Higher Education Management and Policy

Volume 22/3

Journal of the Programme on Institutional Management in Higher Education
Higher Education Management and Policy

- A journal addressed to leaders, managers, researchers and policy makers in the field of higher education institutional management and policy.
- Covering practice and policy in the field of system and institutional management through articles and reports on research projects of wide international scope.

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2010 subscription (3 issues):  
EUR 129  USD 169  GBP 90  JPN 18 300  
Online bookshop: [www.oecdbookshop.org](http://www.oecdbookshop.org)
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Project economy approaches for higher education: diversifying the revenue base of German universities

by
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Structural changes and budget constraints are challenging German higher education institutions to change their management practices. This exploratory analysis discusses how institutions are increasing their collaborative efforts – and are doing so in a more structured way – with heterogeneous partners from science, industry and society. Their aim is to diversify their financial base, increase their global reach and excellence, bring into play synergies in regional settings, finance student demand and build joint educational products.
Les changements structurels et les contraintes budgétaires constituent un frein au changement des pratiques de gestion appliquées par les établissements d’enseignement supérieur en Allemagne. Cette analyse explique comment les établissements tentent d’accroître leurs efforts de collaboration – et ce, de manière plus structurée – avec divers partenaires spécialisés dans le secteur des sciences, de l’industrie et dans le domaine social. À travers ces partenariats, les établissements visent à diversifier leur base de revenu, augmenter leurs activités au niveau international et atteindre l’excellence, créer des synergies entre les régions, accorder des aides financières aux étudiants et développer des programmes d’enseignement conjoints.
The challenges ahead: higher education dynamics

Higher education institutions (HEIs) around the world have been caught up by the centripetal forces of globalisation as well as structural economic and societal changes. In reaction to the move towards more knowledge-intensive societies, they are pioneering new forms of social and economic organisation. At the same time, some countries’ budgets for higher education may shrink in the long term, due to the reallocation of funds to childhood learning and (continuous) vocational training. HEIs, therefore, will have to do more with less. However, they are being increasingly challenged to modify their operating conditions, their management style and their governance parameters. They need to improve existing educational products and develop new ones in order to attract more students. They are also held accountable for the added value and the capabilities generated by these cohorts. HEIs will therefore have to diversify their sources of income in order to live up to their mission as purposeful institutions in the emerging knowledge economy.

This paper identifies weak points in the financial base of German HEIs. It maps and analyses emerging patterns in relation to how they are reacting to long-term challenges. It also builds on desk research, anecdotal evidence and informal strategy talks held with German higher education managers.

Integrating research and education activities, locally and globally

HEIs are operating in increasingly challenging conditions, and universities are going to have to adjust to the fact that research, science and education activities are becoming more global and “co-petitive”. On the one hand, scientists are now undertaking research in countries which have a global reach; they are closely interconnected with players from government and industry and enabled by advanced information infrastructures. International networks, cross-border research projects and even alliances between universities are flourishing, setting the stage for new types of collaborative knowledge production. On the other hand, the race for scientific excellence is getting tougher. This has led to an increase in different types of “co-petition” in knowledge and knowledge-based value creation.

HEIs are therefore faced with two challenges. First, they need to provide the collaborative infrastructure – informational, organisational and social – for individual researchers who work collaboratively and produce admirable findings. These researchers should be provided with more sophisticated and
effective instruments, IT systems and organisational arrangements which take into account the social intensity of research and education. Second, HEIs are being challenged to position themselves in the struggle for academic talent and eminence. They have to use, validate and transform their scientific findings, use patent strategies and propose new forms of didactic educational modules if they are to surpass others. There is striking evidence of this in specific initiatives underway in several countries which are trying to produce more internationally-oriented leading HEIs. In the context of the German excellence initiative, HEIs have been asked to demonstrate and consolidate their strengths by realigning and merging research and education activities, regrouping researchers, by implementing curricular innovation and managing clusters.6

The Bologna Process and the drive towards more learners

Another important dynamic facing HEIs has been the implementation of the Bologna Process, which brought about fundamental changes to Europe’s higher education landscape. Throughout the last decade, there has been a general move towards greater access, mobility and funding and HEIs have been encouraged to facilitate access to higher education for more students. Nowadays, in the wake of the Bologna Process, bigger cohorts are enrolling in tertiary education modules thanks to changes in entrance requirements and matriculation standards; more diversified degrees also provide students with more choice (Eurydice, 2010; Sursock and Smidt, 2010, p. 8) (Figure 1). HEIs have to accommodate not only more, but increasingly diversified, students. They also have to deal with knowledge being produced and applied faster in increasingly

Figure 1. The number of students enrolled at German higher education institutions

specialised fields. HEIs, therefore, need to open their doors to diverse types of specialists and sometimes even practitioners; this is rapidly providing academic curricula and course development with new sources of knowledge.

**Other forms of learning: education technology becomes a field of innovation**

Faculty members and HEIs are currently experimenting with new forms of learning. In recent years, a growing cause of concern for higher education managers has been the use and management of information and knowledge technologies which lead to better HE management and more efficient forms of blended learning courses. New technologies and know-how in relation to structuring information, programming, designing and implementing both information systems and applications are changing today's classrooms and higher education management (Johnson et al., 2009). These innovations are enabling multimodal teaching and changes to the curricula, as well as spawning rich forms of online research and collaboration. Social software technology, mobile technology and advances in information management such as cloud computing – which has numerous applications for student lifecycle management and managing different actors' complex information flows – will be adopted in the near future. Personal Web technology and semantic-aware applications will change the way students are integrated into courses and campus life. In response to this challenge, many German HEIs have already migrated to new information and resource planning systems and have their feet firmly planted in the 21st century in terms of data and information management.7

**More autonomy for higher education institutions**

In addition to these nascent dynamics, German HEIs have gradually been granted more autonomy – although to differing degrees – throughout the constituent German Länder. Especially in Hessia, North-Rhine Westphalia, Lower Saxony and Baden-Wurttemberg to a lesser degree, HEIs have been given more say in hiring and managing staff. They are – again to differing degrees – managing their budgets, facilities, students and institutional contexts more autonomously. They are also held more accountable in relation to financing operations and plans.8 As regards reporting to stakeholders, additional pressure has been put on HEIs to implement organisational changes ranging from instituting advisory boards to changing their accounting system from cameralistic to double-entry bookkeeping.9

**More private institutions and more universities of applied science**

In line with the trend towards more autonomy and accountability, regulatory requirements concerning HEIs’ institutional statutes and venturing
activities have been slackened. Entrepreneurial spirit has been gaining ground in German higher education with the emergence of more for-profit and quasi-for-profit providers. Innovative ventures in higher education, be it in the public sector (in the form of more universities of applied sciences) or in relation to private universities and public-private partnerships, have been making inroads in Germany.\textsuperscript{10}

**The need for more faculty and administrative personnel**

In reaction to the changes outlined above and given their greater autonomy, German HEIs have started to employ more teachers, professors and support staff for students. Consequently, over the last few years, the number of academic posts as well as those of administrative personnel have risen considerably (Figure 2), although they are increasingly based on part-time and project-based contracts.

![Figure 2. The growth of faculty and administrative personnel in German HEIs](image)


In this context, German HEIs seem to be in a rather challenging situation. While such dynamics would normally call for increased funding, the current buzzword is “stabilised public funding” (Douglass, 2010, p. 15). Although to date the funding situation has enabled HEIs to expand enrolment and maintain faculty staff numbers, the effects of structural demographic changes and the increasing indebtedness of the German Länder will doubtless have an impact on higher education. The EUR 5 billion earmarked until 2020 by the central German government within the framework of the higher education pact will hardly be sufficient to meet the challenges of increasing student
demand, achieving scientific and operational excellence and integrating more sophisticated knowledge-based systems and technologies. Given the cuts in federal funding – i.e. Berlin’s commitment to cut public debt – and the fact that Länder governments (which are the principal financers) are underfunded, German HEIs will need to diversify their sources of income and simply do more with less. They will also need to improve the management of their finances and operations if they are to be in a position to innovate and provide high quality education.

The impending project economy: doing more with less

German higher education managers are actively addressing the challenges described above by initiating projects and moving towards more sophisticated forms of partnering and collaboration. Many German HEIs have been initiating informal and institutionalised projects and forging alliances with a large number of heterogeneous stakeholders and partners in the world of science, industry and society. They are also collaborating more closely with their traditional partners – whether on a public or private basis – in different domains. These range from raising more funding, cutting costs by tapping existing synergies, sharing experiences and lessons learned as well as having better access to knowledge, networks and people.

Given the breadth of collaborative project activities and the dearth of hard data, this paper can only point to what seems to be a bold move on behalf of HEIs and their stakeholders to profoundly change higher educational provision by reaping the benefits of collaboration, which has always been a defining element of both research and education. So what are the new qualitative aspects of collaboration which generate economic value and new norms and values from a societal point of view, thus heralding a new dimension of economic activity?

Project economy approaches to value creation

In the emerging form of economic activity, actors in different industries are bringing into play and expanding their social capital (i.e. partners and peers) in order to collaboratively develop new products. They are also sharing resources when working on projects to develop and co-create new technological paradigms and products. These products are often highly integrated service solutions comprising combinations of tangible goods and intangible products, otherwise known as hybrid products. Project economy players are experimenting with, and instituting, new pricing and financing models thanks to the energy and ideas of various pioneers and promoters who are working both in – and among – organisations. These pioneers are planning and implementing projects and more long-term forms of collaboration.
like alliances, joint ventures, consortia and platforms in order to serve a defined purpose, which is often common to all. Due to the high number of projects that are launched, some peers’ and partners’ modes of management and participation are changing. Value-creation processes are becoming more fluid, temporally flexible, uncertain and trans-organisational, due to the fact that the individuals and organisations involved in these collaborative projects and endeavours work with modified parameters which also comprise governance and participation schemes in terms of gains and profits.

Project economy approaches are particularly effective in helping to create value and values in higher education. With the help of project-economy approaches, HEIs are slowly but surely becoming an integral part of value-creating networks by providing today’s knowledge-based economies with research and educational resources. Higher education institutions (and universities in particular) have been harnessing and putting into play their multiple forms of capital. First, their ideational capital relates to their faculty’s ideas and drive. Second, their social capital consists of relationships with their peers and partners. Third, their infrastructure and financial capital relates to equipment and facilities. HEIs have started to explore and harness synergy potentials based on sharing resources in local, regional and sometimes even global contexts in order to prospect new fields of activity and develop new forms of educational service products. They have created new modules and qualifications in order to enhance the capabilities of as many people as possible.

**Project economy approaches: diversifying universities’ financial base**

One of the most striking shifts which underline the growth of project-economy approaches is that German HEIs’ sources of income are increasingly diversified. Over the course of the last decade, German HEIs have quite spectacularly increased their revenue inflows and diversified their income structure on the basis of projects with third parties (Figure 3). As third-party funds sometimes account for over 25% of resources at some German HEIs (Figure 4), they are an important pillar of HEIs’ financial base. This increase may be attributed to two dynamics. On the one hand, state actors have been re-orienting institutional funding, urging HEIs in particular to apply for funding on a project-by-project basis. On the other hand, some third parties such as businesses have become more aware of the value of research and are funding more projects within, and with, HEIs.

However, German HEIs’ increasingly diversified financial base is only one variation of project economy approaches. Some German HEIs have been going further than this in order to meet the challenges they face in the move towards the knowledge economy.
Figure 3. **Third-party funds channelled to all German HEIs**

Thousands of EUR


Figure 4. **Third-party funds: projects as revenue streams**

Share of third-party funds of German higher education institutions (percentage points)

Project economy approaches need to be further enhanced – globally...

Projects and partnering activities have also been contributing strategically to the goal of German HEIs which is to expand their global reach and to become better embedded in their region. Some German HEIs, like the Freie Universität in Berlin or the Technical University (TU) in Munich have become key players in international networks by building on existing ties and strengths and increasing their international partnering and project activities. In the case of the TU, this outreach policy has even led the university to participate in newly-founded research endeavours in Singapore.

... and regionally

More important, project economy approaches are helping many German HEIs to become better embedded in their region. The universities of Freiburg and Siegen, for example, are building on local and regional competitive advantages in relation to established groups of companies. Their objective is to sustain and build up regional excellence by providing educational opportunities for prospective local and regional students. This, in turn, is of interest to automotive suppliers or green technologists who are in need of qualified personnel.

One of the most telling examples of the push towards regionally-centric project economy approaches is the creation of the Karlsruhe Institute of Technology (KIT). In a drive to optimise synergies with research and science organisations as well as other stakeholders, the Universität Karlsruhe and the research centre Forschungszentrum Karlsruhe merged, giving rise to KIT. This academic research and education institution comprises some 8 800 employees, 329 professors, 585 foreign scientists, 20 000 students and over 500 trainees, spread among 22 faculties and research units. It has an annual budget of approximately EUR 707 million. A dedicated public corporation has been founded and, as a result, higher education, teaching and the work of a research body are now thoroughly integrated on a permanent basis throughout KIT.

KIT’s very structure helps its different partners to share resources as regards strategic investments in major research tools: equipment, laboratories and IT facilities. Furthermore, this form of sustained collaboration in an organisational structure is designed to build an institution offering excellent international research and teaching in Natural Sciences and Engineering. These prospects should attract the best experts and set standards in teaching and the promotion of young scientists. KIT has set out to become a leading innovation partner in the fields of Energy, Nano-Mikro, Physics, Climate and Environment in particular. KIT also takes interactions and technology transfer activities to a new level by allocating start-up budgets. Finally, apart from intensifying
collaboration, project economy approaches also provide more perspectives for faculty and administrative personnel. In this regard, KIT shares resources with scientific bodies and industry players so that it can re-structure its support for young scientists and engage new faculty on the basis of shared professorships, as well as recruit practitioners to lecturing positions.15

Another example of harnessing regional associations' synergies using project economy approaches is the so-called Dresden Concept. The Dresden University of Technology (TUD) and a scientific institute in Helmholtz-Gemeinschaft, both of which wanted to increase their outreach, decided to combine resources. Together, the scientific institute (which offers know-how on scientific infrastructures) and TUD (which excels in research and teaching) formed the Dresden Concept. Its aim is to achieve further excellence and to build on the strengths of the interactive and dynamic network of scholars, scientists, new ventures and even cultural players in the Dresden region.

The Commercial Vehicle Cluster based in Kaiserslautern16 is another example of project economy approaches which focus on the regional activities of an HEI in collaboration with industry. Under the auspices of the Kaiserslautern University of Technology, several partners from academia, politics and the automotive industry in particular work together in this cluster to provide an all-around service in relation to the region’s commercial vehicle industry. This collaborative arrangement also serves as an interface between the industry and the public; it helps its partners to push back the frontiers of research and education and define new paradigms and technological products. The cluster is located in south-west Germany where the IT sector is strong, as is industrial production, namely lorries, buses, agricultural and construction machinery as well as their components. The Commercial Vehicle Cluster, which started as a project launched by academics and a group of engineers in industry, now provides an institutionalised platform for research and education. This platform is already bearing fruit. A Masters’ degree course in commercial vehicle technology is now being offered at the Kaiserslautern University of Technology and an international student exchange programme has got underway. Furthermore, forums which define standards and communities – whose aim is to continuously improve knowledge, standards and technologies as well as the quality of modules and certificates – have been established. The Cluster offers its partners the possibility to benefit from knowledge transfer and knowledge management by working alongside industry experts. For example, they can participate in working groups and workshops which cover current issues in industry such as technical innovation, process optimisation, production, automotive electronics, IT and human resources. Partners can also have access to advance information on particularly innovative solutions, be represented at important trade fairs and
events and benefit from their outcomes. A network of leading decision makers from industry and the world of science can advise them on how to solve current challenges. In addition, the cluster provides partners with assistance to find qualified new recruits and to train mid-career high performers.

**Public-private partnerships: another way to provide tailor-made educational modules**

Project economy approaches can also take the form of public-private partnerships. For example, the Freie Universität in Berlin and Ernst Klett GmbH, a leading publisher of educational materials in Germany, have combined forces and formed the Berlin University for Professional Studies. This university now offers attractive, tailor-made educational modules financed on a public-private basis. It combines the IT resources, logistics and the capacity to generate the high quality content that a private company can offer with the scientific and organisational excellence of the Freie Universität, whose merit is internationally recognised. The Berlin University for Professional Studies is run by a professional management team which helps it to structure and offer new tailor-made educational courses and qualifications. Although to date there is still little evidence on the viability of such models, since ventures like this take several years to mature, this kind of public-private partnership is definitely promising for the German higher education landscape. This business model, which combines the strong points of both the public and private sectors, may help to transcend what used to be strictly compartmentalised not-for-profit, non-profit and for-profit activities and enable more students to take up lifelong learning.

A second example of project economy approaches which has led to the provision of attractive, tailor-made educational modules and products is the collaboration between the Leuphana University of Lüneburg with a German trading and services corporation, the Otto Group. Based on a consistent profiling process with an assessment of its strengths and weaknesses, the University of Lüneburg joined forces with the Otto Group and, together, they started to deliver tailor-made continuing vocational education programmes. The University of Lüneburg has been using its expertise in education management and curricula development in projects to develop new sources of income, to build up its knowledge base and to provide partners in the service and retail sectors with more appropriate educational products.

A third interesting example of project economy approaches is the initiative launched by the Goethe University in Frankfurt to harness partners’ and peers’ knowledge, expertise, funding and engagement on a regional basis. Shared goals, a shared vision and thorough planning have given rise to an innovative, collaborative structure called the Frankfurt House of Finance. The House has been organised in such a way that partners from
academia, science, industry and society are brought together and managed under one umbrella; it now forms a leading European centre and a hub for research and education related to the world of finance. The House exploits regional synergies in the Frankfurt area and has become one of the world’s leading financial hubs and a world-class, interdisciplinary research centre specialising in finance, economics and law.

The House of Finance's unique environment is especially conducive to developing and generating graduate and executive education programmes like those of the Goethe Business School, one of its partners, where real-life experiences as described by leaders in industry complement state-of-the-art theoretical education. The House also serves as an open forum for co-operation and the exchange of ideas between academics and practitioners. Another interesting feature of the House is that the Goethe Business School has been actively encouraging its peers and established partners to facilitate access to higher education to more students on the basis of models of demand-side education. In this vein, the business school has started to combine funding from donations, institutional funding and knowledge-based project funding to establish integrated, preferential student loan schemes and scholarships, which are available to both enrolled and prospective students. In order to provide tailor-made financial assistance and student loan schemes, in collaboration with banks and industrialists, the school draws on data on prospective and graduate students such as longitudinal studies on the employability of its students. These approaches are not limited to the Goethe Business School. Currently, many other HEIs are in the process of setting up and negotiating preferential arrangements for financing education based on project-economy approaches with a view to enabling enrolment in higher education and lifelong learning.

**Factors upon which the success of project economy approaches depend**

Some higher education managers have been doing better than others when using project economy approaches and the most successful ones are those who regard individuals and groups as promoters of new collaborative practices. If projects and partnerships are to be initiated and sustained, it is necessary to motivate knowledgeable people who are ready to commit their time and energy. Human resource management – i.e. recruiting and staffing a team of charismatic people to fill leading roles, structuring tasks on the basis of appropriate parameters and sustaining personal project initiatives over the long term by providing incentives – is one of the main success factors for HEI project economy approaches.

Another success factor lies in the management of partners and peers. Managing collaborative processes with appropriate parameters, planning and conducting activities geared to the long term as well as keeping the helm in
line with purposes and profitability seem to be essential for successfully managing HEIs in the project economy. It is also important to shape institutions’ profiles according to purposes: before venturing into project economy approaches, HEIs should define their goals in function of their overall objectives. They should assess their organisational readiness and capabilities to undertake partnering and project activities.

A key factor to successful projects and partnerships, as many discussion partners have reported, is to start small, scale up and shape processes. Actors should monitor relevant environments and integrate partners on the basis of informational infrastructures (access to IT), clearly-defined parameters and clear guidance.

Last but not least, the success of project economy approaches depends on attractive, tailor-made educational modules and products. Again, as many HEI managers have said, the key for designing appropriate lifelong learning and training courses lies in working hand-in-hand with students and other bodies – be it employers, foundations or other social groups. It is also important to establish communities and organise forums where standards are defined; this facilitates partnering and project management and helps to improve the quality of educational modules.

**Improving project-economy approaches: doing more with less**

Although project economy activities have already had some positive effects, given the increasing skill requirements in today’s labour markets, more subtle and structured collaborative endeavours are needed. For example, together with their counterparts, partners and peers, HEIs need to provide many more options for personalised, accessible, empowering, flexible and transparent student-centred learning. Differentiated pricing (subject to limited financial resources) should also be put in place.

As we have seen above, it is essential to create more interest- and industry-specific forums that facilitate closer collaboration between different partners and stakeholders from industry, (local) government and the world of culture so that they may exchange information and engage in forward-looking discussions. Given the prospect of massive changes in skill needs, looming qualification mismatches (Cedefop, 2008), the low participation rate in continuous vocational training in Germany and the increasing race for academic talent, HEIs will need to do more in terms of strategic pricing, information and marketing activities. Most German HEIs would be well advised to step up partnering and project activities with local and inter-regional employers and employment agencies in order to provide better guidance, career services and student support. More differentiated pricing strategies as well as greater transparency in relation to qualifications, credits
and returns on investments in education seem to be effective in facilitating educational choice. Project economy approaches can – in that context – also help to lower the barriers to life-long learning for prospective students by increasing the involvement of well-informed people from industry and society at large in collaborative work on new qualifications. This way, they generate more sophisticated and suitable educational modules at the regional level.

Each generation of students has its own approach to learning. Therefore, it is also very important to re- and up-skill people by providing new modules and redesigned learning processes that are responsive to the availability and habits of adult and part-time students, especially the way they use their time. Target groups of learners with different learning aptitudes should be offered hybrid online and personalised courses using different types of technology, including mobile phones. When designing courses for re- and up-skilling learners, specific factors need to be taken into account – especially the time factor. For example, today’s learners increasingly do not want to be bound by constraints of time and place or limited to passive learning modes. Thus, it is important to rethink four- and six-year degree courses for students who are not interested in following the traditional higher education model. It will become increasingly important to restructure course and assignment time in close collaboration with learners and other interested parties, such as employers. In this context, in order to enhance the potential of educational products, partnering and project activities should include players responsible for course content, IT, mobile telephony, building and maintenance as well as software industries. Savings can be generated by exploring new forms of pedagogies, learning methods and technologies and this is much easier to accomplish if there are well-structured forms of collaboration in place. Some German HEIs are beginning to perceive education technology as a field of innovation which they can explore, together with partners, to develop modified, more pervasive forms of technology-enabled or social software-based learning and learning environments. They are beginning to jointly develop smart appliances, smart building and architectural solutions, online courses and tutorials, new campus software and student lifecycle-management solutions, thereby improving technology and knowledge transfers from science to industry and vice versa.18

More sophisticated project and partnering management

The inherently short-term character of project activities needs to be well balanced in order to create more robust, reliable, high-quality educational products. Given the increasing speed of knowledge production, HEIs are being challenged to validate scientific findings and transform these into commonly agreed and verified bodies of knowledge. In this respect, the individual and collaborative standardisation activities of individual researchers, communities
and consortia (led by HEIs, which are the providers of platforms for negotiating and balancing interests) will become increasingly important. Patenting and standardisation are two sides of the same coin, although to date the latter has not been taken sufficiently into account from a strategic point of view. But standardisation of knowledge, technologies and components is not everything. It is also the duty of HEIs to develop new curricula in didactically inspiring ways. To achieve this, another issue that needs improving is partnering and project management.

Today, project economy approaches often resemble a state of play termed “projectitis”. This may be described as a situation in which there are an excessive number of projects; their goals, process management and outcomes are not thoroughly thought through or co-ordinated. In this environment, competition among the projects is tough, thus they stifle each other. Also, many projects are initiated, managed and ended without being thoroughly evaluated. This is why it is increasingly important to explore new ways of sustaining initiatives in programmes and projects and to keep in mind the carry-over and lessons learned from projects by instituting a culture of learning by failure. Second, promoters of new ideas and practices should be given even more strategic support than before. Twenty-first century universities can be considered as “multiversities” with a multitude of pioneers and promoters, all serving different purposes. If pioneers are to be kept motivated and to be encouraged to remain active in their jobs then incentives, compensatory schemes and institutional reputation rankings also have an important role to play. Often, scholars who work actively in the field of standardisation do not have adequate incentives, and the development of peer review-based citation metrics (which serve to measure the performance of scholars) do not make up for this short-coming. This too definitely has to change, because persistence is not only, but also, about pay.

Another major concern in respect to persistence in higher education lies in addressing the problem of highly qualified individuals who are engaged in project-based work, or on a part-time basis. It is important to co-ordinate and synchronise the activities of people who have flexible working hours and are not continuously present at the workplace so as to avoid creating disincentives for them.

Another closely related issue is the need to synchronise the different temporal logics of bodies working in science and education as well as businesses. The difference in the speed of operation within these bodies or between different peers, which evolve in different contexts, is highly important. Other factors that carry considerable weight are human resource management, giving faculty members more perspectives for their own professional development and possibilities for them to train and re-train – especially in project management and didactics.
Another way to leverage effective, long-term project economy approaches is to re-define parameters for governance and funding. Most German HEIs are still grappling with traditional bureaucratic operational methods, which do not engender open, collaborative processes. Today, HEIs can be considered as “entrepreneurial universities” and they need parameters which foster collaborative strategic planning, safeguard quality and structure governance processes. These parameters should also govern reporting to funding institutions and societal stakeholders. HEIs should increasingly work together with local, regional and national decision-makers and regulatory authorities in order to compile more pertinent indicators and, this way, provide more people with educational opportunities in the sciences, technology, engineering and social service-oriented qualifications.

In parallel to the discussions taking place in some German Länder on measuring and assessing intellectual assets and overhauling internal bookkeeping structures (Ernst & Young, 2009, p. 26), HEIs should also consider the activation of their intellectual assets. Twenty-first century HEIs can play a vital role in collaborative learning ventures and more structured forms of knowledge and technology transfer by developing best practice and standards for evaluating and reporting intellectual assets. However, the methods used to evaluate the value created by universities’ research and education activities are still in their infancy. Some HEIs are starting to change this by asking advisory boards to come up with better parameters for practices, more focused profiles and more structured strategies based, for example, on SWOT analyses.

Lastly, another way to leverage operational excellence and efficiency is to share jointly developed services with other players. If academic performance is to be maintained, it is vital to outsource certain well-defined functions which are not essential for the creation of academic and educational value but are critical to internal processes. In this respect, some HEI managers have started to work together with peers to build up competencies and structures for handling information processes. Work has started in the following domains: campus and student management issues, managing libraries, document and information services and the management of energy services. As anecdotal evidence shows, the solutions they have developed on the basis of explorative, clearly structured, well-designed and collaborative projects and partnerships have started to generate savings. They seem to be more sustainable in regard to the total costs of ownership than models based on contractual relationships with service providers.
More sophisticated project and partnering management: driving for more prosperity

Last but not least, HEIs are being challenged to define their goals and role in society. In the light of current dynamics, they are being called upon to become engines of growth for municipalities and regions (OECD, 2007). In order to achieve this, they should function as access points between individuals and regions as well as international academic and business-oriented knowledge and value-creation networks. HEIs should pioneer going beyond the public/private domain and experiment with sustainable business models which combine for-profit, not-for-profit and non-profit oriented activities for the common good. They should also provide platforms for businesses, scientific bodies and civil entities at the regional level and act as catalysts, pushing forward new ideas and generating greater prosperity and social progress.

HEIs should nurture knowledge-intensive initiatives in favour of growth. They should apply the benefits of collaboration to jointly develop technologies and services in industries of the future such as energy, mobility, social services, healthcare, education and eco-technologies for cities, agglomerations and regions. Along with collaborative practices, they should be pressing for greater access, equity, quality and ethics. Together with their regulators, funding institutions and their partners in politics and banking, they should be pushing financial frontiers, structuring funds and financial solutions and founding industries to create more spin-offs, joint ventures and co-operatives. With more well-defined collaborative infrastructures, more persistent, soundly-built projects, enhanced partnering and more service learning, HEIs would be well placed to do more with less and thereby trigger more knowledge-intensive growth and societal progress.

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I would like to thank Professors Weiler, Lenzen, Burckhardt, Joehnk and Schiewers and Drs. Wormser, Thelen, Efinger and Fritz, as well as other higher education experts for having inspired debate and research in this field. I would also like to thank Glenn Westholt-Smith for his valuable linguistic assistance and Carola Miras for her brilliant editing.
This article has been funded by Deutsche Bank as part of the scientific research work undertaken by its research unit, Deutsche Bank Research.

Notes

1. On the subject of structural challenges, see Hofmann et al., 2007; OECD, 2007; OECD, 2008a; OECD, 2009.

2. This analysis of trends and challenges in higher education is based on the following questions: “In which settings and with which regulatory parameters do institutions help others to learn? What kind of institutions are concerned? With which governance parameters do they work? What is their target group? What resources do they have in terms of personnel and staff? With which educational products and programmes do they work, and who finances them? What are the results and effects?” (Based on Rollwagen, 2007; OECD, 2008b)


5. For a definition of the term “co-petition”, see Brandenburger and Nalebuff, 1996.

6. For information on the German excellence initiative, see Leibfried, 2010.

7. The German higher education landscape is structured by a handful of providers of HE management software, namely MACH AG, the Higher Education Information System (HIS), SAP AG and Datenlotsen Informationssysteme GmbH.

8. For an overview of propositions made in the different Länder, see VBW, 2010.

9. For an overview of changes in relation to bookkeeping, see Ernst & Young, 2009.

10. For an overview of the rise of HEIs in Germany, see Frank et al., 2010; Deutscher Hochschulverband and Goll, 2009.

11. HEIs and academia have historically formed new sets of values and forms of open collaboration which have helped societies to develop.


14. In Germany there is considerable potential for structured collaboration. As of today, research and education are only loosely linked to the research and education system by definition.

15. For example, the KIT has designed a new kind of faculty position called “shared professorship”. This has enabled it to appoint a professor in the field of thin-film technology, which is being financed by the KIT along with four industrial partners (KIT, 2009).


18. Clients of integrated campus management providers such as HIS, SAP and Datenlotsen have put in place co-development schemes such as these.

19. SWOT is a strategic planning process used to evaluate environmental factors in relation to a project or a business venture: strengths, weaknesses, opportunities and threats.
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Multidimensional ranking: a new transparency tool for higher education and research

by

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This paper sets out to analyse the need for better “transparency tools” which inform university stakeholders about the quality of universities. First, we give an overview of what we understand by the concept of transparency tools and those that are currently available. We then critique current transparency tools’ methodologies, looking in detail at the question of data sources, the risks involved in constructing league tables and the challenges in using composite indicators. Lastly, we argue in favour of developing a new principle for transparency tools: that of multidimensional ranking.
Classement multidimensionnel : un nouvel outil de transparence pour l’enseignement supérieur et la recherche

par

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Cet article tente d’analyser la nécessité de créer de meilleurs « outils de transparence » destinés à informer les étudiants et autres acteurs de l’enseignement supérieur sur la qualité des universités. En premier lieu, nous offrons une vue d’ensemble sur ce que nous entendons par le concept d’outils de transparence et sur les outils déjà disponibles à l’heure actuelle. Ensuite, nous analysons en détail les techniques d’utilisation des outils de transparence existants, notamment la question des sources de données, des risques sous-jacents à l’établissement de systèmes de classement et les défis posés par l’utilisation d’indicateurs composites. Enfin, nous exprimons notre avis favorable au développement d’un nouveau principe d’utilisation d’outils de transparence : celui du classement multidimensionnel.
**Introduction: the rise of transparency tools**

International discussions on higher education and higher education policies have given rise to a new concept: that of “transparency”. Transparency in this context relates to the need to provide information on higher education institutions’ efforts and performance in their various fields of activity. It is also related to the concept of quality assurance. If the latter is perceived as a set of activities intended to provide proof of quality to higher education institutions’ external stakeholders, then creating transparency entails providing the information which these stakeholders need in order to form judgements and take decisions. Such decisions can range from students choosing between specific educational programmes to public or private agencies awarding research contracts and governments deciding on accountability issues relating to funding. Therefore, transparency instruments are information tools designed to communicate information on higher education institutions’ efforts and performance to external stakeholders.

Transparency tools are urgently needed in higher education and more so than in many societal sectors. In economic terms, higher education is either an “experience good” or a “credence good”. In the case of an experience good, the quality can only be judged after it has been consumed (and by implication, after it has been paid for), unlike search goods, whose quality and price are clear in advance. Credence goods are those whose quality remains unknown even after consumption, for example, a medical consultation or computer repairs (Bonroy and Constantatos, 2008; Dulleck and Kerschbamer, 2006). From this perspective we question whether students can ever really gauge to what extent their university experience has enhanced their knowledge, skills and competencies. Also, to what extent is that enhancement specifically attributable to the institution at which they studied? (We distinguish initial from post-initial higher education in this respect; cf. Westerheijden, 2003.) Whether higher education is seen as an experience or credence good, we may safely assume that students cannot know the quality of their educational experience beforehand. Similar arguments can be advanced for other stakeholders in higher education such as businesses, professions and governments. This implies that information asymmetry exists; the value of transparency tools is in rectifying these asymmetries in order to maximise the social benefits of higher education.
Transparency instruments have become increasingly widespread over the last decade. Classifications, rankings and league tables (three of the best-known transparency tools) have become part of the global higher education scene. It is widely recognised now that, although these transparency tools are sometimes controversial, they are both well-established and increasingly influential, impacting on both university and national decision makers. They reflect growing international competition among universities for talent and resources; at the same time their results reinforce competition. On a positive note, they encourage decision makers to heighten their ambitions and to challenge their higher education institutions to perform even better, especially in the case of research universities that dominate global league tables. However, major concerns remain in relation to the league tables’ methodological underpinnings (Bowden, 2000; Clarke, 2002; Wende, 2008; Dill and Soo, 2005; Gottlieb, 1999; Harvey, 2008; King et al., 2008; Marginson, 2008; Usher and Savino, 2006; Dyke, 2005; Yorke, 1998) and to their policy impact on stratification rather than the diversification of their mission (IHEP, 2009; Marginson, 2008; Vught, 2008). Harvey summarised much of this criticism as pointing to a failure to follow accepted methodological rules in relation to deductive analysis (spanning from concept to indicators) and synthesis (spanning from indicators to a composite ranking). Instead, rankings are made from whatever indicators are measurable and available (Harvey, 2008).

While we agree with the principle of conceptual soundness and the need for the deductive development of indicators, the main problem with Harvey’s summary is that there is not a single theory explaining the link between higher education and stakeholders’ information needs. Higher education institutions have many stakeholders and target groups; these have multiple actions and intentions and sometimes lack clarity when expressing their own information needs. Moreover, “Not all nations or systems share the same values and beliefs about what constitutes ‘quality’ in tertiary institutions, and ranking systems should not be devised to force such comparisons” (International Ranking Expert Group, 2006, principal number 5). Given that there are such different needs, different actors require different information on different subjects. Consequently, multi-dimensional transparency tools tailored to individual needs are one obvious solution to complex, unclear information needs.

In terms of multiple stakeholders, we distinguish between:

● Students at the micro level of teaching.
● The same persons at the meso level, i.e. graduates of whole study programmes.
● Employers (businesses and other organisations) who are “users” of graduates.
● To some extent, the same companies who are users of research and innovation.

● Local, regional and national authorities who are often users of higher education institutions’ “third mission” (i.e. their mission to disseminate knowledge and innovation to their environment). In addition, they usually act as the guardians of the broader interests of society in terms of economic and social development and are often major funders.

At the same time, universities’ teaching and research staff are experts par excellence who have cutting edge subject knowledge and, by using educational methods and research technologies, are in the unique position of being able to “delight the customers” (Juran and Gryna, 1988).

In this multi-stakeholders context, quality “is in the eye of the beholder”; it is a multi-dimensional concept which differs according to particular stakeholder perspectives, and it may be more accurate to talk of a “multitude of qualities” (Brennan et al., 1992; Houston, 2008; Westerheijden, 2007). Transparency tools should reflect this conceptual multiplicity in order to communicate higher education institutions’ quality effectively to their users.

An assessment of current classifications and rankings

The preceding analysis requires some conceptual clarifications or at least working definitions. We regard “transparency tool” as an overarching term, covering all means of providing information on effort and performance in higher education. We make an important distinction within transparency tools between classifications and rankings and, within rankings, between league tables and multi-dimensional approaches.

A classification is a system that allocates objects to groups on the basis of their characteristics. Classifications show horizontal diversity, where differences do not imply ordinal scales of “more”, “bigger” or “better”.

Rankings display vertical diversity in terms of performance by using indicators. Most existing higher education rankings take the form of a league table, a single-dimensional list going from “best” to “worst”, assigning ordinal numbers to the entities which relate only to rank and not scales of difference. Other approaches to ranking use:

● multi-dimensional approaches, which do not try to combine education and research rankings, for example, into a single, composite measure and which are often user-driven because they enable an interactive display of data; and/or

● robust group ratings rather than individual rankings, such as in league tables.
On the basis that these other rankings provide more information for a wide field of stakeholders, we argue that they are better, more sophisticated transparency instruments than league tables. This does not mean that we believe that ranking is inherently good or bad, simply that it is possible to define sets of criteria that make ranking-based approaches better or worse. Although there are many existing rankings and classifications, we summarise the major ones in Table 1.

Table 1. Major classifications and rankings

<table>
<thead>
<tr>
<th>Type</th>
<th>Names</th>
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<tbody>
<tr>
<td>Classifications</td>
<td>Carnegie classification (United States)</td>
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<td></td>
<td>U-Map (Europe)</td>
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<tr>
<td>Global league tables and rankings</td>
<td>Shanghai Jiao Tong University's (SJTU) Academic Ranking of World Universities (ARWU)</td>
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<td></td>
<td>Times Higher Education (supplement) (THE)</td>
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<td></td>
<td>Leiden Ranking</td>
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<td></td>
<td>Webometrics</td>
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<td></td>
<td>CHE Excellence Ranking (European, not global)</td>
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<tr>
<td></td>
<td>QS World University Ranking</td>
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<tr>
<td>National league tables and rankings</td>
<td>US News and World Report (USN&amp;WR; United States)</td>
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<td></td>
<td>Time Good Education Guide (United Kingdom)</td>
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<td></td>
<td>Guardian ranking (United Kingdom)</td>
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<td></td>
<td>Forbes (United States)</td>
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<td></td>
<td>CHE Das Ranking / University Ranking (CHE; Germany)</td>
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<tr>
<td></td>
<td>Studychoice123 (SK123; the Netherlands)</td>
</tr>
<tr>
<td>Specialised league tables and rankings</td>
<td>Financial Times ranking of business schools and programmes (FT; global)</td>
</tr>
<tr>
<td></td>
<td>BusinessWeek (business schools, United States + global)</td>
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<tr>
<td></td>
<td>The Economist (business schools; global)</td>
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Source: Adapted from CHERPA Network (2010), U-Multirank Interim Progress Report.

Classifications

A growing desire to come to grips with the diversity of higher education and research institutions has been paralleled by these systems’ growth and the recognition that key stakeholders can no longer be familiar with all institutions individually. In Europe’s state-funded higher education institution (HEI) systems, bureaucratic categorisations have played an important role in this regard. Some countries make a distinction between institutional types such as academic institutes, universities, polytechnic schools, national research centres and higher education colleges. It has become necessary to develop more sophisticated classification instruments in order to distinguish between quality and performance within these categories or across state boundaries, where there are different categories of institutions and degrees. At the same time, increasingly institutional autonomy has led to
strategic diversity, creating a heterogeneous picture of institutional goals, missions and priorities for institutions within the same category. Two classifications used to date stand out on an international level: the US Carnegie classification and the European U-Map classification tool.

The Carnegie Foundation first published its classification in 1973 as a tool for researchers; this subsequently turned into an authoritative concept across the United States and beyond (McCormick and Zhao, 2005). The Carnegie classification was used widely and turned into something of a league table: to be a “research I university” was prestigious, although this was not the objective of its originators. To counteract this tendency, a major system overhaul in 2005 resulted in a multi-dimensional classification. The new classifications were presented as “different lenses” on the higher education landscape:

They are organized around three fundamental questions: what is taught (Undergraduate and Graduate Instructional Program classifications), who are the students (Enrollment Profile and Undergraduate Profile), and what is the setting (Size and Setting). The original Carnegie Classification framework – now called the Basic classification – has also been substantially revised.2

The European U-Map classification methodology (Vught, 2009; Vught et al., 2010) is currently being populated with HEI data.3 U-Map was originally developed as a user-driven, multidimensional European classification instrument allowing all higher education and research institutions to be classified in function of their efforts in six dimensions:

- research
- innovation
- education profile
- student profile
- internationalisation
- regional outreach

Each dimension is made up of several indicators. Ideally these reflect institutional efforts in different areas, the intention being to phase out performance (output) indicators as effort-based indicators become available. At the heart of the U-Map concept is the creation and analysis of specific “institutional profiles”. This enables users to generate institutional “pictures” showing the various indicators in some or all of the six dimensions (Figure 1). U-Map has also developed access to data through two online tools (a profile finder and a profile viewer) which permits stakeholders to analyse institutional profiles and undertake comparative analysis or institutional strategic profiling. U-Map was developed in close co-operation with the
designers of the most recent Carnegie classification and adapted to European circumstances.

We contend that classifications help map HEIs’ horizontal diversity. They address the ways these institutions vary in terms of the efforts they make in their various fields of activities. In this sense they are descriptive: they present HEIs’ institutional profiles by describing their actual behaviour. Classifications do not indicate how well institutions perform with respect to their chosen profile as they focus essentially on institutional effort rather than performance.

**Rankings**

Higher education institution rankings began in the United States in the early 20th century but their exponential growth dates from the turn of the century (Dill, 2006). Recent overviews of existing ranking systems by Shanghai Jiao Tong University and the Institute for Higher Education Policy (IHEP) list rankings and league tables in more than 30 countries and across all continents, while several countries (including the United States and the United Kingdom) have produced a number of competing rankings. In this context, it is useful to analyse and classify rankings across the following dimensions:

- **primary target groups**
- **producers:** public vs. private and not-for-profit vs. private for-profit
● level: institutional vs. field-based
● scope: national vs. international
● focus: education vs. research

We will discuss these dimensions in the following subsections, and then discuss methodological problems regarding data sources, league tables and composite indicators.

**Primary target groups**

Most national rankings expressly aim to inform (prospective) students and their parents about the quality of universities and programmes in their country. It is a challenge for these rankings to balance simplicity and sophistication. One of the principles of “good ranking” as specified in the Berlin Principles (International Ranking Expert Group, 2006) is that rankings should be geared towards their target group, but in this case there are opposing information needs. Prospective students are among those least informed about higher education, and for them, league table information must be simple and focused on education. At the same time, in order to gain legitimacy within higher education communities, more sophisticated information is needed to avoid accusations of oversimplification and insensitivity to sectoral complexity (Federkeil, 2006). As HEIs also have interests to promote other than just their educational programmes, many league tables seek to include research information to help increase the authoritativeness of their rankings. However, this means that until recently ranking systems tended to give the impression that all available indicators must be relevant for all types of users (King et al., 2008).

A similar problem faces international discipline- or field-based rankings, e.g. rankings of business schools which are published by, inter alia, the Financial Times. These international field-based rankings first appeared in internationally integrated professional fields such as business studies. Recently, other rankings have begun to address specific academic fields separately, e.g. the CHE Excellence Ranking and the field rankings in the Shanghai, Taiwanese and THE league tables.

It is important to recognise that not all students are alike: the US News and World Report (USN&WR) ranking and websites such as Studychoice123.nl (SK123) or CHE mainly target students entering higher education for the first time, i.e. typically adolescents completing secondary education. The Financial Times targets adults with at least several years of professional experience wanting to gain specific skills. These are groups of completely different learners with their own study cost/benefit calculus, with different teaching expectations, different knowledge about HEIs, different information needs and different social preferences and mobility. Given the importance of
responding to diverse student needs, good rankings are those which provide robust information about investment considerations (e.g. future job chances; gaining specific competencies; having well-known teachers [e.g. in performing arts] or additional income [Westerheijden, 2009]). Good rankings should also provide information on consumption considerations (e.g. the availability of sports facilities at HEIs; the possibility of living on campus; acquiring a broad academic education). Considerations relating to consumption may be particularly important to first-time students, while those related to investment may be more important for returning students.

It is important to note that even specific target groups have multiple information needs. In addition, socially-excluded groups’ needs in relation to HEIs are severely constrained by a lack of contextual information such as the kinds of benefits or qualities they might acquire by attending university. League tables further contribute to a stratification of the student body in that it is those with the highest social capital who tend to take them most into account when making strategic higher education choices.

International or global rankings of HEIs do not generally refer explicitly to a defined target group, rather a broad audience closely or loosely involved with higher education. The most prominent global league table, Shanghai’s Academic Ranking of World Universities (ARWU), was initially designed to compare Chinese universities’ research performance in the fields of science and technology, and to compare performance between the Chinese national higher education sector and the rest of the world, especially the United States. The ARWU was primarily a tool for steering national research policy and planning; it therefore targeted policy makers and public authorities (in particular the ministries of education, science and technology).

Detailed research rankings such as the Leiden Ranking (which analyses university performance by using citation data) target university managers (i.e. institutional leaders and their support staff) by giving them information on similar kinds of universities which are either their competitors or against which they might mutually benchmark. Similarly, the Webometrics ranking informs institutional leaders about their higher education or research institutions’ relative prominence on the web, which is potentially useful for informing decisions concerning open access publishing. Both of these focused rankings (the Leiden Ranking and Webometrics) are designed to answer institutional staff’s specific information needs associated with strategic decision making.

Rankings are also of interest to those beyond the primary target group. For example, politicians consult research-based league tables or rankings targeted at prospective students. Leaders of HEIs are generally interested in all types of rankings because of their impact on institutional prestige, and in
particular the negative prestige that results from low rankings. This raises questions about universities’ impartiality as data suppliers, and alerts us to the risk that some institutions might be tempted to “adjust” the rankings in order to enhance themselves or discredit their competitors (Bowman and Bastedo, 2010; Dill and Soo, 2005; Hazelkorn, 2007; Sharp, 1995).

**Producers of rankings**

The majority of national rankings are produced by media companies, a trend started in the United States with the *US News and World Report*. Previously, some rankings had already been produced by academic institutions themselves (e.g. in economics), but in contrast to the media rankings they did not receive substantial public attention. Other examples of media rankings include *The Times* Good University Guide, league tables compiled by the UK newspapers the *Guardian* and *Independent*, national rankings in France (*Nouvel Observateur*) and Italy (*Sole 24 Ore*). As commercial publishers are interested in profit and sales, this raises the risk that they are less concerned by sound and stable methodology than garnering spectacular headlines (Gottlieb, 1999; Stella and Woodhouse, 2006).

A minority of rankings are published by independent, national non-profit organisations. These include the CHE rankings in Germany (although they have a media partner, *Die Zeit*), Studychoice123 in the Netherlands and a Polish ranking published by the Perspektywy Foundation. Furthermore, there are a few examples of national rankings published by public institutions, e.g. the Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT) and the Nigerian Rectors’ Conference.

There are six “global” rankings; these are differentiated in function of their geographical and disciplinary coverage. Three of them are compiled by academic institutions (CWTS/Leiden University, *École des Mines* and Consejo Superior de Investigaciones Científicas [CSIC] in Spain). Whilst ARWU was initially produced by the Shanghai Jiao Tong University (SJTU), the unit responsible for it became independent in 2009 and formed the Shanghai Ranking Consultancy. The *THE* ranking is an outlier among global rankings as it is generated by a major newspaper. Since *THE* changed its data supplier in 2009 in order to have more direct access to citation data and develop its reputation survey, its previous partner (QS) launched its own product, World University Rankings, so as of 2010 there are two commercial global ranking producers.

Chinese Taipei’s HEEACT and the Dutch consortium SK123 (which includes many categories of stakeholders and benefits from a governmental subsidy) seem to be the rankers most closely related to public authorities. They are not involved with policy making in relation to higher education and
research institutions, although some branches of HEEACT work on evaluation and accreditation issues. Most academic institutions which produce global league tables are public actors, but both CHE and Perspektywy are public-private partnerships; they are independent non-profit organisations with close ties to national rectors’ conferences.

Increasingly, authors of rankings are revealing information on their methodology, often on their websites. However, as the AUBR Expert Group put it, it was “found that the results of the Shanghai Jiao Tong Academic Ranking of World Universities (ARWU) are not replicable, thus calling into question the comparability and methodology used” (AUBR Expert Group, 2010, p. 56).

**Institutional and field-based rankings**

In broad terms, it is possible to distinguish between users who are interested in institutional rankings and those interested in “fields”, which we define as smaller organisational units like faculties, schools or departments focusing on a single area of knowledge. Fields may include academic disciplines like economics and physics, interdisciplinary areas like business studies and nano-technology and single study programmes or research programmes in a given area. Field-level rankings are of particular interest to students or individual researchers looking for a study or research base, since programmes across institutions may have quite different qualities. Indicators only showing averages for whole institutions mask particularly strong or weak programmes, implying that for these users institutional rankings are irrelevant or even misleading.

Institutional-level rankings, on the other hand, are popular with government policy makers and institutional leaders who have a legitimate interest in overall characteristics at the institution level. In fact, some characteristics (such as an institution’s mission or its policies relating to participation) only apply at this level. Likewise, the institutional level is useful for mapping more detailed characteristics and identifying similar institutions for co-operation or benchmarking exercises. Besides, policy makers often limit themselves to the institutional level, because it is here that they make policy and funding decisions.

Most global rankings (such as ARWU, THE, QS, Leiden, HEEACT, Webometrics) rank whole higher education and research institutions, and it is in this connection that they are generally associated with the “reputation race” (Vught, 2008). ARWU, HEEACT and THE rankings also publish results for broad fields, but they do not identify the “best institutions in the world” (or whatever designates “best” according to the indicators used) for these fields. Instead, they create a new rank order of institutions from their general ranking in function of individual fields. This means that theoretically the
rankings may miss out the best institutions if these do not figure in the overall top scores. This way they put small, specialised institutions at a disadvantage. Some global rankings only focus on one specific field: the Financial Times ranking is solely concerned with business studies, irrespective of whether these are taught in comprehensive institutions or business schools. In that sense, the FT ranking straddles the field vs. institution divide.

Several national rankings also focus on institutions as a whole, such as USN&WR and Perspektywy. More typically, however, national rankings such as CHE Ranking and SK123 are geared to help prospective students make an informed study programme choice in step with their individual preferences.

National vs. international rankings

The earliest rankings which were published compared colleges across 50 US states. This was comparable to a national level from a technical point of view, but in fact 50 states and around 4 000 HEIs constitute as large and as complex a higher education system as the European Higher Education Area, which comprises 47 countries and several thousand HEIs. Nevertheless, the USN&WR league tables are more like national rankings in other countries and aim to inform US students about the best study options available across the whole country. Similarly, at field level, the CHE Ranking aims to inform students looking for undergraduate study programmes across all 16 German federal states. These examples point to the fact that national-level rankings tend to be designed for a clearer purpose and with a more focused target group in mind than global ones.

International rankings like the ARWU and THE primarily rank whole higher education institutions. They are currently the most controversial and most discussed rankings, as they are said to make or break institutional reputations. Other international rankings such as the Leiden Ranking or Webometrics are more explicit about the limitations of their scope and claims, i.e. research performance and impact (Leiden Ranking) and web presence and activity (Webometrics). That way, they evoke less vehement debate than the former two.

There is a growing demand for more international transparency in the context of international mobility of students, and here we see two primary trends. First, national rankings are expanding to neighbouring areas. Thus, the CHE ranking now includes institutions from inter alia Austria, Switzerland and the Netherlands, although a pan-European ranking does not exist yet. Second, more focused international rankings are beginning to emerge: the CHE Excellence Ranking, for example, focuses on the European market for Masters and PhD students. First piloted in 2007, this covers a limited number of fields
and is restricted to international, research-oriented universities throughout Europe.

**Education vs. research**

Rankings can have two different foci. First, they may set out to provide information about either education or research. For instance, the professed aim of the CHE rankings and SK123 is to inform students about the best places to study, indicating a focus on education. Likewise, the Leiden Ranking explicitly focuses on the research performance of HEIs. Also, the original objective of the ARWU was to inform policy makers in China about the position of Chinese research universities (mainly in the fields of science and technology).

Second, another facet of the word “focus” relates to the **actual indicators** used to compose the ranking. A good ranking system is one in which the indicators used to establish a ranking (e.g. research productivity and impact) correspond to the focus the ranking claims to have (e.g. to inform institutional leaders about the research strengths of their institution). Most national rankings which focus on informing (prospective) students do indeed have indicators on teaching or use a mix of education and research indicators (plus some context variables). The majority of indicators used in the six main global rankings give the ranking a tendency to evaluate research. Given its objective, this practice makes the Leiden Ranking a good one, but the same practice can become problematic if research-based rankings are used in any way as equivalent measures of general prestige or even quality.

**Methodological issues**

A substantial part of the current discussions on the “use and abuse” of ranking and categorisation relates to a set of methodological issues. In this section we consider three issues that appear to be at the heart of these discussions, namely data sources, league tables and composite indicators in rankings.

**Data sources**

When reviewing the workings of the main ranking methodologies it appears that the data can be broken down into three broad categories: databases and statistics (national and international), data elicited from the institutions to be ranked (“self-reports”) and surveys from different types of respondent.
Existing databases

The ideal solution from the point of view of validity, reliability and parsimoniousness of data collection (not bothering higher education institutions with unnecessary questionnaires) is to use an existing database. An instructive example of this is the Carnegie Classification, which distinguishes higher education institutions in function of a large number of criteria and indicators. The information needed to construct these indicators is derived almost uniquely from a publicly available US-wide database, the Integrated Postsecondary Education Data System (IPEDS). IPEDS is based on surveys conducted annually by the United States’ Department of Education’s National Center for Education Statistics (NCES). It is a legal obligation for HEIs benefiting from federal student aid programmes to report enrolments, programme completion, graduation rates, staff, finances, tuition fees and student financial aid data to IPEDS. IPEDS checks the quality of the self-reported data, which means that the Carnegie Foundation is neither burdened with data collection nor its verification. Institutions only have to report data once, rather than to both the government and the Carnegie classification. Almost all data used is freely available at the federal level in the United States.

The system described above is ideal for a classification or ranking, but is rare. Databases exist in a number of countries, but few exist on an international level. The European U-Map project has been disadvantaged in relation to the Carnegie Foundation given the absence of a Europe-wide database on individual higher education and research institutions. U-Map has had to work with national databases and statistics, which raises two difficulties. First, national-based data are notoriously difficult to gather internationally, given the plethora of national sources governed by different data protection laws. They are also hard to compare, due to different data being collected across countries, which moreover often use different definitions of what seem to be the same data. International publications on statistics, such as the OECD’s annual Education at a Glance, therefore have an abundance of footnotes in every table or indicator, showing the limits of comparability of international statistics. A final problem that arises is that international databases tend to gather information at the national system level rather than for individual institutions or at the field level within institutions.

One area where it has been easy to effectively compare international data is in the field of bibliometric indicators. The two major databases used for large-scale comparative bibliometric studies are Web of Science (WoS) and Scopus, which cover journal articles published in peer-reviewed journals. Nevertheless, the use of such data comes with its own problems, since publication cultures and modes vary considerably between different fields.
Peer-reviewed journals are the prime vehicles for knowledge dissemination in the natural sciences, medical sciences and life sciences. However, in many applied sciences and in engineering, conference proceedings are more important than journal articles. In the social sciences and humanities, book publications play an important role. Focusing the data collection on journal articles (which are easily gathered) creates a bias in favour of the sciences and medicine. The corollary of this is that existing indicators penalise universities which are leaders in fields where journals are less important. However, both WoS and Scopus databases are rapidly repairing major lacunae by increasing coverage of journals in under-represented domains of knowledge production, as well as that of international journal coverage and conference proceedings. Nonetheless, the coverage of both databases is likely to remain unsatisfactory for the arts and humanities in the foreseeable future.

A further problem comes from the fact that the journals included in the databases have so far been biased towards English language publications. Output from non-English speaking countries is therefore under-represented, as are publications from major countries which have a long tradition of scientific research (e.g. France, Germany, China and Japan). A further drawback is that this language bias also contains a disciplinary bias. The sciences are mostly international (English) in their modes of publication, while several other fields in the humanities and social sciences have much stronger national research cultures, publishing in the languages of the countries involved. Citation indicators in English therefore reinforce a bias towards sciences. WoS and Scopus have been trying to address this, in particular by developing alternative databases covering humanities journals in more European languages.

Bibliometry also suffers from biases. For instance, publications by large universities are cited more often than those by small ones. Also, the process of cleansing data to assign publications to persons and institutions (or to ascribe web pages to institutions), is far from straightforward, and this lowers the reliability of indicators unless rankers use them with great care (Moed, 2005; Raan, 2005).

Self-reports from higher education and research institutions

Where (international) databases fall short, self-reporting by higher education and research institutions becomes the most used data source (Thibaud, 2009). Many types of data are efficiently gathered from institutions themselves such as staff composition, institutional facilities, budget reallocation and licence income, if this is not available elsewhere. Institutions’ virtual monopolies on such data create a “principal-agent” problem and open the door to rankings being “adjusted” by manipulating data. Individual
institutions’ definitions may differ, and almost certainly differ across countries. Normalisation of data to a single, globally-used definition is rarely straightforward. For these reasons, the plausibility of self-reported data needs to be externally tested and validated. Analysis also needs to be carried out on extreme cases e.g. through using time series data, triangulation with other data sources and using the expertise and knowledge of an advisory board.

**Surveys**

A number of rankings use data resulting from peer surveys (i.e. THE, QS, USN&WR and CHE) notably on institutions’ reputations, as well as information on satisfaction levels from surveys among students and graduates (CHE, SK123).

The degree of satisfaction with which students (and graduates) rate their university experience is a category of data which is particularly valid for rankings that address prospective students (quality “is in the eye of the beholder”). Experience from the CHE and SK123 rankings as well as national student surveys in the United Kingdom and Australia show that student and graduate surveys produce robust comparative information about higher education programmes. But to date little work has been done on the international comparability of this type of survey data. Clearly, it is affected by a range of country-specific factors such as culture (notably the acceptability of critiquing teachers) and scales (Westerheijden et al., 2008).

Another variable for which surveys are often used is institutional reputation. An analysis of CHE data on the reputation of German, Swiss and Austrian universities (Federkeil, 2009) showed that reputation has to be treated with extreme caution in international rankings. Clearly, peers can be biased as a result of unawareness of all but the most famous international higher education and research institutions. The quality of the results depends heavily on the quality and size of the sample. In 2009, a heated discussion even broke out in the United States about the trustworthiness of USN&WR’s peer reports: respondents to the ranking survey were accused of downgrading other higher education institutions in order to improve their own institutional standings.14

**League tables**

A focus on a specific category of data leads to a very restricted concept of quality, and this narrowness has consequences. Nevertheless, such a narrow concept of quality is what characterises many current rankings, where the focus is on “world class research universities”. Governments have made significant efforts to build “world-class universities” through special funding. They have also been stimulating mergers or taking other measures in favour
of these universities (Salmi, 2009). This approach has been criticised for concentrating efforts at the expense of interest in, and resources for, other parts of higher education systems. Similarly, AACSB, a specialist accreditation organisation in the field of management, criticised MBA programme rankings for taking the risk of narrowing the diversity of business studies to a single, highly specific course, the MBA (AACSB, 2005, p. 7).

Most rankings, both national and international, are published as league tables and to be ranked at the top implies higher quality. This kind of league table is ranked on an ordinal scale, and this poses problems. A change in rank does not necessarily signify a change in institutional quality if the performance of others has changed. Further problems can arise when ranking differences are within the margins of error of the methodologies used. Also, there is a strong risk of random ranking fluctuations arising from measurement errors. For example, in the 2008 THE World Rankings, the difference between the universities ranked number 27 (Brown university) and 43 (University of Queensland) was only 4.5 points, and between numbers 50 and 100 it was only 10 points. In the QS rankings, between 2009 and 2010, 10 institutions varied more than 20 places in the league tables. Hence, these tend to exaggerate differences between institutions and put an extreme emphasis on vertical stratification.

**Composite indicators**

Composite indicators in rankings are scores that are derived from combining a set of underlying variables which produce a single score. Obviously, the choice of variables and the weighting given to individual variables influence the outcomes, as well as the rankings, which emerge in these situations. This raises three issues which need further reflection.

First, assigning weights to individual indicators needs a conceptual model with a set of arguments about the relative weight of the indicators when defining quality. A 1997 study by the National Opinion Research Center on the USN&WR rankings confirmed that “the weights used to combine the various measures into an overall rating lack any defensible empirical or theoretical basis”.15 To this day, the problem persists that there are neither generally accepted theoretical nor definite empirical arguments for assigning particular weights to individual indicators (Dill and Soo, 2005). Moreover, the weighting choices create an implicit bias in favour of specific types of higher education institution. Reputation, as measured by international surveys, is for instance enhanced by HEIs being located in a major, well-known city – and by establishing a university brand (Marginson, 2008).

Second, rankings target different groups and these have different priorities and preferences when it comes to comparing universities and
making choices. Moreover, individual users have different priorities and preferences, e.g. prospective students use heterogeneous criteria for selecting a university. To be relevant for users’ decision-making processes, ranking systems must account for this heterogeneity and potentially leave the decision about the relevance – and weighting – of indicators to the users. A composite indicator with fixed weights risks patronising the users of rankings by predetermining the importance and relevance of different indicators. Eccles (Eccles and Gootman, 2002) pointed out that fixed weights also fail to acknowledge non-traditional students’ interests, as these may have priorities and interests different from “mainstream” weighting systems. To offer a more user-driven approach, some web-based rankings have introduced an interactive tool in order to let users decide about the relevance of indicators. Some rankings (including the Guardian) do this by allowing the user to assign their own weights to the indicators forming the composite indicator. Others such as SK123, CHE and HEEACT allow users to give priority to a number of indicators, resulting in a personalised ranking of programmes or institutions.

Third, the methodology used by the THE and Shanghai Jiao Tong University rankings to construct their composite indicator has been analysed statistically and was found to be relatively unrobust (Saisana and D’Hombres, 2008). Through a sensitivity analysis and simulations using different weightings, Saisana and D’Hombres showed that 67% of universities in the THE ranking and 60% in the Shanghai Ranking were highly sensitive to the composition of the overall score. The variation of league table positions according to different indicator models in general is greatest in the lower ranks, but even the Massachusetts Institute of Technology drifted from the 10th to the 25th position according to THE data (ibid., p. 53). Saisana and D’Hombres concluded that “no conclusive inference regarding the relative performance for the majority of the universities can be drawn from either ranking” (ibid., p. 8).

Discussion

All over the world higher education and research systems are becoming more complex. Stakeholders are looking for valid and reliable information about their own systems but increasingly also across national borders. More national and international classifications and rankings are being produced to respond to this need for greater transparency.

Asbhy’s well-known Law of Requisite Variety makes us realise that the more complex higher education systems become, the more complex our way of looking at them needs to be. In other words, for a simple system of uniform universities, perhaps all we need is an elementary league table. However,
given contemporary complexities, more complex instruments are needed if we are to obtain the degree of transparency we are looking for (cf. Vught, 1993). Sophisticated transparency tools are also needed because the role of higher education in society is expanding. As different kinds of stakeholders come into contact with universities they bring their own information needs, which transparency tools need to serve if they are to effectively meet their own goals.

Transparency tools are designed to help stakeholders form judgements and take decisions. In this context, information needs among different stakeholders in higher education are diverse (see, for example, AUBR Expert Group, 2010). Moreover, stakeholders are not homogeneous groups: specific categories of professionals may need tailored study programmes, quite unlike those of secondary-school leavers. Transparency tools therefore must be designed with flexibility to cater for these different needs.

Our analysis builds on a growing literature that critiques existing transparency tools. Our aim, however, is not to suggest that we should stop publishing rankings: many groups of stakeholders show a clear and legitimate need for information on higher education, research institutions and study programmes. Transparency tools such as classifications and rankings therefore have an important role to play in the further development of the external quality assurance of higher education and research. The way forward, in our opinion, is to improve transparency tools, and there are two avenues to achieve this.

The first requires rankers to “self-regulate” by articulating more clearly the principles of ranking and what constitutes “good” ranking. With this in mind, a number of rankers and experts have established the International Ranking Expert Group (IREG), which convenes regularly. At its meeting in Berlin in 2006, it agreed on a set of basic principles for good ranking practice, commonly called the Berlin Principles (International Ranking Expert Group, 2006). The Berlin Principles set out to establish good practice in relation to the purposes and goals of rankings, the design and weight of indicators, the collection and processing of data and the presentation of ranking results. Accordingly, they call for:

- Clarity about purpose and target groups.
- Recognition of the diversity of institutions.
- Transparency in ranking methodologies.
- The measurement of outcomes, not inputs.
- Providing consumers with a clear understanding of how a given ranking was developed and offering them a choice of how rankings are displayed.
- The application of quality assurance principles to the ranking itself.

(N.B. From 2011 onwards, the IREG plans to audit and recognise rankings.)
In general, the Berlin Principles are perceived as relevant guidance on what should constitute “good” rankings. Their application reflects the multidimensional understanding of the concept of quality.

The second avenue is via the recognition of the multiplicity of stakeholders’ interests in higher education and research and hence of the importance of creating multidimensional ranking tools. At CHEPS we are currently preparing a feasibility study to do exactly that, i.e. develop a multidimensional global ranking tool that is able to address different stakeholders' needs. The study in question is the “U-Multirank” project, which is undertaken by an international research consortium. In addition to CHEPS it involves producers of well-established specialised rankings, namely CHE (which contributes experience with student-focused programme rankings), and CWTS (from the Leiden research ranking). Applied research and innovation – something which has hitherto not featured widely in ranking – is represented in U-Multirank by INCENTEM, which is located at the University of Leuven in Belgium. The Paris-based Observatoire des Sciences et des Techniques (OST) is also part of the research team. The researchers’ diverse areas of expertise reflect the project’s goal, which is to design in a deductive way a ranking that reflects all missions of higher education and research institutions, while recognising that not all institutions need to perform on all dimensions.

A deductive rather than opportunistic approach calls for bringing together existing indicators (that effectively measure what matters) and developing new ones, such as regional impact indicators, where they do not. The project involves a pilot field test to explore the extent to which indicators may be developed in such a way that they reflect higher education and research institutions’ performance in the most varied contexts. The ranking exercise seeks to reflect various stakeholders’ needs, developing both focused rankings for higher education and research institutions as a whole (for institutional decision makers and national policy makers) and field-based rankings to inform (prospective) students.

This is clearly a large, difficult and potentially risky undertaking, and the fact that existing rankings have focused on available data underscores that “measuring what matters” is extremely difficult. To ensure legitimacy as well as validity, the development of the U-Multirank project is embedded in a context in which both international experts and stakeholders are represented. The final report will be published in 2011 and will furnish empirically-grounded answers to the question of whether it is possible to make higher education and research transparent on a world-wide scale.

Only future research will tell whether it is possible to design and implement a multidimensional ranking tool on an international scale. But
such a tool will only make higher education and research transparent if it can also address the various methodological problems discussed above. In addition, this tool should at least address the following three issues. First, higher education institutions should be allowed to present their own specific “institutional performance profiles”. Second, rankings should be able to meet different stakeholders’ needs, and third, higher education and research institutions should be able to showcase their strengths. If these three conditions can be fulfilled, then multidimensional ranking may well mark the next generation of transparency tools.

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The authors wish to thank Dr. Paul Benneworth of the Center for Higher Education Policy Studies (CHEPS) for his contribution in finalising this text. They would also like to mention that parts of this text are drawn from two project reports – to which they contributed – which are available online: Design and Testing the Feasibility of a Multi-dimensional Global University Ranking (CHE et al., n.d.) and U-Multirank: Interim Progress Report (CHERPA Network, 2010).

This project has been funded with support from the European Commission.
Notes

1. This is complicated by the fact that “ranking” may be a noun or a verb, while there is no corresponding verb for “league table”; some confusion stemming from our use of verbs may be unavoidable. More confusion comes from many league tables being called “rankings”.


3. See: www.u-map.eu.


6. For an overview, see www.find-mba.com/mba-rankings.


10. Reputation is an efficient, therefore attractive indicator of “quality” for actors who do not have the time or resources to search for detailed information (Stigler, 1961). Therefore, Rankings enjoy a high level of acceptance among stakeholders and the wider public because of their simplicity and consumer-type information (AUBR Expert Group, 2010).


13. The EU has launched a project to investigate options of getting institutional-level data; see the EUMIDA project (www.eumida.org). Also, the AUBR Expert Group recommends setting up a regular observatory on research information from HE and research institutions (AUBR Expert Group, 2010).


16. See: www.u-multirank.eu. This article reflects the views only of the authors. The Commission cannot be held responsible for any use which may be made of the information contained therein.

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The global impact of the financial crisis: main trends in developed and developing countries

by

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The impact of the financial crisis on higher education has been considerable, and its effects are continuing. These effects can be discerned in a number of ways; but whereas both developed and developing countries are affected, they can be affected differently. A modifying factor is the shape and structure of the higher education system within each country. This paper looks at developed and developing countries and considers key areas of higher education affected by the financial crisis and possible ways forward.
La crise financière a eu un impact considérable sur le secteur de l’enseignement supérieur et continue de faire effet. Ces effets se perçoivent à de multiples égards ; cependant, même si les pays développés et en voie de développement sont touchés, ils peuvent l’être différemment. Cet article examine la situation des pays développés et en voie de développement ; il analyse les domaines de l’enseignement supérieur qui ont été majoritairement affectés par la crise financière et propose des perspectives possibles.
Introduction

This paper indicates the main trends to be discerned in higher education in response to the financial crisis. Detailed figures for the 2009/10 academic year are not available in all countries, but there is now sufficient published information to affirm that all countries, whether developed countries, developing countries, or emerging global players, exhibit some effects. The paper considers the impact on students and on government policy, as well as the problems faced by institutions. The final section examines possible ways forward, and postulates how university management teams might respond to the crisis.

Developed countries

The impact of the financial crisis on students

Currently, over 210 million people worldwide are estimated to be unemployed, an increase of some 30 million since 2007. Not only do three-quarters of these newly unemployed live in developed countries, but another notable feature of this recession is youth unemployment. Both young people at age 18 and new graduates are markedly affected. The downturn in businesses has led companies to shun new graduates and large companies such as British Telecom have closed down their graduate recruitment departments. Thus, with meagre job prospects, those who are able to study are applying for initial or additional courses at a wide range of institutions. The Universities and Colleges Admission Service (UCAS) in the United Kingdom reported that there had been an 8.7% overall increase in the number of accepted applicants for the 2009/10 academic year. Also, there had been a particularly large increase (+15.3%) in applicants aged 25 years and over. The increase applies to both full-time and part-time courses. Figures from one UK university, for instance, show a rise of almost 20% in enrolled undergraduate student numbers compared to last year’s figures. Part-time enrolments show an even larger leap: over 25%. Switzerland, similarly, is showing a growth of between 20-30% in student enrolments.

Other European countries affected by high youth unemployment exhibit different trends. Norway, for instance, has witnessed a growth in the number of males entering higher education (HE). This is of particular interest as the trends in Europe in recent years have pointed towards a majority of females at
undergraduate level. The other trend seen in Norway has been towards a growth in applications for training in secure professions such as teaching and nursing. Both of these trends are echoed in the United Kingdom, with a rise in acceptances of males aged 25 and over (+10.8%) and a steep rise of numbers in courses such as nursing (+19.9%).

In Finland students are “choosing not to graduate” and are hence not leaving university. They have the right to stay on for seven years, and be absent for two years before graduating. If jobs are not available, this is a tax-efficient choice for them. Germany has a somewhat similar system.

The US HE system has also been much affected by the financial downturn. Unemployment has climbed to over 9%, and jobs for young people are scarce. However, the cost of tuition at private colleges and state universities offering four-year courses has continued to grow. As a result, families with reduced financial resources have chosen cheaper options. Thus those that may well have paid for a prestigious private college in previous years are now going to a good quality state university. Out-of-state enrolments, for example, at a university such as the University of Colorado at Boulder have held up better than expected. Another effect of rising costs is that those who would have attended a four-year state university are choosing a two-year community college. This in itself is causing problems. While it is government policy that every student should be able to receive some form of post-secondary training, many community colleges have capped their numbers because of lack of resources provided by their particular states. Even so, there has been a huge growth in community college enrolments.

Within the United States, certain states – such as California – have been particularly badly affected by the financial crisis. Governor Schwarzenegger has cut USD 1 billion, representing around 20%, from the budget of the University of California. In 2010 fees are rising by 20% to over USD 10 000 a year: support staff are losing their posts, and academics are having to take unpaid leave. Funds for the state’s community colleges are being cut by over USD 900 million and warnings have been given (Keller, 2009) that these colleges will be badly hit by the cuts, with a likely reduction in enrolment of 20 000 students. Likewise, universities in Arizona have been badly affected by cuts in the state budget: California is by no means alone.

The trend in relation to international students moving to developed countries to study appears to be holding up: in recent years there has been a year-on-year growth in numbers. A recent publication (Wit et al., 2008) presents a wide-ranging global study of the growth worldwide of student migration and its patterns. Although the financial crisis has, for some countries, had the effect of slowing down that growth, it is likely that this powerful trend will continue. Figures for the United Kingdom, for example,
have risen markedly: the percentage of overseas students at one institution, for instance, has risen in line with the overall expansion of numbers. Most universities in the United Kingdom attract between 10% and 15% of overseas students; these continue to make a major contribution to the finances of the country’s HE system.

Postgraduate numbers have also increased, with targets for recruitment being surpassed. This is particularly marked for MA and MSc degrees taught full-time. In some faculties, such as Business, there has been a rise of 75% of overseas students in comparison with the intake for 2008. China continues to be a major contributor to the numbers of overseas students studying in the United Kingdom.

There is some indication that within developed nations international students are opting for cheaper countries and for those that offer fewer problems with obtaining visas. The OECD reports that the United States’ share of foreign students has dropped (OECD, 2009).

**Government responses at policy level**

The developed nations almost all have a policy of expanding graduate numbers in order to provide more highly skilled workers to take forward the knowledge society. However, the problem of funding has inevitably brought about some changes. Irish HE, for instance, has no tuition fees attached, but this is no longer sustainable and the government has indicated that fees will be introduced within the next two years. However, many European countries are making efforts to maintain systems of grants and/or loans for students from disadvantaged backgrounds. Only by expanding the overall percentages of graduates in the population can the countries hope to compete effectively in a globalised world. The United States, for instance, has improved the value of Pell Grants for the first time in many years. (Pell Grants are awarded to US post-secondary students on the basis of financial need via an educational federal grant programme sponsored by the US Department of Education.) President Obama has also reorganised the Federal Perkins Loan Program, which is administered by institutions to bridge gaps between other loans, grants and scholarships, i.e. low interest, needs-based student loans provided by the US Department of Education to assist post-secondary students in financing the costs of their education.

This additional funding will provide USD 6 billion a year, compared with the current USD 1 billion. As a result, an additional 2.7 million students enrolled in the United States’ 4 400 colleges and universities could qualify for a loan. The administration also indicated its intention to change the distribution formula to give priority to needier students and reward colleges that control costs (Murray, 2009). The Health Care and Education Affordability
Reconciliation Act, passed on 21 March 2010, introduced automatic annual increases in the Pell Grant, which will rise to USD 5,975 by 2017. It also included USD 13.5 billion to cover a shortfall caused by the steep rise in the number of Americans enrolling in college and seeking financial aid during the recession.

The situation in the United Kingdom points up the difficulties caused by the recession. The problem facing the Higher Education Funding Council for England (HEFCE) is the cost of student support. The cost of studies is met up front by the government, and the student repays his debt after graduation. Loans are available and have to be repaid, but no interest is levied. The system is therefore expensive, particularly in the face of rising numbers of qualified applicants who would otherwise likely be unemployed. Growth in English universities was limited to an extra 10,000 places in 2009/10. During 2010 there will be a reduction in overall funding to the HE sector: some GBP 500 million will be taken from its envelope of GBP 7.8 billion. Further budget cuts are expected in 2011.

Figures released indicate that in 2009/10 141,000 candidates failed to get a place through the UCAS system, in comparison with 109,103 last year. In response to this bleak horizon, the government has expanded the number of places in Science, Technology, Engineering and Mathematics. In the Chancellor of the Exchequer’s March 2010 Budget statement, an extra GBP 305 million for universities was pledged. Of this sum, GBP 250 million will provide for 20,000 extra student places in these subjects, including 5,000 places for part-time degrees and 5,000 places for foundation courses.

Germany has been concerned for a number of years that its HE system is inefficient and has, despite the economic crisis, agreed a series of measures to improve it. The federal government is to provide EUR 11.8 billion and the state governments will provide another EUR 6.2 billion. The money is to be spent on more study places, improving academic excellence and supporting research institutions. In 2008/09, Germany had just under two million students; by 2015 it should have a further 275,000 at a funding cost of EUR 26,000 per additional student over a four-year period. It is clear that Germany is determined to improve the quality of its graduates, to produce more, and to produce them more efficiently.

**The impact on institutions**

University leaders have given much consideration as to how best to deal with the financial crisis and its impact on HE. The 2009 US Presidents’ Forum agreed on several strategies to respond to the global crisis: “higher student aid loans and subsidies, flexible payment schemes, scholarships and discounts
for international students ... to make college education more accessible to students from low-income families” (Flores, 2009).

The reality, though, is in many cases very different. Spending in many US colleges and universities has been severely cut back. These vary from choices relating to the provision of services – Davidson College, for instance, saved over USD 10 000 by switching from bottled water to tap water at college events, and USD 150 000 by cutting back on a free laundry service. Other cuts have affected staff, and include redundancies and the freezing of academic posts (Lewin, 2009).

The phenomenon of freezing academic posts and offering voluntary early retirement is in fact common in developed countries. Athletics departments, for instance, have been severely affected. Stanford University cut 21 staff positions in its athletics department and removed funding from the nationally ranked men’s fencing team, the state of Indiana cancelled its men’s and women’s tennis teams, and Vermont closed its baseball and softball programmes (Schlabach, 2009). Senior administrative staff at the University of Hawaii have had to take cuts in salary, and pressure has been brought on academic staff to accept salary freezes. In the United Kingdom, posts are likely to be lost in restructuring faculties. Departments at risk are often those which are high cost, such as modern languages. Rising salary, pension and energy costs mean that operating expenditure is increasing steeply, at a time when money is less available. Fears have been expressed that the unit of teaching resource per student, which has been maintained in the United Kingdom at the level of inflation in recent years, will be affected. University vice-chancellors argue that it is essential that they remain internationally competitive in both research and teaching.

Research has been affected by the financial downturn, but the main effects have not yet been seen. The problem is the lack of new funds for specific projects in the future. With less money available, the competition to gain research grants is fierce, and the level of funding is likely to be lower.

One result of the decrease in public funding and private sector resources is that departments are merging and even whole institutions are closing, a trend particularly evidenced in small private US colleges. This trend has been noticeable for a number of years: 824 private colleges and universities – i.e. 11% of all institutions – were closed between 1975 and 2005 (Porter and Ramirez, 2009). The University of Amherst in Massachusetts has responded to cuts by merging two colleges into one and has conflated 17 departments into a new natural sciences college. Even so, the college still has a deficit of some USD 24 million. The problems for private colleges are great: there are huge increases in energy costs; as many families are in financial difficulty students can only afford to enrol if there are substantial discounts in fees; and donors
are unable to contribute funds. The difficulties are not confined to US colleges: it is a global phenomenon, in both the developed and the developing world.

A more particular problem affecting private institutions in the United States such as Harvard and Stanford has been the loss in value of their endowment funds. Some funds have lost 30% in value, and as a result scholarships and operating costs are affected. Harvard University has laid off 275 non-faculty employees and reduced the hours of another 40 employees. Salary freezes have been introduced, appointments to new positions are strictly limited and capital projects have been slackened (Harvard Magazine, 2009).

The effect of academic redundancies and job freezes could well have its silver lining, however. Guest speakers at a recent OECD conference* predicted that traditional tenure systems offering “jobs for life” would disappear, and that the “churn” in the international job market could be of benefit to emerging nations in attracting talented staff.

**Emerging global players**

The public sector has suffered some small budget cuts but the impact of the financial crisis on Brazilian HE has mainly affected the huge private sector. This sector represents 70% of all undergraduate enrolments, and is constrained by students’ inability to meet rises in tuition fees. As a result, many small local institutions have been bought out by big corporations that can afford to offer lower tuition prices. Some of these have more than 100 000 students and can offer programmes at a very low cost (e.g. less than USD 150 a month). The result is that the small, locally oriented institutions are being supplanted by the huge for-profit corporations.

The South African situation is tied directly to a rate of inflation of some 13% caused by the financial crisis, which has led to a weak rand. This has resulted in increased operating costs in such areas as library budgets. Although universities need to push up student fees to meet their costs, the government has warned against this. Unfortunately, in the current economic climate, the government cannot provide more funds and universities cannot generate more “third stream” income. This leaves them with little choice but to introduce cuts. The crisis also affects students’ ability to pay fees. As these are often paid just before the final examination there is likely to be a significant number who cannot afford the fees even though they have taken a course.

A major problem in China is that of rising graduate unemployment. The drive to make HE more widely available in the late 1990s has led to a growth in graduate numbers, which are around four times that of ten years ago. Over

* See: [www.oecd.org/document/10/0,3343,en_2649_35961291_43253066_1_1_1_1,00.html](http://www.oecd.org/document/10/0,3343,en_2649_35961291_43253066_1_1_1_1,00.html).
six million students graduated in 2008/09, but finding employment is difficult. Zhou and Lin (2009) noted that “Very likely, in 2009, close to two million graduates may not find jobs – many of whom are postgraduates, even doctoral graduates.” However, China’s response to the financial crisis by providing a USD 586 billion fiscal spending package appears to have been vindicated. Figures show that the economy grew by 8.7% overall in 2009. It is expected to become the second biggest economy behind the United States by the end of 2010. Graduate employment is likely to improve in the new financial climate.

India, like China, is expanding access to higher education and has not been as badly affected by the crisis as Western countries. Enrolment is already around 12.8 million, the third largest after China and the United States, and it aims to increase the number of students attending HE from 12.4% to 30% by 2020. However, the planned outlay to create new infrastructure and facilities is likely to be slow, so the expansion of capacity will be affected. Another effect is that fewer students are opting to study abroad (Bhattarcharjee and Kotoky, 2009). The numbers taking the qualifying examination to study abroad showed a 20% drop from the figure of 55 000 in 2007. The cost of studying in the United States is around USD 50 000 for a two-year period; by comparison the cost of studying at the highly prestigious Institute of Technology in Madras is USD 1 200 a year.

Interestingly, a reverse brain drain effect can be seen in India, and about 100 000 skilled Indian “returnees” are expected to return home from the United States over the next five years. The Indian job market welcomes them back.

**Developing countries**

Developing countries have suffered the effects of the financial crisis in a number of ways, some of which are similar to the problems in developed countries. Cutbacks in funding from NGOs with consequent effects on the number of projects that can be sustained are common. Indeed, some projects have been cut back mid-term, with donors behind on pledges. A recent report from ActionAid has studied the effects, and states: “Although developing countries didn’t make this crisis, it has become all too clear that they are in the firing line when it comes to suffering its worst effects” (ActionAid, 2009). African economies lost some USD 49 billion by the end of 2009. About USD 27 billion was due to a fall in aid, as well as a fall in export earnings and income from other developed countries which had been hit by the recession. Remittances are markedly down, and families no longer have the money to pay for enrolments. Scholarships have been cut because the bodies funding the scholarships no longer have sufficient income from investments, and earnings from exports are down as a result of falling demand and the effects
of inflation. The lost income for Africa from all these sources is equivalent to a 10% pay cut for the continent in a context of participation rates as low as 2% (Malawi). Thus the knock-on effects on poorer nations exacerbate the problems. Some universities have had to close, such as the University of Zimbabwe; many are struggling to continue. The cost of modern technology and books as well as the effects of worsening poverty on populations present a complex problem to solve.

**Looking forward**

A recent publication (OECD, 2009) suggests several priorities for action:

i) Identify the population that will be the hardest hit by the crisis and most likely to suffer cutbacks on investment in human capital.

ii) Target resources to these more vulnerable populations.

iii) Invest in demand-side financing programmes, such as conditional cash transfers and scholarships, to mitigate the effect of the crisis.

Crises can offer opportunities. The Southeast Asian countries responded to the crisis of 1997-99 by developing innovative approaches, especially in skills training, which led their countries to increased competitiveness and helped them rebound quickly when they moved out of recession. They recognised the need for huge improvements in basic education and skills standards. Second, education switched from rote learning to creative thinking. Lastly, Thailand and Indonesia took authority over the curricula and decentralised funding and made it more responsive to local needs (Pennington and Chaisri, 1999).

**The Red Queen effect**

One of the conclusions of a major British study (P.A. Consulting Group, 2009) of how HE should respond to the new economic order is the vital importance of bringing universities closer to their communities. The study’s title, *Escaping the Red Queen Effect*, is a reference to *Through the Looking Glass*, where the Red Queen advises Alice that “in this country, you see, it takes all the running you can do to keep in the same place” (Carroll, 1872). The authors argue that the changes in the economics of HE are fundamental and irreversible. No longer will governments provide for the purposes of universities; instead, universities must shape their purposes to the values attached to their activities by diverse client groups, including government. Formulaic block grants are being replaced by a portfolio of earned income and the drivers of change are no longer sector-wide government priorities, but market developments, often specific to individual institutions.

The traditional institutional response to hard times is to follow the Red Queen’s advice and run faster, by reducing costs and raising revenue by
well-tried means. After many rounds of such measures, however, the point of rapidly diminishing returns is now being reached. Teaching staff numbers cannot be reduced beyond a certain point without quality being put at risk. In the United Kingdom, over 50% of university revenues still come from government sources and it would appear that public spending has now reached an all-time peak and can only decline. In this situation, the PA Group argues, universities must abandon a business model which relies on government funding and should have the courage to look at radical alternatives, as described below.

“The Amazon university”

The automatic response to funding cuts is to address the problem of apparently uneconomic courses, such as Modern Languages in the United Kingdom. Amazon.com, however, successfully re-thought the way in which customers could access products previously regarded as uneconomic, to the extent that they now represent the majority of Amazon’s sales. In relation to HE, this would require the full application of technology, from e-learning to work-place based delivery, to reduce the break-even point and increase demand. Sharing costs with other institutions is another option for turning loss-making courses into net contributors.

“The on-demand university”

Current teaching patterns require institutions to maintain physical and human capacity which is over-stretched for six months of the year and under-utilised for the rest of the time. Alternative uses of staff time and facilities must be fitted into periods of lull, rather than being year-round. The on-demand university, by contrast, would offer students choice in the mode and pattern of individual study and would even allow them to select courses or whole semesters at other institutions. It would go even further than the British Open University in responding flexibly to market demands.

“The learning hotel”

Research hotels, in which highly specialised equipment is made available to visiting research teams for short-term use, are being piloted in many parts of the world. Institutes of advanced studies are also being developed to encourage the exchange of ideas across disciplinary and institutional boundaries. The learning hotel would be the hub of collaborative knowledge exchange, research and problem solving activities, in a continuous process of co-production between faculty and counterparts in government, business and professional practice.
“The umbrella university”

A further development of the above model would lead the university to finally abandon the idea that it can be self-contained and self-sufficient in everything it does. The institution would become a conglomerate of separately managed businesses, e.g. online services, research centres, employer partnerships and shared service centres.

The underlying assumption of the PA study is that universities will need to respond individually to critical market trends and individual client-centred needs. Such a movement is diametrically opposed to the pressure exerted by league tables which tend to impose a single orthodoxy consistent with the compilers’ concept of excellence. It concludes that “In the past, quality in HE has been associated in large part with the research standing of the Faculty, with good teaching an important but poor relation. In recent years this view has been tempered by the growing importance of managerial capabilities, to ensure that academic excellence is balanced with financial control and operational efficiency”. The successful 21st century university will, in their view, have five essential attributes: a focus on market opportunities; excellence in critical capabilities; agility in responding to customers; a valued impact and sustained margin for investment.

The implications for university management teams

It seems unlikely that any institution would wish to embrace, uncritically, any of the four options above identified by the PA Group, particularly in those countries relatively untouched so far by the financial crisis. It would in many cases be unwise to ignore league table considerations given that they have achieved such prominence in the media and in the thinking of ministers and ministries. Nevertheless, the basic premise of the Red Queen remains compelling. After many years of running hard to stay still, and taking advantage of all the readily available means of cutting costs and raising income, a tipping point is being reached in many systems, where more radical steps are unavoidable.

There are many examples from around the world of universities which have succeeded by taking bold, innovative steps in the face of adversity. Warwick University suffered a 21% reduction in government funding in 1981, yet is now amongst the most successful UK universities. All cuts in funding were neutralised by raising income by a similar amount, and the latter was used strategically to strengthen the University’s core mission. Makerere University in Uganda has demonstrated that “expansion and the maintenance of quality (indeed even the enhancement of quality) can be achieved simultaneously in the context of reduced state funding” (Court, 2000).

It should also be noted that many of the recommendations of the PA Group are already being put into practice, to good effect. The University of Northampton
has recently opened a new facility which enables local industry to hire on a short-term basis state-of-the-art equipment for engineering modelling. It exactly fulfils the criteria of one of the Group’s recommendations.

There is much to be learned from such case studies and from aspects of the Red Queen study, but it is hard to see in these recommendations a global solution to the challenges that universities now face world-wide. What, then, are the initial steps that management teams need to take to ensure that their institutions not only survive the economic crisis but ideally emerge stronger than before?

**Stakeholder engagement**

Once it is accepted that states will no longer be able to fund universities at previous levels, it follows that other sources must be found. With them come new stakeholders, whether fee-paying students, alumni, business, professional practices, city authorities or regional economic development agencies. Each must be identified, together with a communication plan which addresses their particular interests and aspirations.

**Governance**

Radical innovative measures inevitably bring greater risks of failure. Good governance becomes more important than ever, entailing a strengthened role for external governors. Ensuring that they have sufficient information and involvement to perform their task whilst at the same time allowing the executive to manage the institution’s affairs without undue interference, is not easy. Autonomy and accountability are now widely recognised as being two sides of the same coin.

However, in times of financial stringency, funding bodies may be tempted to consolidate their ability to influence and control the decisions of governing councils, even in such core areas as the appointment of the head of an institution or ensuring academic standards. In a future scenario where there are numerous funding sources, one such funder, albeit the major one, should not be permitted to exert pressure which would threaten the autonomy of the institution, and governors need to be increasingly vigilant.

**Local communities**

Universities can no longer take their share of public funding for granted and must compete for political support. All politics, it is said, is local, and institutions must ensure that their contribution to the life and prosperity of their cities and regions is substantial and is recognised. The priorities of local politicians and communities are unlikely to be the same as those of league table compilers. Access from low participation neighbourhoods and by ethnic minority groups are examples of policy areas which will need to be safeguarded in the interests of strengthening local standing.
Communications

Good external communications are essential to successful engagement with stakeholders and communities. Internal communications are equally important if radical changes in university structures and priorities are to be effected. Otherwise disaffected groups will use external media to undermine change programmes and damage the university’s local reputation. The highest quality communications staff and website, together with excellent information systems to allow for instant response to adverse stories, are essential.

Professional services

Other managerial capabilities, such as those involved in finance, risk assessment, project management and governance, are also vital and their contribution must be recognised and respected. A partnership between the professional services and front-line academic staff is a better model than one where one group provides a service to the other. But it can only work when the staff have the right skills. In many cases, a review of the structure of professional services and some new blood will be an essential first step towards a full partnership.

Conclusion

After reviewing and – if necessary – strengthening stakeholder and local community engagement, governance, communications and professional services, university management teams will be well placed to take whatever measures are necessary to address the challenges of the new world economic order. Each institution will need to respond to its particular stakeholders and local needs and differences will increase. Public accountability, along with service to the community, will remain valued aspects of HE provision. The surest route to success will be to identify a unique mission and pursue it tenaciously. In fulfilling it, every HE institution can play a valuable and valued part in society.

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The research presented in this paper was supported by internal resources at the University of Strathclyde, and no external funding was used.

The authors wish to thank the following people for helpful information and discussion: Pawan Agarwal, Elizabeth Balbachevsky, Stephen Court and Jamil Salmi, and to record their enduring debt to Burton R. (Bob) Clark, who sadly died in 2009.

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Sustaining leadership in challenging times

by
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Some governments hit by recession have chosen to invest in higher education as part of long-term economic and social development and international competitiveness agendas; others have opted for a route of cuts, financial stringency and contraction of their higher education systems. This article explores challenges to leadership in the latter context. Different types of institutional responses are examined in terms of three categories: reactive, adaptive and generative, first in terms of the nature of responses and second in relation to three institutional case studies. The higher education responses are then compared with the responses – and associated leadership lessons – that have been compiled from other sectors. Different forms of leadership development are also helping leaders to meet the challenges at individual, team and organisational levels, within and across countries and sectors.
Maintenir le leadership en temps de crise

par
Robin Middlehurst
Université de Kingston et le
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Certains gouvernements frappés par la récession ont décidé d’investir dans l’enseignement supérieur dans le cadre de leurs programmes d’actions pour le développement économique et social à long terme et de leur compétitivité sur le plan internationale ; d’autres ont opté pour une réduction de leurs dépenses, pour des mesures d’austérité financière et un repli de leurs systèmes d’enseignement supérieur. Cet article analyse les problèmes liés aux fonctions de direction dans ce dernier cas de figure. Les différents types de réponse des établissements sont examinés sous trois angles : la réaction, l’adaptation et la génération, tout d’abord du point de vue de la nature des réponses, puis sur la base de trois études de cas. Les réponses liées au domaine de l’enseignement supérieur sont ensuite comparées aux réponses – et aux pratiques de leadership associés – obtenues dans d’autres secteurs. Différentes manières de développer le leadership aident également les dirigeants à surmonter ces problèmes au niveau individuel, collectif et organisationnel, à la fois au sein des pays et des secteurs et entre ces derniers.
Introduction

“The universities of the world have entered a time of disquieting turmoil that has no end in sight,” wrote the higher education scholar, Burton Clark, in 1998 (p. xiii). He attributed this situation to increasing levels of demand on universities to accommodate larger numbers and different types of students, for the design of an ever wider range of specialisations and qualifications at multiple levels, and for increased accountability and responsiveness to a diverse range of stakeholders. Most important of all, Clark argued, was the fact that knowledge outran resources; no university and no national system of higher education (HE) could control knowledge growth, since “Knowledge expansion and specialisation, and reconfiguration are self-propelling phenomena” (Clark, 1998, p. 130). Clark predicted that this “demand overload” combined with a lag in institutional response capability, would lead inexorably to systemic crisis unless “adaptive responses” at system and institutional levels were adopted.

Clark’s “demand-response imbalance” persists in many industrialised countries and arguably has accelerated significantly since 1998. In 2010, we must add to Clark’s earlier analysis the impact of the worst financial and economic recession to hit many OECD countries in 80 years. At both institution and system levels incremental and evolutionary approaches to change – adaptive responses – may need to shift gear towards faster and deeper “transformational” changes. In his seminal study of leadership and organisational learning, Senge (1990) describes three types of organisational response to change associated with different forms of leadership: “reactive” organisations that respond to stimuli as they emerge, “adaptive” organisations that re-shape their activities in response to shifting conditions and “generative” organisations that seek to change the “rules of engagement” in their operating environment to maximise their own position, advantage and aspirations. For the next decade and beyond, generative responses are likely to be important, not least because the economic position and responses of countries, governments and HE sectors are increasingly interconnected. But is there any evidence of generative approaches at system or institutional levels?

This paper begins with a contextual outline of the financial crisis and economic recession and the ways in which different governments are viewing their higher education budgets. In the following sections, I discuss a sample of institutional responses to the economic downturn in different countries, focusing
on the types of response and leadership approaches. I then examine some lessons from other sectors. In the final section, I explore the role that leadership development can play in supporting and challenging leaders to create adaptive and generative organisational responses to current and future challenges.

The global recession in perspective

Variously named “the credit crunch”, “the economic downturn”, “the Great Recession” and described by Alan Greenspan as a “once-in-a-century credit tsunami” (quoted in Lin, 2008), the financial and economic crisis of 2007-08 has reverberated around the world, affecting most economic sectors – manufacturing and service, private and public – in multiple countries. Researchers and policy makers differ in their analyses of the exact starting point and triggers of the crisis. Chief Economist at the World Bank, Lin (2008), points to developed-country growth fuelled by expansionary monetary and fiscal policies in the period 2002-07 as a precursor to the bursting of the US house-price bubble, the mid-2007 crisis in the sub-prime mortgage market and the associated losses linked to a set of securitised financial products (such as mortgage-backed securities) that were traded around the world. The subprime mortgage crisis became a fully-fledged financial crisis, leading to a collapse in equity markets with knock-on consequences for the real economy. The US National Bureau of Economic Research dates the start of the recession to the fourth quarter of 2007, but the level of intensity was felt much more keenly in most countries as of September 2008, signalled by the bankruptcy of Lehman Brothers.

Watkins (2009) has analysed the recession and its impact on the gross domestic product (GDP) of different countries between 2007 and 2009, based on data from the IMF. These data show different scenarios between countries with decline in output and recession starting at different times (or not at all) and proceeding at a different pace, with some countries emerging quickly from recession while others remain in dire economic straits. For example, Japan’s decline in real GDP started before the US economy entered the recession, while the United Kingdom’s pattern of an initial decline in economic growth followed by a decline in real production closely mirrored the pattern in the United States. Within the eurozone, Italy was hardest hit out of France, Germany, Italy and Spain, but Germany was affected later (in 2009) almost to the same extent as Italy. Some of the smaller economies of Europe such as Portugal were not affected initially, but were then severely affected in 2009, a situation that also occurred in Singapore, Thailand and Malaysia. Canada and Mexico – among other countries that depend on trade with the United States – were both affected, Canada in the same pattern as the United States and Mexico more severely. Watkins also highlighted those countries (such as Sweden, Israel and the Russian Federation) whose economies are not dependent or linked to the US economy in the same way: they have remained
economically dynamic and seemingly unaffected by the recession. Others (such as South Korea) appear to have recovered fast. In addition, Australia has officially avoided going into recession, assisted at present by a strong trading relationship with China.

The initial response to the potential collapse of the global banking system involved co-ordinated intervention by the eurozone, UK, Japanese and US authorities. In addition, since the initial impacts of the financial crisis have now spread to other areas of economic activity, governments have intervened in different ways to stimulate their own economies and deal with the consequences of the recession.

**Governments’ higher education budgets**

State authorities have adopted different stances towards higher education. In many countries, investment in HE has been seen as key both to short-term economic recovery and long-term competitiveness. In other cases, HE has received initial stimulus packages, but with future budgetary arrangements remaining uncertain; in a smaller group of countries, these budgets have been cut in real terms. Douglass (2010) has tracked various national responses to HE budgets in several OECD countries. In the United States, despite a federal stimulus from the Department for Education of USD 48 billion (part of the larger American Recovery and Reinvestment Act passed in 2009) many state budgets for HE have been cut in 2009-10, with California being particularly badly hit. France, which is in the midst of government reforms in this sector, has witnessed increased HE funding, with a new EUR 35 billion stimulus package for promoting research and a further EUR 11 billion to support continuing reforms. The government in the Netherlands has chosen to protect funding for basic scientific research while seeking budget cuts in other areas, combined with plans for higher tuition fees and a shift from student grants to a loan system. In Germany, despite a severe economic crisis, state and federal governments agreed to spend 18 billion on HE institutions and research in 2009-10, much more than in the previous fiscal year, with long-term plans for funding and expanding German HE still in place.

The situation in Ireland is very different, with higher education undergoing large cuts in 2009-10 in addition to salary cuts for all staff of 4 to 10%, in common with other government employees. In early 2010, the government of the United Kingdom signalled budget cuts for England’s HE and the Research Councils of GBP 600 million with required “efficiency savings” of GBP 180 million and further cuts of GBP 135 million. However, GBP 270 million was also to be made available through the Higher Education Modernisation Fund. By mid-2010, a new government was signalling further cuts; and a review into student fees and financial support is also to be published at the end of the
year. It should be noted that these budget cuts follow record levels of funding over the past decade for the UK HE sector according to a paper by management consultants PriceWaterhouseCoopers (PwC, 2009).

The gloomy picture in the United States and parts of Europe reported by Douglass is not mirrored in most Asian countries. China, South Korea, Taiwan and Japan are not planning large budget cuts to their HE sectors and are using the economic recession to increase efforts at reform and to expand investments to create “world class” universities. As Richard Levin, President of Yale argues in the 2010 HEPI Annual Lecture (Levin, 2010), the East continues to rise in terms of economic and human capital development. Large-scale investments in HE in the Gulf States, Singapore, China and India are a key part of this development agenda. For the countries that are dealing with recession, they must remember to add the growing levels of competition for status, reputation and talent that they will face from those HE systems that are becoming stronger all the time.

Institutional responses to challenging times

In this section, I look first at some summary responses to the financial and economic crisis at institutional level in the United Kingdom and then focus on three more detailed case studies of institutions in different western countries based mainly on publicly available information.

**Types of institutional response to financial reductions in UK higher education institutions**

Engagement with higher education leaders, managers and governors in the UK system (and internationally) through network meetings, leadership development programmes and consultancy initiatives mounted by the Leadership Foundation for Higher Education (LFHE) has enabled the authors to gather information and exchange ideas about institutional responses to forthcoming cuts in national HE budgets. UK institutions, like countries, are positioned differently, with some universities facing substantial financial difficulties while others are less severely affected. The authors of the PriceWaterhouseCoopers’ (PwC, 2009) paper note that even in the period 2005-08 (“the boom years”) almost 25% of the sector (41 institutions) generated cumulative aggregate operating deficits and this “has to raise questions around how some of these HEIs will cope in more austere funding conditions” (p. 5).

Table 1 provides a summary of the kinds of actions being taken by senior managers to deal with the financial situation; most responses tend to fall into the categories of “tactical and adaptive” while a few are potentially generative. It is worth noting that several responses include important symbolic actions from senior leaders in terms of pay cuts and pay freezes while others signal longer-term development and deeper cultural change across the institution.
In other countries, universities individually and collectively are also taking action. For example, in the University of California, where state funding per UC student has dropped by 54% since 1991 and where the last two years have seen severe cuts in the state budget, a UC Commission on the Future has been established to examine issues of access, quality and affordability in the new budgetary context. Tough questions and controversial ideas are being explored, such as increasing the number and proportion of non-resident undergraduates; offering three-year undergraduate programmes; charging differential fees by campus; avoiding the duplication of programmes, facilities and professional schools by adopting a system-wide approach that would subordinate individual campus goals; establishing an eleventh “all-virtual” campus; and establishing a continual and steep trajectory of fee increases that would essentially privatise the University of California (presentation by the Chancellor, UC Santa Cruz, London, 7 June 2010). The scale and depth of the financial crisis are forcing institutional leaders to go beyond the tactical and adaptive to seek potentially generative responses.

Table 1. **Summary of types of institutional response to financial reductions in UK HE budgets**

<table>
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<tr>
<th>Type of Response</th>
<th>Nature of response</th>
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<tr>
<td>Tactical</td>
<td>Cut or reduce travel expenses and sharpen control of sickness and absence levels. End eligible bonus payments for senior team. Freeze pay for senior team. Target cash savings across the board (all faculties, departments). Control, reduce or slow recruitment of staff. Review discretionary budgets (e.g. subscriptions, training).</td>
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<tr>
<td>Adaptive</td>
<td>Redefine staff contracts and pension arrangements. Offer regular voluntary severance schemes. Replace senior staff departures with appointments at junior levels to control salary budgets. Re-structure units to form larger academic entities; reshape academic portfolio. Identify collective procurement opportunities. Refine or introduce workload models. Review space utilisation and energy consumption. Outsource services (catering, student accommodation).</td>
</tr>
<tr>
<td>Generative</td>
<td>Explore opportunities to share services. Invest in development and varied career progression routes. Build new financial and human resource frameworks. Build and reward “opportunity spotting” at all levels. Work with intermediaries to position institutions to deliver regional priorities. Act as a business and gain external recognition as such (e.g. business awards). Invest in overseas developments. Build strong and in-depth strategic alliances with a small number of overseas partner institutions.</td>
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Individual institutional responses: three case studies

Looking more closely at institutional responses, the first focus is on a UK university that is implementing funding cuts notwithstanding a positive financial position. The source is an internal report from the principal. The key reference point was a new strategic plan (2009-14) coupled with a scenario planning exercise based on an assumption of an initial 2.5% cut in funding. Funding bodies in the United Kingdom have encouraged all institutions to engage in scenario planning and institutions are modelling cuts of 10-40% over three years.

Academic and administrative units were asked to respond to different scenarios. Responses were graded by senior managers according to their ease or difficulty of delivery in line with the Strategic Plan and their level of risk in relation to key priorities such as the quality of students’ experience, development of subject fields and programmes, research potential and income generation. In addition to this grading, the senior team decided to focus in the first year (2010-11) only on those proposals that would produce cost savings that were most likely to improve efficiency and service delivery. Furthermore, the cost savings would be ploughed back into a performance improvement fund to improve efficiency in significant new academic ventures and to encourage cost sharing between administrative units and between academic and administrative units.

The senior team also asked deans and heads of service departments (to whom individual staffing decisions were devolved) to consider arrangements for redeployment of staff or re-designation of roles, and if deciding to recruit or establish new posts, to provide written justification for their decision. In this institution, the approach adopted at this stage can be described as broadly “adaptive”; however, if successful, some of these adaptive responses would create a platform for generative actions. The approach also illustrates three of the six key lessons highlighted in the PriceWaterhouseCoopers’ paper as valuable in addressing the challenges ahead: it was characterised by

<table>
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<th>PriceWaterhouseCoopers’s six lessons gleaned from other sectors to help HEIs to “weather the storm”</th>
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<tr>
<td>1. Honesty and awareness of the challenge</td>
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<td>2. Strong leadership</td>
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<td>3. Need to engage with the whole organisation and external stakeholders</td>
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<td>4. Realistic and detailed plans to resolve the situation</td>
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<td>5. Rigorous implementation (programme management arrangements)</td>
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<td>6. Financial control and discipline</td>
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collective and focused leadership by the senior management team, it was carried out in conjunction with faculty deans and heads of departments and was combined with a serious effort to develop realistic and detailed plans within a context of financial control and discipline.

The second case study is a US state university that was facing a 6% decrease in state funding in 2009-10. The source is a letter from the president to the faculty reported in the students’ newsletter (McRobbie, 2010). After setting out the nation-wide and state fiscal and economic context, the president identified the key principles that he, the deans and senior administrators should adhere to in addressing their forward plans.

First, the academic core of the university must be protected and strengthened by retaining and hiring the best and most promising faculty; second, excellent facilities for research and education should be maintained and grown in keeping with the university’s aspirations to reach its full potential as a research university. These positive principles were to go hand-in-hand with cost cutting measures: university-wide spending cuts and administrative changes were announced as a means to lower the base operating budget by USD 29.3 million and further spending cuts of USD 58.9 million were to follow over the next 18 months.

Increases in health care costs were to be reduced through an incentive programme which gave employees an opportunity to hold down their share of future premium increases by meeting health and lifestyle objectives that were proven to lower health care costs over the long term. Energy savings were being sought in a range of projects in dozens of facilities; these would deliver savings as well as support the cost of renovations in utilities.

The president signalled plans to develop a long-term integrated energy master plan leading to sustainable and efficient energy systems. He also promised to redouble efforts to attract private philanthropy and competitive research grants to help support the university’s strategic priorities and all academic and administrative units were asked to look creatively at untapped revenue sources. For students and their families, the president promised a continued focus on affordability and maintaining reasonable tuition rates. The letter finishes with an upbeat statement about recent external recognition of the university as a “best buy” for HE and the president’s hope that the university would use the current situation as “an opportunity to focus intensely on our priorities of strategic hiring and building, while reducing all other costs” so that the university could emerge “even better, stronger and greater”.

Once again, most responses can be described as tactical and adaptive although the health care initiative, the proposal for an integrated energy master plan and the encouragement for staff to look creatively for untapped revenue sources could lead to generative solutions. The president’s approach
resonates with two more of PwC’s six key areas: honesty and awareness of the size of the challenges lying ahead and the need to engage with the whole organisation and external stakeholders. By writing a letter to all staff and publishing it through student channels, the president ensured that two essential stakeholder groups were informed of the situation and context, albeit further levels of engagement would be needed for the programme of change to succeed. In both the UK and US cases, the sixth key lesson noted by PwC – rigorous implementation of plans – was not visible from the available documentation, but might yet be in place or under construction.

The third case study is from Canada. The university was reportedly in a strong academic and financial position when the “Great Recession” hit. However it found itself in financial trouble as a result of a fall in the value of the University’s endowment, exacerbated by a debt load associated with a period of growth including renovation of physical plant and investment in new buildings. The source is a paper from the Recession Response and Planning Task Group (RRPTG, 2010) set up by the new president. The paper describes the three-stage (and 6-month long) process adopted by the cross-institutional task group of senior leaders and managers. The first stage, composed of fact-finding, involved educating all task group members about the finances, budget and organisational structure of the university. The task group held meetings with senior staff, undertook documentary analysis, investigated how other academic institutions were dealing with the crisis and interviewed their senior leaders. They invited members of divisions and directors from across the campus community to meet with them, and collected reports from departments and programmes based on budget-tightening scenarios in academic areas. Stage two involved sponsored forums for administrative staff, faculty members, students and union staff. The task group sought to “educate and engage” a wide range of people across the campus community. Feedback and ideas were also solicited in written form. The third stage involved formulating recommendations to the president.

The recommendations for cost-cutting measures included freezing salaries and wages across the university for one year and/or a reduction in retirement contributions over a four-year period, as well as a 2% reduction in senior staff salaries. In a parallel with the US case study, health care premiums could be reduced in combination with a longer-term “wellness and work safety educational and marketing program”. Reductions in staffing were suggested through a detailed review of each division’s staffing structure. Workload distribution, opportunities for professional development and the opportunity to improve operations through effective performance reviews were recommended within a new HR framework. Budgetary reductions in a number of general services and in the operation of facilities were recommended, including catering and athletics, but also in various student services’ budgets: Academic
Affairs, IT and University Advancement and Communications. In several of these cases, cost-cutting measures were to be achieved through new ways of working and the implementation of electronic systems and processes. In terms of revenue generation, the task group recommended a temporary use of cash from the endowment fund, expanding student numbers by including new off-campus programmes and more intensive and creative use of both physical and human resources at the university.

The process of engagement in this university is more extensive than in the other two cases, but the recommendations still fall largely into the tactical and adaptive categories. In terms of PwC’s six key areas, the approach illustrates honesty and awareness of the size of the challenge, collective leadership responsibility and engagement with the whole organisation. The source documentation does not provide enough detail to assess whether the proposals were realistic and would resolve the situation or if they were rigorously implemented with strong financial control and discipline. What is clear, however, is that a significant programme of change in systems, behaviours and attitudes will need to be energetically led by the president.

Universities are also acting collectively to address the challenges faced by businesses and public services in their regions. Universities in the north-west of England, for example, with funding from the Higher Education Funding Council for England (HEFCE), are providing a joint service to align HE resources with regional plans for responding to the economic downturn. Actions include developing Continuing Professional Development (CPD) provision to meet the needs of those at risk of redundancy, creating interventions to counter graduate unemployment and providing support for entrepreneurship schemes. Seven projects included in an umbrella initiative (Leading Transformational Change) worth GBP 1.5 million have also received funding from HEFCE. London-based universities will work together to support employability, entrepreneurship and knowledge transfer within and across London through the Centre for Creative Collaboration, while a college specialising in performing arts has developed a cross-sector collaboration involving two local theatres to investigate the benefits of joint productions and explore shared services. Other projects involving two or more universities working together with the private sector aim to find ways to support and develop staff to work in more constrained financial environments.

In Scotland, joint initiatives are also underway. Despite – or perhaps because of – the economic climate, investment in research and consultancy between institutions and small and medium-sized enterprises (SMEs) has increased between 2008-09 and 2009-10 (Universities Scotland, 2009). In addition, a number of universities have pooled knowledge across disciplines and are working together to offer support for the Scottish financial services’ sector in areas such as fund management, life assurance, pensions, banking law and
market data services. To help students and graduates, HE careers’ services across Scotland have collaborated to produce a Shared Vacancy System for businesses allowing employers across Scotland to post vacancies that can be shared across all universities. These examples in England and Scotland are generative in their approaches, offering different ways of working across institutions and between HE and other sectors. They highlight the leading role that HE institutions are playing in supporting their regions in challenging times.

**Leadership lessons from other sectors**

For the past two years, the management consulting firm McKinsey has been tracking, analysing and assessing the responses of private and public sectors to the recession. In July 2009, in a series of interviews with chief executives and chairmen of major companies, McKinsey authors explored examples of how best to lead a company in tough times (Carey et al., 2009). The six lessons reported in the box below mirror PwC’s lessons noted earlier, but focus particularly on leadership and governance.

“Confront reality”, the first lesson, includes having in place monitoring systems that pick up warning signs as well as creating a physical and psychological environment where alternative interpretations of the signs can be aired and considered with care and interest by senior executives. Being able to grasp unpleasant realities and act decisively requires courage as well as models of governance that enable these decisions to be taken in time. Most of the CEOs reported that they were communicating more frequently and openly with their boards through multiple channels and that “putting strategy centre stage” at every board meeting was crucial. “Being transparent with employees” was as important as communication with the board. Being open about what is happening is part of the company’s integrity since it builds trust, respect and solidarity as well as morale. Openness is a mark of the quality of leadership since it is crucial to staying focused on the business and understanding how to make a difference. The need to be in constant communication with

**McKinsey’s six leadership lessons for hard times**

1. Confront reality
2. Put strategy centre stage
3. Be transparent with employees
4. Communicate with investors
5. Build and protect the culture
6. Keep faith in the future
investors was also noted, as was the importance of keeping internal and external communications balanced and aligned. “Building and protecting the culture” of the organisation through emphasising and rewarding particular values and behaviours that build sustainable competitive advantage was a long-term commitment for several CEOs. Attending to culture and “keeping faith with the future” despite short-term pressures involves a further difficult and delicate balance.

In September 2009, McKinsey conducted an online survey of executives representing a range of regions, industries and functional specialties; they received 763 responses, 434 from men and 329 from women (Desvaux et al., 2009). The survey reports on the respondents’ views of the organisational capabilities and leadership behaviours needed to move through the crisis to recovery. Two sets of capabilities were rated as most important for managing companies through the crisis. These are leadership (having leaders who can shape and inspire the actions of others to drive better performance) and direction (the capacity to articulate where the company is heading and how to get there, with the ability to align people appropriately). These organisational capabilities remain important for recovery, along with innovation. At an individual level, the kind of leadership behaviours needed during and after the crisis were the same, namely, presenting an inspiring vision, defining expectations and rewarding achievement. In addition, the authors note the importance of “challenging assumptions and encouraging risk-taking and creativity” as a leadership behaviour needed to reinforce innovation.

McKinsey studies and articles in 2010 have continued to report on strategy and leadership, looking more closely at the impacts of uncertainty and volatility in the economic environment. While different labels, such as “dynamic management” and “organisational agility” are used, both executives and commentators suggest that in the post-crisis era – described as “the new normal” – organisations require far greater flexibility and a different way of working among members of the top team. Furthermore, the more hierarchical and less collaborative the organisation, the bigger the challenges of change will be.

“Dynamic management” or decision-making-under-uncertainty (Lowell, 2010) requires the use of different techniques such as scenario planning and decision trees (to structure and sequence decisions) as well as the ability of key decision makers to share information and debate issues in order to make timely decisions. Corporate processes and protocols (including the timing, format and length of meetings, decision-making rights and required attendees) need to be redesigned, as do budgeting processes and financial planning, if they are to support “just-in-time decision-making”. “Organisational agility” (Sull, 2010) is needed at three levels. Strategic agility requires an effective combination of patience and boldness to recognise and seize those opportunities that can create significant value; this capability can develop from having a variety of
small-scale activities to explore potential opportunities. The second level, **portfolio agility**, involves the capacity to move and reallocate resources across a business or businesses. The key is to invest in developing general management capabilities so that there is a cadre of managers who can be redeployed in line with emerging opportunities. The source of the third capability, **operational agility**, rests on being able to increase revenues and cut costs within the core business more quickly and effectively than rivals. Having access to market data and sharing this widely is one source of advantage; another is translating corporate priorities into individual objectives and focusing attention, resources and effort on those that are truly critical. Such a performance-oriented culture requires “constant injections of urgency, effort and enthusiasm” (Sull, 2010, p. 56).

**The contribution of leadership development to building adaptive and generative responses**

Leading in challenging times places a premium on qualities of courage, determination and emotional resilience. Organisational leaders need to overcome fear, denial and blocks to learning, in themselves, within their top teams and more widely in the organisation (Dean, 2010). In UK higher education, few heads of institutions, their top teams and other leaders in the institution have experienced the economic context, competitive pressures and levels of uncertainty that are likely to persist in the immediate future. There are a range of different types of developmental interventions and learning opportunities that can assist leaders, managers and governors of institutions, individually and collectively in these challenging times.

**Tailored support for vice-chancellors, senior leadership teams and governors**

Personal support and guidance can be offered to new heads of institutions and senior leaders through one-to-one executive coaching. Top-team development on a tailored institutional basis is also valuable, while published research on “top team structures” (Kennie and Woodfield, 2008) allows institutional leaders to consider and assess different ways to organise and enhance the capabilities of their top teams. The current financial context is also placing new expectations and pressures on the relationship between chairs of governing bodies and vice chancellors/principals. Both in the United Kingdom (through the LFHE) and in the United States (through the Association of Governing Boards) regular programmes are run for small groups of chairs and vice chancellors to discuss their roles and build resilience into their relationships.
Building confidence to lead and manage change

Programmes such as the UK’s Top Management Programme, the American Council on Education’s Fellows’ Programme or Harvard Institutes for Higher Education offer career development opportunities, the chance to build strong cross-institutional and cross-functional networks, the opportunity to enhance self-awareness, share experience and expertise between academic and professional service leaders and develop new capabilities. Strategy, scenario planning, leadership, decision making, change management, HR systems and practices and financial modelling are regular themes where the content and learning processes are adjusted to match the current challenges that leaders face. The provision of programmes at different levels gives institutions a structured opportunity to build general leadership and management capability across their organisations while professional networks (such as those in the United Kingdom for pro-vice-chancellors and others) can facilitate rapid exchanges of information, intelligence and knowledge on topical issues between leaders and managers across the sector. In addition to these opportunities for individual leaders, the “Change Academy”, a model borrowed from the United States, now designed for the United Kingdom, and with plans in 2011 for a pilot programme for German participants, is a programme for teams from up to 15 institutions to come together to develop and work on their institutional change agendas.

Strengthening governance

The United Kingdom has conducted a major study of governing body effectiveness in higher education, with reference also to developments in other sectors and countries (Schofield, 2009); a series of guides for governors on topics such as audit, risk, finance, HR and estates has also been published.

These resources complement a wide-ranging annual programme of seminars and workshops for governors aimed at enhancing their understanding of universities and their ability to provide challenge and support in their governance roles. The lessons of experience that are offered by governors from a range of sectors are a valuable resource for HE, particularly as many lay governors have direct experience of dealing with volatile economic conditions.

Positioning, leading and managing “the agile university”

Regular leadership conferences can be adapted to changing conditions. In 2008, the Malaysian Leadership Academy (AKEPT) focused on “the heart of leadership”, while the 2010 Leadership Summit held in the United Kingdom developed the idea of “the agile university” through innovation in research, teaching and knowledge transfer combined with the creative use of information and communication technologies (ICT). Scenario thinking and planning is a
technique increasingly used by institutions and agencies (see, for example, OECD-CERI’s University Futures project [OECD, 2005] which looks forward to 2030). To assist institutions, the LFHE has published a guide for institutions to enable them to assess and use different scenario-building methodologies (Sayers, 2010). In addition, to assist leaders and managers to test and assess the effect of different finance and resource models, the Higher Education Simulation Model (Ranmore Consulting, 2010) is widely used in programmes for individuals and teams within institutions in the United Kingdom. The computer simulation can model a whole university, a faculty or school, or a for-profit business within a university, allowing scenarios and their consequences to be tested in practice.

A range of skills and capabilities are also needed by leaders and managers; some that are relevant include lobbying and influencing skills, inspirational leadership and fund raising. Each of these is addressed in different ways through short programmes, action learning projects and study visits to other countries.

**Widening horizons and developing new ways of working**

International and cross-sector experiences are particularly valuable in times of change. Week-long modules within programmes such as the UK’s Top Management Programme have enabled senior leaders to visit and share experience with senior colleagues in institutions and policy agencies in continental Europe, the Gulf States and Washington DC. Twinning and exchange programmes with India and China provide opportunities for pairs of leaders to work together across countries while strategic dialogues such as those run by the European University Association with the United States and with the Asia Pacific region provide opportunities for new strategic relationships and understanding to develop between institutions internationally. Inward programmes designed for leaders and ministers from other countries are also part of leadership learning across borders. To widen horizons across different sectors in the United Kingdom, an innovative programme for groups of HE leaders gives them the chance to make “raids” into different organisations facing change. The HE leaders take on the role of change management consultants for three days, interviewing managers and staff in the host organisation and presenting their findings to the executive team. Host organisations have included a hospital, an international government agency, a national broadcaster (the BBC), a London local government authority and a national retail store group. Such opportunities can be extended further – as is happening in cities such as Melbourne and London – by developing joint projects and programmes between key city leaders in the health sector, local government and the universities. Building collaborative skills and leveraging resources across organisations and
boundaries are likely to become core skills in the context of financial stringency, and they are equally important in relation to achieving environmental sustainability.

Conclusion

The analysis of the actions being taken by institutions as well as the lessons learned from other sectors point to many similar ways of meeting the current economic challenges. In the main, the HE institutional responses described here are “adaptive” in relation to current circumstances. However, some have the potential to be “generative”, as institutions and their leaders seek innovative ways of operating in response to the realities and requirements of “the new normal”. The good practice examples from the private sector suggest a need to focus even more strongly on organisational change at strategic, operational and cultural levels with determined and focused leadership throughout an organisation and across boundaries. For individuals in leadership, management and governance positions who are in the front line of change, the going is likely to be tough and to get tougher. Yet these leaders will be called upon to stimulate, inspire, and engage colleagues if they are to succeed. Therefore, a capacity-building agenda is needed at both the institutional and individual levels. Developmental opportunities should offer new ideas that stimulate the imagination and energise leaders. They should also seek to build confidence, create networks and offer guidance and support to those facing significant personal as well as professional challenges. Through engaging with leaders, managers, governors and their institutions and working across sectors and countries, it is possible to promote and develop the kind of “re-generative” leadership that is needed both to address Clark’s “demand-response imbalance” and to build new models of HE for “a world utterly changed”.

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No specific funding source was called upon to support the research presented.
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Government funding as leverage for quality teaching and learning: a south african perspective

by

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The South African Higher Education Funding Framework uses funding as a lever to achieve equitable student access, quality teaching and research, and improved student retention and success. Maximising a university subsidy from the national Department of Education necessitates innovative strategies at the pre- and post-student admission stages. This paper describes how the resource base of the Faculty of Health Sciences at the University of KwaZulu-Natal was increased by the Academic Development and Student Support project which enabled the Faculty to meet enrolment targets and increase graduation rates.
Financements publics, levier de développement d’un enseignement et d’un apprentissage de qualité : une perspective Sud-Africaine

par
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Le cadre de financement de l’enseignement supérieur en Afrique du Sud utilise les financements publics comme levier afin de permettre un accès à l’enseignement équitable, à promouvoir un enseignement et une recherche de qualité et à améliorer le taux de rétention de ses étudiants et accroître leurs chances de succès. Pour tirer le meilleur parti d’une subvention universitaire accordée par le ministère de l’Éducation, il est nécessaire de mettre en place des stratégies innovantes à la fois avant et après l’admission des étudiants. Cet article décrit comment la Faculté des sciences de la santé de l’Université du KwaZulu-Natal a élargi sa base de ressources grâce à l’établissement d’un programme de développement académique et d’aide aux étudiants, qui lui a permis d’atteindre ses objectifs en termes d’effectif et d’augmenter son taux de réussite aux examens.
Introduction

In his 2009 budget speech, the South African Minister of Education spoke to the theme of “together achieving and expanding quality and access to education and training for all”. He challenged universities to continuously improve access, success, throughput rates and the quality of the higher education experience, particularly of Black students at all levels of the education system. He highlighted the target to increase graduates as a percentage of total enrolments to 22% by 2010. He endorsed his predecessor’s 2008 budget speech theme of “Education changes lives, changes communities”, which the then minister translated as “greater access, transformation, and quality” in the context of higher education. His predecessor had also specifically challenged universities to match the increased access of students from previously disadvantaged backgrounds with increased success, and underscored a target participation rate of 20% by 2015. Access to higher education (HE), as well as quality teaching and learning, are therefore endorsed at the highest levels.

In response to this government priority and evident needs within the education community, in 2006 an Academic Development and Student Support (ADSS) project was launched by the Faculty of Health Sciences. By focusing on quality teaching and learning it aims to maximise income from teaching input and output grants. This paper describes the context and rationale behind this project. It describes different forms of learning support and identifies the factors that enabled the University of KwaZulu-Natal’s Faculty of Health Sciences to improve student retention and throughput.

The higher education funding framework

A basic feature of the HE funding framework, which was implemented for the first time in 2004/05, is that it links the awarding of government higher education grants to national and institutional planning. The national budget for HE is divided into three categories: “earmarked grants”, “block grants” and “institutional restructuring grants”. Earmarked grants encompass the nationally administered student financial aid scheme, funding for teaching, research and community development, capital for institutional restructuring and the higher education quality assurance framework. Block grants consist of teaching input and output grants (described in detail below) and research
output grants derived from publications and Masters and Doctoral graduate outputs. **Institutional factor grants** additionally fund universities according to size and demographics, i.e. universities which enrol large numbers of previously disadvantaged students receive augmented teaching input grants (Department of Education, 2003; Department of Education, 2004).

**Teaching input and output grants**

Teaching input grants are government subsidies received by the university per student during the period of study. Calculations for teaching input grants are based on the total of enrolled full-time equivalent (FTE) students, weighted according to Classification of Educational Subject Matter (CESM) categories according to the national Department of Education (DoE)-approved enrolment plan (Department of Education, 2003). The plan is devised in a stepwise process whereby the national DoE initially determines national goals and objectives related to graduate outputs. Universities then develop institution-specific three-year rolling plans in response to these goals and objectives culminating in the DoE and university jointly determining the final student enrolment plan. This is subject to annual amendment in the event of changing external circumstances and/or changing university performance (Department of Education, 2004). It is therefore essential that universities meet enrolment targets by proactively recruiting new students, by minimising academic exclusion and drop-out rates and by ensuring that the majority, if not all students, undertake the full annual course load equating to the FTE.

Teaching output grants are subsidies received by the institution upon graduation of the student. They take into account improvements in student success and throughput and are calculated as a ratio of the actual weighted (by CESM category) total teaching outputs produced by the university compared with normative weighted teaching outputs expected as a result of benchmarking (Department of Education, 2003). These include graduation benchmarks for contact and distance students stratified by three-year undergraduate degrees, undergraduate degrees of four years or more (e.g. professional degrees in Engineering, Health Sciences and Medicine), postgraduate degrees up to honours level and postgraduate degrees up to Masters level (Department of Education, 2004). It is thus imperative that universities increase the number of graduates as a percentage of total enrolments and facilitate completion of, and graduation from, programmes within the minimum amount of time.
The resource allocation model (RAM)

The University of KwaZulu-Natal has adopted a resource allocation model (RAM) that defines income areas as teaching input subsidy, teaching output subsidy, research output subsidy, ad-hoc grants and development subsidies, tuition fees, secondary income, earmarked funding and other sources of income. The proportional income generated by the Faculty is derived from three “faculty drivers” i.e. teaching, research and community engagement. These are set by the Senate of the University as 45%, 40% and 15% respectively of the average total workloads of academic staff. The 45% teaching component considers weighted teaching inputs and weighted non-research graduates as the teaching outputs. The 40% research component includes weighted research graduates and publications approved by the DoE, while the community engagement component is still in development and is currently allocated a “0%” weighting. The Faculty resource base for staffing and operational expenses is thus directly influenced by teaching input and teaching and research output grants.

Optimising income via block grants requires innovative strategies at the pre- and post-student admission stages. Pre-admission strategies include the recruitment of students from disadvantaged backgrounds and selection tools predictive of student success. Post-admission strategies include curriculum and pedagogic interventions and comprehensive and holistic student support mechanisms; collectively, they address the issues of equity of access and equity of outcome.

The academic development and student support project

The ADSS project has a three-dimensional conceptual framework, i.e. i) student monitoring and support; ii) curriculum development; and iii) capacity building of faculty. The student monitoring and support aspect was implemented over 2006-07, during which time the Faculty progressively introduced, consolidated or integrated a number of student support mechanisms. In 2008, the project launched a review of the relevance and appropriateness of curricula by various stakeholders, and in 2009 modules using pedagogies other than the traditional didactic model were developed. Capacity development initiatives took place in both 2008 and 2009.

The design, implementation and monitoring of the ADSS project was based on the “theory of change” which is integral to social impact assessment and requires a comprehensive understanding of the underlying assumptions by which a desired impact is to be achieved. This change model delineates the processes of creating the change and anticipates the causal relationships between interventions and short- and long-term outcomes (Morrison et al., 2006).
The changes that were implemented were based on the following review of the literature.

**Literature review**

Curriculum intervention aims to adapt curricula so as to help students develop general academic and cognitive skills, language proficiency and capacity for self-directed learning (Council for Higher Education, 2004). Curriculum intervention focuses on curriculum design, content and pedagogy that engender student engagement and subsequent retention and success. Curriculum design was originally a “more time more tuition” separate or bridging model aimed at improving inadequate secondary education. In response to the increasing diversity of students with different levels of preparedness for higher education, it has progressed to a semi-integrated or foundational model which additionally provides academic development and lays the necessary foundations for further study. Current best practice is an integrated, holistic model which integrates academic development into mainstream programmes (Crosling et al., 2009; Kloot et al., 2008).

The ideal curriculum is student centred and consists of authentic and contextualised content which necessitates the generation and dissemination of indigenous knowledge, challenging tasks relevant to students’ life experiences, adequate and appropriate orientation and induction and the integration of learning and other skills. It also includes active and interactive learning paradigms and formative assessments for academic development (Crosling et al., 2009). While the Faculty is progressing towards the latter, its current teaching and learning practice is of the semi-integrated or foundational model type using supplemental instruction (SI) and structured learning assistance (SLA) (Arendale, 2005). SI facilitates the mastery of content in the process of developing and integrating learning and study skills in high risk courses and aims to improve student performance, retention and completion/graduation rates (Arendale, 2005). SLA assists students in developing the basis required to engage with the course content and to develop and apply the learning strategies most suited to the content, also in high risk courses.

The Student Counseling Service (SCS) is considered an essential component of higher education institutions. Its major roles, as defined by the International Association of Counseling Services, are i) to take a holistic approach to student welfare; ii) facilitate the acquisition of learning skills; and iii) offer personal counselling and/or psychotherapeutic services related to difficulties with integration, psycho-social problems and career counselling. Other functions include consultation with faculty, advocacy for student needs, programme development, retention activities and initiatives to enhance the campus environment by participating in a variety of university forums. It also
provides feedback on student counselling-related needs and initiates and contributes to student policy development and review. Referral to faculty or tutors for academic aspects, other social support structures (internal and external to the university) and healthcare services is implicit in the action of the SCS. The role of a counsellor is thus four-fold: it involves educational support, including the psychometric assessment of potential; career planning assistance; assistance with personal and emotional difficulties; and referral to allied support structures as appropriate (Morrison et al., 2006).

Peer mentoring is increasingly being integrated into the broader context of student learning and development (Wyk and Daniels, 2004). Peer mentors facilitate the induction and retention of students and enable them to realise their potential by providing psycho-social guidance and support. They serve as positive, encouraging and affirming role models (Blunt and Conolly, 2006), demonstrating the principles of accessibility, inclusivity, recognition of diversity in its many forms, adaptability and networking (Granados and Lopez, 1999). Peer mentoring is encapsulated in supplemental instruction and structured learning assistance which allow the creation of learner communities or groups, enabling learners to share across the curriculum and shape a shared, coherent educational experience via a supportive peer group (Favish, 2005). The Faculty has a well-integrated peer mentorship programme whereby new students are assigned to a senior student who plays the “big brother/sister” role to facilitate the transition from secondary to higher education.

The evolution of learning support in the Faculty of Health Sciences

It was decided that 2005 would be the pre-intervention or baseline year. At that time, student support consisted of a reactive SCS that assisted students on self-referral or referral from the discipline/School/Faculty.

The Faculty of Health Sciences appointed academic development programme (ADP) officers in 2006. ADP officers monitor student performance in formal assessments, identify students performing sub-optimally, interview students individually and then refer them to either the academic staff or the SCS as appropriate. Additionally, ADP officers with qualifications in the discipline in which they are appointed serve as tutors providing a form of SI and/or SLA.

In 2006, the Faculty also subscribed to the university-wide mentorship programme. According to this programme, groups of ten first-entry students are assigned to a senior student; their peer provides relevant and contextual academic and psycho-social support, often serving as the first point of reference. According to mentees who have described this form of academic support, mentors provide assistance with “understanding the academic demands at university”, “advise on the selection of courses”, liaise with
academic staff on behalf of the mentee, help with “coping with academic demands” and provide “guidance with problem solving”. For the mentor, personal benefits include playing the role of “big brother/sister”, instilling confidence, “improving communication skills” and “providing moral support during difficult times”. Social benefits include “linking with all resources on campus”, having an “opportunity to make friends” and giving “counselling on socially-related problems” (P.M. Ndaba, personal communication).

In 2007, learning support was characterised by pro-active, targeted intervention as well as the consolidation and integration of support mechanisms. The Student Counseling Service not only trained academic development programme officers and peer mentors but it also implemented a questionnaire-based survey that allowed the early identification of students encountering difficulties of an academic or “psycho-social” nature. The survey – which was undertaken after the first set of formal assessments – yielded data on student development needs and assisted in the design and implementation of interventions by the SCS and academic staff.

Figure 1 is a typical example of results obtained from the questionnaire survey conducted by the SCS. It illustrates student development needs, is stratified by year of study, and shows that student development and academic counselling account for more than 50% of learning-related needs at all levels. Figure 2 illustrates learning-related interventions (excluding personal counselling) such as time management, study skills and examination preparation; these account for 67% of the total interventions implemented.
Impact of learning interventions

The percentage curriculum passed and the percentage curriculum passed on the first attempt were used as intervention impact indicators along with other performance indicators described elsewhere (Essack et al., 2009). Data was analysed using SPSS version 15; the Mann-Whitney U Test was used to compare averages and a p value of < 0.05 was considered significant at the 95% level. There was a statistically significant improvement in the mean percentage curriculum passed (74.3% in 2005 to 78.7% in 2007 with a p value of 0.000) and the mean percentage curriculum passed on the first attempt (70.73% in 2005 to 75.1% in 2007 with a p value of 0.000), both of which impacted positively on the teaching component of the resource allocation model.

Figure 3 illustrates the significant improvements in enrolment (shown as headcount); full-time equivalent students (FTEs) impacting on the teaching input component; and graduation rates impacting on the teaching output component in 2005 and 2007. The p values, derived from the Z-test for two proportions (and which compare faculty values to university totals), showed statistically significant improvements in headcount (p < 0.000), FTE (p < 0.000) and graduates (p = 0.005) between the years in question, while academic exclusion remained constant.

The RAM uses data generated two years prior to the year in which the funding is allocated, in keeping with the Department of Education cycle of...
subsidy payment whereby funds are received for university intake and output performance two years prior to the year in which the funding is actually received. We thus undertook an income distribution analysis for 2007 and 2009 based on 2005 and 2007 data respectively. Data on weighted undergraduate FTEs, weighted non-research graduates and subject enrolments was used to calculate teaching input income, teaching output income and subject fee income respectively, as shown in Table 1.

Table 1. Income distribution analysis in 2007 and 2009

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<td>Weighted undergraduate FTEs</td>
<td>3 982</td>
<td>5 420</td>
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<tr>
<td>Weighted non-research graduates</td>
<td>336</td>
<td>349</td>
</tr>
<tr>
<td>Subject enrolments</td>
<td>12 590</td>
<td>13 426</td>
</tr>
<tr>
<td>Teaching input income</td>
<td>ZAR 37 718 000</td>
<td>ZAR 59 177 000</td>
</tr>
<tr>
<td>Teaching output income</td>
<td>ZAR 4 259 000</td>
<td>ZAR 5 501 000</td>
</tr>
<tr>
<td>Subject fee income</td>
<td>ZAR 22 260 000</td>
<td>ZAR 28 788 000</td>
</tr>
<tr>
<td>Total income</td>
<td>ZAR 69 432 000</td>
<td>ZAR 98 840 000</td>
</tr>
<tr>
<td>Proportion of total (%)</td>
<td>5.6</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Note: ZAR signifies South African rand.

The figures above clearly demonstrate that in recent years the Faculty of Health Sciences has been able to significantly improve student enrolments and performance as well as substantially increase its resource base. These
results are due to several factors: the learning interventions, encompassing the proactive determination of learning-related development needs; the monitoring of student performance in formative, continuous and summative assessments; comprehensive and holistic student support by consolidated, integrated and coherent collaboration of Faculty-based academic staff and ADP officers in tandem with the university-wide Student Counseling Service; and the mentorship programme.

Conclusion

The Faculty of Health Sciences improved student retention and throughput/success by:

- Orientating and inducting students in order to facilitate their transition from secondary school; enabling them to successfully navigate and integrate the higher education system using mechanisms such as peer mentors.
- Implementing a monitoring and early alert system that identifies students encountering academic and other difficulties and allows prompt intervention.
- Providing appropriate student welfare services through formalised collaboration between the Faculty and the SCS to facilitate student retention and success (Laden, 2004).

The resultant increase in the Faculty’s resource base will be used to design and pilot teaching interventions in the form of contextualised curricula which integrate academic development. This will enable the Faculty to make the necessary pedagogic shift from the traditional didactic model to interactive pedagogies based on the connectivism and constructivism learning theories, both of which create “rich environments for active learning” (REALs) (Kilfoil, 2008, p. 1023).

In sum, the authors are confident that re-curriculating, new constructivist and connectivist pedagogies and the maintenance of existing, comprehensive and holistic student support will optimise quality in teaching and learning.

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No specific funding source was called upon to support the research presented.

Notes


3. The Faculty of Health Sciences consists 6 schools made up of 13 cognate disciplines. The professional disciplines are Audiology, Biokinetics, Dentistry, Nursing, Occupational Therapy, Optometry, Pharmacy, Physiotherapy and Speech Language Pathology. The non-professional disciplines of Anatomy, Medical Biochemistry, Pharmacology and Physiology make up the remainder.


6. Connectivism is based on the principles that learning and knowledge lie in a variety of diverse opinions, that learning is a process of connecting specialised information sources and that the capacity to know where to source knowledge is superior to knowing “what” and “how”. It maintains that nurturing and sustaining connections is critical to continual learning, that the ability to connect diverse disciplinary fields, ideas and concepts is a fundamental skill, that the acquisition and/or construction of current cutting-edge knowledge is the central tenet and that decision-making is in itself a learning process.

7. Constructivism promotes learning and investigation within authentic contexts, fosters the development of student responsibility, initiative, decision making and intentional learning and engenders collaboration amongst students and faculty. It uses dynamic, interdisciplinary, generative learning activities that facilitate critical thinking processes to assist students to develop comprehensive and complex knowledge structures and evaluate student progress in content and learning skills within authentic contexts using real life examples (Kilfoil, 2008).
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Higher skills and the knowledge economy: the challenge of offshoring

by

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Recent economics literature on offshoring highlights the trend towards the relocation of high-skill jobs to emerging economies. This evolution presents a challenge to the established knowledge economy discourse on which the relationship between higher education, higher skills, higher productivity and higher incomes has been based. This paper identifies some tentative impacts of offshoring for employment and education patterns in OECD countries and argues that the assumptions of the knowledge economy discourse need to be revised. The implications for higher education institutions are considered and three potential strategic responses are presented.
Amélioration des compétences et économie de la connaissance : le défi de la délocalisation

par

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Introduction

Positioning higher education institutions to ensure they contribute to the enhancement of economic performance is a key issue for many governments within the OECD. This paper draws on the theoretical perspectives associated with the idea of the knowledge economy which provide a strong justification for expanding higher education. These stances emphasise the positive contribution to productivity and growth that comes from educating a large workforce with higher-level skills. However, this convention is being challenged through the phenomenon of offshoring, which threatens to unpick this relationship as highly skilled jobs become more geographically mobile. As such, policy makers and higher education leaders are prompted to reconsider the relationship between high skills, economic success and institutional strategy.

This paper begins by outlining the theoretical underpinnings of the knowledge economy and then explores how these ideas have provided the basis for higher education policy. It then goes on to examine the literature on offshoring and discusses the challenges that this presents to the established consensus. Three responses that might be pursued by higher education institutions are then considered and evaluated.

The knowledge economy

Capitalism develops through different phases in which the balance of economic value between different types of resources change (Rikowski, 2003, p. 160). Today’s international political economy can be characterised as a “knowledge economy” or “knowledge-based economy” where “knowledge has superseded traditional factors of production, such as land, labour and capital, as the most important determinant of performance in the global economy” (Guile, 2003, p. 86).

This does not of course imply that human knowledge is the only source of economic value, and the recent boom in commodity prices continues to emphasise the value of more traditional resources (Humphreys, 2010). Nevertheless, advocates of the knowledge economy approach claimed with some justification that knowledge had become the main driver of both productivity and economic growth. In the mid 1990s, for example, it was estimated that over half of the GDP in the major OECD member countries was derived from knowledge-based sectors (OECD, 1996, p. 9). More recently,
Brinkley and Lee (2006) calculated that around 40% of the workforce in both the United States and the European Union are employed in knowledge-based industries and, in the latter case at least, they are the most important sector in the generation of new jobs.

As a concept, the knowledge economy can be seen to derive from a number of different academic and policy literatures. Peters (2001), for example, identifies links to the economics of knowledge and information, management theory and the sociology of work. Of these, it is perhaps the economic approaches that have been of most direct influence. The “human capital” approach developed by Becker (1993) focused on the degree to which productivity could be enhanced through investing in the skills and development of workers. This theme was further developed during the 1980s and 1990s with the development of new growth theory, which emphasised the capacity of economic systems to generate learning and innovation as a key determinant of their ability to grow over time. These approaches constituted a departure from the preceding economic policy orthodoxy which viewed long-term growth as the outcome of factors – such as the rate of technological progress – which were characterised as exogenous to the economic system. For new growth theory, by contrast, such developments were endogenous and could therefore be nurtured through favourable institutional structures and policy stances (Crafts, 1996).

The growth of the knowledge economy has been driven by the process of globalisation. As a term, globalisation has been variously defined and our use of it here refers to the narrow sense in which the greater integration of national and regional economies is facilitated through the increased use of communication and information technologies (McMahon, 2001). As has been recognised by many commentators, processes of globalisation are changing the nature of specialisation within the world economy. In recent decades, the most developed of OECD member countries have faced competition from newly industrialised emerging economies that have been able to produce many standardised manufactured goods more cheaply (Fröbel et al., 1980; Guile, 2003, p. 90). This process resulted in the relocation of many sectors of manufacturing to the emerging economies. In parallel to this, the developed economies shifted their production towards more knowledge-based industries such as technologically advanced manufacturing and services, which increasingly became the basis of their participation in the global economy. As such, their ability to innovate, develop and apply new knowledge became central to emerging patterns of comparative advantage (Peters and Humes, 2003, p. 1). As Storper (2002) has argued, “The geographical origins, destinations, and mastery of economically useful knowledge have more profound impacts on the changing shape of development than do standard issues of location and specialisation” (Storper, 2002, p. 42).
The development of this new knowledge economy was also seen to have significant implications for employment patterns within countries and the appropriate educational policies to support this. The growth of knowledge-based industries, it is argued, requires greater numbers of highly skilled workers and a higher general level of education across the workforce (OECD, 1996, p. 16). This increases the importance of the education system as part of the supply side of the economy, developing the human capital that is required to fuel the growing knowledge economy and ensuring that people have the skills to successfully gain employment in these areas. If this can be successfully achieved, a golden scenario can begin to unfold within the knowledge economy in which lower skilled and poorly paid work is replaced by more highly skilled and better paid jobs.

**Policy responses to the knowledge economy**

It is widely acknowledged that theories on the knowledge economy have been a key influence on policies to promote economic and industrial competitiveness pursued by OECD member countries since the 1990s (Robertson and Keeling, 2008; St. George, 2006; Olssen and Peters, 2005). As such, there was a new policy emphasis on developing research, innovation, education and skills. This is not to suggest that these themes were not an aspect of policy before the 1990s; indeed, the record of public funding for all these areas demonstrates the preceding commitment of OECD member countries to these areas. However, these themes were increasingly seen as key instruments of competitiveness policy and, as such, had a higher priority than previously accorded to them. We propose now to explore this finding through a review of the influence of the knowledge economy on the policies pursued by the UK government since the late 1990s as an exemplar of this new relationship.

The UK government's White Paper of 1998, “Our Competitive Future: Building the Knowledge Driven Economy”, is rightly seen as a seminal point in the development of competitiveness policy (Peters, 2001; Stedward, 2003). The White Paper presented a picture of a global economy in which competition was becoming more intense, fuelled by a greater mobility of capital, technological innovation and lower costs of transportation and communication across boundaries. As a consequence the UK economy, it argued, would need to “compete by exploiting capabilities which competitors find hard to imitate. The UK’s distinctive capabilities are not raw materials, land or cheap labour. They must be our knowledge, skills and creativity”. (DTI, 1998, p. 6)

The phrasing here is interesting for both its positive and normative aspects. On the one hand there is the message that the United Kingdom’s knowledge, skills and creativity are already the basis of competitive
advantage, but on the other, this is also a statement of intent that further work would need to be undertaken to ensure future competitiveness. Accordingly, the White Paper set out a series of initiatives aimed at addressing this issue. With regard to the higher education sector, these actions focused on the generation of new knowledge through research, the transfer and application of this through collaborative partnerships between universities and industry and the raising of educational achievement levels across the population (DTI, 1998). Although, as Wolf (2002) notes, UK public policy has a track record of linking education reform initiatives to economic rationale, the approach developed from the late 1990s can be seen as a significant intensification of this approach in relation to the higher education sector.

However, notwithstanding the UK government's commitment to develop the skills base of the UK economy, comparative levels of skills and productivity have continued to trail those of key competitors. This situation is evidenced by the World Bank's Knowledge Economy Index and Knowledge Assessment Methodology rankings. The World Bank developed this ranking mechanism to assess and compare to what extent national economies have the “critical requisites for a country to be able to fully participate in the knowledge economy” (World Bank, 2008). Within these rankings the United Kingdom remained at eighth position between 1995 and 2008, on a par with Switzerland and the United States. Furthermore, the overall score of the United Kingdom slightly deteriorated during this time, indicating that it either lost ground in absolute terms, or improved more slowly than the rest of the world (World Bank, 2008).

This position was further recognised by the decision of the UK government in 2004 to establish a major review aimed at identifying the skills that the UK workforce would need to develop in order to promote economic growth and higher productivity in the period leading up to 2020. The resulting report Prosperity for all in the global economy – world class skills (Leitch Report), confirmed that “the UK’s skills base remains weak by international standards, holding back productivity, growth and social justice” (Leitch, 2006, p. 3). This was identified as a material challenge to the future development of the UK economy because, whereas “skills were once a key driver of prosperity and fairness, they are now the key driver. Achieving world class skills is the key to achieving economic success and social justice in the new global economy” (Leitch, 2006, p. 9, emphasis in original).

In response to this challenge, the report recommended that the government should significantly raise the proportion of the adult population achieving basic skills in literacy and numeracy, intermediate skills and higher skills. To achieve this, it suggested, would require concerted action by employers, education providers and individuals, bolstered by a framework of
government initiatives aimed at communicating skills needs and incentivising the development of economically valued skills.

The analysis of the Leitch Report clearly derived from the direction of established policy and reflected the underlying influences of new growth theory and the concept of the knowledge economy. Once again, it is important to identify critical perspectives which question or seek to qualify both this analysis and the policy stance assumed in response. Wolf (2004), for example, has questioned the degree to which the UK workforce lacks the skills that are currently required by employers and warns of the danger of target-driven policy initiatives. These, he argues, run the risk of making the attainment of accredited qualifications an end in itself, rather than enhancing the economically valuable skills and expertise available within the economy. While such critical perspectives constitute an important element of the policy debate they have not, however, influenced the direction of policy which continues to emphasise the wider development of higher skills.

Offshoring of services

It is now suggested that capitalism is entering another phase, one in which the dynamics of globalisation and advances in communication technology are further transforming the spatial distribution of economic activity. The process of offshoring is central to this restructuring. Offshoring can be defined as “the total or partial transfer of an industrial activity (manufacturing or services) abroad” (OECD, 2007a, p. 7). This process is being explored and documented in a growing field of literature, including a number of recent OECD publications (OECD 2007a, b and c). Offshoring can be viewed as either an emerging trend which accounts for the relocation of service industries, or, alternatively, as another phase of the knowledge economy where services are subject to the same processes responsible for the relocation of manufacturing outlined above. Regardless of how the process is conceptualised, the offshoring of services has important consequences for the policy stances adopted by governments and education providers.

The processes which drive offshoring are those which facilitate globalisation within the international economy, such as the fall in telecommunication costs and the increase in broadband capacity across the world. Smith (2006), for example, reported that peak call rates between India and the United Kingdom fell to ten per cent of their level five years earlier. As a result of this a significant number of basic service occupations, for instance call centre jobs, transferred from the United Kingdom to India (Smith, 2006, p. 53). Another process is the relocation of research and development related to foreign direct investment (R&D FDI). Huggins et al. (2007) identifies that between 2002 and 2005 the Asia-Pacific region became the largest destination for R&D FDI.
This region accounted for more than half of all R&D FDI in the world economy and for almost three-quarters of the jobs created by R&D FDI across the globe (Huggins et al., 2007, p. 443). Investment of this kind provides emerging economies with the capability to undertake knowledge-based activities. These new centres of knowledge provide the destinations for jobs that can be relocated from the developed economies (Huggins et al., 2007, p. 446).

Empirically, the scale of this wave of offshoring has been disputed in a wide range of studies which indicate that anything from a small number up to several hundred thousand jobs in the developed economies could be moved offshore (Colquhoun et al., 2004; Whalen, 2005; Bryson, 2007; Crinò, 2009). However, as Palley (2008) argues, simply counting the number of jobs lost is not the most significant issue in assessing the implications of offshoring. Rather, the impact on the labour market such as the bargaining power of workers and the kinds of jobs that are being relocated are of critical importance (Palley, 2008, p. 281-282).

Alan Blinder (2006), Princeton economist and former advisor to the US government, argues that what distinguished the current phase of offshoring from previous periods is the way in which it is transforming the nature of the “traded” and the “non-traded” sectors of the economy. The traded sectors are those that are subject to international contestability. The further development of electronic communication technology, Blinder argues, has significantly increased the range of service jobs that can be performed at a distance and are therefore now “tradable”. Central to this is the distinction between “personal services” and “impersonal services”. Impersonal services are defined as those that can now be delivered electronically from anywhere in the world with little or no degradation of quality, while personal services continue to require the face-to-face interaction of the provider and the service user. To illustrate the point, while one’s banking services or medical test results could be provided at a distance through electronic communications, a visit to the hairdresser or delivery of domestic plumbing services must in their nature remain localised. Moreover, it is worth noting that some high value personal services are, in a different sense, also increasingly tradable. For example, the growing trend of “medical tourism”, whereby people travel offshore for surgery, is an example of the relocation in the consumption of a personal service (Ramírez de Arellano, 2007; Burkett, 2007).

It is evident that the processes responsible for the previous relocation of manufacturing and the shift to knowledge-based industries in the developed economies are now moving on to shape a new economic environment. Hence, the assumptions on which the previous economic and educational strategies were developed now need to be reviewed. As Blinder (2007) argues, “Looking backward, the crucial labor market divide has been the familiar one: between jobs that require high levels of education and jobs that do not. ... But looking
forward, the more critical distinction may be the unconventional divide between personal and impersonal service jobs” (Blinder, 2007, p. 5, emphasis in original).

Offshoring, therefore, challenges the knowledge economy literature which presumes that workers in the developed OECD member countries will be the “knowledge workers” and that only low-skill work will be moved to the emerging economies. As such, Brown and Lauder (2006) argue that the demand for high skills will not in future be concentrated in the developed economies. The standardisation of work in a global economy enables the relocation of complex and skilled jobs to the emerging economies on a greater scale than previously imagined. Whereas previously offshoring was contained to back office functions and unskilled positions, increasingly, it is the senior positions such as financial analysis, human resources and graphic design which are being relocated (Brown and Lauder, 2006, p. 49). The emerging economies, including India, China and Malaysia, are increasingly competing for high-skill work. It seems that “declining barriers to distance inexorably lead to the emergence of global labour markets in particular skills” (Levy, 2005, p. 688) and that “the central reality of the latest wave of offshore production ... is that higher skilled jobs are also now at risk, from computer programmers to radiographers and accountants” (Levy, 2005, p. 687).

This process is of significance to higher education institutions as it transforms the demand for certain types of educated labour in OECD economies, the location of graduate employment across the world and the financial returns to education. In summary, the economic development of OECD member countries does not neatly correlate with the growing demand for a higher educated workforce. As Blinder (2007) explains, “there is probably little or no correlation between the educational requirements of a job and its degree of offshorability ... [and] ... over the next generation, what kind of education our young people receive may prove to be at least as important as how much. In that sense, a college degree may no longer be a panacea” (Blinder, 2007, p. 27-28, emphasis in original).

Assuming the offshoring trend is to be sustained, the economic basis of the virtuous circle of higher education, higher skills, higher productivity and higher incomes that has been the basis of policy is likely to come into question. Considering this, higher education institutions themselves need to consider how their own strategies and roles might need to be re-thought to respond to such trends and it is to this question that we turn in the next section of the paper. Reflecting the backgrounds and interests of the authors, this will primarily focus on the UK context.
Policy options in changing times

In answering the question of how higher education institutions respond to the potential unravelling of the virtuous circle there are a number of factors which frame the arguments we present below. First, the full extent of offshoring is still a matter of debate within the literature and its impact on locations of economic activity may be balanced by a range of countervailing factors. Second, whatever the wider impact of economic change on the global economy, there may be a time lag before this results in changes to higher education policy. This would mean that the activities of higher education institutions which are suited to the older knowledge economy model will continue to be funded and mandated by government despite changes in the wider economy. The suggestions that we present here are therefore tentative and exploratory in nature.

We would further highlight two additional factors that shape our consideration of these issues. The first is that different higher education institutions have different values, priorities and constraints. Therefore, there could be no one-size-fits-all response and we will outline three potential strategic approaches that, while not mutually exclusive, might be engaged with in an incremental way by providers. Second, the three alternatives we have developed are based on existing patterns of higher education activity, and therefore some of the options which flow from the analysis provided in earlier sections are in tune with current practice.

The first potential strategy that we can identify advocates decreasing the influence of economic policy drivers on institutional strategy. Governments have tended to push for a greater emphasis on the economic role of higher education institutions in recent decades, and it should be noted that although the ambition to contribute to economic development often sits within the strategic aims of a university, it is by no means a sole aim. Furthermore, there has always been resistance from a range of authors to the idea of the university merely serving the needs of the economy. Maskell and Robinson (2002), for example, are among those who argue that the pursuit of a narrow and instrumentalist approach to education has been damaging and call for a return to what they characterise as a more traditional liberal educational approach. For Wolf (2002) the drive to increase student numbers – in the hope of stimulating economic growth – has been ill-conceived and has led to the overexpansion of the sector.

Considering that the relationship between earnings, jobs, skills and qualifications is not as enduring or as fixed as we may have assumed, the argument for the continuous expansion of higher education, and the expectation that this provision should have an immediate economic rationale, has been somewhat discredited. In this context, institutions might choose to
distance themselves from the model of the “entrepreneurial university”. This would involve de-emphasising activities that are focused on demonstrable outcomes that are immediately or primarily economic. But pursuing such a strategy would not be without difficulties and perhaps one of the key challenges would be how to generate funding streams to support such a shift. In the UK context, for example, predominantly teaching universities are heavily dependent on the state for both research and teaching income. As such an approach would be running counter to the direction of policy, other sources of income would need to be developed. It is possible that greater income from philanthropic sources such as alumni donations might provide part of the answer, but any large-scale move in this direction would be likely to result in the emergence of smaller and more elitist higher education institutions.

The second potential strategy that we can identify is one that continues to emphasise the role higher education institutions have in supporting economic development, but seeks to do this in an environment in which offshoring occurs. Considering the global nature of education and work, institutions can rise to the offshoring challenge themselves and seek to develop ways in which to meet the changing demand for higher skills and develop the knowledge economy in countries other than their own (Lieven and Martin, 2006).

Such international objectives are already part of the existing strategies of many higher education providers and Bjarnason (2004) identifies four different types of activity within the General Agreement on Trade in Services framework. The first and largest financial category is consumption abroad, whereby students travel outside of their own countries to engage in education. This is where universities vigorously compete to attract students from across the world who will study in the provider country. This contrasts with cross-border supply, a smaller second category, where the student remains in a different country to the provider and learning is supported through distance or e-learning techniques. A third model is where the higher education institution establishes local provision through franchising agreements with local providers, or, alternatively, the establishment of a new overseas campus or satellite operation where entire courses are delivered or marketing and recruitment activities take place. The investment made by the University of Nottingham in Ningbo, China is an example of this model (Ennew and Fujia, 2009). The final category is that of academics travelling overseas to provide teaching in other locations. As Bjarnason (2004) notes, the future development of such relationships is unclear, but may provide new opportunities for productive collaboration between partner institutions.

Higher education can thus be a valuable part of the export economy and, as Dodds (2009) observes, OECD member countries such as Britain and France have played an active role in promoting the internationalisation strategies of
their universities. For governments, such a policy can be part of an approach to the higher education sector where it is valued as an economic asset (Wright, 2004). However, one can also speculate that there may be limits to how far the development of overseas provision could progress within the portfolio of higher education institutions without tensions arising. As King (2004) argues, the modern higher education institution is a creation of the state and its desire is to promote national development. As we have already noted, in countries such as Britain, the state is the primary funder of higher education and a range of benefits to society are identified to justify the allocation of public expenditure for this purpose. Were a situation to develop in which a group of institutions were to shift the balance of their work away from domestic provision, the question might be asked as to the justification of continued state financial support. Furthermore, although universities may perceive themselves to be multi-national corporations, with freedom about where and how they operate, they are constrained by the environment in which they are located. Even if entirely privately funded, higher education institutions have to fully appreciate the political context in both their home and overseas campus location if such a strategy is to succeed.

This brings us to the third strategic option that we wish to explore, that of higher education institutions not only continuing to engage in supporting national economic development, but intensifying that work. The rationale for this approach flows from the contention that when presented with intense competition for highly skilled work, the response of developed economies should be to identify the potential opportunities and compete harder. From this perspective, the virtuous circle of the knowledge economy remains the basis of policy, although it is recognised that it is more difficult to achieve than it once was.

Fundamentally, higher education policy needs to acknowledge the dynamic nature of the economy. Blinder advocates focusing graduate students on the high-end jobs that are less likely to move offshore, and ensuring that graduates have the generic skills and creative abilities to develop “new processes, new products, and entirely new industries” (Blinder, 2007, p. 29). An OECD publication makes a similar point: “The educational system must also factor in the new needs of a knowledge economy. It cannot restrict itself to conveying knowledge but must develop the abilities students need to acquire new knowledge and assimilate it rapidly throughout their entire careers” (OECD, 2007a, p. 123).

One example of how this strategy might occur is outlined in the UK government’s higher skills strategy. This provides new funding streams to support higher education institutions which work with the business sector to provide learning that will contribute to economic productivity (DIUS, 2008). Despite this, many obstacles remain to developing the forms of flexible and
cost-effective provision that are required. These include cultural and institutional inflexibilities such as the academic calendar, semester structures and accreditation processes that were designed for a different model of university life. In addition, it is not only higher education institutions that need to change their behaviour to support such a strategy. As the United Kingdom Commission for Employment and Skills (2009) has argued, it also requires employers to pursue business strategies that seek competitive advantage through the skills of their workforces.

Conclusion

Since the 1960s, a general trend in the developed economies has been the growing number of students entering higher education (Altbach, 2008). As we have suggested, this fitted well with the prevailing economic consensus that higher education was an investment in human capital and would translate into economic rewards for both the individuals receiving the higher education and for the countries in which they lived and worked. The emergence of offshoring, and especially the relocation of highly skilled jobs, has the potential to transform the established knowledge economy.

We have argued that higher education institutions faced with such a situation face three strategic options. They can seek a reorientation away from having an immediate economic rationale for their activities. Alternatively, higher education institutions can develop their own offshoring strategies to meet the changing nature of demand for education in a period of globalisation. They can also pursue a strategy based on intensifying the development of human capital to serve the development of the domestic knowledge economy. While for the purposes of our discussion we have emphasised the contrasts between these positions, it should be noted that in practice many institutions will seek something of a balance between the various elements outlined. Few would seek to exit entirely from activity designed to contribute to local economic development or see this become the sole activity of the institution. Neither would institutions abandon working at an international level as this provides new opportunities for expansion and can enhance status and prestige.

Nevertheless, three fundamental issues remain. Economic change is a constant in the contemporary period and generates new challenges for governments, economies and universities. Nation states have supported the growth of higher education across OECD member countries in recent decades largely because of the perceived benefits to their economies. If new challenges appear to disrupt this calculus, higher education institutions will need to develop strategic responses to adapt to a changing world.
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This project was supported with funding from the UK Higher Education Academy Subject Centre for Sociology, Anthropology and Politics (C-SAP), grant 18/P/07.

References


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Contributions to the *Higher Education Management and Policy* Journal should be submitted in either English or French and all articles are received on the understanding that they have not appeared in print elsewhere. Articles submitted for publication in the Journal are refereed anonymously by peers.

Selection criteria

The Journal is primarily devoted to the needs of those involved with the administration and study of institutional management in higher education. Articles should be concerned, therefore, with issues bearing on the practical working and policy direction of higher education. Contributions should, however, go beyond mere description of what is, or prescription of what ought to be, although both descriptive and prescriptive accounts are acceptable if they offer generalisations of use in contexts beyond those being described. Whilst articles devoted to the development of theory for its own sake will normally find a place in other and more academically based journals, theoretical treatments of direct use to practitioners will be considered.

Other criteria include clarity of expression and thought. Titles of articles should be as brief as possible.

Presentation

Electronic submission is preferred. *Three copies* of each article should be sent if the article is submitted on paper only.

*Length*: should not exceed 15 pages (single spaced) including figures and references (about 5 000 words).

*The first page*: before the text itself should appear centred on the page in this order: the title of the article and the name(s), affiliation(s) and country/countries of the author(s).

*Abstract*: the main text should be preceded by an abstract of 100 to 200 words summarising the article.

*Quotations*: quotations over five lines long should be single-spaced and each line should be indented.

*Footnotes*: authors should avoid using footnotes and incorporate any explanatory material in the text itself. If notes cannot be avoided, they should be endnotes, at the end of the article.

*Tables and illustrations*: tabular material should bear a centred heading “Table”. Presentations of non-tabular material should bear a centred heading “Figure”. The source should always be cited. Please provide original source files.

*Addresses of author(s)*, including e-mail, should be provided at the end of the article.

*References in the text*: Vidal and Mora (2003) or Bleiklie et al. (2000) in the case of three or more authors.

*At the end of the article*, references should be listed in alphabetical order under the heading “References”. Examples of the reference style used in the Journal are:


  The names of up to three authors can appear; for more than three authors just cite the first name followed by *et al.*

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Please cite this publication as:
http://dx.doi.org/10.1787/hemp-v22-3-en

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