simply provided a mental frame for developments that were unrelated to degree structures as such. This illustrates that actors align themselves with the international context and international perceptions only when those perceptions are consistent with nationally-grounded preferences. At the same time, international perceptions have a very high legitimating power when they support national preferences; even though those international perceptions may be selective and biased, sometimes even wrong, and are rarely questioned (p. 492).

⁴.In 2001, 10 per cent of the total number of study programmes was structured in bachelor-master, with 1 per cent of the student population enrolled in them. In 2003, this had increased to 23 per cent of programmes, catering for 3.5 per cent of the student population.

2.4 *Diversification trends and policies*

Apart from the fact that the Bologna Process is implemented quite differently *across* countries, weakening its harmonising or convergence effects, parallel to it, divergent trends can be observed. This is especially the case *within* countries. Examples are Germany and France, where there is increased diversity in each case. This is partly due to the parallel existence of different degree structures in the transition phase, but also derives from the increased curricular autonomy of HEIs (Witte, 2006). In a number of countries, among the trends in governmental policies are increased autonomy and a push for more diversity in the system. This is especially the case in those national systems which aim to enhance participation in higher education; for example the United Kingdom, Sweden, Finland and the Netherlands, where participation targets of 50 per cent have been formulated. More diversity is seen as a necessary condition to achieving these aims. The EC also advocates increased diversity, as a condition for excellence and greater access (EC, 2005).

At the same time, another process of convergence can be observed. As both academic and professionally oriented higher education institutions offer bachelor and master programmes, there are frequent and increasing instances of functional overlap. This convergence of the two main types of higher education may lead to a change in those nations with such binary systems. But again, in response to this situation, nations exhibit diversity and an overall trend towards a unitary system cannot be confirmed. In Hungary it has been decided to abolish the binary system and to replace it with a more varied range of programmes, especially at masters level. The Netherlands intends to maintain the binary system and wants more institutional types to emerge. In Finland and Austria, binary systems were established only over the last decade. The United Kingdom, which abolished its binary system in the early 1990s, is now looking to re-establish more diversity with the above-mentioned aim of thereby enhancing participation. These trends raise questions about the level at which diversity is defined and pursued, and whether it is systemic, institutional, or programmatic diversity (Birbaum, 1983). A more contemporary point is that 'there has been a gradual shift in the meaning of "diversity" – from diversity among national systems of higher education to a European-wide diversification in institutions and programmes with different profiles' (Hackl in Olson 2005).

An important distinction needs to be made between changes at the undergraduate and the graduate levels. Increasing participation rates require diversity to be enhanced especially at the undergraduate level, thereby enabling non-traditional students to enrol. In terms of programmatic diversity, the introduction of the associate or foundation degree, awarded after two years higher education, is important here, but often this is seen to contradict the spirit of the Bologna Declaration⁵ At the graduate level, where the patterns of activity are closely related to research strengths, there is a trend towards greater concentration and specialization.

These various trends indicate that the current dynamics in European higher education are at one and the same time characterised by trends of convergence, aiming for harmonisation and transparency; and divergence, searching for more diversity. Both kinds of trend are considered important in order to enhance competitiveness in the global context. Increased participation rates among a larger number of domestic students, fostered by diversity of provision, are seen to enhance the potential of each country as a knowledge economy. Enhanced cross-border mobility within Europe, and attracting more students from other regions, objectives fostered by harmonisation and convergence, are seen to enhance the performance of the European knowledge economy as a whole.

At the same time, this implies patterns that to an extent are confusing, and it raises questions about the further direction of the process of Europeanisation in higher education. Given that multi-level actions and interactions are involved, these questions are not easy to answer, and future directions are not easy to predict.

⁵Because the Bologna Declaration required minimum three years for the first degree. This has been solved by considering this type of 'short cycle higher education' as integrated into or linked to the first degree (MSTI 2005).

2.5 *The Lisbon Strategy: Coordinating policies for a European knowledge economy*

As noted, whereas the Bologna Process emerged bottom-up and the role of the EC in the process was initially limited but over time gradually developed into a leading one, the initiative for the Lisbon strategy was taken by the EC at supra-national level, and in its implementation it exhibits a more top-down character. Yet this strategy cannot be characterised completely as top-down, since the formal competences of the EC in the area of education policy have not been enlarged. Instruments used are thus not (legally binding) EU directives, but take the form of recommendations, communications, consultations, or other working documents. This ‘open method of coordination’, based on common objectives, is translated into national action plans and implemented through sets of indicators, consultative follow-up, and “soft” mechanisms such as peer review, peer learning, and peer pressure (see also Gornitzka, 2005).

In 2001, the EC published a first report setting out the steps to be taken in response to the challenges of global competition in higher education (EC, 2001). The report explicitly referred to market-oriented approaches to internationalisation in the United Kingdom, Germany, France, and the Netherlands and stressed the need to attract more students from other regions to the European Union. This laid the foundation for the establishment of the ERASMUS MUNDUS programme in 2004. This programme includes a global scholarship scheme for third country nationals, linked to the creation of ‘European Union Masters Courses’, based on inter-university cooperation networks. The programme has enrolled more than 800 students and 130 scholars, about 40 per cent from Asia, in 60 master programmes in the academic year 2005-2006,⁶ and is expected to grow further. These figures can be compared to the 1,300 foreigners that enter the US every year as fellows of the Fulbright programme, on which ERASMUS MUNDUS was largely modelled.

Following up the Lisbon summit of 2000, in 2002 the EC published a detailed work programme on the future objectives of education and training systems in the EU (EC, 2002), emphasising the central role of those systems in achieving the aim of Europe becoming the world’s most competitive and dynamic knowledge society by 2010. The general goals of improving quality, enhancing access and opening up the education and training systems to the wider world were worked through in a set of more specific objectives for the various education sectors. Those most relevant to higher education were the objective of increasing graduates in mathematics, science and technology by 15 per cent while improving gender balance, to ensure that more than 85 per cent of all 22-year olds had achieved at least upper-secondary education level, and to ensure that 12.5 per cent of the 25-64 year-old adult working population participated in lifelong learning.

In 2003, the EC launched a large-scale consultation on the role of higher education institutions in the European knowledge economy (EC, 2003a). It showed a particular concern about the funding of higher education. The increasing under-funding of European higher education institutions was seen to be jeopardising their capacity to attract and keep the best talent and to strengthen the excellence of their research and teaching activities. The consultation round took two years, and was paralleled by a series of critical messages on growth and innovation. Two important reports published in 2003 (EC, 2003b, 2003c) revealed that the objective of boosting EU spending on R&D from 1.9 per cent to 3 per cent of GDP - the principal target for research expressed in the Lisbon strategy - was far from being met; that the R&D investment gap between the European Union and the United States increasingly favoured the United States;⁷ and that brain drain out of Europe and notably to the US was still on the rise. It was clear that the EU was hindered in catching up with its main global competitors by a lack of

⁶. See: http://europa.eu.int/comm/education/programmes/mundus/index_en.html

⁷. 80 per cent of this comes from the difference in domestic business R&D expenditure between the EU and the US. Further analysis showed that the US attract one third more R&D expenditure from EU companies than US companies allocate to the EU (a net outflow of EUR 5 Billion in 2000) (EC 2003b).

investment in human resources⁸ by not producing enough higher education graduates,⁹ and by attracting less talent than its competitors.¹⁰ Furthermore the EU had too few women in scientific and technological fields; rates of early school leaving were still too high and rates of completion of upper secondary education still too low, with nearly 20 per cent of young people failing to acquire key competences; there were too few adults participating in lifelong learning; and there was a looming shortage of qualified teachers and trainers (EC, 2004).

Early in 2005 a new stage of the Lisbon Strategy was announced. Major EU conferences on higher education and research were organised, and in a follow-up communication on the contribution of universities to the Lisbon strategy (2005), further and wider measures were announced. These initiatives were focused on achieving world-class quality¹¹, improving governance, and increasing and diversifying funding. The European Commission stated that ‘while most of Europe sees higher education as a “public good”, tertiary enrolments have been stronger and faster in other parts of the world, mainly thanks to much higher private funding’ (EC 2005, p. 3). This contrasted with the strong emphasis that many in the higher education community have placed on ‘higher education as a public good’ and on the role of universities with respect to social and cultural objectives rather than economic purposes, especially in the context of the Bologna Process (Van Vught et al. 2002).

The EC identified the main bottlenecks retarding access and excellence as uniformity in provision, due to a tendency to egalitarianism and a lack of differentiation; and insularity, in that systems remained fragmented between and even within countries, and higher education as a whole remained insulated from industry; over-regulation, in that a strong dependence on the state inhibited reform, modernisation, efficiency; and under-funding.¹² The pathways to more access and excellence were seen to be more diversity and enhanced flexibility. At this point the Lisbon Strategy absorbed the Bologna objectives of coherent structures, compatibility and transparency, designed to improve the readability and attractiveness of European higher education internationally. Likewise the Bologna instruments such as the ECTS, IDS and EQF were taken into the Lisbon agenda. The EC also spoke out for the first time on issues such as the governance and funding of higher education, arguing for greater institutional autonomy, deregulation and professionalised management, combined with competition-based funding in research and more output-related funding in education, supported by more contributions from industry and from students via tuition fees.

These statements reflected a preference for new public management (NPM) techniques and related to what was seen as ‘good practice’ in certain member states; notably the United Kingdom, where a risky political initiative to raise higher (‘top-up’) tuition fees in order to provide the university sector with sufficient capital to counteract global competition had succeeded by a narrow political margin; and also systems such as the Netherlands where deregulation and institutional autonomy had been advanced. At the same time there had been a more open debate in the Nordic countries about tuition

⁸. Especially private investments in education in the EU (0.6 per cent of GDP) lag behind the US (2.2 per cent) and Japan (1.2 per cent). The biggest difference is in higher education: the US spends between two and five times more per student than EU countries (EC 2004).

⁹. On average in the EU, 21 per cent of the EU working-age population holds a higher education qualification, compared to 38 per cent in the US, 43 per cent in Canada, 36 per cent in Japan and 26 per cent in South Korea. (EC 2005).

¹⁰. The EU produces more higher education graduates and doctors in science and technology (25.7 per cent) than the US (17.2 per cent) and Japan (21.9 per cent) but the percentage of them at work as researchers is much lower in the EU (5.4 per 1000 population in 1999), than in the US (8.7) and Japan (9.7). This is due to career changes, a limited European labour market for researchers, and better opportunities and working conditions in the US (EC 2004).

¹¹. It was explicitly stated as a problem that apart from some British universities there were no European universities in the top 20 of the world and relatively few in the top 50 as ranked by the Shanghai Jiao Tong University.

¹². EU spending on research (1.9 per cent of GDP) compared badly with the US, Japan and South Korea (all close to 3 per cent thanks to much higher investments from industry). Higher education spending in the EU (1.1 per cent of GDP) also compared badly with US and South Korea (both 2.7 per cent, again related to differences in private investments). It was calculated that in order to match the US figure, the EU would need to spend an additional EUR 150 billion a year on higher education. It was suggested to set a 2 per cent of GDP aim for funding of higher education (EC 2005).

fees for domestic students and differential fees for foreign (non-EU) students¹³. These issues remained highly controversial in other parts of Europe, however.

As well as pushing for the more widespread adoption of these practices, the EU made a notable effort to enhance investments in research, innovation and excellence. In the context of the EU budget for 2007-2013, it was planned to introduce major budget growth in order to enable investment in the new Framework Programme for R&D (FP7) and an integrated programme for education (the Lifelong Learning Programme).

2.6 *Mid-term concerns and challenges*

During 2005 these ambitions were seriously constrained by severe obstacles in achieving a political agreement on the new EU Treaty (the so-called 'European Constitution'), a process that was temporarily halted after French and Dutch referenda failed to gain a majority in favour of the new Treaty, and on the new EU budget. Under the UK presidency of the European Union, the Hampton Court Summit failed to make the intended budget shift from an 'agricultural' to a 'knowledge' Union. Instead of the originally planned EUR 132 billion, a total of EUR 72 billion was attributed to all activities under the heading of competitiveness, growth and employment.

This included a total (seven year) budget of 50.5 billion Euro for the EU's 7th Framework Programme for R&D, which is twice the financial volume of its predecessor (FP6). In comparison: this is a slightly larger budget than the US NSF budget on a yearly basis (6.2 billion US\$ for 2007), although it represents not even four percent of the total of national R&D (private + public) budgets of the member states together. Important, therefore are the bottom-up dynamics that are emerging at the same time through the network of national research councils (ERA-NET), which strives on a voluntary basis for more cooperation between them through transparent peer review, aiming to avoid overlap between national research agendas and pushing for joint calls for proposals (yet still very unfrequent). It is expected that the EC may top up such com-mon budgets as to provide a greater incentive to move towards "single pot" funding. Initiatives for such cooperation also emerge on a regional basis, as for instance between the Nordic countries (see 3.2), which may further encourage this type of bottom-up dynamics.

The most recent review of progress in the Lisbon Strategy displays a more optimistic view with respect to the overall objectives of economic growth, employment and productivity. The February 2007 report of the Lisbon Council stated that: "Now in the 7th year of the Lisbon Agenda some of the objectives finally seem within reach". And that "The famous Lisbon targets have come within closer reach throughout the EU than many had thought possible" (p. 5-6). It should be noted that this review only looked at the largest nine EU economies, comparing them to the EU 15 average (see table 1)¹⁴.

¹³ Denmark has, as the first country in Scandinavia, introduced tuition fees for non-EU/EEA students from September 2006 in an effort to become more competitive in the global arena.

¹⁴ An overview of the EU25 (and now even 27) member states would display a different average performance. The extension of the EU with 10+ countries coinciding with the ambition to become the world's leading knowledge economy is seen by many as the main challenge towards achieving these aims.

Table 1: Overall performance on the Lisbon Objectives of the nine largest EU economies, compared to the EU15 average

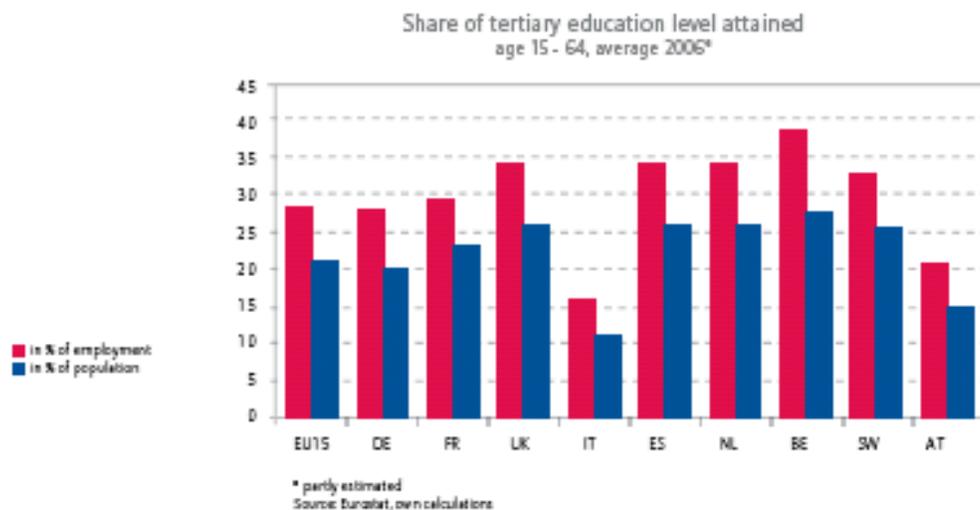
Rank	Country	Overall Score 2006 Q3	Change in Ranking since then	Rank one year ago	Score one year ago
1	Sweden	1.37	←	1	1.26
2	Belgium	1.09	↑ ↑	8	0.72
3	Netherlands	1.02	↓ ↓	2	0.95
4	United Kingdom	0.98	↑ ↑	4	0.85
5	Spain	0.98	↓ ↓	3	0.87
6	Germany	0.91	↑ ↑	9	0.65
7	EU15	0.90	←	7	0.73
8	Austria	0.83	↓ ↓	5	0.83
9	France	0.80	↓ ↓	6	0.78
10	Italy	0.43	←	10	0.33

(Source: Lisbon Council, 2007)

On this basis the report concluded that Europe is doing better economically than it has done in any year since 2000, when economic growth briefly brushed 4%. In particular, growth in the EU-15 was a surprisingly high 2.8% in 2006 – the first time since 2000 that EU countries have come close to meeting the Lisbon target in this vital policy area. And growth has become much more stable; there is no “new economy” hype as there was in 2000 (p. 10). But also that despite the progress that has been made recently, Europe still has low productivity in the services sector – an area which covers 70% of modern economic activity – a fact that many experts blame on the low application of information and communications technology (ICT) in the service sector (p. 13).

Looking at higher education, it can be noted that the overall proportion of employees with tertiary education is steadily rising. In 2006, 29% of the workforce in the EU-15 countries had tertiary or higher education, up from 25% in 2000 (table 2).

Table 2: Share of tertiary education level attained

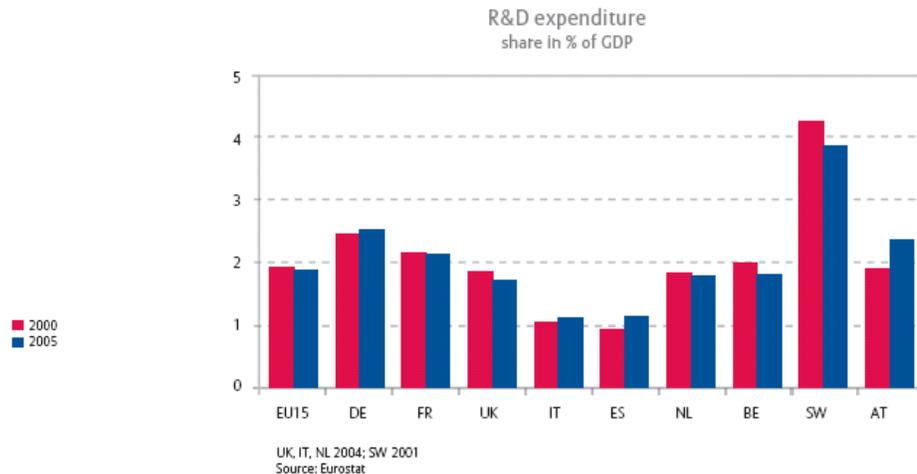


(Source: Lisbon Council, 2007)

For research, however, progress is still unsatisfactory; throughout the EU-15 the share of GDP spent on R&D remains stuck obstinately at 1.9% (table 3), far below the prominent Lisbon target of 3% of

GDP by 2010 (see 2.5). Considerable differences between countries can be observed: Italy and Spain demonstrating very low scores, while in contrast Sweden is way out front. The report notes that education and research alone are not enough for a knowledge-based economy; equally important are the use of human capital and the diffusion of new technologies. Also for the share of private investment in R&D the Lisbon objectives have not yet been met. Currently the private contribution is 55% on average; the Lisbon target being 66%.

Table 3: R&D expenditure in the EU



(Source: Lisbon Council, 2007)

Another recent review of achievements under the Lisbon Strategy (LSE, 2006), which is less optimistic on the wider economic progress, criticizing the failure of EU members to liberalise their product and labour markets, agrees on the weak progress on R&D side. It underlines that R&D and in particular innovation as a route to growth is sensible, but that the cost of patenting in Europe is still about five times the cost of patenting in the United States. And that the ‘brain drain’ from the EU to the United States – because of better research opportunities and higher wages – is still a significant phenomenon and that the Lisbon aim of reversing this trend has not materialised (LSE, 2006).

Despite these disappointments positive points can also be reported. First, the role of the EC, especially in the higher education policy area, has expanded and become less controversial. This is a gain in terms of both legitimacy and coordinating capacity. Second, individual countries have started to respond to the wider EU agenda on global competitiveness. Although the overall targets for investments in R &D and higher education have not been reached; many countries do not as yet reach their individual targets; and in some cases investments have even decreased, with the expected additional contributions from private sources proving especially problematic; as noted several nations have developed initiatives to strive for more excellence and to widen access to higher education, notably the Nordic countries, the United Kingdom, and the Netherlands.

3. Responses to global competition: some case studies

As was indicated before, policy responses to global competition emerge at various levels. Some illustrative examples that reflect initiatives taken at European, regional, national and institutional levels will be presented below.

3.1 *EU-level initiatives: ERC and EIT*

The EU itself established the European Research Council (ERC), set up to fund innovative, ground-breaking basic research, not linked to any political priorities, with competitive funding awarded based on peer review (as with the National Science Foundation allocations in the US). The ERC has been implemented by 2007 with a 7.5 Billion Euro budget for seven years.

Another major, but also slightly more controversial, initiative concerns the establishment of a European Institute of Technology (EIT), to become a symbol of the integrated European Innovation, Research and Education Area, and often seen as a European equivalent of the US Massachusetts Institute of Technology (MIT). To achieve its mission the EIT will set up excellence-driven strategic long-term partnerships in critical areas between all actors involved in the knowledge triangle. Such an initiative would offer European companies a new relationship with education and research.

However, in its original form of a new single-site institution the EIT was heavily criticized, as for instance by the European League of Research Universities (LERU, see 3.3.1): *“It would put all our eggs, and much money, into one uncompetitive basket. At a stroke this ‘flagship’ institution would be artificially elevated in terms of funding above our existing great universities. The concept itself fails to comprehend how and why MIT, on which the EIT is ostensibly modeled, has become the great institution that it is. MIT has economic impact partly because it is a very, very good university, with the breadth of science, arts, social sciences similar to most major traditional universities; partly because it can access massive funding; partly because of the absorptive capacity of regional industry for R&D and people trained in it; and – most importantly - because it has evolved in a competitive environment over many decades. The EIT proposition is the reverse – an anticompetitive, science-only institution, to be funded, not competitively but through earmarking”* (LERU, 2006).

The proposal has been revised to a two-level structure combining both a bottom-up and a top-down approach; a network of “Knowledge and Innovation Communities” (KICs) (joint-ventures of partner organisations representing universities, research organisations and businesses) headed by a governing board that will be responsible for setting the overall strategic priorities of the EIT and for selection, evaluation and coordination of the KICs. The KICs will be selected on a competitive basis, set a medium to long-term (10-15 year) research, education and innovation agenda, and have a fair amount of flexibility to determine their own organisational structure. In the view of the EC, the EIT will be able to award its own degrees (EC, 2006), another point which is contested by established universities, as voiced for instance by the European Universities Association (EUA). The EU asserts that the EIT will be a high-quality ‘brand’ and institutions will compete to join. Target for political adoption of the proposed regulation on the EIT is the end of 2007 or early 2008. In this case, the EIT would become operational in 2008, with the first two Knowledge and Innovation Communities in place by 2010-2011. The proposed budget for 2008-2013 is 2.4 Billion Euro.

3.2 *Regional responses: the Nordic Research and Innovation Area (NORIA)*

While the world envies the Nordic countries for appearing at the top of almost every global and certainly European league table, the Nordics themselves worry about being able to keep their leading position in the field of R&D. A recent report for the Nordic Council of Ministers (an above nation state level body)¹⁵ departed from the assumption that the relevance and success of research and its application in the form of innovation is limited by the size of a country. Since all the Nordic countries are small (population wise), it looks into ways of reaching a critical mass by working more closely

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Nordic co-operation, one of the oldest and most wide-ranging regional partnerships in the world, involves Denmark, Finland, Iceland, Norway, Sweden, the Faroe Islands, Greenland and Åland.

together. In admiration for the EU's successful coordination of its member states research policies, the Nordic countries would likewise develop a joined up research and innovation policy and through it the Nordic Research and Innovation Area (NORIA). Crucial considerations are that: "Nordic instruments can build Nordic platforms and strengths that complement and support those at the European level. However, EU instruments cannot be used to build Nordic positions. The strategic question for the Nordic area is therefore: Is it useful to invest in building Nordic strengths in a European and a global context, since Europe will not do this for us? Our answer is clearly "Yes" (Norden, 2006, p. 53-54). With reference to ERA-NET (see 2.6), it is believed that the opening up of national research programmes to applicants from the other Nordic countries is as such desirable, but may not be politically feasible. Therefore more realistic options are suggested, such as joint needs analysis and planning among funders and other stakeholders in the region; parallel (though separate) calls for proposals; joint calls for proposals financed from a virtual common pot; and closer cooperation between two Nordic research institutions Nordforsk and NICE.

3.2 National responses: Germany, Denmark, and the Netherlands

3.2.1 Germany: creating top universities

In 2004, the then social democrat government decided to create top universities and research institutes that can compete with the global premier league¹⁶. The idea was to achieve this through nationwide competition among universities to identify the best research universities and provide them with extra funding to become "elite institutions" or "lighthouses" able to compete on a global level (Kehm, 2006). A budget of 1.9 Billion Euro was earmarked for 2006-2011 and envisaged to be allocated to about ten future elite institutions (to receive 25 Meuro per year), some 30 excellence clusters (8 Meuro per year), and about 40 graduate schools (1 Meuro per year). As for the first category (institutions), from the first round of submissions (27) ten were invited for further elaboration. This group held no single East German university, included three technical universities and seven universities in the southern region of Germany (Bavaria and Baden-Wurttemberg). Obviously this raised debate over the issue of a regional concentration of top institutions in the south of Germany and on the under-representation of the humanities. Finally, three top universities were selected: Karlsruhe University of Technology, Munich University and Munich University of Technology. The three were selected based on evaluations by international expert panels, leading to a unanimous decision by a joint committee of scientists and federal and state ministers; the latter following the decision of the scientists. The three institutions together share 24% of the total budget, which turns to approximately 20 MEuro per year to be mainly used to attract or retain high-profile scientists to build up or enhance top-level research. A much larger share of the budget (65%) is finally spent on clusters of excellence (only one of which in social sciences), spreading the extra funding over a larger number of institutions after all, although the three top universities are well represented in this category as well. A second selection round will take place in a year's time.

Obviously the initiative was met with scepticism as it implied the breaking of a taboo (all universities are equal in quality) and triggered more competition than ever before. As a process of differentiation it can be seen as the biggest restructuring of the German higher education landscape since the early 1970s, characterized by two new elements: (a) vertical differentiation is more important than horizontal, (b) only the top institutions of the vertical differentiation are treated favourably. Criticism and fears are related to the idea that the initiative for excellence is targeted too much to natural sciences and engineering; that the money is insufficient to turn the selected few into Harvards, MITs or Stanfords; that the money is not provided additionally but will eventually be taken away from the funding of the other universities in Germany; and that the process of differentiation set into motion will concentrate research at a few universities and reduce the rest to teaching only institutions (Kehm, 2006).

¹⁶ In this year the first editions of the THES and Jiaotong global university rankings were published.

3.2.2 *Denmark: national mergers policy*

Aimed at strengthening the country's position in the international higher education and research market(s), Denmark engaged into a merger process in order to create fewer but stronger (and larger) universities. Motivations for this merger operation are related to the challenges of increased global competition, of creating world-class universities, achieving the 3% of GDP target for R&D by 2010 (0.7 % public + 1.7% private in 2005), and allowing 50% of young people to attend higher education (45% in 2006). The strategy is based on increased government funding, new mechanisms for university funding (i.e. more competition for public R&D), pooling and concentration of resources, closer interaction academia-society, while at the same time keeping the link between research and education (Larsen, 2006).

The mergers are taking effect from 1 January 2007, bringing the number of universities back from twelve to nine and probably later on to six or seven. Governments research institutes from 24 to three, while increasing the government funding of R&D with 15% to 1,6 Billion Euro. The "top 3" of mergers include the University of Copenhagen which merged with two specialised universities (one in Pharmaceutical Sciences and one in veterinary and agricultural sciences); the University of Aarhus, which merged with the Aarhus Business School and two research institutes; and the Technical University of Denmark which was merged with five research institutes.

3.2.3 *The Netherlands: federation of the three universities of technology (3TU)*

The Dutch government demonstrated a serious approach to innovation and the knowledge economy, by establishing in 2003 an Innovation Platform, chaired by the Prime Minister, following the example of Finland. R&D performance, university-industry interfaces, as well as the number of math and science students, early school leavers, and constrained visa requirements for foreign scholars and students captured the attention of the Platform.

Although already initiated in a bottom-up way, the Innovation Platform and the Ministry of Economic Affairs encouraged with a 50Meuro grant the formation of a federation by Delft University of Technology, Eindhoven University of Technology, and Twente University. Today the initiative is well under way and has established a joint graduate school including all masters courses (overlap has been abolished) and a common plan for research chairs, replacing redundant research topics, while creating new chairs in more promising areas. On this basis it recently engaged in the joint recruitment of 30 new professors to lead the five new joint centres of excellence that have been established. Furthermore the federation has engaged into joint criteria for bachelor and master programmes, into joint accreditation, and a common framework for the quality assurance of research (3TU, 2005). The 3TU Federation is expected to be a successful player in the European Research Area, by attracting EU more research funding and by effectively linking itself to the EIT (see 3.1).

3.3 *Responses at the institutional level*

3.3.1 *League of European Research Universities (LERU)*

LERU¹⁷ was founded in 2002 by a group of 12 European research-intensive universities seeking to promote the values of high-quality teaching within an environment of internationally competitive research. Together the 20 LERU universities award over 10,000 doctorates annually, enrol more

¹⁷ LERU includes the Universities of Amsterdam, Cambridge, Edinburgh, Freiburg, Genève, Heidelberg, Helsinki, Leiden, Leuven, University College London, Lund, Milan, Munich, Oxford, Paris 6, Paris-Sud 11, Karolinska Institute, Strasbourg, Utrecht, and Zürich.

than 500,000 students and employ well over 100,000 staff. Their total research income for 2005 amounts to approximately 3.5 billion, with well over 100 million coming from the EU. Among LERU's strategic aims are to influence policy in Europe and to be a powerful and authoritative voice, able to exert a profound impact on the decision-making processes concerning basic research in Europe.

LERU is concerned with the question how to ensure that more of our European universities join Oxford and Cambridge in the top of the world university rankings. In their view, the European universities need greater autonomy to respond rapidly to challenges and opportunities, combined with much greater investment to ensure that the best compete at the highest international levels of excellence. Their annual report 2005 states: "Oxford, for example, has an endowment that is about a fifth of Harvard's. In Europe, we spread research money very thinly, rather than using competitive funding in an area with the size and potential of the Union to allow the best to be funded at internationally competitive levels" (p. 5). For this reason LERU has strongly supported the concept of the European Research Council, which, in their view, could become a powerful driver for excellence in Europe. Also for this reason, LERU opposed the initial idea of the EIT, criticizing the lack of competitiveness in its design (see 3.1).

3.3.2 The Manchester merger

In October 2004, UMIST and The Victoria University of Manchester merged to create the UK's largest single-site University: the University of Manchester, in order to match the leading universities in the world, i.e. to become one of the top 25 strongest research universities in the world by 2015. Manchester University has more 36,000 students and a £500m annual turnover. The merger was the culmination of nearly two years work and planning, including the launch of a distinctive new brand identity, the implementation of a new management and governance structure, the largest programme of capital investment (£350m) ever in British higher education, and the creation of six new research institutes. In 2006 The University of Manchester secured the title of 'Higher Education Institution of the Year', praised by the country's Prime Minister for its determination to reinvigorate itself to become one of the top research universities in the world.

4. Competition & diversity: ranking and classification

The examples presented above illustrate responses to global competition and clearly indicate the important role that international rankings of universities play in this respect. Politicians set targets as to how many universities should list in the worldwide top 20, 25, or 50 as a symbol of national achievement and prestige and as engines of economic growth in a global knowledge economy. University leaders express their ambitions by referring to this ordering. While there is disquiet about the impact of the rankings and some instances of critique of the methods, it seems that many of the given examples are in fact directly or indirectly driven by the awareness that these rankings raise with respect to global competition in the higher education sector. In this way rankings have generated a strong drive to improve comparative position, particularly the Shanghai Jiao Tong rankings which are seen as more credible. All of these responses have both cemented the role of the rankings themselves and further intensified competitive pressures (Marginson & Van der Wende, forthcoming).

Yet as rankings seem to be here to stay, they are far from problem-free. Major concerns are related to their methodological underpinnings and to their policy impact on stratification and diversification of mission.

On the methodological side, common problems are that most rankings systems purport to evaluate universities as a whole (denying the fact that they are internally differentiated), that the weightings used to construct composite indexes covering different aspects of quality or performance may be of arbitrary character, and that they are biased on research (especially in the natural and medical sciences) and provide little (or no) guidance on the quality of teaching.

In Europe the Centre for Higher Education Development (CHE) in Germany developed the better alternative. The chief strategic virtue of the CHE rankings, one with far-reaching implications for the character of competition in higher education, is that it dispenses with the spurious holistic (overall or summative) rank ordering of HEIs, and instead provides a great range of data in specific areas, including single disciplines. As CHE states, there is no ‘one best university’ across all areas, and ‘minimal differences produced by random fluctuations may be misinterpreted as real differences’ in holistic rankings systems. The CHE data are made available through an interactive web-enabled database that permits each student to examine and rank their chosen institutions based on their own chosen criteria (CHE 2006). The system is internationally acknowledged as best practice in higher education rankings and ‘nothing short of brilliant’ (Usher and Savino 2006; Van Dyke 2005; Salmi & Saroyan). The system complies with the Berlin Principles on Ranking (UNESCO/IHEP, 2006) as developed by the International Ranking Expert Group (IREG) founded by the UNESCO European Centre for Higher Education (UNESCO-CEPES) in Bucharest and the Institute for Higher Education Policy (IHEP) in Washington. The CHE system now includes data on higher education institutions in Germany, Switzerland and Austria, and the Netherlands and Belgium (Flanders) are preparing to join the system¹⁸. The CHE ranking system is thus well positioned to develop into a European-wide system.

Policy impact of global rankings tends to be distinct as global comparisons are possible only in relation to one model of institution, that of the comprehensive research-intensive university. This model of HEI is the only one sufficiently widespread throughout the world to lend itself to the formation of a single competition, which for the most part is tailored to science-strong and English-speaking universities. Research is not only the most globalised of all activities in higher education, research capacity is a key marker in the higher education landscape because the research standing of HEIs and nations feeds into both their capacity to produce globally-salient outputs and their generic attractiveness to other HEIs, to prospective students and to economic capital. The absence of specialised rankings in vocational education and in teaching functions reduces the status attached to specialisation in those domains. Consequently, ranking and competition together enhance vertical differentiation between research-intensive universities and other type of institutions and between the different grades of research-intensive universities. Policy measures seem necessary to avoid that some HEIs build research strength only through the weakening of others, as this would seem to constitute little gain in national capacity overall, and also to avoid that a certain flattening of national system typologies results so as to lead to more unitary systems (Marginson & Van der Wende, forthcoming).

Policy measures to counterbalance mission drift and consequent convergence is particularly important for Europe, as more rather than less diversity in its higher education landscape is required desirable (see section 2.4). The EC (2003) stated that: *“European universities have for long modelled themselves along the lines of some major models, particularly the ideal model of the university envisaged nearly two centuries ago by Alexander von Humboldt, in his reform of the German university, which sets research at the heart of the university and indeed makes it the basis of teaching. Today the trend is away from these models and towards greater differentiation”* (p. 5-6).

In order to encourage institutions to design different missions and profiles, allowing them to excel in a variety of domains, and to ensure transparency for stakeholders at the same time, at present a typology (classification) of higher education institutions in Europe is being developed¹⁹. The proposed multi-scheme typology acknowledges that institutions can be grouped and compared in a variety of ways. The heart of the typology will be formed by a number of parallel ‘schemes’, relating to the various characteristics upon which differences and similarities of institutions are mapped, each highlighting a different aspect of the profile of the institution (Van Vught et al., 2005). The preliminary work on this

¹⁸ A project coordinated by CHEPS and CHE, with support from the European Commission.

¹⁹ A project coordinated by CHEPS in cooperation with a wide range of stakeholders and with support from the European Commission.

typology was carried out in conjunction with a review of the U.S. Carnegie Classification of higher education institutions, including the reasons for and principles of its revision in 2005 (Sapp & McCormick, 2006).

5. Conclusions and Reflections

This paper analysed a range of policy initiatives in Europe Serious in response to increasing global competition in higher education. Impressive progress as much as persistent and new challenges were reported. As discussed above, there is the complexity of parallel trends of both convergence and divergence (2.4) and challenges related to effectively combining strategies for cooperation and competition.

Major policy questions and choices are related to these strategic categories. Governments have to consider what is the best way to make the national higher education system more globally competitive: national or European-level cooperation or competition, or (more likely) a mix of these four options? National policies often demonstrate combinations of the various strategic options. For example measures to make national research funding more competitive through the national research council may be combined with policies that urge institutions to cooperate more closely within the national context, for example through mergers. At the same time institutions are stimulated to cooperate at the European level by participating in EU R&D projects and the government supports the establishment of the ERC as it believes that competitive funding measures are even more effective at supra-national level. Similar examples could be given for the teaching function. This illustrates how complex is the environment for institutions in terms of partners, competitors and strategic options. Consequently the outcome of the process at a meta-level is ever more difficult to predict. Clearly, successful strategies depend on the right mix of competitive and cooperative options.

Overly simplistic or one-sided competitive models will enhance vertical differentiation by building strength in certain institutions or areas by weakening others and may in fact lead to a lack of diversity. Therefore these choices need to be guided by a vision on an effective division of labour and a good balance between global competitiveness, European excellence, and national priorities and interests (including issues of cultural and linguistic diversity). The development of such a vision is not bound to national-level actors. Also the EU as a whole has been urged to better define its priorities and opportunities for cooperation and competition in a wider international context (EURAB, 2006). Scenario studies carried out by the OECD and by CHEPS indicate that specialization and concentration in the research function of the university will increase (OECD, 2006) and, as mentioned before, this may in Europe lead to a concentration of this function and related type of HEIs in the North-West of Europe (Enders, 2005). It is unclear as yet, whether the ERC and the EIT will contribute to this effect or will turn out to be instruments to counterbalance it.

On the one hand the EU is considered as an 'area' for higher education and research, as indicated in the European Research Area (ERA) and the European Higher Education Area (EHEA), in which cooperation is traditionally seen as the pathway towards stronger global competitiveness of the EU as a whole. On the other hand the EU is seen as an internal market subject to internal competition strategies, which were likewise introduced to achieve stronger global competitiveness. This latter principle is starting to affect the higher education sector more than before, i.e. in the ERC and notably, under the Services Directive²⁰. This mixed reality implies a certain degree of conceptual and political

²⁰ The proposed EU directive on services in the internal market seeks to remove barriers to the freedom of establishment for service providers in Member States and barriers to the freedom to provide services as between Member States. Higher education (as a sector providing services) is not excluded, although it is not clear yet what exactly the impact of the new directive will be on cross-border activities in higher education. This directive was developed by the EC's directorate for internal market and can be seen as an example of wider EU-policy interfering with higher education policies and as an EU equivalent to GATS, a trade framework which also intervened with higher education, but which was dealt with by yet another EC directorate (for trade).

confusion, as to how the higher education and research sector is to be interpreted in terms of supra-national steering and how its dynamics should be understood in the light of global competition.

Olson (2005) underlines the existence of competing visions in Europe, between the university as a service enterprise in competitive markets, the university as an instrument for national political agendas, and the university as a public service model based on the argument that higher education cannot be solely market-driven because the logic of the market does not apply easily to education. He regards the situation as unsettled, given the multitude of partly inconsistent criteria of success and competing understandings of what forms of organization and governance will contribute to good performance. Jacobs and Van der Ploeg (2006) also argue that higher education cannot be left to the market alone and that government interference may be necessary to correct for market failures. In their view, the challenge for reform of the European system is to achieve the diversity and quality for which the US system is praised: choice, differentiation and competition. But Europe should not throw away the baby with the bathwater, i.e. it should not only invest in top academic universities but also maintain and cherish the high average quality of institutions. And it should strive to provide the possible access to the smartest students from less privileged backgrounds and charge less bright and more well-off students substantially higher tuition fees. Van Vught (2006) is also concerned about the potential for simplistic market-type strategies in relation to the social dimension of higher education. The introduction through public policy of increased competition does not necessarily lead to more responsiveness of higher education institutions to the needs of the knowledge society. Rather than being driven by a competition for consumer needs, higher education institutions are driven by a competition for institutional reputation (see 4). In addition, the creation of more institutional autonomy in such a 'reputation race' leads to costs explosions, related to hiring the best faculty and attracting the most talented students; institutional hierarchies; and social stratification of the student body. Instead, the coordinative capacity of the market should be used, consisting of a new set of 'social contracts', which lay down the mutual obligations between universities and their stakeholders, including business and industry. For the EU, however, this implies that an inverse tendency needs to be addressed. The European business community has an increasing propensity for technological alliances with US firms, while the European academic community has an increasing propensity for intra-European partnership. There is still a considerable lag in cooperation between enterprises and universities within the EU, compared to the US and Japan (Archibugi & Coco, 2004).

Finally, Europe demonstrates striking internal differences in performance between countries and systems, differences that are large, deep-rooted and difficult to overcome. The EU includes some of the top higher education systems in the world, performing on a par with and on some measures performing higher than the US and Japan, as well as a range of new member states that are at a very different overall technological level to that of the EU15 group. Effective solutions to accommodating this diversity and lack of cohesion in terms of supra-national decision making require major institutional reforms at EU level, which have yet to be established. These reforms are part of the proposed new EU Treaty, intentionally signed but not (yet) ratified by all EU member states.

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