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Higher Education Management and Policy



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JOURNAL OF THE PROGRAMME
ON INSTITUTIONAL MANAGEMENT IN HIGHER EDUCATION

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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- to promote, through research, training and information exchange, greater professionalism in the management of institutions of higher education; and
- to facilitate a wider dissemination of practical management methods and approaches.

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Table of Contents

Making "World-class Universities": Japan's Experiment
Akiyoshi Yonezawa 9

Steerage of Research in Universities by National Policy Instruments
John Kleeman 25

The United Kingdom's Research Assessment Exercise : Impact on Institutions, Departments, Individuals
Paul G. Hare 43

The Lack of a National Policy Regime of Quality Assurance in Germany – Implications and Alternatives
Gero Federkeil 63

Evaluating Teaching and Research Activities – Finding the Right Balance
Javier Vidal and José-Ginés Mora 73

The Impact of the State on Institutional Differentiation in New Zealand
Andrew Codling and Lynn V. Meek 83

New Mechanisms of Incentives and Accountability for Higher Education Institutions : Linking the Regional, National and Global Dimensions
Fumi Kitagawa 99

A Power Perspective on Programme Reduction
Jeroen Huisman and Oscar Van Heffen 117

"Leadership" and "Governance" in the Analysis of University Organisations: Two Concepts in Need of De-construction
Stéphanie Mignot-Gérard 135

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Making "World-class Universities": Japan's Experiment

by
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The realization of world-class universities is a dream of every researcher and national government. However, making them and maintaining their status is difficult even in highly developed industrial countries. Consequently, national governments tend to concentrate financial investment in their top universities, usually with the support of leading members of the academic community.

It is not clear that such sponsored development of a limited number of universities is truly the most efficient approach to enhancing the quality of research and development in any one country. Similar to the effect of Korea's BK21 scheme, dispute among researchers was widespread when the Japanese government endeavoured to select around 30 "top" universities.

In order to provide sustainable incentives, foster accountability and promote competition among institutions, national policies must aim for the enrichment of "flagship universities" while continuing to support the knowledge infrastructure for "ordinary" ones. This article analyses Japanese "World-Class Universities" policies from the perspectives of both researchers and the national government. This topic is treated as an issue facing most OECD countries.

Introduction

The realization of world-class universities is a dream of every researcher, higher education institution and government. However, their creation and the maintenance of their status are not easy even in highly developed industrial countries. Consequently, national governments tend to concentrate financial investment in their top national universities, with the support of leading researchers. The trial to seek research excellence in the United Kingdom is a typical example (Department for Education and Skill, 2003).

Special financial consideration for research universities is itself not a new tendency. Prior to World War II, Japan maintained an "Imperial" university system that received preferential financial treatment compared to other higher/tertiary education institutions. Special provisions for "flagship universities" are also commonly found in the state university systems of the United States. The "California Master Plan", for example, divides higher education institutions into three categories: Universities of California, California State Universities and Community Colleges. The awarding of special status to a limited number of higher education institutions is similarly a widely recognised strategy in East Asia. The "Brain Korea 21" (BK21) scheme in Korea is a typical example of trials to develop a limited number of world-class research universities (Lee, 2000). As is particularly the case in developing countries, limited financial resources make it almost inevitable that special financial treatment is extended to leading universities in hopes of boosting their academic competitiveness in global competition, and of producing quality leaders for domestic social development.

In some cases differentiated treatment is not reflected in the creation of explicit categories. The United Kingdom has a very hierarchical higher education system, having abolished differential treatment of universities and polytechnics in 1992. Japan also experienced the upgrading of polytechnics by integrating them into the university sector in 1949. However, while equal legal status has been assured to institutions of different origins, hierarchical financial differences have continued to be the reality in these two countries.

It is not clear that such sponsored development of a limited number of universities is actually the most efficient approach to enhancing research quality or national development. Similar to the impact of the BK21 scheme in Korea, dispute among researchers was widespread when the Japanese government endeavoured to select around 30 top universities.

In order to provide sustainable incentives, foster accountability and promote competition among institutions, national policies must aim for the enrichment of flagship universities while continuing to support the knowledge infrastructure for "ordinary" ones. This article analyses Japanese "World-Class Universities" policies from two perspectives, namely, those of researchers and of the national government. This topic will be treated as an issue facing most of the OECD countries

History of trials with differential treatment

The main structure of the current higher education system in Japan was established in 1949 with the upgrading of various types of higher and post-secondary institutions into the university system. At this time, all universities received equal status under the law. However, the financial treatment of these institutions by the national government remained unequal between former "imperial" universities and other national institutions, as well as between national, public and private universities. The reasons for this are three-fold.

First, the organisational structure of faculty remained different between former imperial universities and others. Until quite recently, basic governmental grants to the national universities were distributed according to the number of academic staff and students. However, the unit-fund per faculty remained differentiated between former imperial universities and others. This differentiation officially derives from differences in the organisational structures of respective chair systems. The traditional chair system of the former imperial universities maintained its German-style structure: a research unit consisting of a chair professor, associate professor(s), research associate(s) and graduate students (Ogawa, 2002). On the other hand, new universities assumed a much flatter, "department-subject" system, with several research staff covering several subjects within a department. This difference in organisation functioned to distinguish the older, research-oriented universities from newer, education-oriented ones. However, faculty members of new universities have also gradually assumed an orientation to research as a result of academic-drift.

Second, postgraduate education has also served as a factor in differential financial allocation between older institutions and newer institutions. Hamanaka's (2002) analysis of the development of post-graduate education following World War II showed that older universities tend to have a greater number of doctoral programmes and larger postgraduate student enrolments. For a university to have a graduate programme also serves as an advantage in financial allocation. Without specific official reason, national policies for the establishment of postgraduate education programmes are also significantly related to differences in historical origin.

Third, university reform since the early 1990s also reinforced the differentiation between older and newer institutions. Under the chair system of Japanese national universities, faculty members traditionally belong to undergraduate programmes. However, when the School of Law of the University of Tokyo moved all its faculty members to the graduate level, its annual basic budget increased by 25 per cent. Following this example, other faculties of the University of Tokyo and other leading universities implemented the same reorganisation for upgrading. A university can interpret an upgrade approval as a sign of having been recognized as a research-oriented institution. The ministry of Education (MEXT) was very cautious in approving this reorganisation for expanding into non-elite universities; as a result, only a limited number of institutions were successful in implementing this reorganisation. Simultaneously, as many institutions were in the process of expansion, the government ceased admitting budget increases based on this reorganisation. This further results in differentiated financial treatment between the oldest universities and others.

Competition-based project funds

In addition to systemic financial differentiation, the government provides competition-based project funds. Asonuma (2002) pointed out that budgeting related to research activities continued to increase throughout the 1990s. Project funds related to research are officially open to all individuals and institutions. Older research-oriented universities, however, tend to be at an advantage because of their prestige, size, and rich human resources for research.

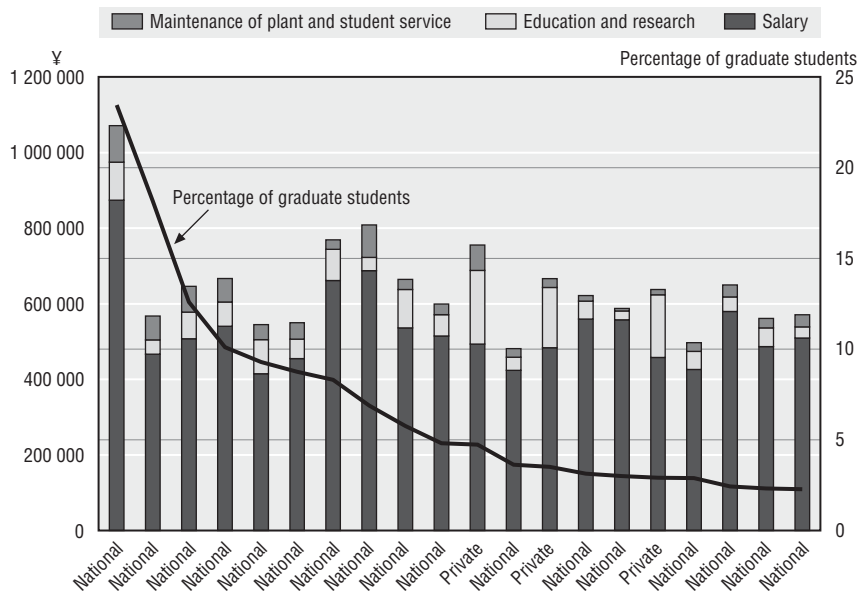
The budget for governmental Grants-in-Aid for Scientific Research increased dramatically during the 1990s, becoming nearly equivalent to the total budget of formula-based research funds for faculty. The ranking of the amount of Grants-in-Aid among 669 universities (99 national, 74 local public and 496 private) in 2001 reveals that the top seven positions are virtually monopolised by former-imperial universities, followed by other prestigious national universities with long histories. Private institutions are also ranked basically by historical order. For example, Keio University, the oldest private university is ranked number 15, and Waseda University, the second oldest ranked number 20 ("*Daigaku Ranking*", 2002).

Asonuma (2002) also observed that new types of budgetary and research funds were established during the 1990s, strengthening competition for funds among national universities. Since the 1970s, private institutions have also received formula based government aid for operation. In the 1990s, the share of project funds to the private sector also increased substantially.

Differentiated financial allocation

Financial allocation among institutions is currently significantly diversified. The *Asahi Newspaper*'s (2002) ranking of the total expenditure for national universities based on MEXT data suggests that, the top seven positions were again monopolised by the former seven imperial universities (admitting that these seven are the largest universities in terms of student and staff numbers). The structure of financial allocation is also different among academic fields. Figures 1 through 5 reveal the current-fund expenditure per student according to academic field. In engineering and natural sciences, the hierarchical structure of financial allocation in terms of the share of graduate students is clearly evident, while the relation is not always readily discerned for other fields.*

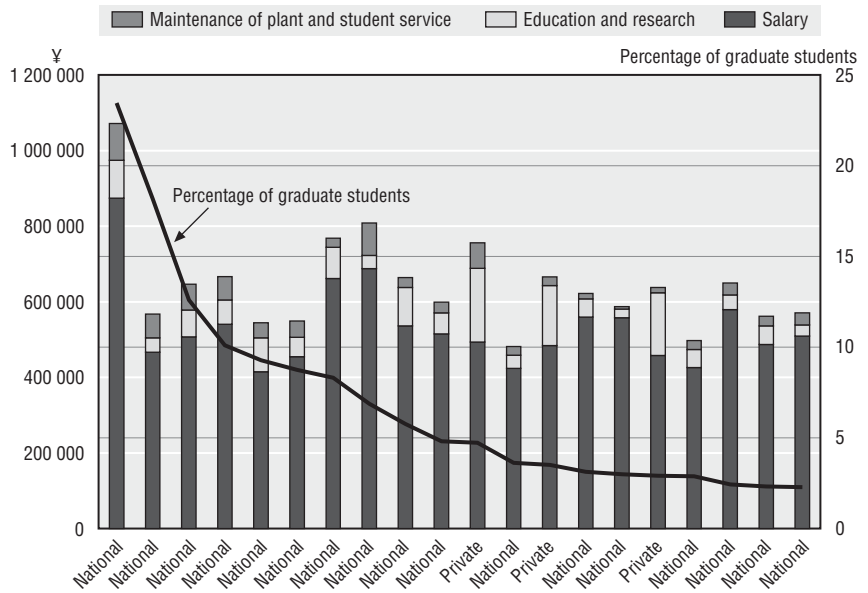
Figure 1. **Current-fund expenditure per student and the percentage of graduate students – Literature**



Source: Author, based on MEXT data, 2002.

* For technical reasons, the university in the top-left column should be regarded as an exception, because it does not include students in the first and second years.

Figure 2. **Current-fund expenditure per student and the percentage of graduate students – Economics**



Source: Author, based on MEXT data, 2002.

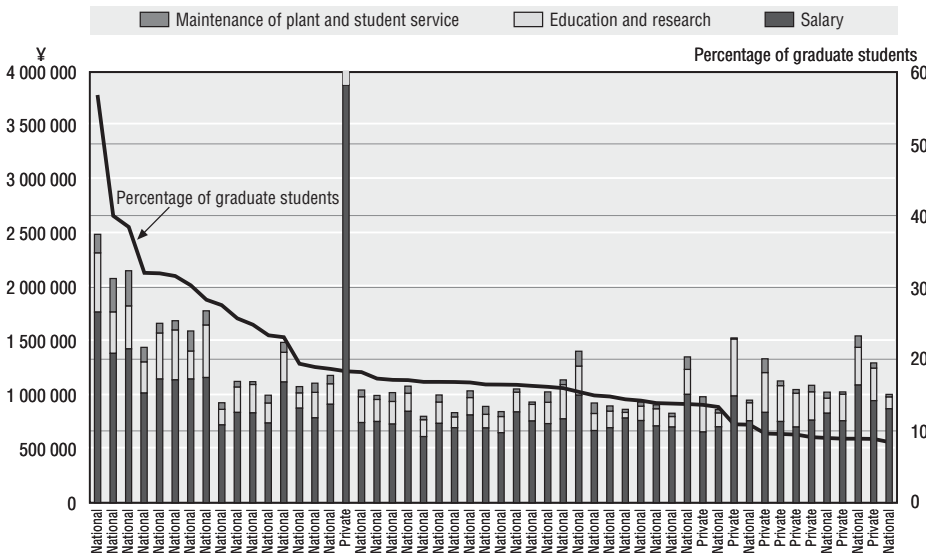
The Toyama plan and Top 30 scheme

While the preceding discussion showed that the Japanese higher education system has given special financial treatment to its leading universities, global trends of competition in the field of research and development also serve to strengthen this tendency.

As a part of a drastic reformation by the Koizumi cabinet, the "Toyama Plan", named for the minister of Education, called for the restructuring of the national university system in June 2001 (Box 1). In its plan to introduce the principle of competition through a third-party (external) evaluation system, MEXT clarified its intention to differentiate financial allocation based on evaluation results. Also revealed was the idea to foster the progress of the "Top 30" universities towards leading global standards. This should be understood as an attempt by MEXT to draw additional resources from the Ministry of Finance by becoming part of the Koizumi cabinet's public services restructuring plan. However, this plan provoked controversy among stakeholders in higher education for several reasons.

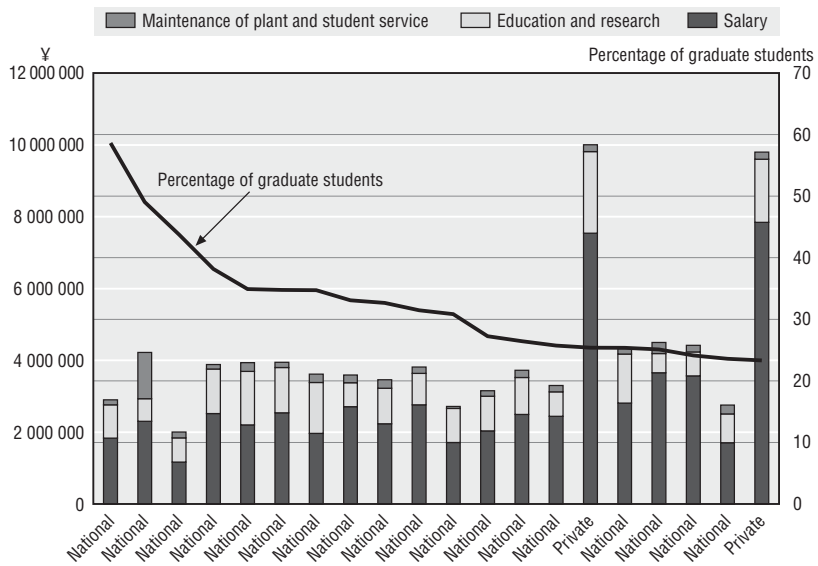
First, the MEXT initiative was interpreted as an effort to create an official category of research universities in Japan. As already mentioned, the Japanese university system does not make an official distinction between "research"

Figure 3. **Current-fund expenditure per student and the percentage of graduate students – Engineering**



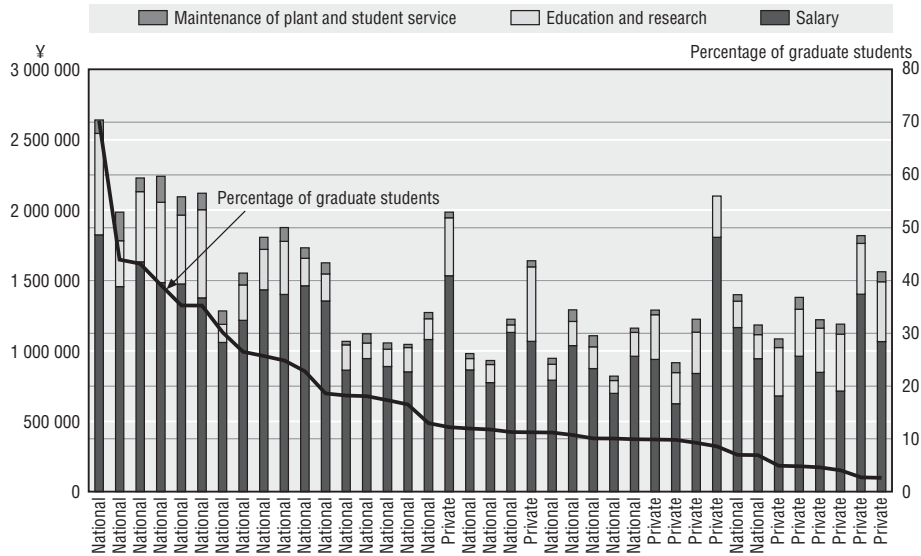
Source: Author, based on MEXT data, 2002.

Figure 4. **Current-fund expenditure per student and the percentage of graduate students – Medical sciences**



Source: Author, based on MEXT data, 2002.

Figure 5. **Current-fund expenditure per student and the percentage of graduate students – Natural sciences**



Source: Author, based on MEXT data, 2002.

and "education" universities. A categorisation once proposed by an advisory council to the ministry of Education in 1971 was not realised because of strong resistance by the universities. At the same time, there has always been a strong preference to establish a special category of research universities among top researchers and opinion leaders in the fields of natural sciences and engineering. This group, being faced with increasingly severe global research competition, feels that egalitarian treatment among universities and research units is disadvantageous as a national strategy.

Second, the idea of the chair system and relatively weak power of institutional managers based on the German-model tradition stimulated an increase in research activities among academic staff, especially in the national sector. Arimoto (1996) indicated that academic staffs of universities in Japan have a strong orientation to research rather than instruction. This tendency provides a competitive atmosphere in an academic community relatively isolated due to language barrier; it is not easy for Japanese universities to attract top researchers from all over the world, even with attractive salary offers. It is therefore crucial to support a critical mass of researchers, so as to assure competitive selection within a domestic academic community.

Third, under the current system, top research universities receive more funding partly from advantageous budgeting, and partly from competitive project funds. There is a strong argument that the financing of higher education in Japan

Box 1. **Guideline for restructuring the (national) university system (MEXT: June, 2001)**

The reorganisation and integration of national universities

Reorganisation and integration based on the assessment of institutions and fields

Downsizing and reorganisation (*e.g.*, teacher training programs)

Integration (*e.g.*, colleges with a single faculty such as medical schools)

Reorganisation and/or integration among schools and institutions in different prefectures

Revitalisation through scrap and build

Introduction of private sector managerial methods to the national universities

Recruiting external experts to university boards and administration

The creation of flexible and strategic operation of universities through the clarification of management responsibilities

Introduction of new personnel systems based on merit and performance

Introduction of financial independence through the separation or detachment of certain national university functions (affiliated schools, business schools, etc.)

Early transformation to the new "National University Corporation".

Introduction of the principle of competition by third-party (external) evaluation

Introduction of third-party evaluation system involving experts and outsiders

Utilisation of national institution for academic degrees (NIAD)

Fully publish and make freely available to stakeholders the results of evaluation

Differentiate financial allocation based evaluation results

Increasing competitive funding among national, local public and private institutions

Foster "Top 30" University towards global top standards

is already highly competitive enough. Introducing "fostering funds" to a limited number of institutions may disturb this competitive structure by working to disadvantage researchers at non-leading institutions.

Fourth, the MEXT scheme targeted not only national institutions, but also local-public and private institutions. This represents a drastic policy change,

in that Japan's science policy has always had a tendency to ignore the private sector. At the same time, this can be regarded as pushing private institutions into competition with national ones in research performance. This may stimulate a sense of "unequal" financial treatment of the private sector, because private institutions rely mainly on tuition fees for revenue, and are clearly disadvantaged in fields requiring expensive facilities or equipment.

The last and most important dispute concerned the issue of who identifies "top" institutions, and how. It was apparently the government that took the initiative, with a committee of the Cabinet approving the basic idea of this scheme before consulting universities. Meanwhile, the Ministry had no intention to select top institutions without establishing a selection committee of peers and experts.

In order to develop a basic outline of this scheme, MEXT organised special meetings among four institutions related to evaluation and financial allocation, namely, the Japan Science Promotion Society (JSPS; a research council), the National Institution for Academic Degrees (NIAD; a university evaluation agency), the Japan University Accreditation Association (JUAA; an institutional accreditation agency), and the Promotion and Mutual Aid Corporation for Private Schools of Japan (PMACPJ; a public corporation for aiding private institutions). However, the general attitudes of these institutions reflected a general caution and reluctance to take the initiative in discussions.

Title and usage of performance indicators

Since the beginning of the development of this scheme, MEXT has been highly interested in using a set of "objective" performance indicators for the selection process. However, MEXT was faced with strong opposition from experts in higher education. At the same time, many research oriented institutions rushed to collect possible data for performance measurement, partly as a defence against this scheme, and partly for other reasons such as obtaining information for strategic institutional management, for controlling staff members, or merely for showing off the power of university president offices against faculty members. This placed a heavy burden especially upon senior staff members to make lists of publications, citations, research grants, and so on, sometimes from the beginning of their research careers. Ultimately, MEXT abandoned the idea of applying indicators mechanically in the selection process, placing greater emphasis on "subjective" decision-making by the selection committee as peer evaluation. Instead, a set of recommended indicators was published as an "example", however institutions are not obliged to adhere rigidly to these when defending their performance or excellence.

The disputes and criticisms of the "Top 30" Plan had a great influence on MEXT policy. MEXT changed the title of the scheme to the "Centre of Excellence in the 21 Century" (COE21) scheme after six months' discussion, as

well as it clarified that institutions were not to be to categorised or ranked. The decision was also made that the JSPS (Research Council) would implement this scheme as a policy for enhancing research activities rather than assessing university performance. By changing the name of scheme, the image of MEXT's intention was clarified as selecting research units and not institutions; accordingly, it is not the research units, but the institutions that submit to this scheme. From the beginning, the plan specified that 9 fields of research units be assessed: 1) life sciences; 2) medical sciences; 3) chemistry and material sciences; 4) mathematics, physics and earth sciences; 5) information, electricity and electron; 6) mechanical science, civil engineering, architecture and other engineering; 7) humanities; 8) social sciences; 9) inter-discipline and new-fields. This scheme can be understood as a tool to strengthen the power of university presidents, because they decide priority among the proposals of different research units. Selected research units will receive 100 million to JPY 500 million per year for five years. While the amount of the fund itself is not significantly large, this authorisation will make it easier for these units to attract other funds.

The COE21 scheme can be regarded as a trial in performance funding. In previous years, the government and its committee had decided financial allocation based on annual budgetary plans submitted by universities, or in negotiation with the universities. Historical factors had a substantial influence in establishing priority for these plans, in the absence of explicit indicators for striking a balance in the hierarchical structure.

There are two main reasons that the ministry opted to continue using "objective" performance indicators. First, the government is not the only user of performance measurement; industry, society, and university managers also demand a convenient way of performance measurement. Nowadays, ministries as well as universities are required to demonstrate their accountability through assessment and evaluation. Indicators of university performance will also give the government a tool for enhancing the transparency of their policy implementation. Second, financial allocation based on performance is a very effective means for stimulating university activities. Similarly, performance measurement can be utilised as a tool to control universities, in that those outside of the academic community, including the staff of MEXT, can speak to the clarified orientation and achievement of university goals expressed in the form of indicators.

However, it is not clear that the proposed set of indicators is actually viable for estimating the future success of research units (Cave *et al*., 1997). Many countries have already experienced that indicators tend to lead to meaningless institutional efforts to increase "scores" rather than real performance. Researchers furthermore tend to believe that top research activities are too complex to be readily indicated, and therefore near impossible to explain in an

Box 2. **The performance indicators for selecting COE21 research unit**

Excellent researchers related to the field and their contribution

- facts that show recognition and approval in foreign countries
- fellow, honorary memberships in academic societies in Japan and internationally

The publication of research outcomes and standards

- publication in journals of highly esteem
- degree of citation
- patents, their usage and implementation
- organisation of international conferences

Mobility of academic staff

- post-doctoral fellows
- visiting researchers from abroad
- academic staff with foreign research experience

Postgraduate education

- presentation in academic society by postgraduate students
- activities of graduates in society
- characteristic educational methods for fostering excellent human resources

Linkage with industry and local governments; international network

- contract research, donations, etc.
- recruitment of academic staff from industry
- contribution to policy development in local communities
- international linkages in education and research

Institutional management and conditions for education

- implementation or external assessment
- conditions for research and education (libraries, ICT, facilities and equipments)

Others

- classes in English
- Ph.D holders among academic staff
- donations from graduates
- system of class evaluation by students
- international staff members
- movement or promotion to other universities

easily understandable way to lay-people. However, it is also true that the number of researchers who rely on indicators for assessing the academic standards of others is increasing. Moreover, the attitudes of researchers towards indicators such as citation and impact factors are quite different among fields. Presidents and managers of other institutions find indicators to be convenient tools, because it is difficult even for those among the academia to understand the performance of unfamiliar academic fields.

In October 2002, the results of the COE21 selection were published. The *Yomiuri Newspaper* (3 October 2002) presented a league table of institutions classified according to the number of selected research units (see Table 1). The JSPS selected 113 research units of 50 universities (31 national, 4 local public and 15 private) out of 686 institutions (99 national, 75 local public and 512 private). The University of Tokyo and Kyoto University share the top rank (11 units). The top 10 rankings consist of seven former imperial universities; the two best-known private universities (Keio and Waseda) share the same number (5 units), and the top engineering university (Tokyo Institute of Technology), 4 units.

Table 1. **League table based on the number of COE21 research units**

11	Tokyo, Kyoto
7	Nagoya, Osaka
5	Tohoku, *Keio*, *Waseda*
4	Hokkaido, Tokyo Institute of Technology, Kyushu
3	Tsukuba, *Ritsumeikan*
2	Tokyo Agriculture and Technology, Tokyo Foreign Studies, Yokohama, Toyohashi, Nara Institute of Science and Technology, Hiroshima
1	Obihiro, Akita, Gunma, Ocha, Nagaoka, Shinshu, Nagoya Institute of Technology, Gifu, Kanazawa, Kobe, Tottori, Ehime, Saga, Nagasaki, Kumamoto, Miyazaki Med., Shizuoka (Prefecture), Osaka (Prefecture), Osaka-city, Himeji (Prefecture), *Aoyama, Kitazato, Kokugakuin, Sophia, Tamagawa, Chuo, Tokai, Nippon, Hosei, Aichi, Meijo, Kinki*

Underlined are former Imperial universities; *italicised* are private universities.
Source: Yomiuri Newspaper (3 October 2002).

The results have been received with both praise and strong criticism. While some experts argue that the results fit well to the actual academic performance of prospective institutions in principle, others claim that the performances of top national research universities are underestimated compared with those of private and less-prestigious public institutions. The perceived dominance of elder academic bosses was criticised, as was the objectivity of the selection criteria. Some journalists pointed out that the top national universities do not perform well in light of the highly concentrated investment of research funds. Yet others criticised the peer review selection system as even deceptive. One can therefore see that this ranking did not significantly change the public's

image of university hierarchy from past, widely held impressions. The system did not change the share of investment in research between the public and private sectors. In short, the belief in academics in the peer review system faced severe doubts both inside and outside academia.

However, the results can be understood as a sound representation of both a good incentive for less prestigious universities and a justification of the stability of top research-oriented universities. The selection committee of the JSPS stressed that they are trying to identify research units with high potential, and published a list of the reasons for selection after receiving criticism on the transparency of the selection process.

Discussion: same bed, different dreams

The process of introducing the new scheme for developing world-class universities revealed that government and universities are differently motivated. There are two issues to be considered.

First, the ideal image of balance in financial allocation among different fields and institutions varies among different types of stakeholders. Attempts to clarify definitions for the mechanisms of financial allocation based on performance would result in endless debate over different images of "well-balanced" allocation. A thorough consideration of respective histories, or unexplained "subjective" factors, is necessary for making final decisions in order to satisfy the various stakeholders within and outside of the academic world.

Second, there is no clear answer on how to develop world-class universities, or how to enhance the quality of research for global competitiveness. Of course, national support is a critical factor. At the same time, many universities believe that autonomous management is also important. Without an official category for flagship universities, the government needs to invent tools for differentiated financial allocation which are justifiable to both universities and society. Performance funding should be a convenient tool for government, as the easiest way to demonstrate accountability to society.

Indicators are inherently imperfect, and therefore cannot satisfy everyone. They will also increase the cost of evaluation, especially for top researchers whose valuable time ought not be unduly consumed by the preparation of documents for funding. On the other hand, the peer review system does not appear to be successful for gaining trust and support from outside the academic community. While high degrees of transparency and objectivity are requested, in practice they are impossible.

Nevertheless, top researchers tend to support performance based funding, out of confidence that they can "win the game". However, various kinds of new trials are important to discover new factors that may strengthen

the competitiveness of national research activities in the global academic market. Although performance funding is not an optimum method to determine financial allocation, researchers, institutional managers and government administrators are working together to "visualise" their performance and "optimise" financial investment to foster the creation of "world class" universities. This situation finds them, as old Chinese proverb says, "in the same bed with different dreams".

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Steerage of Research in Universities by National Policy Instruments

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In June 1999 the Australian Government signalled, with the publication of a Green Paper, its intention to reform research and the training of research students in universities. After a period of public and institutional comment and debate, the reforms eventuated and the new policies result in performance based funding for research and research training, which is separated from the base of funding of coursework teaching. The new funding mechanisms can shift core government research resources across universities.

Within universities, funding inputs from government need to be directed internally to research-active areas with large numbers of research students and substantial external grants, which contribute most strongly to the performance indicators that bring in the funding. This train of funding from government through to internal resource allocation can be modelled and the results imply potentially permanent changes in the character of universities, by changing the way academic work is funded and accounted for.

Funding models can leave teaching-active sections, if they have few research students and little external grant funding, without the means to support even basic levels of research and scholarship. This threatens the standard and nature of university teaching, which by its nature should take place within a culture of sustained scholarship and creation of new knowledge through research.

The paper discusses these issues, in the context of models for funding of research, and the responses by university managers and grass-roots academics to the challenges of adapting to the new policy and funding framework.

Introduction

The new research policy landscape

Over the past three years changes to the policy, regulatory and funding environment have radically changed the rules for research in Australian higher education institutions. This paper firstly outlines these changes, and the growing influence of government steerage; then discusses the implications for the nature of academic research and the culture of universities and their teaching.

Government funding for research in universities

New government policies (DEST, 1999b) that cover research and research training in Australian universities were introduced in 1999 following consultation on a discussion paper (DEST, 1999a). Three major features are important to this paper:

1. The funding provided to universities by government as "block funding" for institutional level support of research and research training is clearly identified and distinct from funding for teaching activities. Funding is divided among universities competitively using performance indicators.
2. Policy statements, planning guidelines, and terms of reference for quality assurance, together denote steerage by government of broad organisational topology, nature of intended outcomes, and management style within institutions. There is recurring emphasis on the need for institutions to identify their areas of strength, and to favour them.
3. There will be significant increases over several years in the funding for research infrastructure and targeted research, and an enhanced role for the organisation administering the flagship set of competitive research grant programs, the Australian Research Council. The expanded targeted funding will largely be directed to priority areas.

Cross-sector innovation agenda

Announcements in 2001 at a national level (ACG, 2001) declared the Commonwealth government's wider national agenda for investment in research and innovation across government, industry and education sectors. This statement encompassed previously announced schemes, and announced new policy initiatives and funded schemes for stimulating research and

development. It adds a fourth major feature to the new landscape and provides context for the higher education sector within the national picture:

4. There will be an emphasis on policies and funding for strategically directed programs that will maximise the national benefits from research and development, assisted by priority setting mediated by government (DEST, 2002c).

National benefits from innovation and commercialisation of intellectual property

Both in the higher education sector, and cross-sector policy, government has focussed on the tangible outcomes of innovation. This is the fifth feature:

5. It is now explicitly expected that research and development will increasingly be linked with their potential to contribute to national prosperity and social well-being, and that public investment in innovation should receive a direct return on investment where the outcome is commercialised successfully.

Funding for research

Resources deployed by universities

Table 1. **Research expenditure 2000 as a proportion of total expenditure**[a]

2000 expenditure in Australian universities for all purposes (AUD m)		R&D %	2000 research and development expenditure (AUD m)	
Employee costs	5 368	26	1 397	Salaries and stipends
Buildings and grounds	365	13	48	Land and buildings
Depreciation and amortisation	643	26	165	Other capital expenditure
Other expenses	2 630	44	1 163	Other current expenditure
Total operating expenses	9 006	31	2 774	Total

a) Total expenditure relates to all higher education institutions encompassed by Commonwealth allocation of operating resources.

Source: All purposes DEST (2002e) R&D expenditure ABS R&D 2000 (2002).

The data in Table 1 refer to expenditure on a whole of institution basis, including academic and non-academic sections. In addition to academic department expenditure, the ABS R&D data also estimate the proportion of expenditure on administration and academic support, equipment and infrastructure that is attributed to research function support. These data encompass all sources of funding, including operating funds provided by government for teaching and research purposes, research grants and contracts, tuition fees paid by fee-paying students, fees for services provided and consultancies etc.

This figure of 26% deployment of employee costs can be compared with a calculation of the average time spent by academic staff on research. ABS

R&D 2000 (2002) statistics report 11 854 person years, and annual national staff data collection by DEST (2002d) shows 54 310 FTE (full time equivalent) of academic staff. This yields a figure of 22% of academic staff time spent on research. This can be reconciled to the 26% employee costs figure. Firstly, the 26% includes the stipends for higher degree research students, who are full-time; secondly the salary costs of academic staff engaged in research are skewed upwards because early career staff find less time for research (Allen, 1998) than do academics who have been in the system for longer (McInnis, 1999).

Sources of income for research purposes

Table 2 presents analysis of 2000 income for universities, combining sources from the national finance data collection for all income, with the ABS statistical data on the sources of income relevant to the total of AUD 2 774 m shown in Table 1. Table 2 models the distribution, as it would have been in 2000 under the new policies using the published principles and data. (2000 must be used because that is the year with the latest ABS R&D data.)

Table 2. **Model reconciliation of 2000 income sources for Australian universities for all purposes, and income for research purposes**

Income source category	All purposes (AUD m)	Research purposes (AUD m)	Research as % of source
Tuition related income			
Commonwealth operating grant	2 651		
HECS contributions by students	1 676		
Fee-paying students (domestic and international)	1 191		
Superannuation and other Commonwealth non-research	188		
Subtotal tuition related income	5 705	*920*	16%
Research and other purposes			
Research Training Scheme (RTS)[a]	494	494	100%
Institutional Grant Scheme (IGS)[b]	251	251	100%
Commonwealth infrastructure and targeted grants[c]	415	415	100%
Other grants, contracts and consultancies[d]	933	*676*	74%
All other sources	1 545		
Total income	9 343	2 774	30%

a) The RTS is the block grant provided for university support for research student training. This figure was obtained by taking the 2001 negotiated figure and calculating its 2000 AUD value.
b) The IGS is the block grant provided for basic university support for research. This figure is obtaining from the sum of the 2000 research quantum plus 2000 small grants (DETYA, 2001a).
c) This figure is "special research assistance" in DEST (2002e) Finance 2000 data less small grants.
d) This item is a best estimate, fitting the ABS R&D 2000 data and available Finance 2000 data and implies that a proportion of contracts and consultancies are not research (italics designate this figure as an estimate).

Source: Data sources: The income for all purposes column adapted from DEST (2002e) and DETYA (2001a); for research purposes adapted from ABS R&D 2000 (2002). The RTS and IGS have been calculated and extracted from the operating grant as if that had been the case in 2000, in order to separate research from non-research sources.

In the year 2000 neither RTS nor IGS were granted in these headings, but the principles for their calculation have been published (DETYA, 1999b) and can be confidently applied as a construct to 2000 data by unpicking them from the operating grant to arrive at the data for the column headed "all purposes". The Research Purposes column is adapted from the ABS R&D 2000 data but re-arranged to correspond to the categories of the table.

The estimate of AUD 920 m for the tuition related resources allocated in the model is the amount that is required from tuition related resources to reconcile with the ABS R&D 2000 data of income sourced from general university funds. It represents 33% of the total expenditure on research in 2000.

Powers of government to steer research activity

Government is able to exercise considerable influence over the overall direction of research in universities by steering more resources through targeted or competitive schemes, in combination with the priorities that will guide the relative national funding in broad fields of research.

Targeted and infrastructure funds

All targeted funds and competitive grants are channelled into broad fields of research that will be encompassed by the determination of national priorities that is taking place in 2002 (DEST, 2002c). In addition to the funding in Table 3 there is an estimated AUD 676 m (see note *d)* in Table 2) in grants and contracts that higher education institutions attract from other Commonwealth portfolios, and directly from industry, etc. These sources direct funding to projects in fields of research that advance their interests and serve their needs.

Competitive research grant schemes therefore channel research funds into fields that are determined by agencies outside the higher education system. It is a process commenced in Australia in 1956 as noted by Pennington (1997) and the amount as a proportion of total research funds will increase significantly between 2000 and 2006, as shown in Table 3.

Table 3. **Commonwealth higher education research funding 2002-2006 quoted at 2000 values (AUD m)**

Commonwealth higher education research funding Income source category	2000	2002	2004	2006
Research operating purposes (discretionary but accountable)				
Research Training Scheme (RTS)[a]	494	494	494	*494*
Institutional Grant Scheme (IGS)[b]	251	260	260	*260*
Subtotal research operating purposes	745	754	754	*754*
Research targeted and infrastructure				
Infrastructure Block Grants (RIBG)	80	114	153	*175*
Systemic infrastructure	0	26	52	*57*
ARC competitive grants	237	261	369	*500*
Other Commonwealth (scholarships etc)	97	98	98	*98*
Subtotal targeted and infrastructure	415	498	672	*829*
Total	1 160	1 252	1 426	*1 583*
Research targeted and infrastructure as a % of total	36%	40%	47%	52%

a) and *b)* See Table 2.

Source: 2000-2004 data from DETYA (2001a) and DEST (2002a); 2006 information estimated or adapted from ACG (2001) and *www.dest.gov.au*

Block funding for operating purposes

The funding that universities have some discretion over (including the power to deploy it for salaries of "teaching and research" staff) will remain constant until 2004 and probably 2006. As a relative share *versus* targeted funding it is decreasing.

The research performance indices used to allocate this funding to universities are heavily dependent on individual institutional success in attracting targeted and grant funding. Infrastructure block funding is entirely determined by competitive research grant income. As a result, block research funding for operating purposes will move towards institutions that are able to increase their share of targeted funding (including both the ARC and other targeted sources in Table 3 and also the additional AUD 676 m from other sources shown at note d) in Table 2).

This means that the decisions that set priorities for competitive and targeted schemes will in turn influence the relative amount of discretionary funding allocated to individual universities. This provides a mechanism for steering the broad directions of research undertaken by universities, via the process of priority setting for the portfolios that provide research grants.

Internal university pressures

Maximising research income to the university

Table 4 and Table 3 show that targeted and infrastructure funds will increase over 2000-2006 as a proportion of research income for universities, while block funding for operational support will remain static and reduce as a proportion of research income. Universities that are ambitious for a strong research emphasis are under pressure to stimulate increased acquisition of targeted research funds and defend or increase their share of RTS and IGS block funding. The RTS and IGS are important sources of salary funding, because competitive research funding schemes do not usually provide for salaries of tenured academic staff in universities. Also, the RTS and IGS provide a partial funding buffer for individual years when there may a temporal downturn in performance index outcomes.

Table 4. **Scenario for the relative contribution of income resources used for research 2002-2006 (%)**

Income source category	2000	2002	2004	2006
Resources used for research from non-research income				
Tuition related resources from Table 2	33.4	31.7	29.4	27.5
Research operating purposes (block funding)				
Research Training Scheme (RTS)[a]	17.9	17.0	15.8	14.8
Institutional Grant Scheme (IGS)[b]	9.1	9.0	8.3	7.8
Subtotal research operating purposes	27.0	26.0	24.1	22.5
Research targeted and infrastructure				
Infrastructure Block Grants	2.9	3.9	4.9	5.2
Systemic infrastructure	0.0	0.9	1.7	1.7
ARC competitive grants	8.6	9.0	11.8	15.0
Other Commonwealth (scholarships etc)	3.5	3.4	3.1	2.9
Subtotal targeted and infrastructure	15.0	17.2	21.5	24.8
Other grants, contracts and consultancies	24.5%	25.1	25.0	25.1
Total resources used for research	100.0%	100.0	100.0	100.0

a) and *b)* See Table 2.

Source: This Table is sourced from Table 2 (second column of data) and projected into 2002-2006 using data of Table 3. In addition it is assumed that the AUD 920 m estimated for resources deployed from tuition related income in Table 2 remains the same over 2002-2006. Secondly, the scenario includes "other grants, contracts and consultancies" (see Table 2) and assumes for this projection a 7.5% increase every two years.

In practice the best overall funding result for a university (including from RTS and IGS) is obtained from performance in:

- Competitive acquisition of external research funds from granting agencies and other sources; (this is the only area of increased funding as shown in Table 3 and Table 4).

- Higher degree research student numbers.
- Completion rates of higher degree research students. And
- Completion of research projects and communication of outcomes, especially by publication of research.

Performance of this nature is best produced by groups or teams that have more similarities with research institutes than with typical academic departments, especially in fields of research that require large equipment and other substantial investment in infrastructure. A.P. Rowe (1960) pointed this out, in a very different policy environment, more than 40 years ago, and his comments are just as relevant now (although it should be noted that he was principally focussing on science/technology based fields).

Observing the Australian scene, we can observe centres within teaching schools, and centres that exist outside the normal faculty-based structures (this second type is more likely to be cross-disciplinary in nature).

Incentives provided by performance funding

One clear method of obtaining a response within a university is to deploy block funds internally using the same performance based indices as are used by government (Table 5) to allocate to universities. As a long-term strategy this implies a comparatively hands-off management style for allocation of discretionary research resources such as block funding, because it relies on a numerical system of rewards for success in research and provides an incentive for others to achieve success. Because this mechanism is a visible and transparent positive feedback, it is more likely in the long term to produce the best outcomes in the current policy framework.

Table 5. **Performance indicators and their weights used to allocate RTS and IGS block funding (%)**

Performance indicator	RTS (Research Training Scheme)	IGS (Institutional Grants Scheme)
Research income	40	60
Research student numbers		30
Research student completions	50	
Output of research publications	10	10

Source: DETYA (1999b).

However the performance indicators are mostly "lagging" indices that allocate funding for past activity, not future potential. Steady state performance will produce steady state funding, but this is not always the case. Past performance may relate to a group that has since wound down or

discontinued its activities, and past performance will not provide index related funding for new ventures.

A good institutional response is to provide strategic allocations of funding to groups that are rapidly showing potential, thereby allowing accelerated performance that will have rewards in due course from performance indicators. Difficulties may arise at the end of the start-up strategic funding if there is insufficient funding to allow for weaning off. The financial position of a centre is more vulnerable if its tenured academic staff do not teach because it cannot take advantage of the resources available from tuition related sources to even out the bumps in research funding.

Priority setting and quality assurance imperatives

The main national policy statement (DEST, 1999b) is supported by operational guidelines (DEST, 2001) that reinforce its intentions. They emphasise the need for:

- Delivering the benefits from competition for government funding – particularly diversity and excellence.
- Linking university research with national and regional priorities for economic, social and cultural development.
- A more strategic approach by universities in developing their research priorities and concentrating on their areas of strength.
- Preparation of research degree graduates for employment; and their relevance to labour market requirements. And
- Excellent quality management of research student training.

Universities are required to make an annual submission of a Research and Research Training Management Report (RRTMR) to government, outlining planning and quality assurance responses within the university. Publication of the reports provides public accountability and a basis for auditing claims during quality assurance audits.

Details of these plans were first discussed with universities during the Educational Profiles discussions for the 2000-2002 triennium (DETYA, 2000a):

> "Core elements that institutions would be expected to report on include: research strengths and activities; graduate outcomes both in terms of attributes and employment; linkages to industry and other bodies; and policies on commercialisation. In addition, as a monitor of quality, it has been suggested that details of research active staff, including outputs per research staff member, form part of these Plans. Further discussion on the form of the Plans will be held with institutions before details are finalised."

QA audits of universities provide a powerful lever for introducing reforms by government, as the series of QA reviews in 1993, 1994 and 1995

demonstrated. Universities and the public media take a great deal of note to the publication of review findings (CQAHE, 1995a, b).

With the use of guidelines that indicate the requirements of the RRTMRs, government is able to exert considerable pressure for implementation of reforms, especially as these are backed up by auditing and monitoring mechanisms that are on the public record.

> "The 2002 RRTMRs will be published by the Department. Claims in RRTMRs will be audited by the Australian Universities Quality Agency […]" (DEST, 2002a).

Active management of quality is vital, and this university has, as have others, established a network of faculty based research coordination and quality management roles (associate deans for research) that will be able to exert influence and maintain communication to ensure compliance with policy.

Pressures from staff to include research in their role

In the Australian system, the dominant mode of employment for academic staff is "teaching and research" (72.6% Teaching and Research; 24.8% Research only; 2.6% Teaching only; in DEST, 2002d). Academic staff jealously guard their right to undertake research and indicate the importance of research in surveys of work roles (McInnis, 1999).

In previous eras up to 50% of time for research was expected as a right (Rowe, 1960). Rowe noted the serious lack of output, and of accountability for research time, and this theme is rehearsed from time to time, including in a recent Commonwealth discussion paper (DEST, 2002f).

Theoretically if there were no output, there would no research funding, but as shown in Table 2, AUD 920 m nationally, or 16% of tuition related income is deployed on research. In practice this 16% is deployed *laissez-faire* to research simply because there is no real way of controlling it. Since most academic staff are employed on "teaching and research" conditions, they are free to undertake research during time not undertaking teaching duties. Similarly, facilities and infrastructure (hard and soft), and minor expense items, are provided for core business purposes in a way that makes it possible to share them for research.

Research profiles and the nature of the university

Currently the dominant academic structure at the grass roots is a school or department that combines staff activities in teaching, research and professional service (such as consulting, work with professional bodies and community service) not to mention all of the administration.

Table 6 profiles the sources of income for three schools that illustrate three typical combinations encountered. They represent profiles developed prior to

the reforms, and the discussion focuses on the implications of the reforms for their future. While the data are based in real examples, they are not named and I am attempting to generalise to make the discussion of wider relevance.

Table 6. **Profiles of income sources for schools as examples of research dominant, teaching and research, and teaching dominant (%)**

Income sources for an academic unit	Research-dominant	Teaching and research	Teaching dominant
Teaching related income	19	63	96
RTS and IGS block funding (includes income for HDR training)	25	12	1
Research grants and contracts	41	11	1
Other professional activities	11	11	3
Research Infrastructure funding	4	3	0

Source: Internal institutional data.

Research dominant school

These are the winners in the new funding environment, because their strongest feature is the ability to attract targeted and competitive grants from Commonwealth higher education and other portfolio schemes, and direct from industry. As shown in Table 4 these are the growth segments for research funding over 2002-2006.

The vigour of the field of research nationally makes it possible to recruit higher degree research students and subsequently place them as graduates. Their research has a balanced proportion of pure, strategic, applied and experimental development components, and there is a high interest in their research outcomes.

All of these factors contribute strongly to the university's ability to compete for a share of the RTS and IGS block funding, as well as research infrastructure funds.

Within the school, the mode of operation for many staff approximate to the "research institute" style with much of the work undertaken in teams or complementary projects, and with strong strategic collaboration with other institutes. Even across specialised projects, there is a degree of shared use of high-cost infrastructure and technical staff support, which are in addition to equipment and technical staff resources focused on individual projects. Grants and contracts fund most of the direct costs for research and research-specific staff, including technical and support staff. Block funding earned by the profile of performance provides the resources for much of the indirect costs, and the proportion of the salaries of tenured academic staff applicable to their research activity.

For this school the research income pays for the research costs and most of the staff time for research, and teaching related income pays for its teaching. For most tenured academic staff the time allocation for teaching and research may be approximately equal proportions, but some are more heavily weighted to research. The relative proportion of teaching income to block funding indicates that the average tenured academic (as distinct from project-specific research staff) has about half of the salary paid for from teaching income. Very few of the tenured academic staff of the school draw enough income from research sources to pay for their own salaries without adding some teaching income.

The crossover benefits between teaching and research are substantial, both in availability and use of resources and academically. While much of the research is highly specialised, its main applied and developmental outcomes are relevant and communicable to students.

Teaching and research school

This school has a much higher teaching load, and even for its senior professors 'fitting in time for research between marking assignments' is an on-going problem as is administration and committee work, which has increased as McInnis (1999) demonstrated.

Considering the discretionary resources (*i.e.* teaching income and research block funding) if we apply the global 16% (from Table 2) to the tuition related income of Table 6 together with the block funding resources we obtain a figure of 29% of the resources theoretically available for research/scholarship. This is close to the average of 26% calculated in Table 1. Not being a science-based discipline there is not the same urgent need for large-scale infrastructure, and the infrastructure funding earned from their research productivity provides a useful input. In many ways this type of school encapsulates some of the essentials of the traditional university mould and we can consider its funding profile focus for the reforms (but from here on not referring to any one department).

Typically a teaching and research school or department appoints staff to cover a broad sweep of its main disciplines. There is historically little management of the spread (or its converse which is concentration) of research interests of staff within a school. In my experience, it has not been the case that schools wished that there should be spread in research fields; it was just accepted as a consequence of appointing staff to teach across a spread of topics in the discipline. I suspect that many academics took some comfort in maintaining some distance from each other in research activities.

If the research reforms are to be of any benefit there must be a response that makes the activities and outcomes of such a department more satisfactorily aligned to the policies. The policy and funding settings favour

those who will form teams and collaborate and successfully compete for targeted research funds, thus increasing their resources for research, including salary time of academics. Observing university structures, schools of this nature typically possess one or more centres or institutes within the school structure, and there may be cross-disciplinary centres outside schools.

The issue for university managers is how to stimulate the best response from the grass roots, and at the same time deciding to what extent management should intervene by picking and favouring winners that will be given funding assistance to accelerate their performance. In my experience research concentrations (*e.g.* institute or centre) are most successful where management recognises and supports their initially promising activity, but does not insulate from competition for longer than an agreed "kick-start" period.

Teaching dominant

A school with this funding profile will find it difficult in the new policy environment, which effectively separates most teaching and research resources. Staff teaching loads have increased by 38% over the period 1993-2001 (AVCC, 2002). Rapid growth areas are more likely to have a profile like this school, and staff may have less research experience than other established schools.

And yet the nature of university teaching is threatened if it is not possible to establish a pattern of scholarship and research within the school. The current national discussion paper (DEST, 2002f) canvasses the issues for quality teaching and the relationship of scholarship to teaching, and raises discussion of alternative roles to the "teaching and research" combination.

> "Should all teaching academics be expected to engage in research? What is gained by forcing an expectation that all academics should engage in teaching and research? Should the conception of an 'academic' be extended to someone who is 'teaching-only' or who engages with their discipline in other ways – for example, by consulting to industry or the government, undertaking professional practice or participating in the creative arts?" (Point 242).

At the very least the outcome for a school with a teaching dominant profile must be to provide for sufficient staff to engage in scholarship to support teaching. In an environment of increasing teaching workloads, even fitting basic scholarship in between marking assignments may be difficult enough. This will remain a challenge for university managers and policy makers.

Concluding discussion

The main impact of the reforms

It is clear that the Commonwealth government has established policy settings that now ensure that resources available to universities for research

will be increasingly oriented to serving the national interest. National research priorities are currently under discussion and when established will guide funding from targeted and competitive sources, which will increase significantly over 2000-2006. In turn the pattern of funding from targeted and competitive sources will influence the allocation of discretionary resources for research to universities, potentially shifting resources between institutions.

Concentrations of research activity within universities will provide the most competitive response to the policies. However there is a danger that university responses could focus too much on maximising research performance and remove highly active researchers and groups from the teaching arena altogether. Clearly there are some highly specialised research fields in which this may be very appropriate. However for most instances, it is the opinion of this paper that it is best to retain some combination of teaching and research activities for tenured academic staff that are research-active. The complete separation of research activity from the teaching arena would impoverish teaching in two ways. It would remove the most active and creative minds from contact with undergraduates, and it would deny the benefits of shared access by students and other staff to infrastructure paid for from research sources.

Staff roles

The roles of staff who are active in research and who successfully win competitive funding will increase in stature as a result of the new research policies. However, the roles of those who do not are less clear, and are the subject of a national discussion:

> "It seems timely to challenge the assumptions of the academic model of much of the past century, and validate alternative academic career paths. Some academics may choose to specialise in teaching, and become "teaching-only" academics. Some academics may choose to specialise in research. Some academics may choose to be actively engaged and productive in both teaching and research. The argument for validating a career path in academe for teaching-only academics does not mean that there would not be an expectation that academics would have initial research training or some research experience." (DEST, 2002f; point 244).

It is not within the scope of this paper to attempt to canvass the wider issues of that statement. However I wish to discuss the nature of research as it appears to be reported by the majority of staff who are not in the research-intensive category, and who see themselves as "teaching and research" staff.

Table 7. **Types of research (McInnis, 1999)**

Type of Research	%[a]
Advancing theory	65
Applied professional, business or industry related	58
Directed to inform teaching	35
Policy oriented	29

a) Percentage responses to each category – each respondent may nominate any or all Source.

What is reported as research/scholarship?

Much of this paper relies on quantitative statements about time and resources deployed on research activities. But what do academics mean when they report research activity? Survey data demonstrate the need for care when interpreting the meaning of "research time" especially as the word "research" is bound up with "scholarship" in a compound mental concept when staff respond to questions about their time. While staff feel that research/scholarship is a core part of their role, as McInnis (1999) shows in Table 7, there is a spread in the types of research that staff believe they are undertaking.

The last two categories, teaching related and policy oriented may not result in visible research outcomes. Instead they will be reflected in excellent teaching or as good policy. In addition, some applied professional research may be reported in consultancy or contract reports and be similarly invisible. Indeed, some of the work that staff may classify as research may be more correctly classified as scholarly activity.

If this diversity of types of research/scholarship is a fair reflection of academic staff concepts of research, it is likely that staff self-reporting of research time in questionnaires and statistical data collections (including in the ABS R&D 2000 (2002) results) follows the pattern in Table 7. And yet policy makers and commentators (Rowe, 1960; DEST, 2002) have sustained a focus on academic staff that lack visible research outcomes. The issue raised is one of demonstrating accountability for the use of the time.

This paper has modelled research resource/time inputs and found that an average of 16% of research has not been paid for by research funding. It is a resource provided from earnings that are teaching related. Therefore it could be argued that the primary accountability is to good teaching, which links to McInnis' (1999) findings on types of research.

The so-called "economic rationalist" line of thinking might argue that this 16% could be directed into a further efficiency dividend, but that position does not have foundation. There is a correlation between total hours worked by academics and hours spent on research/scholarship. Allen, (1998) presents data that shows that staff in research-intensive universities work longer hours, and spend more time on research, than do staff in more teaching

intensive universities. Staff increase the total number of hours worked to give themselves time for research.

From this I hypothesise that there is little advantage to overall efficiency in re-defining roles of teaching-dominant staff. Were we to make their roles "teaching only" we would only lose a small amount of research off the top, and see them work shorter hours, not increase the teaching load. The teaching would be impoverished as a result.

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The United Kingdom's Research Assessment Exercise : Impact on Institutions, Departments, Individuals

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UK universities are publicly funded to carry out teaching and research. Since the mid-1980s, the bulk of the research stream of institutional grants has been allocated on the basis of periodic research assessment exercises, the most recent of which was completed in 2001. The results of RAE2001 will influence institutional grants from 2002-03 onwards. This article explains the RAE system, discusses its advantages and drawbacks, outlines a framework within which it can be analysed, and examines some of the available evidence about the impact of the RAE. The article then concludes that the RAE system as presently operated has outlived its usefulness, and that it should be replaced by an allocation method based on the volume of research grants and contracts attracted to an institution. A short postscript updates the article to take into account the White Paper on higher education that was published in the United Kingdom in January 2003.

Introduction

In UK universities, public funding for research reaches institutions via two channels: *a)* part of each institution's main grant from the Funding Council; and *b)* funding for specific research projects, awarded competitively by the Research Councils. This two-channel system of research funding is commonly referred to as the system of *dual support*. This article focuses entirely on channel *a)* of this system.

Since the 1980s, responding both to general public spending constraints and increasing pressures for public accountability, the Funding Council component of research support has been determined by measures of research quality by institution and subject area. Initially, the surveys of research performance that guided the Funding Councils in allocating research funds to institutions were called Research Selectivity Exercises, but the system soon evolved into the present Research Assessment Exercises (RAEs). RAEs took place in UK universities in 1992, 1996 and 2001, with the results of the most recent exercise being published in December 2001. The results of RAE2001 are being used to determine the research stream of institutional grants from academic year 2002-03 onwards.

Now that the United Kingdom has over a decade of experience with such exercises, it is timely to consider how well the system works. This entails investigating a number of questions that can be asked at various levels.

Individual

How does the RAE influence the research behaviour of individual researchers in terms of the type of research pursued, the types of publication sought? Does it influence non-researchers or not very productive researchers? Has the system influenced who chooses to be an academic or who switches to an alternative career (entry into and exit from the academic profession)?

Department/Unit of assessment

How do departments organise themselves for research purposes? How do they decide on their research strategy and how far is this influenced by the RAE? Have departments changed their approach to probation for new academic staff (*e.g.* has it become harder to get tenure)?

Institution

How do institutions group staff for RAE purposes? Has the RAE influenced recruitment policy and if so, how? Has the RAE influenced institutional promotions policy? Has the reward/ incentive system changed at all in the light of the RAE system? Do institutions use their research funding to reward strong research units or is it redistributed to other areas?

System

Is the RAE an effective tool to help in allocating research resources across UK universities? Has the RAE system led to a real improvement in research output in UK universities, or merely to a degree of grade inflation? To what extent have an academic transfer market and other "distortions" induced by the RAE undermined the original intentions of the system? Are there better ways of allocating the funding council component of research resources, in the light of the United Kingdom's experience with the RAE in the past decade or so?

With such questions and issues in mind, this articlr is structured as follows. The second section explains how the RAE system evolved in the United Kingdom, how the most recent exercise was conducted, and how the results will be used to influence institutional grants. The third section then studies some of the above questions in a simple conceptual framework, leading to a set of hypotheses regarding the expected effects of the RAE at various levels, including some of its possibly less desirable distorting effects. Evidence for or against the various hypotheses will be presented in the fourth section, leading on to some conclusions about alternative approaches to the funding of research in UK universities in the final section. A short postscript to the article outlines some implications for research of the UK Government's latest White Paper on higher education (DfES, 2003).

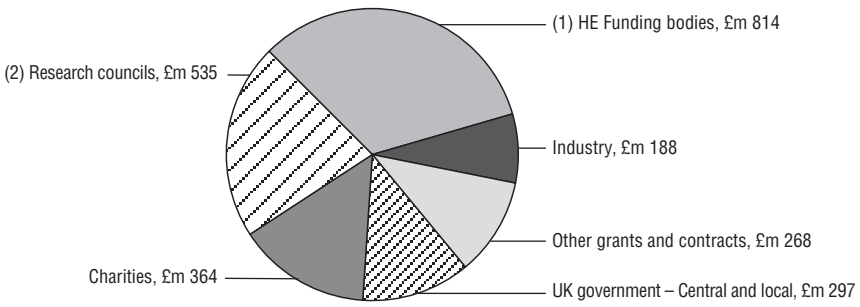
The RAE system in the United Kingdom

In the last couple of decades the UK higher education system has expanded massively, the age participation rate (APR) rising from 18% in the late 1980s to over 30% and still rising a decade later (the corresponding figure in Scotland being 45% and rising).The expansion has seen polytechnics achieve university status, while government core funding for[1] the whole of higher education is now delivered through the higher education funding councils, NGOs set up for the purpose.[2] Unfortunately, expansion has not been matched by corresponding increases in real funding, with the result that the unit of (public) resource per full-time-equivalent student (FTE) has fallen by nearly 40% since the late 1980s, with real academic salaries also lagging increasingly behind the growth in real average non-manual earnings (Shattock, 1999).

With government wishing to see continuing expansion of student numbers, and with its policy emphasis on widening access to universities, lifelong learning, and the promotion of a learning society (see Ncihe, 1997; OECD, 2000), university funding is coming under increasing strain (see Hare, 2000a). One result of these pressures has been the revival of older debates about student funding, with diverse ideas about fees, student loans, graduate taxes, and the like, under active discussion (Barr, 2001; Greenaway and Haynes, 2000). The present position in the United Kingdom is that undergraduate students pay an annual fee of just over £ 1 000 per annum to their institutions, and one aspect of the current debate concerns whether this should be raised, whether institutions should be free to charge what fees they like, and how student maintenance costs should be funded. None of these issues can be considered settled, and many doubt the medium and longer-term viability of the current funding model for UK universities (but see the postscript to this article).

Against this background of increasingly tight public funding, the research component of university funding is no less problematic than the teaching component. Government funding of research is provided through the so called *dual support system* (HEFCE, 1999; STC, 2002). Under this system the funding councils provide general research funds to universities to finance a basic research infrastructure, while the research councils fund specific research projects, mostly on the basis of proposals submitted by individuals and research groups (response mode funding). During the last decade or so, the relative funding council contribution to universities' research funding in the United Kingdom has declined, while the research council contribution has increased, as has research funding from other sources. In the mid-1990s, the funding pattern for research carried out in UK universities was as shown in Figure 1.

Figure 1. **Sources of research income, 1996-97**
Total £ 2 456 m



Source: HEFCE, 1999, p. 12.

A few points are worth emphasising in the light of the funding structure shown here. First, the dual support system refers to the funding channels 1) and 2) only, which already in the mid-1990s were only providing just over half the total research funding received by UK universities. Second, the HE funding bodies [channel 1)] provided about one-third of the total funding, but this share was declining and continues to do so – it is this element of research funding that is influenced by the RAE system that forms the subject of this article, so we shall return to it below. Third, funding from the research councils included a contribution to university overheads amounting to 45% of the salary costs of an approved project (this overhead contribution is now 46%, and may be further increased), but most other research funding paid either no overhead or a very low rate of overhead to institutions.[3] The combination of slow growth in research funding from the funding councils and low overhead recovery from most research funders other than the research councils has seriously exacerbated the already serious financial pressures being experienced by universities in the United Kingdom, since increasing fractions of the research being undertaken are, in effect, running at a loss. This is another reason for doubting the sustainability of the present funding model.

For the funding councils, the main effect of the increasingly constrained resources flowing through them has been to stimulate the development of selective models of funding institutions, especially as regards research. During the 1980s, research selectivity exercises were carried out in 1986 and again in 1989. By 1992, the RAE as it exists now had come into existence, and such national research assessments were carried out in 1992, 1996 and most recently in 2001 (STC, 2002). The results of each RAE were used to determine almost the entire Funding Council research grant to institutions.

For RAE 2001, research activity was classified into 68 subject areas or units of assessment (UoAs), and for each of these a very experienced assessment panel was formed, mostly served by senior academics but with some industrial or commercial sector involvement (RAE, 2001). Each higher education institution was able to make submissions to as many UoAs as it wished, providing information in a standard format prescribed by the RAE administrators. Research active staff had to be listed, along with up to four of their research outputs published over the relevant reference period, and each UoA provided a short text describing its research environment, research culture, recent achievements and plans for the future. Assessment panels then judged the submissions belonging to their respective UoAs and assigned ratings on a 7 point scale. The scale employed for RAE 2001 is shown in Table 1, below.

Table 1. **RAE Ratings System for RAE 2001**

Rating	Description
5* (5 star)	Levels of international excellence in more than half of the research activity submitted and attainable levels of national excellence in the remainder.
5	Levels of international excellence in up to half of the research activity submitted and attainable levels of national excellence in virtually all of the remainder.
4	Levels of national excellence in virtually all of the research activity submitted, showing some evidence of international excellence.
3a	Levels of national excellence in over two-thirds of the research activity submitted, possibly showing evidence of international excellence.
3b	Levels of national excellence in more than half of the research activity submitted.
2	Levels of national excellence in up to half of the research activity submitted.
1	Levels of national excellence in virtually none of the research activity submitted.

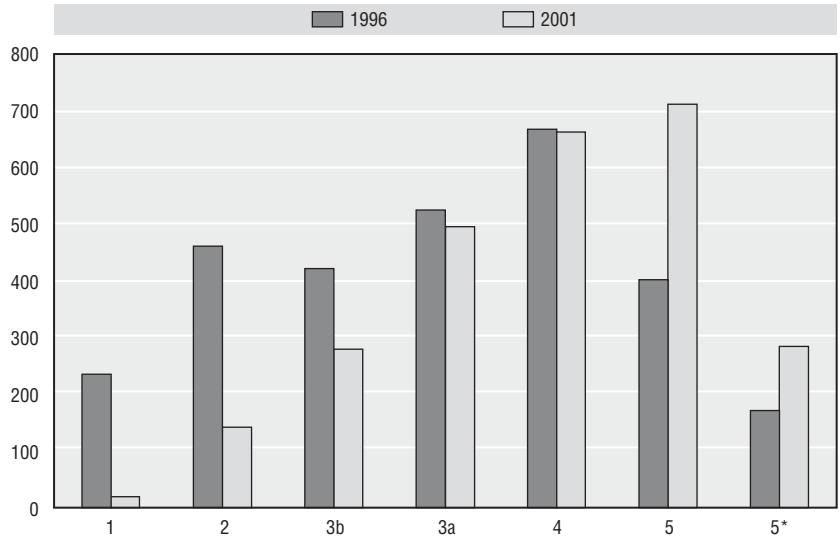
Source: RAE.

The procedures and criteria employed by each panel were reasonably clear and transparent, since all panels published guidelines on their methods of working. Moreover, soon after the results were announced in mid-December 2001, all institutions received written feedback from each panel to which they had submitted material, explaining the rating that they had been assigned. This was a welcome and very positive aspect of the whole exercise. However, it did not prevent different panels from interpreting their general guidelines in somewhat different ways (*e.g.* what share of international quality research is enough for a 5-rating?), and there were suggestions that at least one subject area might seek a judicial review of the RAE outcome on the grounds that it has been unfairly treated. At the time of writing it remains unclear whether such a threat will proceed to the courts.

Figures 2 and 3 summarise the outcome of RAE 2001 in comparison with RAE 1996, in terms of the distribution of UoAs by rating, and the distribution of submitted staff numbers by rating.

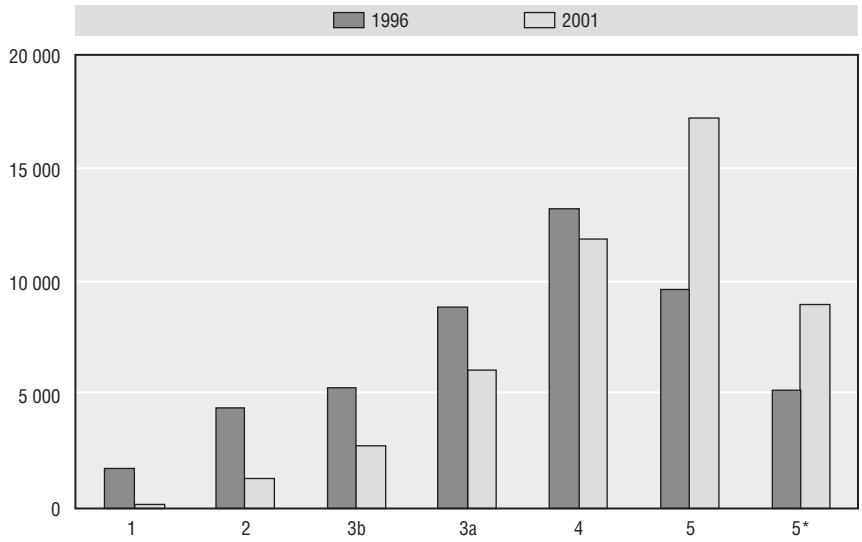
Overall, there were 2 598 submissions to RAE 2001 from 173 higher education institutions across the United Kingdom, this being 296 fewer submissions than in RAE 1996. These submissions reported on the work of 48 022 research-active staff (strictly, staff in Categories A and A*), 50 fewer than in 1996. Figures 2 and 3 suggest that between 1996 and 2001 there must have been a very substantial improvement in the quality of research in UK universities, with the percentage of research-active staff in departments rated 4, 5 or 5* rising from 43% in 1996 to 64% in 2001. These remarkably good results immediately posed a serious dilemma for the funding councils, since the latter faced budget constraints that appeared to prevent them from rewarding institutions' improved performance using the funding formulas

Figure 2. **RAE 1996 and 2001, outcomes by units of assessment**



Source: : RAE, 2001a; and STC, 2002.

Figure 3. **RAE 1996 and 2001, outcomes by staff numbers**



Source: : RAE, 2001a; and STC, 2002.

that evolved after RAE 1996. Let us therefore review briefly how this delicate matter has been resolved for the funding year 2002-2003.

The numbers in Table 2 show the ratios used by the funding councils in their allocation formula for research funding based on the RAE. Thus after RAE 1996 in England, a researcher in a 5*-rated department or UoA attracted 4.05 times as much research money as a researcher in one rated 3b. Why the ratios should be as they are is one of the mysteries of the RAE process. There is a widely held view that better quality research should attract higher rewards, but this is counter-balanced to some extent by vague notions of "fairness", in the form of the view that lower rated units should get "something". The ratios we observe are the outcome of these admittedly imprecise considerations.[4]

Table 2. **Funding of research in England and Scotland, 2002-2003 – Ratios**

RAE rating	HEFCE		SHEFC	
	RAE 1996	RAE 2001	RAE 1996	RAE 2001
1	0	0	0	0
2	0	0	0	0
3b	1.00	0	1.00	0
3a (unchanged)	1.50	0.31	1.55	0
3a (improved)	1.50	0.31	1.55	1.00
5	3.375	1.89	3.72	2.80
5*	4.05	2.71	3.72	3.20

Source: Funding Council letters to institutions, various (available on the Council websites); STC (2002).

Regardless of the rationale for the ratios, it is evident that the changes between 1996 and 2001 imply a far greater degree of selectivity in the allocation of research funds by the funding councils to HE institutions. To a large extent this reflects their increasingly tight budgets, even after some modest injections of new money from the Government (to HEFCE) and the Scottish Executive (to SHEFC) to support university research.

UoAs rated as 1, 2 or 3b now receive nothing (other than a tiny amount of pump-priming research funding provided under a different part of the funding formula), so that the RAE "hurdle" is now quite high. This part of the outcome was already suspected prior to RAE 2001, so many institutions tried to judge whether they could put together a submission that would merit a "3a" award or better; if not, it was barely worthwhile to enter the exercise except possibly as a way of signalling future research intentions. In Scotland, even 3a-rated departments get nothing from the RAE, unless their "3a" represents an improvement over 1996.

Both HEFCE and SHEFC claim to have designed their research funding formulas for 2002-03 so that when they apply the above ratios, the unit of resource going to 5*-rated departments will, on average, be maintained. Inevitably, given the available funds, this means that funding for 4- and 5-rated departments is in most instances less than it would have been after RAE 1996. In other words, the good performance of institutions in improving research is, in effect, being penalised financially. It has been estimated that around £200 million of extra money would be needed by the Funding Councils annually in order to reward all UoAs at the rates that applied following RAE 1996. Additional public funding was being sought through the Spending Review 2002 (completed by summer 2002), but few expected a significant improvement in research funding for the universities – in the event, some additional funding was provided, but not enough to meet the perceived needs of the sector.

Conceptual Framework

The RAE was designed as a mechanism to facilitate the allocation of the research component of Funding Council resources to individual HE institutions, under conditions where the available resources were lagging behind system expansion. Like all such mechanisms, its operation over a period generates a range of incentive effects, some desirable, others possibly not so welcome. The nature of these effects depends, moreover, on quite detailed features of mechanism design, including the information about the prevailing "rules of the game" possessed by the various "players", as we shall see. Much of what follows will be wholly familiar to readers conversant with the practices – and distortions – associated with old-style central planning (*e.g.* see Cave and Hare, 1981; and Hare, 1991).

It makes sense to envisage the HE system in the United Kingdom in terms of four levels:

1) Funding Council;

2) Institution;

3) Department or UoA; and

4) Individual academics.

Funding Council

I think it reasonable to suppose that the objectives of the Funding Council are to fund research in such a way that its overall volume and quality is maximised, given the relevant funding constraints. The current practice is to do this using the RAE as a basis for research fund allocations to institutions.

In relation to the RAE itself, the funding councils jointly set the rules governing the exercise, notably what Units of Assessment will be included and how they are defined in terms of subject areas, how research quality will be assessed. Individual Funding Councils subsequently decide how the judgements embodied in the RAE will be translated into research funding to the institutions that they fund.

For RAE 2001, the UoAs were specified well in advance of the exercise, as were the procedures and criteria for assessing quality. But the outcomes in terms of institutional funding were not known until spring 2002. However, institutions were aware that funding was tight, that research was likely to show an overall improvement as measured by the RAE ratings, and that there was likely to be little or no funding for UoAs rated at 3 and under. The relative funding that would be received by institutions rated at levels 4, 5 and 5* was unknown (though naturally subject to considerable speculation). These factors influenced institutions' submission strategies for RAE 2001.

Institution

Institutional objectives amongst UK universities are probably rather diverse, though they will certainly include the desire to achieve good degree results (teaching performance, T) and to produce high quality research (research performance, R). There can also be a mix of other goals, such as success in a variety of commercial activities (*e.g.* consultancy, conference facilities), widening access (*e.g.* by assisting people from relatively deprived backgrounds to enter degree courses), and so on, but these are beyond the scope of the present discussion. In pursuing T and R, institutions are, of course, constrained by their overall budgets. To the extent that these are linked to specific performance indicators which seek to measure T and R, two effects can be expected: *a)* institutions themselves will tend to measure their own performance using the same indicators; and *b)* in determining their T/R mix of activities, institutions will be strongly influenced by the relative funding streams associated with each activity.

Institutions receive research money from the funding councils based on their previous RAE outcome. They are free to allocate this money as they wish – it need not be used to support research, and even if it is, it need not be used to support the Departments/UoAs that achieved the best ratings in the RAE. For the most part, the Funding Councils do not interfere in the internal financial allocations made within an institution.

In relation to the recently completed RAE 2001, institutions could decide how to divide up their academic staff/departments into UoAs as defined for RAE purposes, and for each UoA they could decide which staff to include in their submission. In doing so, as was implied in the allocation rules discussed

above, there could be a trade off between the quality measure (RAE rating) and volume (proportion of staff in the given UoA submitted). The difficulty for the institutions, though, is that prior to RAE 2001 the terms of this trade off were not known.

Institutions wishing to build up a particular research area could also recruit experienced researchers from other institutions (or sometimes, from outside the United Kingdom). The resulting academic transfer market was considered to be a problematic feature of RAE 1996, so for RAE 2001, measures were taken to limit its effects, notably by setting a cut off date for staff movements one year in advance of the deadline for eligible research. Unless we believe that a given researcher will be markedly more productive in one institution than in another such movements are wholly unproductive from an overall national standpoint. However, both for institutions (which secure higher research ratings) and for the individuals concerned (often lured by offers of higher pay and better research facilities) there are clearly benefits.

Department or UoA

Departments depend on their institution for their core funding, so as far as possible, department-level objectives have to be aligned with institutional goals. In effect, the departmental budget is then merely the "reward" for complying with and contributing towards these goals.

Since departmental core budgets are made up of funding for teaching (based, essentially, on approved student numbers) and funding for research (based on the RAE), departments also have to make a judgement about the trade off between teaching and research funds. For instance, some departments might find it advantageous to go for higher student numbers and hence more income related to teaching, rather than pursuing high RAE ratings. Their choices are likely to be influenced, of course, by the internal allocation policies adopted by their institutions. For instance, if research funds "won" by highly rated departments are diverted to support other parts of the university, this might adversely affect their incentives to develop research over the next assessment period.

Together with their institution, departments/UoAs decide on their RAE submission strategy in terms of whom to include under each UoA. Between RAEs, departments can seek to influence the research behaviour of their staff in order to maximise the chances of achieving a high rating, *e.g.* for RAE 2001, ensuring that all staff being submitted had four good quality publications to include. Departments can also influence recruitment by placing greater emphasis upon the research abilities of new academic staff; and can make the probationary period for new staff tougher than in the past by imposing more demanding requirements in terms of research performance.

What is far more difficult, in the UK system, is to influence the research behaviour of experienced academic staff who are not research active. Provided that such staff contribute to teaching and departmental administration, institutions can place virtually no effective pressure upon them (as a result of the existing system of tenure).[5] The only ways to enforce change in such circumstances are through the closure of an entire department or through institutional restructuring involving early retirement and/or voluntary redundancy. Such restructuring has become quite widespread across the United Kingdom's higher education sector in recent years.

Individual academic

Individual academic staff can either leave the profession, move to another HE institution (possibly overseas), or remain where they are. While remaining in the HE sector, they can either be research active and contribute to the RAE, or they can contribute in other areas such as teaching and academic administration. These potential choices raise interesting questions of academic incentives and motivations that are not often discussed in the literature.[6] Moreover, the loyalties of academics are always divided as between their home institution and the wider professional group to which they belong. Again, some quite difficult trade offs arise here. In deciding how to operate as concerns their research activity, academics are influenced by their personal ambitions, their desires for recognition within the profession, and where relevant, their desires for institutional promotion. Offsetting these positive influences is the perception that research is difficult, demanding and relatively poorly rewarded in the UK higher education system – so not everyone will choose a personal research strategy that involves them being highly research active.

Further, there is also the question of entry to the academic profession. It was noted above that departments increasingly seek to recruit research-active academic staff, partly as a by-product of the RAE process. However, the supply side of the academic labour market is also important, and in many areas this has become more difficult in recent years. Academic salaries have declined relative to those in business, many other professions, and the civil service, and in disciplines such as economics and finance fewer UK citizens proceed to a PhD degree than used to do so. Hence many departments experience increasingly severe recruitment problems. To some extent, shortfalls are made up by high quality staff from overseas. However, in order to meet their teaching commitments, departments are also often constrained to accept staff who are less well qualified than they would like. Such dilemmas associated with recruitment are especially acute in connection with the research dimension of a department's activities.

In the above discussion of the United Kingdom's multi-level university system, potential trade offs were noted at various levels, these being dependent upon the applied funding models and prevailing incentives, especially as between the core activities of teaching and research. Underlying the whole structure is the implicit view – or hypothesis – that for the HE system as a whole overall research output is likely to be stimulated most effectively by allocating public funds preferentially to those units and/or institutions that demonstrate good research performance in some agreed reference period. However, this approach gives rise to some important questions:

- Does the allocation of public funds to institutions as based on RAE results actually deliver improved research?
- Are the indicators used to measure research for the RAE satisfactory?
- The RAE system involves two types of cost: *a)* direct administrative costs of operating the system; and *b)* indirect costs due to induced distortions in individual and institutional behaviour. Given these, does the RAE system yield net benefits for UK research?
- What other allocation models for research funding could be proposed?

The evidence

According to STC (2002), and as noted above, it is very likely that the outcome of RAE 2001 does represent a real improvement both in the volume and quality of UK university research as compared to the outcome of RAE 1996 and earlier exercises. In most universities research has become a more effectively managed activity, and individual academics face greater pressure to deliver research output than formerly. Especially in relation to passing probation (for new entrants to the academic profession) and promotion to higher grades (senior lecture, reader and professor in the UK system), research performance is heavily emphasised.

A serious omission from most studies of university activity is any consideration of the underlying production function. However, thought of as production units, universities produce multiple outputs – research, graduates at various levels, commercial activity – using labour and other inputs to do so. Since many studies have suggested that there are synergies between teaching and research (which, technically, is likely to mean that there are both economies of scope and economies of scale), and significant positive correlations in the United Kingdom between RAE ratings and teaching quality assessments of academic departments, it must be questionable whether the current practice of funding and "incentivising" research separately from teaching is economically sound (see, in this connection, Sloane, 2001). Moreover, it can lead to perceptions that teaching is undervalued, for instance in the competition for promotion.

This observation makes the wide ranging study by Geuna and Martin (2001) especially interesting. These authors surveyed the funding of research in university systems around the world, finding that some countries – notably the United Kingdom, Hong Kong, Australia and Poland – use performance-based allocation methods, while others – such as Germany, the Netherlands, Italy, Sweden and Norway – allocate public research funds essentially in proportion to measures of institutional size (usually teaching volume or student-number based). Finland and Denmark mostly use teaching volume as the driver for research fund allocation, but some funding is also allocated on the basis of performance indicators. Over the past decade or so, the trend has been towards the greater use of performance-based funding models, the United Kingdom's RAE system being the most developed version of this approach, and the version with the longest track record.

Advantages and drawbacks of this system are sketched in STC (2002), Geuna and Martin (2001) and in Geuna (1998), though all these sources concede that precise quantification of costs and benefits is not yet feasible. At best one can hope to make some rough and ready judgements. Focusing on the United Kingdom's RAE, the key points are summarised in Table 3.

One can take different views about some of the points shown in Table 3, and we lack the space for an extended analysis. For present purposes, what is important is to take a view of the overall costs and benefits of the RAE system as it has operated in the United Kingdom. On this, I would support the judgement of Geuna and Martin (2001) that the benefits of the RAE system most likely rose for a time and by now will have levelled off or even started to decline; and the costs were initially high, and will have risen over time as individuals and institutions devote more effort to playing the RAE "game". Hence we may well already have reached a position where the costs outweigh the benefits, in line with a view expressed at a recent UK conference on the RAE to the effect that the RAE as a tool for allocating research funds has "passed its sell-by date".

While this is a conclusion for the HE system as a whole, it is also important to consider the RAE from a more local perspective, that of individual academics. Moore *et al.* (2002), for instance, found that for a sample of academic economists, the RAE system had led to improvements in individual research productivity during the 1990s, with those in highly rated departments publishing more in the better journals, those in weaker departments publishing more in less highly ranked outlets. There was little evidence that increased research output was due to new entrants to the profession or new research-active staff.

Via a survey of over 800 academic staff in social sciences and business-related disciplines, Harley (2002) found very diverse reactions to the RAE, from

Table 3. **Advantages and drawbacks of the RAE system of research funding allocation**

Advantages	Drawbacks
Rewards good research performance, so can be seen as meritocratic – this is one notion of what one might mean by a "fair" allocation. The resulting concentration of research funds can be viewed as a good way of creating big enough research groups to be internationally competitive.	Tends to lead to increasingly concentrated research resources, since rewarding success creates conditions for further success and yet more public funding. Little evidence that concentrated funding is associated with higher quality research.
Provides incentives to improve individual research performance.	Can encourage various forms of "game playing", *i.e.* efforts to fulfil formal criteria that do not imply genuinely improved research. Rewards safe and quick research, discourages longer terms and riskier research (since output less certain, takes longer to come through). May encourage less diversity in research, less experimentation, etc.
Relatively competitive system, encouraging completion of research, weeding out poor quality activities, generally better research management, etc.	Encourages strong researchers to move to highly rated institutions – but this can weaken synergies between teaching and research. Rewards past performance, so tends to support the historic pattern of research across universities, and to discourage "new entry" into high level research.
Can facilitate linkage between government policy priorities and research funding streams.	Can provide channels through which government can have too much influence over university research.
	Very costly to implement and administer.

Source: Author.

those viewing it as validating the importance of research in their work, to those who resented its distorting effect on research and the increasingly managerial approach to research that institutions and departments were adopting. Essentially, the RAE uses quite a sophisticated system of peer-review and co-opts it to drive managerial control through the allocation of research funds. While peer review is a traditional means for academics to secure recognition, the new link with managerial control attracted strong criticism even from those who benefited – personally and institutionally – from the RAE, since it was widely regarded as undermining strongly held academic values of autonomy, freedom, and the like.

Hence at the individual level, while the RAE has undoubtedly influenced academics' research behaviour, and often in a positive direction, there is considerable dissatisfaction with other effects of the RAE, such as on the management of research, traditional notions of academic freedom and independence, publication strategies and academic career paths. It is also widely believed – though here the available evidence is far from clear cut – that the increasing institutional emphasis on research is likely to undermine

many academics' commitment to high quality teaching. This is an aspect of the problem where poorly designed incentives could actually *worsen* overall university performance by discouraging the proper exploitation of efficient complementarities between teaching and research.

Conclusions

For brevity, I merely list the principal findings and conclusions, with at most very limited comment or discussion.

- The United Kingdom's RAE system has led to some improvements in the efficiency of university research, but further benefits of this sort are likely to be small and the costs of operating the system will go on rising. Hence the net benefit of allocating limited public research resources through the RAE is likely to turn negative, if it has not already done so.
- For institutions, the RAE system has resulted in an increasing concentration of public research funding, with barely 20 institutions receiving the lion's share of the funding, the weakest receiving very little. This concentration effect has been exacerbated by ever more stringent constraints on the total research money available to the Funding Councils to allocate to institutions. Yet there is at best very limited evidence that bigger research units are more productive (despite popular – and official – opinion to the contrary).
- Hence I would favour an alternative means of allocating research funding to universities. Two natural alternatives are available, both relatively cheap to administer. They are:

  a) Allocate research funds in proportion to the main teaching grant; and

  b) Allocate research funds in proportion to a simple measure of research performance, such as the value of research grants and contracts attracted in a given reference period.
- There are good arguments for either of these allocation rules. My preference would be to apply the second, or possibly a mixed system. I would not wish to allocate research funds entirely on the basis of the teaching grant since some institutions could choose to do no research at all, yet they would still benefit from such a rule.

Postscript

Since this article was first written, events have moved on in two respects. First, the Funding Councils responded to the already quite comprehensive House of Commons review of the RAE (published as STC, 2002) by declaring: *a)* that they welcomed and appreciated that exercise; and *b)* that they proposed to set up a review of their own. This they did, and their review – chaired by Sir Gareth Roberts – has collected a diverse range of evidence,

invited submissions from many quarters, and was expected to produce its report in April 2003. It is hard not to see in this procedure a certain amount of political game playing, but to be fair, one ought to withhold judgement until the report finally enters the public domain. There are strong suggestions that the Roberts review might well acknowledge that the present RAE has indeed passed its "sell-by" date (as was suggested above), and might therefore come out with some quite radical recommendations for changes in the United Kingdom's approach to research assessment.[7]

Second, the Government finally published in late-January 2003 its long awaited and frequently delayed White Paper on higher education, DfES (2003). One can speculate that the delays in finalising this paper had to do with continuing controversy over the possibility of universities being allowed to set their own fees, in the absence of other means of improving their funding. The White Paper finally comes out in favour of institutions gaining the power to set fees of up to £3 000 per student per year, subject to a variety of conditions not relevant to this paper.[8] Moreover, these fees would not be paid up front by students, but would be treated as an additional loan, to be repaid out of earnings after graduation, once these earnings rise above £15 000 per annum.

Concerning research, the Paper outlines some interesting new ideas. First, within the next three years, funding on science and research – in England – will rise by around 30% in real terms, a very substantial increase. Second, while it does not anticipate another full-scale RAE before 2008 or 2009 (and at that time the approach is likely to be based on the recommendations of the on-going Roberts review), it does expect HEFCE to identify those highly rated units of assessment in the English universities that performed well enough in research to be awarded a new grade 6*, this to be done in the next two-three years. The new top rated UoAs would then be allocated substantial additional research funding, thus increasing the already substantial differentiation within the research funding system as applied to England. Third, there will be strong encouragement for the formation of research consortia and various forms of collaborative research, linked to increasing the share of resources allocated to the very best units. Fourth, it is intended that the most talented researchers will be properly rewarded.

While the new arrangements will not come into effect until 2005-06, and will apply only to England, it is clear that university institutions elsewhere in the United Kingdom will have to work out how to respond in the emerging, more competitive, and more differentiated environment. At the same time, even within England itself, the new measures are likely to induce a good deal of organisational restructuring – in the form of institutional or departmental mergers, mission-related specialisation (*e.g.* some institutions deliberately choosing to become undergraduate only, or teaching only), and possibly a few

outright closures. In these respects, English higher education can look forward to a rather turbulent few years.

How all these changes will affect the quantity and quality of the research carried out by UK universities is not clear. There will be greater concentration and a lot of support for selected very large units, based on the claim that this is the way to enable the United Kingdom to sustain its international competitiveness in research. But this case is not actually made in the White Paper, and other evidence on research does not usually conclude that bigger units are necessarily either more productive or of higher quality. My own view, therefore, is that the proposed measures will certainly pump more money into the system – through various channels – but that the likelihood of achieving a substantially improved research performance across the United Kingdom is not high. Centralised planning and resource allocation in this area will unfortunately prove no more effective than they have done in other fields!

Notes

1. Whether we actually need so many young people to go through higher education is another matter. In the context of an analysis of vocational education and training, and discussion of the needs of a "learning economy", this is questioned in Keep and Mayhew, 1999. See also Dutta *et al.*, 1999, which discusses higher education in its wider public policy context, while showing that for most subjects, despite the introduction of fees, private returns remain high.
2. In Great Britain there are three funding councils, namely: the Higher Education Funding Council for England (HEFCE); the Scottish Higher Education Funding Council (SHEFC) and the Higher Education Funding Council for Wales (HEFCW). In Northern Ireland, higher education is funded by the Department of Education, Northern Ireland (DENI).
3. For instance, the EU is an increasingly important funder of UK university research, but if often pays overheads at a rate of only 10% or 20% of the identifiable costs of a given research partner.
4. Interestingly, an article by Andrew Oswald (*Education Guardian*, 14 December 2001) argues against the RAE for being far too egalitarian, spreading limited research money across too many institutions/departments. In terms of Table 2, this means that the funding ratios are much too equal. Oswald points out that in most disciplines, a huge fraction of the internationally significant research in the United Kingdom – in terms of papers, citations, etc. – is actually done by a mere handful of people. But so far, no one has been willing to reward such outstanding performance – either the individuals themselves or their institutions.
5. Tenure is much debated in UK universities. The formal position is that tenure is far weaker nowadays than it used to be, in the sense that academic contracts are much less open-ended and secure than in the past; also, the exact wording of academic contracts varies somewhat from institution to institution. Nevertheless, the meaning and legal force of tenure has never been properly tested in the UK courts, and no institution wishes to be the first to do so.

6. But see Coate *et al.*, 2001, for some analysis of possible conflicts and synergies between teaching and research; and Hare, 2000b, for a more formal analysis of academics' motivations.

7. Two basic models are being considered, apparently. Model 1 is a subject-based, expert review model; Model 2 is an institution-based, partially metricated assessment model. For details, see the RAE review website: *www.rae-review.ac.United Kingdom*

8. But including some conditions on access to university by students from disadvantaged backgrounds which, in my view, it is not especially desirable to impose (since I see most of the problems faced by such students as arising in their earlier schooling, and I am far from convinced that it ought to be the task of universities to remedy defects in lower-level schooling).

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The Lack of a National Policy Regime of Quality Assurance in Germany – Implications and Alternatives

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*Due to its federal order and unlike countries as the Netherlands and the United Kingdom, Germany has no national policy regime of quality assurance in higher education. There are several instruments aiming at defining minimum standards or assessing quality in some way, but none is targeted at quality assurance on a national level. State approval of courses and universities is within the responsibility of the individual states ("*Länder*") and follows more or less formal criteria. Evaluation is carried out either by single universities or on a regional level (*e.g. *in the "*Nordverbund*"). As a consequence their results did not get much public attention. Accreditation is still in its infancy and restricted to the newly introduced Bachelor and Master courses. The only nation-wide instruments of comparison in higher education are rankings that are carried out by private institutions. The implications of this lack of a national policy regime are discussed with respect to both national policies of quality assurance and rankings. Key methodological standards for rankings which they have to meet in order to fulfil their function, are outlined.*

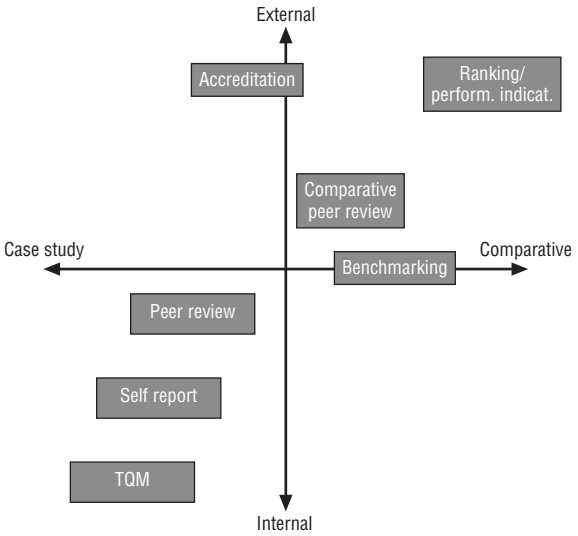
National policy regimes of quality assurance in higher education

Policy regimes are marked by different rationalities, logics of organisation and procedures. The typology of welfare state regimes by Esping-Andersen (1990) is a well known example of a clustering of regime types. The existence of a national policy regime requires national scope (or at least national comparability) and an explicit policy. With regard to quality assurance in higher education the question of a national policy regimes implies two aspects: first, the instruments of quality assurance in a national perspective and, second, the underlying policies of quality assurance. The – recently abandoned – British combined system of teaching subject reviews done by the Quality Assurance System and the research assessment by the Higher Education Funding Council is an example of such a regime.

Within higher education there are several instruments of quality assessment and quality assurance that are often mixed up with regard to their rationality, their objectives, their scope and their methods. National policy regimes of quality assurance can be described in terms of their particular mixture of those instruments. The instruments can be analysed in terms of internal *versus* external assessment and they can be sortered by the degree of comparativity. The more internal and the less comparative the instruments, the more they are aiming at quality *management*. The more external and the more comparative, the more predominant issue of public *control* or *transparency* becomes.

For decades the German higher education system cultivated the myth that all universities are of equal quality. Together with a strong notion of university autonomy this is the main reason why Germany remained a latecomer in quality assessment in higher education. When other countries were already characterised as "evaluative states" (Neave, 1988), evaluation was still new territory in Germany (Cave *et al.,* 1997). Up to the 1980s notions of competition and quality assessment were opposed by many stakeholders within the higher education sector (*cf.* Fisch, 1988). However, in a period of tight resources issues of accountability, competition and quality control gained more public attention. At the same time there was a growing sense of differences in quality between German universities, which in the beginning was discussed in terms of "profiles". During the 1990s a number of models for evaluation were developed (*e.g.* by the German Science Council-

Figure 1. **Instruments of quality assessment**



Source: Author.

Wissenschaftsrat, 1996) and the first German evaluation agencies were founded in that period.

This article wants to give evidence that despite those trends there is still no coherent national policy regime of quality assurance in German higher education. The only nation-wide instrument of comparison of higher education institutions are rankings made by private institutions. In the concluding section the contribution and the limitations of rankings to quality assessment and quality assurance in Germany will be discussed.

The German federalistic system of higher education

The German higher education system as well as the education system in general cannot be understood without reference to German federalism. Compared to most European countries the most apparent feature of the German education system is its federalistic structure. Only limited responsibilities are located at the Federal Ministry of Education and Research (BMBF) while for most fields of education the 16 states (the *Länder*) hold major responsibility. This is also the case for higher education. The Federal Government has some overall responsibilities that should guarantee a minimum of comparability and correspondence (expressed in the *Hochschulrahmengesetz*, first passed in 1976), but within that framework the

Länder have far-reaching autonomy. As a result there are in fact 16 different systems of higher education with 16 different legislations. This diversity causes a permanent need for co-ordination. Fur this purpose a special body, the Conference of Ministers for Education (*Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland*, KMK) was established. In most areas their decisions have to be made unanimously. In the past this principle obviously tended to prevent or at least protract reforms. As a result of the federal system, their is *e.g.* a necessity for mutual agreements on the recognition of degrees between the states – a remarkable instrument within a single nation-state! Nevertheless it is, for example, still quite difficult for a teacher to work in a state other than the one where he or she obtained his/her degree.

According to legal responsibilites, all public universities and polytechnics (*Fachhochschulen*) are run by the states. The federal state (the *Bund*) is not allowed to run higher education institutions (the only exception are internal academies for the training of federal civil servants whose degrees are formally equivalent to the *Fachhochschul*-degrees). Federal influence largely restricted to financial support, which can of course also influence strategic decisions. For decades the federal state launched special programs giving additional money to universities for specific purposes, as for example multi-media or gender equity, often intended to support poor state resources. In addition, according to the German constitution the Federal Government covers over 50% of all investment expenditures. Decisions about expenditures are made in a complex procedure by a joint committee of the Federal Ministry and all state ministries. But the first decision about investments are made by the *Länder* themselves for their universities; the joint committee then allocates the money.

Quality assessment in German higher education

State approval of universities

A first instrument which has at least some reference to quality but cannot be interpreted as an instrument of quality assurance in a narrower sense is the state approval of courses and universities. Traditionally degree courses and each single examination regulation of a degree course had to be approved by the state ministries. After the reforms aiming at a higher degree of autonomy of the universities have begun, in most states now, degree regulations of state universities only have to be announced to the ministry. The criteria for approval of degree courses are not concerned with quality in the first place. Rather they refer to a program's requirements in the context of state planning concerning numbers of students and supply with courses in different disciplines. They also take into account the existing resources for carrying out the program. But there is no reference to professional standards or to programs contents.

Private universities as well as their individual courses still need state approval, which is regulated by the university law of the state in which the university resides. Although legislation concerning the approval of private universities is quite similar in the 16 states, it differs on some points and also the handling of the legislation differs from sate to state. In general, degrees must correspond to those of public universities, private universities should offer several degrees, resources should guarantee stability of the institution. But there are also differences: for example in some states the majority of teaching staff must be regular staff, in others not. In many private higher education institutions a great share of teaching is done by professors of state universities as a sideline. The criteria for the approval of degree courses of private universities are not fixed in state university laws, there is much latitude for state ministries and hence they differ from state to state.

To conclude: state approval of courses and universities varies among German states and predominantly follows formal criteria. Hence it cannot be viewed as a means of quality assurance in the stricter sense.

Accreditation

The instrument of accreditation is rather new within the German higher education sector. On the background of the Bologna process and with regard to efforts towards the internationalisation of the German higher education system and as a mean of a broader reform of higher education (dealing with drop out rates, long study duration) the 1998 amendment of the *Hochschulrahmengesetz* introduced the Bachelor-/Master-system to German universities, for the time being parallel to the (five-years-) Diplom-degree. According to a resolution of the Conference of Ministers for Education (KMK) a system of accreditation of courses was introduced in 1998, but for Bachelor- and Master-courses only. Accreditation is carried out by various partly regional and partly professional accreditation agencies which themselves have to be accredited by the national German Accreditation Council.

Up to June 2002, only 32 Bachelor-courses and 62 Master-courses out of a total of some 630 Bachelor- and 440 Master-courses have been accredited, not to mention of the 9 600 traditional courses. These numbers indicate that accreditation of all degree courses cannot occur in Germany in reasonable time and at reasonable costs. Thus, even though accreditation is directed towards the assurance of (at least minimum standards of) quality, it cannot fulfil the function of a national system of quality assurance in Germany: it is still in its infancy playing only a marginal role with regard to the entire system of degree courses. Even if accreditation is granted under the uniform label of the National Accreditation Council, the approaches, standards and methods of the individual accreditation agencies differ, so that direct comparisons of accreditations of courses are not possible. Furthermore in its existing form of

accrediting single degree courses, the system will not be transferable to the large number of *diplom*-courses and would not be manageable if the Bachelor-/Master-system replaced the *Diplom*-degree.

Evaluation

Probably the most common instrument of quality assessment in higher education is evaluation. Usually it is designed as a two-step procedure: an internal self-evaluation (resulting in a self-report) is followed by an external peer review (resulting in a peer report). In Germany this kind of evaluation began to gain importance not earlier than in the 1990s, after a lack of assessment and accountability in higher education had been asserted (*e.g. Wissenschaftsrat* 1996). Consequently, various concepts of evaluation have been developed and several agencies of evaluation have been founded, some by initiative of networks of universities (*e.g.* in 1994 the *Nordverbund*, Consortium of – six – Northern Universities, among others the universities of Hamburg, Kiel and Rostock), some by states' initiative as *e.g. the Zentrale Evaluationsagentur Niedersachsen* in 1995 (ZEVA – Central Agency of Evaluation Lower Saxony) or most recently the *Stiftung Evaluationsagentur Baden-Württemberg* (EVALAG – Foundation Evaluation Agency). Up to now evaluation of teaching and evaluation of research are strictly separated in Germany. Those agencies only deal with the evaluation of courses. Evaluations of research activities are carried out by other institutions, for example by the Science Council or by the *Wissenschaftliche Kommission Niedersachsen* (Scientific Commission Lower Saxony), which is again based on one single state.

Common to all evaluations carried out by those agencies is their regional scope. Up to now there is no national comparative evaluation of courses as *e.g.* the reviews done by the British Quality Assurance Agency. There is no national compilation of results and probably the approaches, methods and criteria of the various agencies are anyway too different to allow comparison. Even most of the "comparative" evaluations do not go beyond a description of the performance of single degree courses or departments, and hesitate making explicit comparisons. Accordingly, the results of those evaluations do not draw much attention in broader public.

This fragmented system of evaluation reflects German federalism and cannot be the foundation of a nation-wide system of quality assessment and quality assurance. In this situation the only instrument of nation-wide comparative assessment of universities and degree courses are rankings done by private institutions. With regard to their specific objectives their appropriateness as an instrument of quality assurance will be discussed in the next section.

Rankings

As other forms of quality assessment, rankings of higher education institutions do not have a long tradition in Germany. In 1989, the weekly magazine *Der Spiegel* first asked "which university is the best". Since then, numerous rankings with quite different approaches have been published in Germany. The majority were carried out by magazines (*e.g. Der Spiegel*, *Focus*, manager magazin, *Handelsblatt*) or at least in co-operation with magazines (the Ranking of the CHE – Centre for Higher Education Development and the magazine *Stern*).

Ranking can be understood as a particular system of performance indicators. Contrary to the classic notion of performance indicators (as *e.g.* presented by Cave *et al.*, 1997) the target group of ranking is not primarily the higher education system (such as universities, planners, policy makers). Instead ranking aims at users outside the higher education system. Rankings are an instrument for informing consumers, *i.e.* university entrants, their parents, students moving from one university to another or employers, about complex systems, or complex markets to put it in economic terms. The first objective is to create transparency about the performance of – in the best case all – universities. This means that ranking is, by definition, an *external* instrument of assessment. In certain aspects it comes close to benchmarking – with one important difference. Benchmarking can/should include performance indicators as well as underlying processes. This cannot be achieved by ranking, as the approach to the objects has to be broader in the sense of covering the whole field, while benchmarking normally is selective with regard to the number of institutions involved. The most important difference between ranking and evaluation is that ranking may completely ignore the causes of deficits and weaknesses of universities and courses/programs. Thereby ranking does not include an indispensable element of quality assurance within institutions. Thus it can only give first indications of areas of deficits without offering explanations – if, and this is an important qualification, if it is sophisticated enough and keeps up with methodological standards (*cf.* Federkeil, 2001).

The first qualification concerns the level of *aggregation*. If rankings are to produce significant knowledge on quality, they should not refer to whole universities but to single departments or courses. Universities are not that homogenous institutions that they could be treated as a unity for ranking. An analysis of strength and weakness demands a lower degree of aggregation. Departments of a university may differ in their performance. This is indicated by the CHE-ranking data. A university may be ranked high in one subject but ranked low in another discipline.

Second, rankings have to come up with the fact that indicators of different aspects of performance can – and do – also vary within a single department. A department can perform very well in teaching but quite poor in research. With regard to teaching alone a department can have few staff so that the supply of lectures is rather low but at the same time the department may have a good system of mentoring. In order to give indications for quality assurance as well as with regard to different preferences of the target group of rankings, these must offer a *multiperspective*. That means rankings should not merge different aspects of performance into an uniform overall score of a department.

Third, exact league table positions are not an adequate way of ranking department performance. Such a procedure inevitably involves the danger of misinterpreting small differences in the numerical value of an indicator in terms of differences in quality. For example in the 2002 *US News and World Report* Ranking of national (doctoral) universities the difference between rank 14 and rank 23 with regard to the reputation score is just 0.2 (in a scale with an empirical range from 1.8 to 5.0). To avoid creating such artificial differences a ranking should only form *groups* of universities (*cf*. Clarke, 2002). For example, the CHE-ranking places universities into three groups for each indicator: top, middle and bottom group.

Following those methodological standards rankings can give detailed and differentiated clues for identifying deficits and areas of bad performance. In this sense rankings are a preliminary stage of quality assurance. With regard to the lack of a national system of quality assessment in Germany a growing number of universities use the CHE-ranking in this way. For this purpose we offer additional and more detailed analysis of our data for single departments.

Conclusions

In comparison to other countries like the "pioneer countries in Western Europe" (Jeliazkova/Westerheijden, 2001) such as the United Kingdom and the Netherlands, instruments of quality assessment and assurance in higher education do not have a long tradition in Germany.

The system of *state approval* of degree courses and of private universities operates rather formally and has no real concern with quality. *Evaluations* are embedded in the system of federalism and offer no base for standardised, nation wide comparisons among higher education institutions. *Accreditation* has just started and is restricted to the newly introduced system of Bachelor- and Master-degrees. Furthermore, program *accreditation* will not be manageable for the majority of degree courses. So the only broader system of quality assessment in higher education is ranking.

But in fulfilling this function rankings have to face two problems: first, most rankings are carried out by commercial magazines without scientific

rigor. Only by observing methodological standards can they be used as a means of quality assessment. Second, they must find a balance between the needs of their different user groups: the primary target group of ranking, university entrants, is the least informed group of all stakeholders in higher education. Therefore ranking help reduce the complexity of information encountered in the process of selecting a university. On the other hand, the most informed groups, departments, professors, planners, etc. are also users of university rankings and expect an approach appropriate for the complex system of higher education. Hence rankings must find a compromise between needs that pull in different direction: clear understandable information for university entrants and differentiated and complex information for the higher education system itself.

If rankings can reconcile those two needs they can be a useful instrument of quality assessment in a higher education system and also an aid for quality assurance within higher education institutions – with the limitations outlined above. Most important is that they can help to identify areas of bad performance, but they cannot explain the causes.

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Evaluating Teaching and Research Activities Finding the Right Balance

by

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Since 1990, research and teaching activities of academic staff in Spanish universities have been periodically assessed. There are national, regional and institutional assessments. Each evaluation is organized in a different way and the organisation itself reflects the importance given to each activity. In most cases, positive assessment are linked to a salary increase and other perk benefits.

In this article, we analyse the evaluation system of teaching and research activities and how they could be, in fact, orienting to promote research activities and, as a consequence, to devaluate teaching activities.

Introduction

Relations between teaching and research within higher education institutions have always been difficult (Vidal and Quintanilla, 2000). An adequate balance between both activities has not yet been found. Various factors which affect these relations and which make institutions and individuals orient their activities more towards teaching or research have been pointed out. However, the problem is not devoting one's time to one or the other activity, except if attention to one activity implies a decrease in quality of the other activity. And this is exactly where the problem lies.

In the Spanish case, the structure of the Spanish university system makes it impossible for an individual to do only research activities. Faculty must necessarily combine this activity with teaching (by the way, undergraduate teaching). In other words, academic staff are forced to devote an important part of their time to teaching activities, a time that is, in addition, controlled by the institution. In fact, this is the only time that is controlled by universities. For this reason, the problem of the balance between teaching and research in Spain is especially relevant.

But, on the other hand, one of the most important aspects to take into account in order to introduce changes and improvements in the activities of universities is the individual motivation of each of the faculty, who are the principal agents of these institutions. Individual motivation is affected by various factors, of which promotion opportunities to better positions or wage improvements within the same position are the most remarkable ones. In Spain, the way these two measures of motivating faculty have been implemented have brought about a very clear message: research is more important than teaching. So, this is not only the feeling of academics, but also an explicit policy. This message looks clear in the model for 1) the promotion of teaching staff, 2) teaching assessment and 3) research assessment, as we shall see below.

Finally, there is another important factor that must be analysed. Research is important for the national system of science and technology, and the attraction power of this system, especially as far as resources are concerned, is really high for university faculty. Not only can faculty see their infrastructures increased but also their salaries.

When a university system and a science and technology system grow significantly, as in the Spanish case, the tension between teaching and research

also grows due to the speed at which both systems demand personal resources and dedication. The problem that must be solved at this level is how to reconcile the need, on the one hand, to increase and improve teaching activities and, on the other hand, some science policy goals such as to increase university-industry relations or to improve competitiveness in the various EU Frame Programmes.

So, institutional and educational policies are affected by powerful objectives from the national or European scientific policy (in Spain, also at the regional science policy), which are supported by important and appealing budgetary assignments. Having all this in mind, the questions with very difficult answers are the following:

- Should educational and scientific policies be co-ordinated as far as university is concerned?
- And, in case of disagreement, which should be given priority, that is, which has more impact on the economy and welfare of a country?

After this general introduction to the problem, in what follows we shall analyse the Spanish case in more detail. Firstly, we shall describe the main changes which have occurred in the Spanish university system and the status of academic staff in Spanish universities. Secondly, we shall describe the system of incentives for academic staff. Third, we shall analyse some of the consequences brought about by the incentive system.

The context: some changes in Spanish higher education

Over the last two decades, Spain has experienced a period of profound changes affecting its social and economic systems. Political and economic changes have considerably affected the higher education system. Probably, the most outstanding fact has been the dramatic growth of the whole higher education system. For instance:

- Fifteen out of the sixty current universities were created after 1968.
- The number of students has multiplied by 3 in the last two decades and faculty has grown at similar pace (although this growth stopped suddenly at the end of the nineties due to a dramatic change in the demographic trend).
- In 1978 there were 43 different study programs and now there are more than 122 regulated programs.
- The financial resources for higher education have increased from 0.5% of the GDP in 1985 to 1.2% in 1998.
- Higher Education R&D expenditure has multiplied by four (constant currency) since 1982. In that year, 22% of the total expenditure in R&D was spent at universities, and now it has increased to 32%. Besides, this trend is the opposite of the science policy goals for this period. One those were the increasing of research at industry.

- The number of publications in the ISI databases have multiplied by more than 4 times from 1982 to 1997, and the percentage of the total publications has increased from 0.8% to 2.4% in those years.

In summary, it may be claimed that the system has increased in absolute terms as far as institutions, centres, students and lectures are concerned. It has also increased in global economic resources for higher education. As for research, both the global amount set aside for this purpose and the relative involvement of universities in the total of R&D activities in Spain have risen. In other words, the efficiency of Spanish research, especially academic research, has improved.

The context: the status of academic staff

There are two main categories of academic staff: tenured and non-tenured staff. Tenured staff have the legal status of civil servants. With the exception of a few professionals, who have part-time positions in universities as teachers in specific fields, a non-tenured staff position is considered as a provisional situation for people starting out their academic career. Obviously, the objective of the majority of non-tenured academic staff is to eventually obtain a tenured position.

The working conditions of academic staff in Spanish universities depends on three main actors:

Central Government establishes salaries, status, general duties and rights of academic and non-academic, tenured and non-tenured staff. The central government established in 1990 an assessment system of tenured staff with consequences on salaries and promotion.

Regional governments. Because regional governments finance universities, the staff policy carried out by universities is strongly dependent on financial deals with regional governments that eventually (though indirectly) have to cover the pay roll. On the other hand, as is defined in the new University Act (*Ley de Ordenación Universitaria*, LOU) they could establish salary increases for the staff employed in universities under their patronage. Nevertheless, these increases would have to be paid as bonuses based on some type of individual assessment and not as increases in basic salary, which by law must be homogeneous in all Spanish public universities.

Universities define the number and type of positions in each department, and specific rules for the promotion of staff (limited by general rules established by the central government). They are responsible for the assessment of teaching activities of academic staff.

In summary, although Spanish professors work in autonomous universities, their homogeneous salaries are fixed by the central government. Nevertheless, there is the possibility of receiving salary increases based on

performance assessed at central, regional and institutional level. This complex system is important, not for the modest salary increase, but because it is the only regulated incentive for academic staff in a system extremely homogeneous coming from a typical napoleonic model of universities.

In principle, all Spanish universities are research oriented. This means that academics have to work on both types of activities. In fact, academics at Spanish universities spend 46% of their time on teaching activities, 41% on research and 13% on administrative and other activities (INE, 1991). As a consequence, there is a logical tension between efforts devoted to both activities.

Basic salaries of academic staff in Spain are lower that in other European countries (Enders, 2001). To counterbalance these comparatively low salaries, the legal system allows academics (even in full time positions) to obtain additional compensations for related activities. Academic staff can deal with public or private institutions for special services such as: giving special courses (continuing education, for instance), consulting, applied research contracts, and so on. The university itself signs these contracts, retains a small part as overheads and pays the academics involved in the contracts as agreed beforehand. These extra earnings mainly affect academics working in market-oriented fields, where more dynamic individuals can double their earnings. Nevertheless, there are no data for evaluating the average incidence in the earnings of academics.

Academic staff assessment

In Spanish universities, individual activity of academic staff is evaluated through several mechanisms (Mora, 2001). On one hand, there are national assessment procedures, regional ones and some organized by the institutions themselves. On the other hand, there are procedures for assessing teaching, research and services. The following are the assessment system currently in use.

National assessment system

At the beginning of the 1990s, the Central Government established a system for rewarding productivity in order to promote the commitment of tenured academic staff to teaching and research. Since 1990, the research and teaching of tenured professors have been periodically assessed. Each evaluation is organised in a different way and the organisation itself reflects the importance given to each activity. *Evaluation* is not only a method for making statements or compare situations. *Evaluation* is also a way of shaping the system. It is one of the ways for public policies to make goals explicit in some way.

There are two types of individual assessment:

Teaching assessment. Teaching activity of tenured academic staff is assessed each five years. For each positive evaluation professors receive a

permanent increase in their salaries. Almost everybody, with rare exceptions in some universities, is positively assessed (Maltras *et al.*, 1998). There is an easy explanation for this "high performance". This type of evaluation is mandatory by law, but universities are responsible for carrying out this assessment. Arguing that there is a lack of reliable standards in the assessment of teaching, universities (self-governed by staff) are reluctant to "punish colleagues". But, apart from this, what seems to be the key factor for this behaviour is that, from the very beginning, there was a non-explicit political decision to use this evaluation system as a way for a general salary increment for faculty. This system has become a formality, and an additional method for rewarding seniority. The number of positive evaluations is limited to five, in such a way that after 25 years of teaching no additional increases are awarded. The value of each bonus depends on rank and run from € 1 200 to € 1 500 per year.

Research assessment. Individual research activities are evaluated through a two-fold system. On one hand, proposals for research projects requesting public funds are evaluated *ex ante* and *ex post*, and only those reaching certain standards of quality are financed. The second type of research evaluation only affects professors (non-tenured academic staff are evaluated, formally and informally, in the process of promotion). National Committees composed of experts for each group of disciplines are in charge of the assessment of individual research activity. For each period of six years, professors can present their most relevant publications to the corresponding committee in the hope of receiving a positive assessment. Nevertheless, this evaluation is relatively strict, and "research periods" are frequently evaluated negatively.

Professors receive a permanent bonus after a positive evaluation of each six years of research activity. This is also limited to six positive evaluations. The economic value of these bonuses is the same as in the case of teaching activities. Nevertheless, because assessment criteria are more rigorous, positive assessment has become a symbol of prestige, and a pre-requisite for promotion to higher positions. Using data from a group of universities, we have estimated that, on average, the Spanish equivalent to full professors have less than two research bonuses, the second level of professors have less than one in average, and very few third level professors have one bonus (Mora, 2001).

The relevance of the research assessment has been even enhanced by the new law promulgated at the end of 2001. For instance, to be a member of committees for selection of new staff it is required to hold research bonus (the number depending on the level of the position). A new project for regulating doctoral studies includes these research bonus as a condition for both delivering courses and being member of the thesis committees.

Regional assessments

The old law established that the universities' Social Councils might establish a system of individual incentives. Only at the end of the 1990s did some Social Councils agree with the regional authorities to the establishment of a new system of bonuses based on individual performance. Regional governments of The Basque Country, Navarra and the Canary Islands initiated this process (incidentally, these are regions with special financial status where governments have more capacity for taking initiatives). The models were different in each region, but basically they established three types of bonuses for compensating research, teaching and services. Assessment of research was the less conflictual, but again, assessment of teaching generated more conflicts. Generally speaking, the model used for teaching evaluation was based on the assessment of a memoir presented by teachers explaining their teaching activities. Using previously agreed criteria, each activity received a number of points, and depending on the total number of points, teachers obtained one, or more, "teaching bonuses". Obtaining a first (perhaps, even a second) bonus was relatively easy, but the system started to distinguish teacher with a higher commitment to their teaching duties. At regional level, bonuses to compensate service were also established but they were merely an extra compensation to academics in governing positions and were not based on any assessment.

The new law allows regional governments (instead of Social Councils of each universities) to establish performance bonus based on individual assessment. At this moment, all the autonomous regions are developing such systems. They are still proposals with a wider variety of mechanisms but with a general common approach: bonuses based on assessment of research, teaching and services. As an example, we can mention the case of the Canary Islands (a region with previous experience in these processes). The new system considers the three aspects of the university activity and in each one establish three levels. Levels are based on a scoring system where every university activity is rated. For the teaching assessment the "basket" include the self-evaluation of activities, the evaluation made by the own department and results of the students evaluation. The system allows a maximum salary increase of € 9 000 per year for academics obtaining the three levels in the trees aspects.

Institutional assessments

As we have mentioned before, institutions are responsible for assessing teaching of tenured academic staff following the national scheme. However, this cannot be considered a real process of evaluation. Apart of this failed mechanism, most universities have established a system for students surveying teachers. Students carry out a yearly survey on each teacher and each course. Overall results of the survey are published, but only the assessed teacher and

the university itself have access to individual data. The use of these surveys is still a controversial issue, because these surveys present many methodological problems in being interpreted. Nevertheless, they have two positive effects: 1) universities detect problematic cases due to teachers' lack of pedagogical abilities or to some type of conflict between students and teachers; 2) this survey affects teachers' attitudes, and at least stimulate the fulfilment of basic teaching duties, and in many cases, how teachers handle these duties. Nevertheless, the lack of visible effects provokes in most actors (students and teachers) the feeling that the process is completely ineffective. This scepticism has a negative effect on the process because students increasingly do not take the survey seriously and results are less reliable than they could be.

Assessment for promotion

Along with these specific systems for evaluating academic staff, there is another important moment in which faculty are evaluated: when they are recruited. The structure of academic staff at the Spanish universities is designed to fit the university's teaching needs. A good indicator of this is a constant rate of 17-19 students per teacher in the last 15 years. So, it is possible to say that a new position is created to teach one or some specific courses. But in this selection, research merits are more valued than teaching qualifications as is explicit now in the regulation of those exams. This seems to point to a mismatch between what is needed and what is evaluated.

Conclusions

It is not easy to answer the questions that we have pointed out: should educational and scientific policies be co-ordinated as far as universities are concerned? How could we make universality compatible with a necessary commitment to the socio-economic needs of the local environment? But these questions arise from a very dynamic university system, the Spanish one. The growth of this system in the last two decades has given rise to inbalances. One of them occurs between teaching and research.

Over these two decades, there have been two great demands for universities in Spain: a social demand of higher education studies and a science policy demand to increase research at universities. 1) We have evidence that both demands have been attended to. 2) We also have some evidence of an increase in the quality of research. But, 3) what we do not have is any evidence of an improvement in the quality of teaching.

Although the systematic evaluation of professors both in teaching and research could be regarded as positive, the fact that it is discriminating only for research activities introduces the bias of considering research as more important than teaching in the academic career, which is quite frequent in many higher education systems.

There is not an easy solution to assure quality of teaching and research at the same time. But, some conditions for that balance in the Spanish system may be:

- Giving some kind of recognition to good teaching activities.
- Defining the role of universities within the science, technology and industry system in a country like Spain, which is characterised by its small and medium-size industry. For instance, if university research is a requirement of the science policy of a country, there should be a possibility for universities to hire specific staff for research activities only.
- Reconciling the autonomy of universities and regions and the need to co-ordinate the system as a whole.

Summing up, the individual evaluation system of teaching and research activities is oriented, in fact, to promote research activities and, as an unwanted consequence, to devaluate teaching activities. But this happens within a higher education system which is growing dramatically, as we have seen, especially as regards the demands for teaching.

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The Impact of the State on Institutional Differentiation in New Zealand

by

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The New Zealand higher education system is a small but complex arrangement of colleges, polytechnics, institutes of technology and universities that on the surface appears to display admirable diversity for a system that serves around four million people. However, while major legislation introduced in 1990 formalised four distinct types of public tertiary institution, in practical terms, the last 12 years have been characterised by the progressive convergence of institutional types.

Through a brief historical review and the analysis of institutional mission and values statements, and published performance indicators, this article explores and illustrates different perspectives of diversity amongst New Zealand higher education institutions which have converged over the last 12 years. This convergence occurred during an extended period of deregulation in which the market has acted as a surrogate for overt government policy in shaping the direction of the system and the institutions within it. Even recent formal government policy supporting the development of strong and distinct institutional identities and greater differentiation amongst tertiary institutions has been thwarted by the same government's intervention to prevent system change by limiting the number of universities in the country.

Introduction

New Zealand is a small South Pacific country with a population of just under four million. Prior to 1990, it had a well-differentiated tertiary education system comprising three types of institution: universities, polytechnics, and colleges of education (which offered pre-service primary and secondary teacher education). The boundaries between these institutional types were well-maintained by legislation and accompanying regulation. Following the passage of the Education Amendment Act in 1990, however, this scenario changed significantly. This Act redefined these three types of tertiary institution and added a fourth, the wananga, which was designed to provide specialist programmes for Maori in the Maori language.

There are currently eight universities, which offer a wide range of undergraduate and postgraduate degree programmes, 23 polytechnics, most of which are relatively small and offer applied programmes up to and including first degree level, four colleges of education, and four small *wananga*.

On the surface this seems to provide a reasonable degree of diversity amongst New Zealand's tertiary institutions. However, the 1990 Education Amendment Act, amongst other things, allowed the polytechnics, colleges of education and *wananga* to offer degrees. This, together with increased institutional autonomy, and a competitive environment promoted a convergence of New Zealand's higher education institutions and, arguably, a reduction of the institutional diversity that Government policy was designed to enhance.

This article outlines the New Zealand education policy of the 1990s and its impact on institutional diversity, and describes some different approaches to exploring the similarities and differences between New Zealand's higher education institutions.

The education reforms of the 1990s

The build up to the 1990 legislation which so changed the face of education in New Zealand comprised a number of influential reports to government. The first was the Probine/Farger Report (Probine and Farger, 1987). This was followed by the Picot Report (Picot, 1988), which addressed the administration of education, and picked up several of the Probine/Farger recommendations concerning the establishment of charters for schools and polytechnics. The third and most significant report was the Hawke Report

(Hawke, 1988). This, in turn, led to the government's response in the form of two critical policy documents, entitled *Learning for Life* (Lange and Goff, 1989).

Learning for Life proposed greater autonomy and accountability for post-secondary institutions through the establishment of charters and the introduction of "bulk funding". It also recognised the need for students to make a greater contribution to the cost of their own education, and for the establishment of a loans scheme to compensate for the increased costs.

Learning for Life also redefined the roles of the institutions that would deliver post-compulsory education and training. In particular, it identified the college of education, the polytechnic and the university as the prime institutional providers of this education and training. Critically, *Learning for Life* picked up one of the more profound recommendations of the Hawke Report, and proposed that polytechnics and colleges be able to offer degrees.

The response of key players in the tertiary sector to these policy proposals was, not unexpectedly, very varied. For the most part the polytechnics and colleges of education were well pleased with the proposals. They were given significant autonomy and control over their activities, in sharp contrast to their previously tightly controlled environment. There was also a clear indication that many of these institutions would be better resourced than previously, although there was still some anxiety about the eventual form of the new bulk funding system. Thus the polytechnics, in particular, had genuine control over their individual directions and destinies.

The universities, by contrast, "were decidedly unhappy about the reforms" (Butterworth and Butterworth, 1998, p. 156). They complained about the consultation process which followed the publication of the Hawke Report, and about perceived threats to their autonomy and academic freedom. Two universities, the University of Auckland and the University of Canterbury, even started proceedings for a judicial review of the consultation process, but eventually discontinued them. Such a litigious response to issues not of the universities' liking has littered their reaction to developments in the tertiary sector throughout the 1990s, most especially those concerning moves to establish further universities.

The policy decisions of *Learning for Life* and *Learning for Life Two* were translated into legislation with the passage of the Education Amendment Act (1990). Inevitably, some of the substance and intent of the Hawke Report and the subsequent *Learning for Life* policy documents was watered down in the select committee stages of the Bill, due to the concerted and sometimes bitter opposition of the universities. The end result was "that the universities were among the least reformed of all the education institutions" (*ibid*., p. 167).

The Education Amendment Act 1990 nevertheless set in place a number of far-reaching reforms to the structure, funding, governance and

management of tertiary education. In particular, it was the section of the Act which dealt with the definitions of institutions which was especially significant from a point of view of differentiation in tertiary education. Having a range of institutional types implied choice for students and the opportunity for people from all backgrounds and experiences to find a means of pursuing post-compulsory education.

Section 162(4) of the Education Amendment Act 1990 defined four kinds of institution: a college of education, a polytechnic, a university, and a *wananga* (Table 1). The characteristics of a university so defined were exactly those proposed by Hawke in his report. Overall, these four definitions would, on paper, suggest a reasonably wide diversity of institutional types and therefore a reasonable choice for potential students, especially when coupled with the provision of private training establishments. However, the reality is somewhat different, with the universities and polytechnics together enrolling around 95% of the sector's equivalent full-time students (EFTS).

Throughout the 1990s, then, the higher education system was essentially served by two types of institution: the university and the polytechnic. During this period the universities were slow to change. By contrast, the polytechnic sector underwent a dramatic transformation. The new legislation gave them autonomy, facilitated by bulk funding, and with it the power to make their own decisions within the context of their new charters. It also gave them the opportunity to offer degrees. These two fundamental changes provided the polytechnics with the power to diversify and compete for students with the universities in a market driven education sector fuelled by the economic ideology introduced by the Labour Governments of the 1980s, and embraced by the subsequent National Governments of the 1990s.

The unforeseen consequences

One of the most significant, but apparently unforeseen, consequences of the policy reforms and legislation passed in 1990 was the speed with which some polytechnics picked up the opportunity to offer degrees. The Education Amendment Act provision allowing polytechnics to offer degrees, albeit only after rigorous approval and accreditation from the New Zealand Qualifications Authority (NZQA), opened the door for polytechnics to compete directly with universities for students. For example, UNITEC Institute of Technology, one of the larger urban polytechnics, offered its first undergraduate degree, the Bachelor of Quantity Surveying, in 1992. By the end of 2001 it was enrolling some 4 000 students in a wide range of bachelors degrees, a further 300 in postgraduate programmes, including the PhD degree. Auckland Institute of Technology (AIT) made a similar rapid transition to degree level education. Seeking equivalence in status to universities through redesignation became

Table 1. **Definitions of a university, a polytechnic, a college of education and a *wananga*: Section 162(4) of the Education Act 1989**

"4) In recommending to the Governor-General under subsection 2) of this section that a body should be established as a college of education, a polytechnic, a university, or a *wananga*, the Minister shall take into account:

"*a)* That universities have all the following characteristics and other tertiary institutions have one or more of those characteristics:

"i) They are primarily concerned with more advanced learning, the principal aim being to develop intellectual independence.

"ii) Their research and teaching are closely interdependent and most of their teaching is done by people who are active in advancing knowledge.

"iii) They meet international standards of research and teaching.

"iv) They are a repository of knowledge and expertise.

"v) They accept a role as critic and conscience of society. And

"*b)* That:

"i) A college of education is characterised by teaching and research required for the pre-school, compulsory and post-compulsory sectors of education, and for associated social and educational service roles.

"ii) A polytechnic is characterised by a wide diversity of continuing education, including vocational training, that contributes to the maintenance, advancement, and dissemination of knowledge and expertise and promotes community learning, and by research, particularly applied and technological research, that aids development.

"iii) A university is characterised by a wide diversity of teaching and research, especially at a higher level, that maintains, advances, disseminates, and assists the application of, knowledge, develops intellectual independence, and promotes community learning.

"iv) A *wananga* is characterised by teaching and research that maintains, advances, and disseminates knowledge and develops intellectual independence, and assists the application of knowledge regarding *ahuatanga* Maori (Maori tradition) according to *tikanga* Maori (Maori custom)."

almost inevitable for these institutions as their degree student numbers grew, and as competition in the tertiary education marketplace intensified.

The Act also legally defined the characteristics of a university for the first time. These characteristics are set out in section 162(4)(a) (refer Table 1). While having this legislated definition and that of the other types of tertiary

institution suggests a deliberate attempt to maintain a differentiated system, the wording of the Act actually allowed all four types of institution to have the same core characteristics. This, coupled with deregulation and a high degree of institutional autonomy, inevitably resulted in smaller less prestigious institutions (mainly polytechnics) seeking to gain status by becoming more like those institutions that were perceived to be successful (mainly the universities). The definitions therefore provided a basis from which those institutions could build their cases for redesignation as universities. In fact, UNITEC first announced publicly its ambition to become a university in 1993, followed soon after by a similar announcement by AIT, and later by Wellington Polytechnic.

Wellington Polytechnic merged with Massey University in 1999 to become a campus of that university, and by doing so lost all of its previous distinctiveness as a polytechnic. AIT was formally granted university status by the National Government in late 1999, just months before the 1999 election and change of government. It formally became Auckland University of Technology (AUT) on 1 January 2000.

UNITEC's application for redesignation was submitted to the then National Government in mid-1999, but the change of government in late 1999 meant that its evaluation was overseen by the new Labour Government. This new government was keen to introduce some of its own tertiary education reforms, and to distance itself from the policies of the previous government. In addition the existing universities in New Zealand were bitterly opposed to UNITEC's redesignation, just as they had been for AUT's change of name a year earlier. This resulted in some legal and political manoeuvrings in the early part of 2000, which culminated in the hasty introduction of a bill limiting the number of universities in New Zealand to eight (the existing number). This ill-advised and poorly drafted legislation was never enacted by Parliament, but its introduction was enough to derail UNITEC's application for redesignation just two weeks before it was concluded.

Diversity in New Zealand higher education

Larger polytechnics such as AIT, UNITEC, and Wellington Polytechnic took advantage of the liberating legislation of 1990 to grow in areas that had previously been the exclusive domain of the universities. They therefore inevitably became more like universities. At the same time, the universities expanded to incorporate many of the activities traditionally the domain of the polytechnics. This convergent behaviour mirrors similar trends in many OECD countries, notably Australia (Meek, Goedegebuure, Kivinen and Rinne, 1996; Meek, Huisman and Goedegebuure, 2000), and suggests that the institutional diversity so frequently advocated by the policy makers is not necessarily promoted by the policy they make.

However, the determination of the diversity of a higher education system is not a straightforward matter. It depends on the perspective from which it is considered (Codling, 2001). For example, the diversity of New Zealand higher education institutions of the late 1990s can be considered from three quite different perspectives based on three independent data sets: historical data similar to that utilised by Marginson (1999) for Australian universities; performance data based on published institutional performance measures; and purpose data, based on institutional positioning statements. Each of these approaches is described and illustrated below.

First, New Zealand universities could be grouped on the same general basis that Marginson (1999) described for Australian universities. Marginson's rationale for grouping universities in Australia was largely based on historical distinctions. Using a similar approach, the universities of New Zealand could arguably be subdivided into three groups, as follows:

1. Limestones
   [so named because of the dominant limestone architecture of their original buildings, following the convention of Marginson (1999) in naming the groupings of Australian universities such as "sandstones" and "redbricks"]
   University of Otago, University of Canterbury, University of Auckland, and Victoria University of Wellington.
2. Regionals
   Massey University, University of Waikato, Lincoln University.
3. Unitechs
   Auckland University of Technology.

The diversity suggested by this classification is best considered as that reflecting a general system perspective. Under this classification, the "limestones", in a similar way to the "sandstones" in Australia, are characterised by their age and history, the primacy given to their research, their relative size, the location of their primary campuses in major cities, and their high proportion of full-time student enrolments. At the other extreme, the "unitechs", currently represented in New Zealand by AUT (and potentially by UNITEC), are characterised by an overt vocational mission, a long history of skills-based education before redesignation, a high proportion of part-time enrolments, a historical emphasis on teaching and learning, and an inner-city location. Between these extremes are the "regionals", which like the "new universities" of Marginson's classification, tend to be those universities that are left after the others are more certainly placed in their defining groupings. However, the three "regionals" do have much in common. They each have a relatively short history, a clear research mission, and demonstrate a high degree of conformity to the general pattern of the New Zealand university founded on the traditions of Otago, Auckland, Canterbury and Victoria and, significantly, a perceived desire to be so.

To look more deeply at the differences and similarities between these universities it is necessary to go beyond general and easily perceivable traits of a general system perspective outlined above. With this in mind, some measurable performance indicators of the eight New Zealand universities have been selected and summarised in Table 2. It is important to note that consistent data on New Zealand higher education institutions are extremely difficult to locate, and that the absence of a single reliable source for indicators for individual institutions limits any form of in-depth comparative analysis.

For each indicator of Table 2 the eight universities have been ranked from 1 to 8, where 1 represents the largest and 8 the smallest value for each indicator, with the exception of the student to staff ratio, where 1 represents the university with the smallest ratio, and 8 the university with the largest ratio of students to academic staff. There is no intention that the rankings have a qualitative dimension, although this may be inferred for some of the indicators.

Significantly, there is no clear and distinctive pattern of university groupings that emerges from this analysis. Certainly, on a basis of the indicators used, it is not easy to categorise the New Zealand universities into the three broad groupings of "limestones", "regionals" and "unitechs" that were outlined from a general system perspective. It must be accepted that these indicators are a somewhat arbitrary selection, and a different selection could produce a different pattern of university similarities and differences. What is important about these indicators and the data presented, however, is that they are reasonably accessible, and therefore represent a view of the universities that is easily and consistently available for interpretation.

A potentially more useful presentation of the data presented in Table 2 is possible if the indicators are grouped together to reflect broader characteristics of New Zealand universities. The eleven indicators can be grouped to reflect five broad characteristics of a university that could help identify institutional diversity. Given that these characteristics are broadly analogous to those used by Ashenden and Milligan (1999) in their analysis of Australian universities, it could be argued that these characteristics reflect a student perspective of diversity. These characteristics and the associated indicators are as follows:

Institutional Size: indicated by total EFTS, and total student numbers. Note that these two characteristics do not have a complementary relationship. For example, the University of Auckland has a very large EFTS enrolment (ranked 1) and a large total student enrolment (ranked 2). In contrast, AUT has a relatively small EFTS enrolment (ranked 6) but a high total student enrolment (ranked 3). Both characteristics impact on student perceptions of size of a university.

Learning Environment: indicated by the percentage of part-time students, and the student-to-academic staff ratio. The percentage of part-time

Table 2. **Selected indicators of New Zealand universities**

UNIVERSITY	Total EFTS 1999		Total students Nos. 1999		% PT students 1999		% Maoris students 1999		Student EFTS: ac. staff FTE 1999		Operating revenue per EFTS 1999 NZD		Net surplus as % total revenue 1999		% internat. students 1999		External research income 1999 NZD		% postgrad. EFTS 1999		Docs awarded 1999	
Otago[a]	15 214	3	17 113	4	20	6	6.3	6	14.9	1	17 831	2	3.9	4	5.5	3	48.6m	2	18.6	1	142	1
Canterbury[a]	11 761	5	12 191	7	18	7	5.2	7	19.6	8	11 943	7	4.4	3	3.7	6	12.6m	5	13.6	5	63	3
Auckland[a]	22 113	1	26 985	2	21	5	7.4	5	16.6	3	15 898	3	1.8	6	3.9	5	65.0m	1	17.6	3	39	6
Victoria[a]	11 957	4	14 391	5	28	3	7.7	4	19.6	7	13 364	5	12.2	1	3.1	7	7.7m	6	17.8	2	49	4
Massey[b]	16 749	2	32 041	1	60	1	10.1	2	16.9	4	14 544	4	1.3	8	2.6	8	34.7m	3	n. avail.		69	2
Waikato[b]	10 527	7	12 483	6	26	4	22.0	1	15.9	2	13 177	6	1.5	7	5.1	4	14.6m	4	15.4	4	48	5
Lincoln[b]	3 254	8	3 792	8	18	7	3.6	8	17.1	5	18 881	1	2.6	5	14.8	1	4.0m	7	13.2	6	24	7
AUT[c]	10 983	6	26 319	3	42	2	8.0	3	17.6	6	9 610	8	5.5	2	7.7	2	1.9m	8	2.2	7	0	8

Note: EFTS: Equivalent full-time students.
a) Limestones.
b) Regionals.
c) Unitechs.

Sources: From University of Otago Annual Report 1999 (University of Otago, 2000).
From University of Canterbury Annual Report 1999 (University of Canterbury, 2000).
From University of Auckland Annual Report 1999 (University of Auckland, 2000).
From Victoria University of Wellington Annual Report 1999 (Victoria University of Wellington, 2000).
From Massey University Annual Report 1999 (Massey University, 2000).
From University of Waikato Annual Report 1999 (University of Waikato, 2000).
From Lincoln University Annual Report 1999 (Lincoln University, 2000).
From Lincoln University Annual Report 1999 (Lincoln University, 2000).
From Education Statistics for NZ, 1998 (Ministry of Education, 1999) (% PT students).
From NZVCC Statistical Collection 2000 (NZVCC, 2001) (International students).

students can be used to indicate the extent to which a university is willing to accommodate non-traditional students who are not able or do not wish to study full-time. It therefore provides a broad indication of a university's approach to learning flexibility. The academic staff to student ratio is one of the most frequently misused performance indicators in higher education. It is also inconsistently derived, with universities having different interpretations of what constitutes an academic staff member. Never the less, it may be used to indicate, in a quantifiable way, the extent to which academic staff may be accessible to students, with a lower ratio suggesting greater accessibility. In these ways, both the percentage of part-time students and the student staff ratio may be used to give a general impression of a university's learning environment.

Cultural diversity: indicated by the percentage of Maori students and the percentage of international students. Cultural diversity could be more accurately represented by the inclusion of data reflecting other ethnic groups. However, Maori enrolments on the one hand have special significance to New Zealand as a reflection of commitment to the principles of the Treaty of Waitangi, and international enrolments, on the other, give a general indication of the extent to which other cultures are present on a university campus. It is worth noting yet again that consistent data on students from ethnic groups other than European, Maori and Pacific Island Polynesian are not readily available in university annual reports.

Financial performance: indicated by the operating revenue per EFTS and the net surplus as a percentage of total operating revenue. These two indicators give different and independent perspectives of a university's financial performance. A high operating revenue per EFTS such as that achieved by Lincoln University (ranked 1) contrasts with this university's net surplus as a percentage of total operating revenue (ranked 5). AUT on the other hand, generated the lowest operating income for 1999, but managed the second largest operating surplus as a percentage of total income.

Research performance: indicated by external research income, the percentage of postgraduate students, and the number of doctorates awarded. The characteristics used to reflect overall research performance are not complementary, and each reflects a different aspect of overall research performance. In 1999, for example, the University of Auckland, has a very high external research income* (ranked 1), a fairly high percentage of postgraduate students (ranked 3), but a relatively low number of doctorates awarded (ranked 6). By contrast, Victoria University

* The high external research incomes of the University of Auckland and the University of Otago reflect the presence of Medical Schools in both of those universities.

has a relatively low external research income (ranked 6) but a high percentage of postgraduate students (ranked 2).

Table 3 presents the consolidation of the eleven indicators of Table 2 into the five characteristics outlined above. This has been done by averaging the rankings of the indicators associated with each characteristic. The result of this simple manipulation is a measure of the impact of each characteristic for each university relative to the other universities.

Table 3. **The ranking of New Zealand universities according to five institutional characteristics based on data for the 1999 academic year**

UNIVERSITY CHARACTERISTICS				
INSTITUTIONAL SIZE	LEARNING ENVIRONMENT	CULTURAL DIVERSITY	FINANCIAL PERFORMANCE	RESEARCH PERFORMANCE
Massey	Massey	Waikato	Otago	Otago
Auckland	Waikato	AUT	Victoria	Massey
Otago	Otago	Otago	Lincoln	Auckland
Victoria	Auckland	Lincoln	Auckland	Victoria
AUT	AUT	Massey	AUT	Waikato
Canterbury	Victoria	Auckland	Canterbury	Canterbury
Waikato	Lincoln	Victoria	Massey	Lincoln
Lincoln	Canterbury	Canterbury	Waikato	AUT

Source: Authors.

Note that the data utilised for this summary table represent a snapshot of university performance for 1999 only. While it is reasonable to expect most of these data to be consistent in a relative sense from one year to the next, that may not always be the case. This is particularly true for the characteristic "financial performance", evidenced by the fact that several universities have reported significantly poorer performance during 2000 than in 1999.

The importance of this analysis is not the "league table" ranking of universities but rather their potential to group themselves in a consistent way across the five characteristics. Looking at Table 3, it is possible to say that Otago, Massey and Auckland are larger, research-intensive universities with largely good learning environments. Conversely, Canterbury, Lincoln and AUT are smaller universities characterised by relatively low research performance and restricted learning environments. In between, and less obviously grouped together, are Waikato and Victoria. These groupings of New Zealand's universities are somewhat different from those previously described using historical data.

A third approach to analysing the differences between New Zealand's universities is to consider their positioning statements. With this in mind, the missions and values statements of the eight New Zealand universities have

been analysed. The analysis is based on the identification and comparison of key words and phrases from each institution's positioning statement. The underlying assumption is that institutions which have the same or very similar sets of key words and phrases in their positioning statements are likely to be similar kinds of institutions. The converse of this, that institutions which do not have the same range of key words and phrases must be different from one another, is a less reliable assumption, for the reasons outlined below.

First, there is a wide variation in the style and volume of statements written by each university about its position and direction. The universities do not all use the same names for these statements, and it therefore becomes a matter of judgement to decide what to include in the analysis and what to exclude. Only a few universities have a formal values statement, so the values of each university have been extracted from positioning statements wherever they occur. Some statements are succinct and brief, and contain only a few key words that can be extracted for analysis. At an extreme, Massey University does not refer to values at all in its brief published positioning statement. Others are comprehensive and sometimes circumlocutory, and contain a large number of key words and phrases.

Most universities make direct reference to core characteristics such as "knowledge and understanding", "teaching and learning", "research", "scholarship" and "service" as being central to their purposes. It would therefore be reasonable to view these as core characteristics of a university, even though some of these characteristics are not directly referred to by some universities at all. For example, the University of Canterbury and the University of Waikato make no specific reference to "teaching and learning" in their positioning statements, but these are never the less central activities of these institutions.

By contrast, references to "vocational and community education", to "consultancy" as a form of research, and to "service to the professions and trades" are made only by AUT, specific reference to "natural resources" and "sustainability" are made only by Lincoln, and Massey is the only university to emphasise "extramural teaching and learning". This suggests that these universities may be distinctive in each of those particular respects. Clear points of distinction for the other universities are less obvious, and they appear to have more commonality than difference. Variation from one to another is more likely to be a reflection of the inconsistency of the material analysed than it is a reflection of genuine differences between these universities.

When it comes to the values expressed by the universities in their positioning statements a similar pattern arises. Most of the universities make specific reference to "quality and excellence", four refer to "international standing", and a different four to the "Treaty of Waitangi". For the other values, "limestones" such as Canterbury talk of "collegiality", "social commentary",

"ethics", "academic freedom" and "intellectual rigour", while Waikato, Lincoln and AUT refer to "accessibility", "innovation" and "people focus". Again it must be stressed that the absence of a value in the material analysed does not necessarily mean that the university does not hold that particular value, only that it does not overtly state that it does.

Overall, apart from some obvious specialities, the positioning statements of the eight universities in New Zealand show that these institutions have far more in common than they do points of distinction. The implication is that they all conform, in terms of an overall mission, to those characteristics that are generally recognised as characteristics of a university. Only AUT with its overt vocational focus appears to stand apart to any extent.

Summary

The critical issue in considering these analyses and grouping of New Zealand universities is whether the differences between them are more significant than the similarities, and further, whether it is the differences or the similarities that are increasing with time. The answer to these questions becomes one of perspective.

From a general system perspective, there has been a clear change in diversity over the three broad periods of pre-war *status quo*, 1960-1980 expansion, and the 1990s realignment (Codling, 2001). Before 1990 and the very significant legislative change of that time, New Zealand higher education was in a state of rapid growth in three very well defined and separated sectors, namely the universities, the polytechnics and the colleges of education. The boundaries between each of these sectors were sharp, and they formed a higher education system clearly differentiated by government policy and regulation. Within each sector, however, institutional diversity was very limited.

The colleges of education continued to concentrate on pre-service primary and secondary teacher education. The universities were all developing along the traditional lines of a research-led university, and there was a sameness about the programme profiles in each of them, with the exception of a small amount of government control over the establishment of specialist, high-cost programmes such as medicine, dentistry and veterinary science. The polytechnics were also essentially similar, largely because of the centralised curriculum development of that time, and the absence of virtually any financial independence or academic autonomy.

The contrast between the universities and the polytechnics, as the principal providers of post-secondary education, was particularly evident. The universities had a history and tradition of academic excellence, of teaching the elite (both socially and academically), of academic freedom, of increasing research intensity, and from the early 1960s, of increasing institutional and

financial autonomy. By contrast, the polytechnics had an equally long history, but one marked by the education and training of the less academically able, by centralised curriculum control, by the absence of research, and by very little institutional and financial independence.

The 1990 legislation, and the huge ideological shift towards a market economy, changed all of that. It put the universities and polytechnics on to the same playing field, although this field was sharply tilted in favour of the universities because of their traditional status in New Zealand higher education. Two key components of the 1990 legislation dominated events in the 1990s, first, the definitions of a university, a polytechnic, a college of education and *wananga* contained in Section 162(4), and second, the change allowing polytechnics to offer degrees.

The new definitions of a university, a polytechnic, a college of education and a wananga did, in theory, provide for a clear distinction between each of these four types of institution. In practice, however, they did just the opposite. The wording of Section 162, "that universities have all of the following characteristics, and other tertiary institutions have one or more of those characteristics" allows each type of institution to have exactly the same characteristics as a university. For some polytechnics, being allowed to offer degrees made this inevitable.

There is no doubt, therefore, that institutional convergence has occurred as these polytechnics have taken on more and more of the characteristics of universities throughout the 1990s. For polytechnics such as AIT and UNITEC, the transition has been rapid. Both institutions offered their first degrees in 1992, and eight years later both had more than 50% of their students enrolled in degree programmes. With the move to degrees came the complementary development of a research capability and culture for these institutions. It could be argued, then, that these institutions became, in the words of Section 162, "primarily concerned with more advanced learning, the principal aim being to develop intellectual independence" and thus more and more like the universities from which they were distinguished in the legislation.

At the same time as some polytechnics were becoming more like universities, it could also be said that many universities were picking up many of the more applied aspects of education formerly considered the domain of the polytechnics. As the 1990s progressed, most New Zealand universities have become more entrepreneurial, have engaged more directly with industry, and have offered more vocational qualifications. Nowhere is that more evident than in Auckland, where both Massey University and the University of Auckland offer an increasing number of applied programmes in direct competition with the polytechnics and, in the case of teacher education, with the college of education.

It is important to recognise that convergence between institutions traditionally called universities and institutions traditionally called polytechnics has occurred only for a few polytechnics. The vast majority of New Zealand's polytechnics have continued to offer vocational certificate and diploma programmes that meet the needs of their regions. Many have established formal articulation arrangements with a university. In this sense they are closer to the American community college model.

Amongst the universities, the evaluation of institutional diversity is not straightforward. Whether from the general system perspective, looking at broad characteristics, or from a student perspective looking at characteristics based on readily available performance indicators, or from a government perspective looking at positioning statements and values, there is no clear pattern of institutional differences that allows the universities to be distinguished with confidence or consistency. Overall, there is a prevailing impression that New Zealand universities are characterised more by what they have in common than what distinguishes them. Only with the entry of AUT as a new university with a distinctive mission has there been any significant shift in the traditional and conservative pattern of university education, and even AUT has been forced to converge significantly with this traditional model to gain funding parity.

Policy implications

The issue of diversity is probably one of the most important ones to face many higher education systems over the next couple of decades. Earlier this year in Australia, for example, the government commenced a review of higher education which appears to strongly advocate the maintenance of a few well-funded research universities, while "relegating" most of the nation's higher education institutions to a teaching only function.

At a policy level, the issue of diversity is often closely tied to how and at what level institutions are funded. Of course, this also relates to the ideological basis on which higher education systems are planned and co-ordinated. In both Australia and New Zealand, the dominant ideology over the last decade or so has been market steering.

With respect to diversity, past Australian experience has been similar to that in New Zealand in that it appears that uniform policy probably stimulates a degree of uniformity in institutional response, as does market competition where institutions are competing for the same clientele, such as full-fee paying overseas students.

There is a growing body of evidence to suggest that formally regulated and separate policy environments better serve the principles of diversity than market competition. Compared to legislative control, market discipline can be

far more ubiquitous and unvarying. The current New Zealand government seems to have accepted this proposition by seeking to reinforce the boundaries between universities and polytechnics. However in Australia, the government seems to believe that further deregulation can address the past sins of institutional uniformity – an even stronger dose of market competition should do the job, it is believed.

It will be most interesting to observe how these two cases evolve. Will Australia actually be able to achieve the desired level of institutional diversity without erecting boundaries between institutional types? Will the boundaries between universities and polytechnics in New Zealand be able to survive the assault of institutional ambition? Not only will students of higher education policy be interested in the answer to these questions, but also the multiplicity of higher education's various stakeholders, including future students.

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New Mechanisms of Incentives and Accountability for Higher Education Institutions : Linking the Regional, National and Global Dimensions

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This article aims to examine the new mechanisms of accountability and incentives for higher education institutions (HEIs) that are emerging at regional level in relation to the development of knowledge-based economies and new structures of governance. A new landscape of higher education emerging in a particular region in the United Kingdom will be analysed, and the influence of multiple levels of public policy instruments will be considered, including national and European policy initiatives as well as the influence of the globalisation of the economy. The seeks a new conceptualisation of "accountability" in a decentralised national framework in light of the formation of "localised learning systems" in the global learning society. The different roles and functions ascribed to universities at various geographical levels, namely, local, regional, national and international, are becoming highly complex, and universities will need to share more effectively some of their key functions with other institutions in society. Incentive mechanisms are needed to create links between "entrepreneurial universities" and other stakeholders in society within a strategic framework.

Introduction

The aim of this article is to shed light on changing identities and the emergence of new mechanisms of incentives and accountability in higher education institutions, influenced by multiple levels of public policy instruments. Burton Clark, in *Creating Entrepreneurial Universities* (1998) posited a growing imbalance between demands made upon universities and their capacity to respond if they remain in their traditional form. This theme was taken up at the IMHE General Conference in 2000. This aims to incorporate the new geography that is taking shape in relation to the new forms of development of knowledge and governance structure.

One major transformation in society involves the transition from industrial economies to knowledge-based economies. Knowledge-based economies are characterised by high levels of investment in education, training, research and development, software and information systems (Foray, 2001). The rapid development of knowledge and a high level of innovation leads to challenges in relation to education and training, the labour market and the organisational structure of businesses and markets. It is important to note that not all countries or regions have equal access to knowledge-based economies, and that even in the most developed countries there are many social groups and geographical areas that are still excluded from access to "knowledge". It is therefore necessary to analyse the structure and functioning of the emerging new economies in society at large as they may embody new opportunities particularly for those who have been disadvantaged so far.

Higher educational institutions (HEIs) are not exempt from these societal transitions. It is imperative to examine the questions relating to the new skills needed for the integration of the knowledge-based economies in relation to the organisation of HEIs. System wide change in higher education is under way. Massification and diversification in the higher education sector, new models of research management and new forms of knowledge production (Gibbons *et al*., 1994), problems of intellectual property and the privatisation of knowledge, are only a few.

There are various paths to reform, either by national bodies or by universities themselves. The relationship between institutions of higher education and national governments has been affected by a number of developments in society at large. New mechanisms of accountability to the

state, in the form of new central "quality control" agencies and new assessment exercises seem to be emerging in many of the OECD countries. Institutional managers of universities, as well as policy makers, have to become organisational analysts to look for measures that change core structures and overall cultures of institutions as part of a larger policy environment.

This article attempts to examine the new mechanisms of accountability and incentives for HEIs that are emerging at regional level in relation to the development of knowledge-based economies and new structures of governance. Some authors argue, from the perspective of regional development, that universities can play a key role in the building of "social capital" (Coleman, 1988; Putman, 1995; see also OECD 2001a) and act as catalysts in networking. Building on these arguments, I will examine a new landscape of higher education emerging in one region in the United Kingdom, influenced by national and European policy instruments as well as the globalising forces of the economy.

The following questions are addressed in the article:

1. In what ways can universities serve as "knowledge providers" in the local innovation and learning processes? What kind of incentive mechanisms can be constructed?
2. How can the accountability of universities be constructed at regional level?
3. How can this be compatible with universities' national and international missions/aspirations?

The first part of this article gives a brief historical overview of changing notions of the accountability of higher education to society, which is closely interlinked to the assessment and autonomy of institutions. Secondly, I shall look at shifts in funding patterns, and the emergence of the dynamic forces of external influences on HEIs, which can be alternatives to central governmental regulation. This is where Clark's term, "entrepreneurial universities" is relevant, focusing on the change of universities adapting to "environmental demand" rather than emphasising control by the state. Thirdly, I will focus on the new mechanisms of higher education now emerging at regional level with new forms of accountability and incentives, which I have observed during my ongoing PhD research conducted in the United Kingdom since October 2000. The article concludes by highlighting the new opportunities open for HEIs – in the new geography of knowledge production and governance structure.

Roots of accountability

The conceptualisation of accountability is intrinsically connected to the relationship between the state and higher education. There are different views as to what constitutes the notion of accountability. Several authors have provided alternative views on this notion using different models of the relationship between the state and higher education, summarised by Brennan and Shah in a recent publication (Brennan and Shah, 2000, p. 33). Aper (1993), from a North American perspective, outlines the changing emphasis given to the notion of accountability, leading to the emergence of a new concept in the 1980s. In the late 1960s and early 1970s, accountability was concerned largely with cost studies and fiscal auditing. Through the 1970s and into the 1980s, "budgetary accountability" gradually expanded to include "academic accountability", with the emergence of new initiatives intending to measure "student learning" and promoting curricular reform in higher education (Aper, 1993, p. 370). Middlehurst (1995, pp. 78-79), from a United Kingdom perspective, similarly points out that in the 1990s notions of accountability broadened to respond to a wider group of "stakeholders" whereas before, the principal focus of accountability was government as the official sponsor of higher education and proxy for the tax payer.

Rather than viewing the notion of accountability as comprising conflicting values (Becher and Kogan, 1992, pp 169-170), or seeing it as a "counter-balance" to autonomy (Cannon, 2001, pp. 105-106), Middlehurst suggests that three new levels of accountability have been emerging since the 1990s. First, there is accountability to students under the broad banner of "quality". Secondly, there is accountability to industry, or to the economy in a broad sense, including accountability for "the quality of graduates produced and the relevance of their knowledge and skills in a variety of occupational settings"; the accessibility and quality of continuing education and training in higher education; and for the value of the research undertaken in universities. A third level of accountability is to society at large, which includes educating and developing "good citizens" in a civil society (Middlehurst, 1995, pp. 78-79).

The issues of accountability, autonomy and quality assessment, and the relationship between these notions vary in different national, institutional and policy contexts, as is epitomised in the case studies of IMHE institutions (Brennan and Shah, 2000). At national level, however, a set of common factors can be identified. Higher education in many countries has become more diverse, in terms of the institutions, the programmes and the students who enrol. Also, higher education has become more international, involving greater student and staff mobility with a growing necessity for harmonisation of curricula and qualifications across national systems. Internationalisation of university-industry relations has been also developing, for example, by

subsidiaries of multinationals, and by intergovernmental co-operation particularly through the European Community (Drilhon, 1993, p. 97).

Importantly, in many countries, higher education has suffered as a result of cuts in public funding, and the consequent pressures to find alternative sources of funding. Arguably, this reduction in revenue/funding may lead to more institutional autonomy, more competition and more "accountability". It has been suggested that the more governments move in the direction of self-regulation and steering at a distance, the more they will seek to promote the strengthening of managerial authority within institutions as well as improved systems of accountability (Brennan and Shah, 2000, p. 11). Guy Neave's concept of "remote steering" (1995a) regarding the relationships between governments and universities is useful in this regard.

The important role that quality management and assessment have in helping to provide that accountability is more widely accepted now than a few decades ago. However, while it is generally recognised that institutions must be held accountable for the quality of their activities, there is an abundance of different interpretations of *quality*, and also of *relevance*. A variety of stakeholders with diverse and divergent views and interests are involved in determining both the goals of the HEIs and the needs of society (Goedegebuure *et al.*, 1994, pp. 340-341). It is important to recognise that different modes of accountability coexist, reflecting the different interests and values of actors as well as differences in their decision-making processes. Furthermore, along with governmental and institutional interests, there exists an increasingly wide range of external pressures as the role of market competition becomes ever more important.

Responses to "Environmental demand"

If we look at sources of funding, there are three main streams of income for higher education institutions: the relevant government ministry; funds from governmental research councils; and all other sources, grouped together as "third-stream income", which I am going to examine further in relation to the notion of accountability.

While there are many different ways of sub-streaming this third-stream income, Clark (2001) categorises "third-stream income" into three further sub-streams:

Other governmental sources including departments of other levels of government such as departments of regional and city governments.

Private organised sources including industrial firms, professional and civic associations that promote continuing education, and foundations.

University-generated income including endowment and investments, income from campus services, tuition fees, alumni funding, income from IPR.

Various third-stream sources identified above clearly bring "different problems and opportunities and different degrees of expenditure discretion" (Clark, 2001, p. 13), and hence, different forms and conditions of accountability.

Many of these areas of "accountability" are recognisable as "key purposes" of higher education, and there is now strong pressure on universities to clarify and measure their aims, intentions and their claims on the economy and society (Middlehurst, 1995, p. 79).[1] For example, involving firms in the definition of curricula and funding may be one of the ways to strengthen the links between higher education and the labour market, which requires certain forms of accountability. Government departments may offer generous, relatively unearmarked grants, or they may insist on segmental budgeting and tight accounting (Clark, 2001, p. 13).

This may provide a new opportunity for individual institutions to develop entrepreneurial leadership in order to become "a viable, competitive part of the rapidly emerging international world of learning" (Clark, 2001, p. 11). Universities need to develop institutional autonomy if they are to re-invent themselves as "entrepreneurial universities" (Clark, 1998) within the system of the "supervisory state" (Neave, 1995a). In other words, individual HEIs need to develop strategies and instruments appropriate to their own context rather than centrally imposed mechanisms (OECD/IMHE, 1999, p. 28). Policy-makers, in turn, need to create a policy environment in which institutions are allowed to have a good deal of autonomy if this helps them to be dynamic, strategic and able to move fast enough in international competition. The homogenising, unifying policy instruments that would prevent institutions from experimentation and risktaking activities tend to drive overloaded and under-funded universities into being even more conservative and reactive.

Regional, national or global ? Incentives and accountability in HEIs

It is argued that for the university, with fewer public resources available for higher education, there will be a need to place a higher priority on being "responsive to their local and regional communities' needs" and on being "useful to society" in order to receive public support (Shattock, 1997, p. 27). For industry, local authorities and regional development agencies, universities are increasingly seen as "local assets" to be exploited for the benefits for the regional economy. Public agencies concerned with local and regional development have financial resources at their disposal to encourage the "localisation of universities" (Goddard, 1997, p. 24). The growing contribution to universities made by regional and city governments in some nationalised systems has been recognised (Clark, 2001, p. 14).

There is increased government interest in incentive funding. Incentives were thought of as "tools that were integral to the academic community and were used to cater to its internal concern with maintaining academic quality" (Bleiklie, 2001, p. 14). It is since the late 1980s that conspicuous political use of incentive tools started. In England, for example, a shift in the direction of extensive and active use of incentive tools began with the introduction of the Research Assessment Exercises (RAE) since 1985-86. More recently, the funding councils in the United Kingdom have developed a range of initiatives with geographical implications, serving as incentives for HEIs to work with their regions and cities.

The impact of universities on the development of successful localities through the creation of high-tech firms, epitomised by success stories in Silicon Valley with Stanford University, Route 128 with MIT, and Cambridge in the United Kingdom with the university and high-tech clusters has been widely recognised (Saxenian, 1994; SQW, 1988, 2000; Varga, 2001). There has been a shift in the attitudes of governments towards the role of the universities and particularly with regard to their contribution to economic development. In response to this new expectation from governments, universities have themselves conducted research on the economic impact of the institutions in their localities (*e.g.* McNicoll, 1995). These studies have tended to be narrowly focused on the local direct economic impact through multiplier values and employment or/and technology transfer through spin-off companies from the research carried out by the universities. Overall, the approach taken by research communities in this area seems to have been rather "circumstantial" (Patchell and Eastham, 2001, pp. 127-128) and not robust enough in providing policy prescriptions. Nevertheless, since the mid 1990s, interest in universities as part of the regional economy has been flourishing. For example, IMHE conducted a comparative study of this trend, The Response of Higher Education Institutions to Regional Needs (OECD/IMHE, 1999). Association of European Universities (CRE) and the European Commission, and European Roundtable of Industries (ERT) conducted a study on "the dialogue of universities with their stakeholders" comparing experiences of different regions of Europe (1998).

There seems to be a paradox about the role of the universities in regional innovation strategies. The assumption is made in much of the literature on innovation and technological change that universities are part of the regional innovation infrastructure (Cooke *et al.*, 2000, p. 18; Varga, 2000, p. 141). Nevertheless, in practice, universities are difficult to co-ordinate as part of a regional strategy, partly due to their status as "autonomous institutions with allegiance to multiple territories" rather than to specific regions as such (Waters and Lawton Smith, 2002, p. 636). The definition of what a region is could be complex and problematic.

As Chatterton and Goddard (2000, pp. 476-478) argue, the issue of "territoriality" is not so straightforward for universities. For some institutions, to become "a regional institution of higher education" has been seen as "a source of stigma" (Duke, 1999, p. 23). On the contrary, regional partnership can be a route to international research standing (Duke, 2002, p. 34). There is a demand for universities to be both regional and international organisations in the globalised learning economy, while many of the legislative decisions about higher education are made at national level. Universities find themselves now having to pay attention to "many more political centres" than before, *e.g.* research grants and teaching accreditation from both the European, state and the regional level (Paterson, 2001, p. 150). The different roles and functions ascribed to the university at various geographical levels are becoming highly complex, and the university will need to share more effectively some of its key functions with other institutions in society (Meek, 2000, p. 23).

Lagendijk and Cornford illustrate an example of a university that has embraced the concept of "Learning Region" as institutional strategic discourse. In the opening speech of the academic year 1998-1999, the Vice Chancellor of the University of Maastricht used the concept of a "Learning Region" not only to promote the regional embedding of the university, but also explicitly as "a way to create more independence from the central state", presenting the "Learning Region" as a key strategic response to the continuous budget cuts imposed upon universities (Lagendijk and Cornford, 2000, p. 217).

Duke (2002) proposes the concept of the "Learning University", as "open systems, building partnerships and sharing networks in and beyond their localities, and playing leading roles in the creation of learning regions and in new modes of knowledge creation". He argues that the region is a vital focus and locale for the learning university to recreate its destiny, and that this proposition does not contradict the growth of distance learning or development of virtual universities. Allegedly, more universities will become "both more local and more global" (Duke, 2002, p. 34) or become "a bridgehead to the global community" (Shattock, 1999). This statement has to be matched with the solid evidence of the university's performance, in terms of its core business, namely, teaching and research, and its external relations, described as "the third leg activities".

Devolution and accountability of HEIs

The rest of the will examine a particular form of incentives and accountability which is emerging in a new geography of the HE landscape, shedding light on the new institutional identities and mechanism of HE governance at regional level. This has to be put in perspective with the wider political and administrative transformation taking place in many of the OECD

countries. Regions have entered the stage of the debate on economic development and policy-making as a result of devolution of national economic power and the emergence of regional governments and development agencies. Devolution has to be seen as "a process that requires multi-level partnership and networking" (OECD, 2001c, p. 11) rather than as a simple transfer of power from central to city and region level.

Regional governance and the accountability of universities' knowledge production within it, are certain areas which have scarcely been touched upon. It is true, though, that the development of an increasingly knowledge-based economy and society has highlighted these new roles for universities at regional level. While regional or local governments may have some influence over universities and public research institutions, the big budgets for investments like universities and scientific research are usually at national or trans-national (European) level (*cf*. Drilhon, 1993, p. 96). National or transnational governments are good at setting frameworks for action but less so at detailed strategy in contexts with significant geographical variation, so "joining up government actions" involving horizontal and vertical governmental relations (Cooke, 2002, p. 8) will be necessary, at transnational level where appropriate. Coordination between national and sub-national governments is crucial. Sub-national governments may develop programmes of individual learning tailored specifically to the needs of the localised economy, which may be impaired where educational policies are determined centrally at national level (OECD, 2001b, p. 25).

The extent to which decentralised and regional authorities contribute to the funding, management, and planning of higher education varies greatly between OECD member countries. Broadly speaking, two main models can be identified (OECD/IMHE, 1999, p. 28):

a) the centralised model in which the national government is the main source of funds; *e.g*. Finland, France, Hungary, Italy, Japan, New Zealand, the United Kingdom;

b) the decentralised model where the regional authorities are the main source of funds; *e.g*. Australia, Canada, Germany, Spain, the United States.

The United States is a particularly good example of a well developed and regulated higher education system at a sub-national level, but this is an exception rather than the rule especially as it has developed localised nature of the funding base of HEIs. In many other national systems of education, many HEI activities which encourage regional engagement are funded outside core HE budgets. It can be argued, therefore, that there need to be incentives and funding programmes at regional level, such as to encourage activity within HEIs which has an explicit regional dimension, and aim towards strengthening co-operative activity within the region (OECD/IMHE, 1999, p. 28).

Spain and Belgium offer striking examples of "a new level of political accountability for higher education" (Paterson, 2001; IMHE, 1999, pp. 138-144). The case of Germany is interesting, where the financial and administrative responsibility of HEIs rests with each Land, rather than with the national government. Nevertheless, in spite of this regional aspect to funding and administration, there are few requirements for German HEIs to engage with the regions, which reflects the Humboldtian tradition of German universities enjoying a significant amount of autonomy.

Within the centralised model, there are variations. Devolution processes influence institutional nature and practices. Moscati (1993) records a devolution movement designed to enhance regional economic development in Italy, and in so doing, increasing the diversification of the universities mission (cited in Davies, 1997). McNay (1994) notes slow processes of devolution taking place in the United Kingdom, with the increasing attention being paid to the role of higher education within the regional economy, and attributes this to the influence of the European regions (McNay, 1994, p. 330). Traditionally highly centralised countries such as France are now taking a more regional approach and one of the main aspects of this policy shift is precisely greater participation by the regions in university development (Drilhon, 1993, p. 96). It is suggested that in France more measures are undertaken than in the United Kingdom to create a unified approach involving local authorities, universities and local bodies (Lawton Smith and De Bernardy, 2001), but this may vary in different localities.

Greffe (2001) argues that to meet the challenges of the global economy in the context of the knowledge economy, it is important to have devolution of training policies and the formation of a local partnership combined with a national regulatory framework which shows both accountability and synergy (Greffe, 2001, pp. 186-194). For example, incentives and measures are needed to strengthen the links between higher education and the local labour market, filling the skill shortage and enhancing the human capital of the region. Neave (1995b, p. 385) points out that it is inadequate to pay exclusive attention to the market as a contrast to state direction to account for this new level of governance. There is allegedly an emergence of "peer-pressure towards shared perceptions of appropriate roles, funding incentives, planning instruments and all manners of incentives to lateral co-operation" (Davies, 1997, p. 30), and this emergence can be seen in all HEIs, other education institutions and other partners in regions in the European Union. This has to be examined empirically, and methodological issues of evaluating policy initiatives and institutional performance at different geographical levels arise in this respect.

National incentives and institutional strategies

According to Goddard and Chatterton (1999, p. 685), one of the most interesting aspects of the "joined-up thinking" of the New Labour government in the United Kingdom is the "links which are being forged between higher education policy and territorial development issues". Further three points can be made in relation to this statement. First, there is a growing number of national initiatives/incentives in recognition of the roles of HEIs in the economy and society at large.[2] Secondly, the dynamics of the wider process of political and administrative devolution taking place in its regions may influence higher education. Thirdly, the significance of European funding in relation to regional development processes involving HEIs as one of the main players has to be recognised. These intersections between policies at different geographical levels influence resources and management mechanisms of HEIs. This section will mainly focus on the interactions between national initiatives/incentives and institutional practices taking the UK higher education sector as an example.

In the United Kingdom, *the Science and Innovation White Paper* in July 2000 and *the Enterprise, Skills and Innovation White Paper* in February 2001 both recognised the crucial role of HEIs in the economy as powerful drivers of innovation and change. The contribution that universities can make to regional development was recognised by the National Committee of Inquiry into Higher Education (the Dearing Report) (NCIHE, 1997). The *White Paper on the future of higher education* published in January 2003 states that the involvement of universities and colleges in regional, social and economic development is critical.

The national initiatives have made substantial impact on the ways HEIs operate in terms of institutional infrastructure, organisational structure, human resources, research management, service provisions, and the educational curriculum, bringing in new stakeholders and influencing the evaluation practices to some extent.[3] Examples of the wide range of provision include technology transfer schemes and licensing, consultancy, business support services, continuing professional development (CPD) and other short courses, access to laboratories, equipment and "know-how" and student projects and placements.[4]

However, there are conflicting interests among HEIs especially in the area of research funding, with differences in the activities of interests between "new" and "old" universities. Although the "binary system" was abandoned in 1992, an assumption has been made about the different roles that the new and the old universities play. The contribution that the *new* universities can make to regional economies was identified as "access to local students", "supporting small and medium sized enterprises (SMEs)" and "meeting regional skill requirements", while the *old* universities regarded their main roles as "attracting

non-local students", or "engaging in research collaboration with industry and technology transfer" (Waters and Lawton Smith, 2002, p. 636). The government encourages institutions to "choose the role which best suits their strengths, with public funding encouraging such choice, by providing incentives for institutions to become more entrepreneurial" (OST, 2002).

The emergence of regional HE landscape

It seems the advent of the government regional offices and the Regional Development Agencies (RDAs) have encouraged all English regions to have higher educational institutions in the map of RDA boundaries. These new geographical groupings of universities reflect the emerging regional partnership arrangements in England (The Universities UK, 2001, p. 24). With these regional trends, McNay suggests "there is need [...] for a new arrangement for governance and democratic accountability" (McNay, 1994, p. 335).

In the West Midlands region in England, there are 13 HEIs (including the Open University) each with a different institutional nature, areas of expertise and strategies. The expectation of HEIs in the region in enhancing the economy and innovation is very high, as is illustrated in several policy documents such as *Regional Innovation Strategy* (RIS) and *Regional Economic Strategy* (RES).[5] However, the degree to which the regional policy aspirations are strategically incorporated into the activities and resources of individual institutions varies significantly. In the West Midlands region, where the history of regional collaboration among HEIs is relatively short, the dialogue and sharing of expertise among HEIs within the region have only started. Mechanisms of co-operation among HEIs, and HEIs and other regional stakeholders have been created notably through national funding initiatives such as Higher Education Reach-out to Business and the Community Fund (HEROBC), Higher Education Innovation Fund (HEIF), Higher Education Active Community Fund (HEACF), the Science Enterprise Challenge, and the University Challenge. Considerable resources have been made available through European programmes in support of regional development, and through vocational training initiatives, and RTD programmes, many of which, in fact, involve universities.[6]

There are many things happening with universities as regional players. Nevertheless, there are very many different initiatives and programmes taking place separately for a limited duration with limited geographical target areas, and these are often not so well co-ordinated and therefore not sustainable in the long term. Efforts are being made at regional level to map out these different HE initiatives together, including regional innovation and entrepreneurial schemes, student placement schemes (*e.g.* TCS, KITTS, STEP) and other funding opportunities for collaboration between industry and

academia, and to integrate them for the benefit of potential users and stakeholders. These may include students, businesses, local authorities, local communities as well as the university researchers and staff themselves.

However, when it comes to institutional collaboration at regional level between HEIs, there seem to be many barriers to overcome. At institutional level, each institution and even each HEI activity within institutions have different strategic emphasis on the regional agenda, which makes it difficult to construct a single framework. Overall, the national system of higher education in the United Kingdom has made institutions compete, rather than collaborate. It is difficult for HEIs to collaborate regionally or inter-regionally while they compete for student numbers and widening participation, research grants, and for provision for businesses. Furthermore, there are wider tensions between the interests of national and regional governance systems (Charles and Benneworth, 2001).

How to create a recipe (incentives and accountability) for HEIs

From a point of view of the conference theme, "incentives and accountability" in higher education, the question whether there is a mechanism of incentives and accountability at regional level is a challenging one. National incentive aimed at encouraging institutions to collaborate regionally have worked, in-so-far as these institutions have made collaborative bids and established regional/inter-regional consortia in order to meet the needs of a specific funding scheme. Under HEROBC and HEIF funding, new posts have been created in expectation of functioning as "boundary spinners" or "animateurs" within/between different university departments, institutions and sectors. These functions have had to be fully integrated into the organisational mechanism/culture of HEIs. Many people also mention the pressures that university academics are facing. For HEIs the issue of individual incentives for academic staff to engage in "third-stream" activities seems to be one of the most difficult tasks to deal with. Strengthening performance-based financial incentives may be an example.

At regional level, the notion of the accountability of higher education can serve as a test whether, in a devolved structure of education and training, the joined-up mechanism functions in practice. There is as yet no regional elected government in England in the sense of political accountability. In terms of higher education's accountability to the economy and society, "the region" provides a potentially promising but a highly challenging framework. Universities' accountability to the regions involves all three levels of accountability that Middlehurst (1995) has shown, namely, accountability to "students", the "economy" and "society".[7] At the regional level, emphasis seems to be made on serving the "economy" and "society", rather than needs of students.

Financially, there will be more funding circulated through RDAs following the introduction of "Single Pot" funding in 2002.[8] However, in light of the devolution of training and education, the concern of accountability is not about devolution in terms of setting up separate funding mechanisms, but is, rather, at least for now, about strengthening regional machinery and ability of regional players. It may provide an opportunity to have real regional and social prosperity by integrating social and human capital development.

For HEIs, having clear institutional purposes in relation to their regional stakeholders is the way to start. Policy makers, both national, sub-national and transnational levels, need to consider how to initiate learning processes at both individual and collective level. Interests and resources of various actors have to be drawn into both localised and internationalised system of learning, forging links between the processes of globalisation and devolution, and national and local delivery mechanisms, with better regulation systems.

Concluding recipes for universities: How can we create international, national and regional dishes, and keep the business going?

There is no ready-made *recipe* as such with which to answer this question. Each institution can decide what kind of *menus* (identities) it will create as its speciality. Universities can offer a three-course set menu, comprising of a *local* starter, *institutional and/or national* main dish, and an *internationalisation* dish as a dessert. Instead of a *set menu*, it could, for example, offer a *buffet* with more human mobility among institutions and between various career paths with multicultural options. In any case, institutions have to recruit a *top chef* who can create good *recipes* rather than only manage the organisation; good *cooks* who can find good ingredients (knowledge) and cook them well (carry out research), and need good *staff* who know how to serve the dishes to the customers (teach, consult and apply), and even spin-out. Needless to say, to satisfy the good customers with good "quality" service is always the key for a successful business, not only making the accounts balance but also helping to meet the needs of society internationally, nationally and locally.

Notes

1. According to a study conducted for HEFCE, *Better Accountability for Higher Education*, the annual cost of what is referred to as the "accountability burden" on HEIs is estimated as £ 250 m. Better Regulation Task Force, (2002) *Higher Education: Easing the Burden* (*www.cabinet-office.gov.uk/regulation/taskforce/2002/HigherEducation.pdf* access date 12/09/02).
2. In 1999, the Higher Education Funding Council for England (HEFCE), in partnership with other bodies, initiated a new "third-stream" of funding, complementing the

Council's existing grant for teaching and research. The objective was to reward and encourage HEIs to enhance their interaction with business, industry and the public services and in so doing contribute to economic growth and competitiveness especially in the HEIs' home regions. The scheme was originally called the "Higher Education Reach-out to Business and the Community Fund (HEROBC)" (*www.hefce.ac.uk/Reachout/herobc.htm* access date 22/07/02), but there is now a funding stream in this same area with the title "Higher Education Innovation Fund (HEIF)". There are other measures sponsored and co-ordinated by different bodies. For example, in the areas that are eligible for assistance from European Structural Funds, the Government Offices which control these funds have acquired a major lever over universities (Goddard, 1997, p 24). In 1999, the then Department for Education and Employment (DfEE) financed the Higher Education Regional Development fund (HERD), with the aim of increasing the contribution of higher education to regional competitiveness by developing its responsiveness to local or regional employment markets, fostering partnerships between HE, employers, and other organisations which seek to enhance the region's human capital (*www.dfes.gov.uk/dfee/heqe/herdintr.htm* access date 13/02/03). There are also a range of skill-based local schemes concerned with the employability and retention of graduates in the local area, formerly the remit of Training and Enterprise Councils (TECs), now replaced by Learning and Skills Councils (LSCs).

3. It is important to note that in the first round of HEROBC funding, each institutional need was relatively respected and the amount of money allocated to institutions varied significantly, resulting in different levels of institutional resources and their impact on the regions. In the later rounds of HEROBC, more regional or inter-regional collective bids were made, which was encouraged by the funding council, making substantial contributions to the creation of a regional collaborative mechanism of higher education. It is intended that HEROBC/HEIF is to become a permanent third stream of funding, which will influence the operation of HEIs substantially although it is still a small proportion of the total public funding available to universities.
4. Furthermore, there are separate measures sponsored by the Department of Trade and Industry (DTI), which primarily focus on the contribution of universities to the technological transfer. "The Science Enterprise Challenge" is a government strategy to encourage the transfer of science and technology innovation in higher education to the business sector. Several Science Enterprise Centres form consortia of regional universities with support from Regional Development Agencies (RDAs), providing various provisions including university-based entrepreneurship education.
5. The West Midlands Regional Innovation Strategy (RIS) project was commenced in September 1996. The strategy has been adopted and endorsed by the newly established RDA, Advantage West Midlands, and is implemented by the RDA in partnership with all the key players in the region. The "regional system" of HEIs and public research institutes did not exist until the mechanisms set up by RIS came to function in late 1990s. Local "innovation support organisations" including university science parks (see Shattock, 1999), and sub-regional initiatives encouraging academic-industry collaboration, have been re-established as regional schemes with supports from RDA. There are sub-regional regeneration schemes with universities as lead organisations, which are expected to develop into "high-tech corridors" as part of the regional strategies.
6. For example, Innovation Relay Centre (IRC) was set up within the European Commission's Innovation/SMEs Programme. Some of the programmes implemented under European Structural Funds are taking shape into some network structure involving regional HEIs.

7. HEFCE (2002) published "Evaluating the regional contribution of an HEI: A benchmarking approach", which aims at assessing the contributions HEIs are making to the economic and social development of their region (*www.hefce.ac.uk/pubs/hefce/2002/02%5F23/02%5F23summary.doc* access date 13/02/03).
8. HM Treasury (2002) Spending review, 15 July 2002 "New Resources and New Responsibilities for RDAs" (*www.hm-treasury.gov.uk/spending_review/spend_sr02/press/spend_sr02_pressregional.cfm* access date 13/02/03).

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A Power Perspective on Programme Reduction

by

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In the beginning of the 1990s, Dutch government and representatives of employers' organisations have urged the higher professional education sector (HBO) to restructure the supply of the programmes in the sub-sectors of HBO. The sub-sectors were challenged to cut back the number of study programmes to increase the efficiency of the supply. A theoretical framework based on resource dependence and network analysis is proposed to explain why different sub-sectors have reacted differently to the pressure to reduce the pressure. An empirical analysis is carried out for four sub-sectors: agriculture, economics, engineering and the social-cultural sector. The hypotheses could only partly be confirmed, but the simultaneous effect of government dependence, labour market dependence and sub-sector heterogeneity can be shown. Given the restricted number of cases, suggestions for further research are formulated. At the same time, it is implied to complement the chosen quantitative macro-approach with micro-analyses (case studies) on the emergence and disappearance of study programmes.

Introduction

There is a vast amount of literature on curriculum change in education, varying from "how-to" handbooks to theoretical works on the accomplishment of new knowledge fields in research and education (particularly in the sociology of knowledge, *e.g.* Lemaine *et al.*, 1976, Young, 1999). Within the literature there is, however, hardly attention for explaining either the emergence or disappearance of study programmes in higher education, although there are some interesting case-studies (*e.g.* Karseth, 1995). This paper is an attempt to address the latter issue, both theoretically and empirically. The empirical motive lies in developments in the Dutch higher professional education sector in the 1990s. This sector (part of the binary system of higher education) was urged to restructure, in fact cut down, the supply of programmes at the level of the discipline or professional sub-sector. These sub-sectors did so in various ways, ranging from closing down a considerable amount of programmes, to piecemeal adjustment of the supply. This raises the question whether the variety of responses can be explained. Theoretically, we bear on a theoretical framework that includes power and resource dependence in network positions as a point of departure.

The structure of the paper is as follows. First, we will set the stage by sketching the context in which we should position the policy problem. Second, we will set out the theoretical framework and put forward our expectations concerning the way how different sub-sectors will respond to the pressure to restructure the programmes. Third, we will present the empirical findings. Fourth, we will reflect on the findings.

General developments in Dutch higher professional education

The Dutch higher education system consists of a university sector and a higher professional sector (in Dutch: *hoger beroepsonderwijs*, HBO). Like in many Western European countries a non-university sector was set up in the Netherlands in the 1960s to cope with the massification of higher education, the overcrowding of the universities and specific training demands of society (Teichler, 1988). Gradually, the HBO-sector developed itself as an equal partner to the university sector. This was partly due to the increasing autonomy the institutions for higher professional education received in the 1980s. The institutions used to be part of the legislative framework for secondary education, but in 1986 they became officially part of higher education, which

implied also more substantial and procedural freedom. At about the same time a merger process was set in motion by the government to change the HBO landscape from about 350 small-size, mostly mono-disciplinary institutions to multi-disciplinary institutions of considerable size. Whereas the number of institutions dropped to about 90 in the late 1980s, the merger process continued, leading to about 50 institutions nowadays. The majority of students (nowadays around 63%) enrol four-year programmes at HBO institutions, about 37% of the students enrol four- or five-year programmes at one of the thirteen universities.

The supply of programmes in the HBO sector: the policy context

The supply of programmes of Dutch HBO institutions underwent considerable change in the recent decades. In general, the increasing autonomy of the institutions, the increasing competition between the multidisciplinary institutions (formerly hardly competitive), the growing student numbers and increased diversity of the student body in the HBO sector can be presumed to have urged those responsible for the supply within HBO institutions to broaden the supply of programmes, both regarding the sheer numbers of programmes as well as the changing substance. For instance, the fact that HBO formally belonged to secondary education until 1986 (Huisman, 1997), meant that changes in the curricula as well as the implementation of new programmes were regulated by strict procedures concerning the goals, content and structure of the programmes (*e.g.* objectives of courses, number of hours of lectures and practical work, structure and length of apprenticeship). In practice, the Ministry of Education and Sciences[1] was reluctant to establish new programmes and institutions.

Table 1 gives an overview of the total number of programmes (at all HBO institutions) and the total number of different programmes in selected years. The table shows a steady increase of the number of study programmes (especially around 1990) and a vast increase of unique programmes. The number of programmes only offered by one HBO institution more than doubled in ten years.

Table 1. **Number of (different) programmes in HBO 1983-1992**

	1983	1988	1992
Different programmes	140	175	225
Locations	890	1 011	1 135
Unique programmes	40	50	89

Source: Authors.

At the end of the 1980s and beginning of the 1990s, the vast amount of different programmes and programme labels lead to a political debate (Huisman, 1997). The then Minister of Education and Sciences was confronted with criticism on the growth of the number of study programmes in higher education, in particular in the higher professional education sector, by Parliament. At that time the Minister prepared new legislation which would yield the higher education institutions even more autonomy regarding the supply of programmes. Parliament thought that it would be more appropriate to put a brake on this – in their eyes excessive – growth. Although empirical evidence lacked, some Members of Parliament thought that students – because of the considerable growth of alternative choices – would encounter severe problems in selecting the study programme that fitted their needs and wishes. This selection problem was assumed to create inefficient study behaviour. Parliament forced the Minister to develop policy instruments that would steer developments in the programme supply in the right direction. The Minister installed the Advisory Committee for the Supply of Programmes (ACO) to advise the Minister on whether proposals for new study programme of higher education institutions would not harm the overall efficiency of the supply (Huisman and Jenniskens, 1994).

At the same time that Parliament put pressure on the Minister to implement measures to control the supply of programmes, employers' organisations raised their voice. Using similar arguments as the Members of Parliament, they complained about the lack of transparency in the supply of programmes. It was voiced that employers no longer would know what type of graduates were delivered by the large variety of programmes and what kind of skills and knowledge students acquired. Quite a number of the recently established programmes were considered fashionable and not adjusted to labour market demands. To stress their position, an important employers' organisation maintained that a total number of fifty different programmes would suffice to serve the expectations of the labour market.

Whereas the HBO sector on the one hand was of the opinion that the growth in the supply of programmes was necessary to cope with the fast changing demands, on the other hand the sector was sensitive to the critical voices raised by Parliament and the employers' organisations. After all, the debate was not solely on the supply of programmes, but also related to the efficient spending of public resources. At the level of the disciplines/sub-sectors,[2] committees were established to debate the programme supply and to come up with solutions to increase the efficiency of the programme supply (see *e.g.* committee-Braakman, 1991, committee-Koumans, 1993, committee-Brouwer, 1995). "Aiming for transparency" became the slogan for most of the HBO sub-sectors. All of the committees proposed to reduce the number of programmes in the sub-sectors. Either programmes had to be relabelled,

merged with other programmes, or abolished. Halfway the 1990s, effects of these policies are visible: the number of programmes offered in some HBO sub-sectors dropped, however slowly. What is striking, is the fact that the HBO sub-sectors have reacted differently to the pressure to restructure the supply of programmes, despite the coherent and unidirectional compulsion of the policies. Some sectors followed the policies and policy recommendations by reducing the number of programmes. Other sectors hardly reduced the supply of programmes, some sectors even evinced a strong growth in the number of different programmes. Therefore, we feel challenged to try to explain the different policy outcomes. In the following sections we will elaborate upon the theoretical framework.

Theoretical framework: power and dependence in network relations

The theoretical framework based on resource dependence (and to some extent social exchange theory) and network theory assumes that actors – either individuals, groups and/or organisations – interact in exchange relations with each other to acquire the resources, indispensable for survival and achieving given objectives (see *e.g.* Emerson, 1972a, b; Pfeffer and Salancik, 1978; Mizruchi and Galaskiewicz, 1994; Wasserman and Faust, 1994). There is a straightforward explanation for the existence of many of these exchange relations: individuals and organisations can rarely produce the necessary resources themselves. The behaviour of an actor within the exchange relation or network of exchange relations is determined by its dependency on resources. The less dependent, the more powerful the actor. The (motivational) investment of the actor and the availability of the resources outside the exchange relation fix the level of dependence (and thus the power position) in a specific relation. Furthermore, the structure of the network, the nature of the exchange relations and the institutional context are important parameters for the actor's dependence position and the actor's behaviour.

The actor's dependence or power position in a network is the crucial element of our analysis. In the context of our study, we are interested in the responses of the actors in charge of the study programmes within a certain sub-sector of Dutch higher professional education to the pressure by their environment (government, Parliament, employers' organisations) to improve the efficiency of the programme supply in the sub-sector. Note that the level of analysis is the sub-sector offering study programmes, and not actors providing specific individual study programmes. The theoretical framework would predict that the more powerful (or the less dependent) an actor in the network is, the more the actor is able to resist the political pressures and, consequently, is able to withstand the expectation to reduce the number of programmes in the sub-sector and/or increase the transparency (see also

Manns and March, 1978 for a similar approach to curriculum change in a situation of financial adversity and internal competition). This general hypothesis will be made more specific after we have described and analysed the structure of the exchange network.

The network of exchange relations in the Dutch HBO sector

The dependence relations with respect to the supply of study programmes in Dutch higher education can be broken down. On the one hand there are relations between the suppliers of a specific study programme (to be considered as an actor within the higher education institution) and the government (being the main supplier of resources). On the other hand, there are relations between the suppliers of a specific study programme and employers on the labour market: the suppliers of a study programme "deliver" skilled and knowledgeable graduates to the labour market. In other words, the supplier of a study programme is dependent on the costs (per student) born by the government, and the appreciation of the quality of the "product" both by the government and the employer on the labour market.

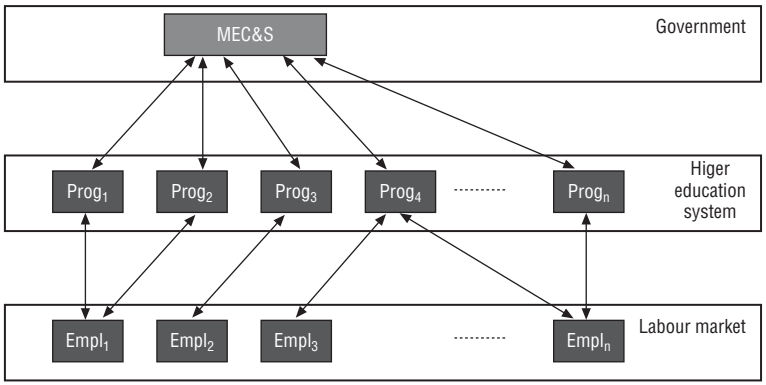
The relations between the Ministry and the suppliers of the study programmes resemble the network structure of a unilateral monopoly (Emerson, 1972b: 76-79). In such a network structure one central actor has exchange relations with many – relatively similar – exchange partners. An important peculiarity of the unilateral monopoly is that the exchange partners in fact compete with each other for the resources (the total governmental budget for higher education is limited), necessary for survival. Exchange relations between suppliers of study programmes and employers emerge where students after graduation are "delivered" to a labour market position. In Figure 1, the network of government, the suppliers of study programmes, and employers on the labour market is depicted.

Please note that the complexity of the exchange relationships is too some extent simplified, however without doing violence to the truth. The exchange relation between study programme and employer(s), for instance, is much more differentiated. The employer does not exchange something in return to the study programme, *i.e.* does not pay the study programme for the graduate. One could even maintain that it is (the quality of) the graduate that is paid for by the employer (in the form of the employee's wages).

Hypotheses and operationalisations

The Ministry of Education, Culture and Science funds HBO institutions on the basis of the enrolments of their study programmes and the type of programmes (*e.g.* engineering programmes are often more expensive than economic programmes). Within the institutions the budget is allocated to

Figure 1. **Exchange relations in Dutch higher professional education**



Source: Authors.

departments and programmes, again based on the number of students enrolled and the tariffs of the type of programme. The first hypothesis – related to the dependency relation of programme suppliers with the government – runs as follows: the more the suppliers of study programmes within a certain sector are dependent on the government, the more these suppliers will be inclined to follow the policies championed by the government. In operational terms, we think that there is a connection between the extent of programme reduction (1987-1997) and the relative decrease of student enrolments. The enrolments to a considerable part determine the budgets of the institutions and consequently the sub-sectors, and therefore, decreases in student numbers imply an increase of the level of dependency. The more a sub-sector is confronted with a (relative) decrease, the more dependent the sector is on the government, the more the sector is inclined to reduce the number of programmes.

In the second hypothesis, the relation between suppliers of study programmes and the related labour market (employers) is the starting-point. Here the theoretical framework posits that the more suppliers of study programmes are dependent on the labour market, the more these suppliers will be inclined to follow the policies proposed or endorsed by (employers on) the labour market. Theoretically, two extreme situations can be conveyed with respect to the relationship between study programme and labour market position. The first situation is a unilateral monopoly between study programme supplier and employer: the employer engages all graduates of the sector. This situation yields much power (less dependency) to the employer, for the study programme suppliers (and their products) are exchangeable. The other extreme concerns the situation in which a unique study programme

supplier delivers its graduates to a large variety of employers. In this unilateral monopoly the power rests with the programme supplier: the variety of employers, jobs and professions prevent the employers (and/or their organisations) to "clench a fist" in relation to the programme supplier. In reality, the exchange relation between programme supplier and employer will be somewhere in between the two extremes. Two indicators clearly reflect relative dependence: 1) the extent to which graduates (of the sector) have labour market opportunities in other businesses; and 2) the extent to which graduates have labour market opportunities in other professions. However, such indicators were not available at the aggregated (sector) level. Therefore we propose the following operationalisations, which come close to the ideal indicators: 1) the extent to which graduates within a sector are of the opinion that their study programme was a requirement for their present job; and 2) the general labour market opportunities for graduates of the particular sub-sector. The more a sub-sector is characterised by direct relations between programme and labour market positions and the fewer the labour market positions for graduates of that sub-sector, the more dependent the sub-sector is on the labour market and the more inclined the sub-sector will follow the policy imperative of the employers.

The third hypothesis relates to the organisation of the suppliers of study programmes in the network of sub-sectors and higher professional education institutions. We expect that the more homogeneous the actors are organised, the less dependent their position is. Similar network positions invite actors to co-operative behaviour, which makes the sector less dependent on both the government and the labour market. Thus, the more homogeneous the sector, the stronger the poser position, the less the suppliers will be inclined to follow the policies championed by the government and (employers on) the labour market. As an operationalisation of the homogeneity of a sector two indicators have been chosen: 1) the number of institutions providing programmes in the sector; 2) the differences in number of mono- and multi-sectoral institutions and number of small (< 1 000 students), medium (1 000-5 000 students) and large (> 5 000 students) size institutions per sector.

Methods

For the empirical part of our study, we analyse the developments in the programme supply in four HBO sectors: agriculture, economics, engineering and the social-cultural sector. For the other three sectors we were not able to gather data or reliable data on the independent variables. The four sectors proved to be divergent cases concerning the growth and/or decline of numbers of programmes in the period 1987-1997. The latter year can be viewed as the end of the relatively turbulent period on the debate on the efficiency of the supply. For each sector the general development in both the policies and the

actual changes in number programmes will be described and analysed. Data on the supply and the HBO institutions were derived from the annual *HBO Almanak*, a sourcebook on HBO institutions and their programmes.

Data on the independent variables were gathered as follows. For the enrolment data we used data from the annual reports of the Ministry of Education, Culture and Sciences. The first indicator regarding the labour market position is taken from the HBO monitor studies of the Research Centre for Education and the Labour Market (ROA, 1993). The second indicator – general labour market position – is based on a study of Loo and Van der Velden (1994). These two indicators are measured in 1990. The situation around 1990 is crucial for the developments regarding the supply a few years later. In addition, we checked whether the indicators were relatively stable over time, which proved to be the case. Regarding the third hypotheses, data were derived from the *HBO Almanak*.

Because of the restricted number of cases (sub-sectors) a full test proved to be impossible. We carried out rank scores analysis to indicate the viability of the hypotheses.

Empirical analysis

The social-cultural sub-sector

A conference in 1987 and a study in 1988 (Van Wieringen, 1988) both touched upon the future of the social-cultural sub-sector. Especially the relationship between the study programmes and the labour market are considered problematic. The lack of a consultation and communication structure between educators and practitioners, and the poor labour market perspectives (including the restricted focus on the public sector) were central elements in the debate. In 1988, the HBO Council – the umbrella organisation of the HBO institutions – set up a committee to formulate recommendations for the development in the sub-sector. The committee (committee-Van der Top, 1989) recommends to reduce the number of study programmes to four. The HBO Council proposes to restructure the programmes to six new programmes. After submitting the proposal to the Minister, in 1992 five different programmes are offered in the sub-sector (Table 2). The growth indicator for the social-cultural sub-sector is: –54%.

The agricultural sub-sector

The agricultural sub-sector has always been a stranger amongst the seven sectors, mainly because the Ministry of Agriculture, Nature Management and Fisheries also has been involved in policy formation and implementation. One of the – still present – consequences of the involvement of the latter is the fact

Table 2. **Programmes social-cultural sub-sector**

	Programmes	Locations	Institutions
1987	13	89	26
1988	13	89	26
1989	13	96	26
1990	13	99	26
1991	7	88	26
1992	5	84	26
1993	5	84	26
1994	5	83	26
1995	6	88	26
1996	6	88	26
1997	6	88	26

Source: Authors.

that the agricultural institutions are mono-disciplinary. The Ministry of Education and Science preferred the agricultural institutions to merge with institutions of other sectors. Despite announcements to restructure the supply of programmes in this sub-sector (Ministry of Education and Science, 1987, 1991; HBO Council, 1996; SHAO, 1996), up to now the sub-sector has resisted the proposals and advice of committees. Also the emerging friction between the programmes and the labour market (*e.g.* the prospect of decreasing student numbers, the increasing need for generally educated graduates) has not led – so far – to a decrease in the supply of programmes. On the contrary, the supply steadily increased in the period 1987-1997 (see Table 3). The growth indicator for the agricultural sub-sector is: +82%.

Table 3. **Programmes in the agricultural sub-sector**

	Programmes	Locations	Institutions
1987	11	19	6
1988	11	20	6
1989	11	21	6
1990	11	21	6
1991	16	32	6
1992	19	35	6
1993	19	37	5
1994	19	38	5
1995	20	39	5
1996	20	35	5
1997	20	35	5

Source: Authors.

The economic sub-sector

The by far largest sector is explicitly mentioned in a 1990 covenant between the Ministry and the HBO Council. The council promised to try to improve the transparency of the supply in both the economic and the engineering sub-sectors. The 1991 committee-Braakman validated the need for a restructuring of the economic sub-sector: the committee recommends bringing the number of programmes back to eight. The HBO Council, after studying the report, recommends to the Ministry to restructure the sector to eighteen programmes. Despite some reorganisations, through time the number of programmes increased slowly in the economic sector (Table 4). The growth indicator is: +43%.

Table 4. **Programmes in the economic sub-sector**

	Programmes	Locations	Institutions
1988	21	126	35
1989	22	133	36
1990	24	141	37
1991	27	151	36
1992	27	169	36
1993	27	164	36
1994	27	169	36
1995	29	185	34
1996	29	171	32
1997	30	171	32

Source: Authors.

The engineering sub-sector

The engineering sub-sector (including nautical programmes) has – like the economic sub-sector – been nominated for restructuring in 1990. Also in this sector, a committee was installed to advise the HBO Council (committee-Koumans, 1993). Some of the proposals of the committee and HBO Council were implemented, after a delay of a few years. At the same time, some new programmes were established (see Table 5 for an overview). The growth indicator for this sector is: +6%.

Table 5. **Programmes in the engineering sub-sector**

	Programmes	Locations	Institutions
1987	36	174	27
1988	36	174	27
1989	36	175	27
1990	36	187	26
1991	39	192	25
1992	42	202	26
1993	42	209	26
1994	43	199	26
1995	40	207	29
1996	41	206	28
1997	38	199	28

Source: Authors.

Testing the hypotheses

The first hypothesis presumed a relation between the development in the enrolments and the extent to which the sector was inclined to follow the expectations of the government. Table 6 gives an overview of the developments in enrolments in the four sub-sectors. For the growth and decline data we used the change in the relative share of the sub-sectors of the total number of students enrolled in the HBO sector. This implies for example that, despite the actual growth of student numbers in the agricultural sub-sector, the sub-sector lost part of its share of the total number of students. We were inclined to apply the same logic to the change in the supply of programmes (*i.e.* the relative growth or decline in the number of programmes as shares of the total supply). This turned out to be redundant for the total number of programmes in 1987 and 1997 hardly differed (175 *versus* 174 programmes).

Table 6. **Students enrolment change and programme supply change 1988-1997**

	Students 1988	Students 1997	Relative growth student numbers	Relative growth Programme supply
Economics	48 600	84 600	39,5% (1)	43% (2)
Agriculture	8 300	9 200	–10,6% (3)	82% (1)
Engineering	26 300	39 200	19,5% (2)	6% (3)
Social-cultural	46 900	52 000	–11,3% (4)	–54% (4)

Source: Authors.

The expectation that sector confronted with a – relative larger – decrease of student numbers (the agricultural and social-cultural sub-sector) would

carry through the largest reduction cannot be maintained. Particularly, the agricultural sector is an outlier: confronted with a considerable decrease of the share of the student numbers, the sub-sector added the most programmes. The rising sectors with respect to student numbers (economics and engineering) experienced average growth of their supply. The results are not in line with our hypothesis.

The second hypothesis related to the dependency relations between suppliers of study programmes and the labour market. In Table 7, the indicators for dependency on the labour market are mentioned.

Table 7. **Level of dependency on the labour market per sub-sector**

	I	II	IIa	IIIa	IIIb	IV	Relative growth supply
Economics	.69-.95	.87-.95	21% (1)	74% (1)	70% (1)	3 (1)	43% (2)
Agriculture	.89	.95	13% (2)	79% (2)	75% (2)	6 (2)	82% (1)
Engineering	.45-.95	.71-.96	10% (3)	90% (4)	82% (3)	10 (3)	6% (3)
Social-cultural	.88	.85	8% (4)	84% (3)	86% (4)	11 (4)	–54% (4)

Sources: Indicator I: labour market opportunities in other businesses per sector, average 1990-1993 (source: ROA, 1993); Indicator II: labour market opportunities in other professions per sector, average 1990-1993 (source: ROA, 1993); Indicator IIa: labour market opportunities per sector, average 1991-1992 (source: Loo and Van der Velden, 1994); Indicator IIIa: % respondents that is of the opinion that the absolved study programme is required for the present job (source: HBO-Monitor 1996); Indicator IIIb: % respondents that is of the opinion that the absolved study programme is required for the present job, average 1991-1995 (source: HBO Monitor 1996); Indicator IV: aggregated rank score of IIa, IIIa and IIIb.

The last two columns of the table show that the dependency on the labour market is a fairly good predictor of changes in the supply of programmes per sector. There is almost a perfect correlation between the two variables, except for the positions of the economics and agricultural sector (these should have been interchanged).

The third hypothesis formulated a relationship between the level of homogeneity of the sector and the changes in the supply of programmes: the more heterogeneous the sector, the more the supply of programmes would be reduced. Table 8 gives an overview of the results.

The empirical relation between the level of homogeneity and the relative change in the supply of programmes does not fit our expectations. Especially the position of the economic sector (very heterogeneous, but relative large increase in programmes) and the social-cultural sector (rather homogeneous, but strong reduction of the supply) contradict the hypothesis.

Table 8. **Internal homogeneity per sub-sector (1990)**

	Number institutions	Differences within the sector	Homogeneity	Growth supply of programmes
Economics	37 (1)	9 mono, 27 multi (1) 4 small, 19 medium, 14 large (1)	3 (4)	43% (2)
Agriculture	6 (4)	6 mono (4) 3 small, 3 medium (4)	12 (1)	82% (1)
Engineering	26 (2)	1 mono, 25 multi (3) 1 small, 13 medium, 12 large (2)	7 (3)	6% (3)
Social-cultural	26 (2)	3 mono, 23 multi (2) 2 small, 11 medium, 13 large (2)	6 (2)	–54% (4)

Source: Authors.

Table 9. **Dependency (on government and labour market) and internal homogeneity**

	Rank score Hypothesis I	Rank score Hypothesis II	Rank score Hypothesis III	Sum score	Relative growth supply programmes
Economics	1	1	4	6 (1)	43% (2)
Agriculture	3	2	1	6 (1)	82% (1)
Engineering	2	3	3	8 (3)	6% (3)
Social-cultural	4	4	2	10 (4)	–54% (4)

Source: Authors.

Taking a view of the three hypotheses, some results are in line with the expectations, but overall there is limited support for our expectations. Reflecting on the results, it may be that the separate dependence positions (either on government, the labour market, or related to the heterogeneity of the actors in the network) do not yield sufficient support. It could be that there is a collective impact of the pressures on the sub-sector. Therefore, a final test – in which the three hypotheses are brought together in one – will be carried out: the more the sector is dependent on government and labour market and the more heterogeneous the sector, the larger the reduction in the supply of programmes. Table 9 presents the results.

These results are in line with the expectations concerning the relation between dependency and homogeneity on the one hand (at the sector level) and the relative change in the number of programmes offered per sector.

Conclusions and reflection

We tried to explain why some sub-sectors of the Dutch higher professional education sector were more inclined to respond to the pressures by government and the labour market to restructure the supply of programmes in these sub-sectors. We used data on four of the seven sub-sectors: engineering, economics, agriculture, and the social-cultural sub-sector. These sub-sectors showed various responses from a rather sever cut-backs in the number of programmes (social-cultural sub-sector) to a steady growth of the supply (agriculture sub-sector).

The empirical investigations do not allow for a definite test of the theoretical framework. Nevertheless, the test gives us a first idea of its viability. A combination of resource dependence and network theory seems able to explain that the joint pressure of dependence on government and the labour market and the power position of the sub-sector within the HBO sector have an impact on the extent to which a sub-sector changes the supply of programmes. The larger the dependency on government (relative change in the number of enrolments, indicating the relative level of resources by the government), the larger the dependence on the labour market (labour market opportunities, necessity of the study programme for specific jobs) and the more heterogeneous the sub-sector, the more the sub-sector was inclined to reduce the supply in that sub-sector. Two of the separate hypotheses, however, could not be confirmed by the data, which casts a shadow on the strength of the theoretical framework. On the other hand, we only used four cases (so far).

Despite the need for further research, the preliminary findings seem to indicate that the environment indeed is able to influence the supply of programmes. This is a relevant finding for those involved in higher education policy and management. Many may be of the opinion that particularly internal academic developments (scientific growth, the emergence of new areas of research, cross-disciplinary initiatives) are the most important drivers for the change in the supply of programmes. Such a perspective depicts curriculum change in fact – admittedly a bit exaggerated – as a "supply-driven phenomenon in the ivory tower". The present study has shown that the supply of programmes in a specific sector is also dependent on environmental pressures, specifically from the government and the labour market. In short: it may be reassuring for governments and other stakeholders that higher education institutions are to a considerable extent susceptible to demand-driven incentives.

Notes

1. In the beginning of the 1990s, the Department of Culture moved from the Ministry of Welfare, Health and Culture to the Ministry of Education and Science. The name changed into Ministry of Education, Culture and Sciences.
2. In the HBO sector, the following seven sub-sectors can be distinguished: agriculture, social-cultural, economics, education, engineering, health, and art and music.

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"Leadership" and "Governance" in the Analysis of University Organisations: Two Concepts in Need of De-construction

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This paper is a critical review of the Anglo-Saxon literature since the 1960s on university leadership and governance. The critique draws on a substantial amount of empirical work on operating procedures and governance in French universities. The intention is to show that the issue of university leadership has been analysed using too personalised, disembodied or normative an approach, and that the analysis of university governance has been too piecemeal. The alternative proposed here is a new definition of university governance to reflect its many facets, namely conflict/co-operation between leaders, the interdependence of the many collegial bodies involved in decision-making, and the relations between leaders and representative bodies.

This paper is based on research conducted with the support of the French agency AMUE[1] (for the modernisation of universities and institutions). Soon after it was set up, AMUE commissioned several empirical studies to generate and consolidate its information base on higher education in France. One was a study by the *Centre de Sociologie des Organisations* (centre for the sociology of organisations) taking stock of French university governance. The study was in two empirical parts. In 1998 an initial qualitative study was conducted in four universities, selected as theoretically contrasting cases in terms of size, geographical location and subject mix:

Table 1. **The four universities in the interview-based survey**

	Number of students	Disciplines	Geographical location
UNI 1	36 290	Multi-disciplinary, with the emphasis on law and economics	Paris
UNI 2	18 330	Multi-disciplinary, with the emphasis on exact sciences	Eastern France
UNI 3	14 657	Omnidisciplinary	Central France
UNI 4	20 000	Mono-disciplinary: arts and human sciences	Western France

Source: Author.

250 interviews were conducted with the help of students on the Sociology DEA course at the IEP (Institute of political studies) in Paris. The sample was as follows:

Table 2. **Interview samples in the four universities**

	Total sample		Interview sample for players involved in university management			
	Academic staff	Administrative staff	Executive team members	Deans	Elected representatives	Heads of laboratories
UNI 1	26	28	7	7	17	1
UNI 2	27	29	7	6	20	8
UNI 3	36	29	6	8	17	4
UNI 4	43	32	11	5	20	5
TOTAL	250		149			

Source: Author.

The data were analysed using strategic organisational analysis, a method developed by M. Crozier and E. Friedberg (1977). This initial survey led to a comparative report to AMUE in 1999 (Mignot-Gérard and Musselin, 1999).

The groundwork findings were used to draw up a questionnaire, 5 000 copies of which were sent out to 37 institutions. The 1 660 responses received (approximately 1 100 from academic staff and 560 from administrative staff) were analysed in a report submitted to AMUE in 2000 (Mignot-Gérard and Musselin, 2000).

Introduction

A wide-ranging review of the literature on university governance reveals two complementary research trends. The first, closely related to management science and organisation theory, seeks to define organisational models that characterise higher education institutions. This trend looks at the organisational culture of universities, their strategic management and the process of change. It takes an overarching view of university organisation by looking for causal links between organisational characteristics, leadership styles and typical decision-making processes.

The second trend, akin to sociology and political science, is orientated more towards the analysis of national higher education reforms and their impact on internal patterns of university governance.

This paper intends to show that the literature gives too disembodied or too coherent a view of leadership, and that its investigation of governance systems is too piecemeal. Our research into French universities suggests that leadership is exercised by a variety of different players who will not necessarily co-operate, hence the need to de-construct the far too monolithic picture given in the literature. Second, it calls for a relational, systemic view of governance, *i.e.* an updated view of the interplay of multilateral relations between the various leaders and collegial decision-making bodies. This is usually overlooked in the literature, which focuses on one or two bilateral relationships without investigating the many interactions that go to make up the system.

Blind spots in university organisation theory

This section gives an overview of the international literature on leadership and governance issues, from pioneering research in the 1970s to more recent work.

Views of university leadership that are too disembodied, too coherent or too personalised

Organisational models give a normative, disembodied view of university leadership

The earliest studies on universities, carried out in the 1960s, described their decision-making processes as "collegial". This covered two features, *i.e.* decision-making based on consensus-seeking through long discussions within the community of academic peers; and a community that was able to regulate itself and coordinate its actions without any need for an external hierarchical authority (Goodman, 1962, Millett, 1962).

In reaction to what was deemed to be too smooth a model came the "political" model, which factored conflicts and bargaining into its view of university decision-making processes (Baldridge, 1971). J. Pfeffer and G. Salancik (1974) found political models particularly useful to describe budget allocation decisions in organisations evolving in a context of scarce resources. They showed how faculties benefiting from external support (*e.g.* great scientific reputation, funding from outside partners, privileged relationship with national authorities) were very likely to win internal bargaining processes.

But the political model was in turn criticised for being over-rational. Salancik and Pfeffer found that budget allocation decisions involved an identified, stabilized group of actors (faculties), who were able to mobilize external resources to maximize their individual interests when the specific time came to bargain.

Next came the "anarchy models" ("organized anarchy" for M.D. Cohen and J.G. March, "loosely coupled systems" for K. Weick) which challenged the exaggeratedly linear, over-rational view of universities. In his research on educational organisations, K. Weick developed the concept of "loosely coupled systems" (Weick 1976), which in his view was a more appropriate way of describing them. It meant a lack of co-ordination; the relative absence of regulations; few links between the administrative management and academic staff; a lack of congruence between structure and activity; differences in methods, aims and missions across departments; little interdependency between departments; and a widespread lack of transparency. Along the same lines was the "organised anarchy" metaphor used by Cohen and March following their empirical work on universities (Cohen and March, 1974). This concept covered three broad features found in decision-making: 1) inconsistent and ill-defined goals and preferences; 2) organisational processes and technology are unclear or poorly understood by the members of the organisation; 3) fluid participation in decision-making processes. We shall now see how the "anarchy" school of thought viewed the leadership issue.

"Anarchy models" of university governance: symbolic leadership. Leadership is a central issue in the literature on university organisation models. A recurrent dual question is: to what extent are the leadership styles of presidents influenced by the organisational context in which they operate? In turn, do leaders in universities have enough resources to influence the organisation? The response of Cohen and March was unambiguous, even deterministic: in organised anarchy, leadership was bound to be weak. Their response was also normative, arguing that bureaucratic or political leadership would be inefficient and instead calling for the "leadership of foolishness", a more appropriate style in universities. "[…] a president who attempts to run a system based on consensus or anarchy as though it were a political system will make a mess of it. […] The general point, of course, is that the model one has of the system of governance dictates a presidential style. The appropriateness of the style, however, is determined by the adequacy of the model. Each of our metaphors implicitly prescribes a role for the president of a university" (Cohen and March, 1974). All the characteristics of organised anarchy seriously restrict any leader's scope for action. To some extent Clark (1972), in his study of organisational sagas, defended a similar idea: university leadership was relatively weak, except when new organisations were to be set up, or in times of organisational crisis or uncommon situations.

Research in the 1980s continued to emphasize the "symbolic" aspect of university leadership (Tierney, 1989). Although C. Musselin criticized the use of the organised anarchy concept to describe universities (Musselin 1989), her work on French and German universities (Friedberg and Musselin 1989) drew a similar conclusion: the leadership style of university presidents was moderate, that of a *primus inter pares* more than of a manager. At the same time, R. Birnbaum was developing a "cybernetic" model, clearly related to organised anarchy. His theory was that university leaders had a limited role: because universities were cybernetic organisations, they regulated themselves efficiently and therefore did not need any authority to define and implement specific rules of functioning. "[…] Our colleges and universities are effective, their administration and faculties are well-trained and hard-working, and to exploit the cybernetic tendencies of these institutions to improve them can often be more effective than management muscle, student testing, or fiscal control." (Birnbaum, 1988: 203). Although the cybernetic model was more optimistic in tone than its organised anarchy counterpart, the view of leadership was the same: *i.e.* a university leader was doomed to have little scope for action.

More recently, Middlehurst (1995) concluded that changing leadership in universities was an "up-hill task". Through her empirical study, she identified three main reasons for this assumption: 1) university staff did not understand the long-term consequences of the changes in process; 2) university leaders

lacked moderation (either frowning upon leadership as antipathetic to individual autonomy and collective bureaucracy, or embracing it with crusader-like zeal; 3) too little attention was paid to the learning and training of administrative staff.

Constraints on university leadership are the subject of a wealth of literature, showing that university leadership is "symbolic", or that a leader's role is "to manage meaning, to define and interpret reality, and to use symbols" (Hardy, 1990 p. 199). For J. Rasmussen (2000) the notion of "management" should be opposed to that of "leadership", a more appropriate term for the type of authority found in universities. "Management refers much more to how the management impacts on the daily productive activities and improves the result [...]. When the term leadership is used, it refers to the management activities that are based on values and skills outside the normal administrative techniques of management."

The "anarchy models" forged by pioneering research on universities portrayed leadership as being relatively weak. Yet this notion of symbolic leadership still runs through the latest research.

Emergence of the "entrepreneurial university": a prospective, normative vision of leadership. During the 1990s, however, the radical change marking the university environment (including restrictions on public spending, significant increases in enrolment, differentiation in the student population, globalisation and commodification of higher education, growing involvement of economic players in the internal running of the university) called for leaders with a more managerial profile.

Substantial research, influenced by management theory, argued that the survival of universities in a turbulent environment depended on their ability to develop strategic management, introduce performance measurement, bring down costs, assess the quality of teaching and research, develop partnerships with external stakeholders and, of course, strengthen their leadership. In short, these authors were assessing the chances of universities to move from a traditional form of organisation to a more "entrepreneurial" model (Askling and Kristenssen, 2000; Davies, 2001; McNay, 1995). Their conclusions often took the form of advice for university leaders, warning of the risks of shifting from a collegial to a managerial culture (Currie and Vidovitch, 1998) or encouraging them to make the most of the collegial culture which was the essence of a university. Bayenet *et al.* (2000), for instance, believed that university presidents were doomed to remain symbolic leaders and suggested they took advantage of the situation to delegate the purely administrative and managerial duties to administrative staff in order to give their own position a strategic and political orientation. Similarly, Dill and Sporn (1995) considered that the dominant culture of universities was collegial and that leadership was bound to integrate

academia opinions into institutional decisions: rather than impose their choices on the academic community, they suggested that leaders promote entrepreneurial values to win support.

It was B. Clark (1998) who proposed the fullest, most nuanced analysis in this series of research papers. Drawing on the cases of five universities in different European countries (England, the Netherlands, Scotland, Sweden and Finland), he attempted to modelise the internal process of change in universities towards a more "entrepreneurial" culture. This hinged on a combination of five processes enabling universities to respond faster and more flexibly to changes in their environment, namely the strengthening core; the expanded developmental periphery; the diversified funding base; the stimulated heartland; and the integrated entrepreneurial culture. The process of change in universities was contingent on this combination of five factors and was therefore bound to be incremental (Clark, 1998 p. 145).[2]

Most of the authors cited have the same aim, namely to identify the conditions under which universities move from a traditional to a more entrepreneurial form of organisation. Their research does have the merit of stressing how resistant universities are to a shift into entrepreneurial mode: change in the university environment is not sufficient to trigger significant internal change (rationalisation of research and teaching, stronger leadership, assertion of control over academics, shift away from collegial decision-making). But the main shortcoming of this research is its invariably normative stand: by looking at how university leaders should behave rather than how they actually behave, it gives a prospective, de-contextualised image of leadership, which does not emerge clearly from the contrast between the leader as a "manager" and the leader as a "manager of meaning".

Furthermore, because the research is more interested in process and structure (Becher and Kogan 1992) than in the players involved in university organisation, it fails to map out the contours of leadership. Who are university leaders? What are their intentions, their ideas? What relations do they have with officials at other levels in the organisation?

Some research focuses more specifically on the people who actually hold the post of university leader.

Research on "academic leaders": too vague or too personalised a view of leadership

To complete this review of the literature on university leadership, we shall now look at the research which focuses on the post of university president and analyses trends in academic leadership and the pressures on those leaders.

A number of papers focus on the subjective side of university leadership, i.*e.* how presidents see their mission, policy strategies and learning patterns (*e.g.* Bensimon, 1989 and Chaffee, 1984). Bensimon and Neuman (1990) show how the behaviour of university presidents can vary and give three indicators to measure that variation: target of attention (external *versus* internal), mode of action (initiates *versus* reacts) and relatedness to the institution (connects *versus* distances). They point out that presidents do not have identical views on university governance, take the same approaches, or set the same priorities. Some are closely focused on the internal affairs of their institution, while others put more effort into outreach. They accordingly show how a president's style of leadership is contingent on the setting: in universities where finances are precarious and faculties morale is low, presidents are more reactive and distant from the university. Conversely, when the financial context is sound and faculties morale is high, presidents are initiators and connected to their institution. Bensimon and Neuman thus emphasise the variety of possible styles of leadership.

In a similar perspective, Engwall *et al.* (1999) try to measure the impact of formal structures on the way in which 30 Swedish university presidents envisaged their role. One point they make is that the size and age of the university has an impact on the president's attitude. More specifically, they see a contrast between the larger, older universities and the smaller, newer institutions. Presidents of the former defend their mission as being innovation-oriented, whereas those in the latter place most of the emphasis on their role in controlling the quality of research and teaching. Some presidents accordingly insist on the importance of strategic thinking (positioning the institution to cater for possible changes in enrolment and the competitive environment), whereas others pay more attention to introducing control systems (planning and monitoring the university's activities, monitoring educational and financial performance).

This research shows just how hard it is to define leadership, which combines several disparate factors: the formal structures of the institutions in which leaders operate, their constraints and cognitive resources (including their personal background, experience, personality and management skills), their national policy environment, their social and economic environment and so on. To compound the problem, every leader presumably alternates between bureaucrat and entrepreneur, between an authoritarian and a democratic approach, between transparency and secrecy. In other words, leaders may combine various styles of leadership depending on the constraints and opportunities they perceive.

The second series of research papers on the subjective side of leadership investigates trends in the post of university president in a context of government budget rationalisation and under the impact of the wave of New

Public Management reform sweeping through higher education policy in Britain and northern European countries.

Smith *et al*. (1999), for instance, look at Vice-Chancellors (VCs), the British equivalent of university presidents, and bring together three aspects of the issue, namely the reform of university governance in Britain, the personal background and previous careers of VCs, and their daily lives. The authors emphasise the dual ambiguity of their role. First, there is a tension between administrative leadership and academic leadership, between the need to be more managerial and have more control over the university's work while preserving its identity. Second, VCs must behave like managers but at the same time retain the trust and commitment of their academic staff. The authors conclude that VCs have an extremely difficult role, owing to the need to develop a strategic vision of the university in a context of scarce resources.

Other work looks at the pressures of academic leadership in general. For T. Becher and M. Kogan (1992), academic leaders have multiple roles because they operate within hierarchy and collegium at the same time. "The university vice-president or polytechnic director has thus always been, at one and the same time, required to be a leader but the first among equals within the institution; an entrepreneur with external funders and, sometimes, within the university or polytechnic itself; an administrative service-giver to those who maintain the primary tasks and operations of the institution; and a norm-setter" (Becher and Kogan, 1992, p. 69). Drawing on her work on academic identities in Britain, M. Henkel also stresses that university heads called upon to act as leader rather than *primus inter pares* do not always feel comfortable with this situation and try to combine the two styles, or at least to keep some of the characteristics of a peer when developing more managerial practices: the ambiguities and uncertainty surrounding their objectives and missions, their lack of technical or interpersonal skills for the role, and the type of decisions they are asked to take and impose on their peers do not make their job any easier.

The feature common to all of this research is that it tackles the issue of university leadership from the standpoint of the leader. As part of their research strategy, be it for a comparison of leadership across institutions or a description of how leadership is changing, authors take the standpoint of the people concerned, paying little attention to relations between the academic leader and the other components of university governance.

Conclusion

While their input is significant, the numerous studies that attempt to grasp the issue of university leadership are not fully satisfactory. First, those based on university models offer too normative and prospective a view of university

leaders: we know how they should behave, but not how they behave in reality. The gaps are filled by research into how university leaders see their role. But further information is still required, as some authors focus on the university president alone, although university governance obviously involves more than one leader (president, vice-presidents, registrars, deans and so on), while others focus on university leaders in general, suggesting that all those involved in leadership have the same problems, the same challenges and the same identities. As we shall see, the case of French universities challenges this assumption.

A piecemeal view of university governance

Research that looks in depth at universities is less focused on leadership that on the balance of power among the many players and structures involved in university governance. Over the past decade, several north European countries have conducted a thorough overhaul of their higher education systems. The research reviewed below usually takes as its starting-point higher education reform in various countries, before assessing the impact of that reform on the structures of university governance. As we shall see, each of these papers sheds light on one aspect of university governance (*e.g.* relations between the president, the dean and heads of department, between the president and representative bodies, or between the president and managerial bodies) but always overlooks the other relations that make up the overall "system of governance".

President, deans and departmental heads

In the course of their research on the impact of New Public Management on Norwegian university governance, Bleiklie *et al.* (2000) come to three conclusions: first, deans have been excluded from university boards; second, the boards have gained more power, to the detriment of representative bodies; third, the departments have seen their size and workloads increase and now have more authority. Bauer *et al.* (1999) believe that the 1993 reform of Swedish universities, aimed at decentralisation and a stronger institutional identity for universities, helped to change the way in which university leaders see their mission and role. They also show that one of the unintended repercussions of the reform was to place deans in a particularly strong position of authority, thereby strengthening the centrifugal tendencies of the faculties. To remedy this, university presidents have set up inter-faculty decision-making bodies and negotiate directly with departmental heads.

Executive leadership and deliberative bodies

The work of H. de Boer and J. Huisman (de Boer and Huisman, 1999; de Boer, 2002) on higher education reform in the Netherlands (1997 MUB Act) takes a similar line. They identify three phases in the development of the

power structure in the country's universities. In the 1970s formal powers were given to representative leadership; from 1986 to the mid-1990s, decision-making power was diluted between representative leadership and mixed leadership; the final phase was the shift from mixed to executive leadership: the MUB Act "provides a form of executive leadership, both at the central and faculty levels of universities. The representative councils at the central and the faculty level become advisory bodies rather than governing bodies with their formal powers diminished accordingly" (de Boer and Huisman, 1999).

The conclusions of H. de Boer and J. Huisman on the shift of power away from representative leadership towards executive leadership are in line with all the research on the latest developments in Europe's university systems. In Britain, for instance, M. Kogan and S. Hanney show that Vice-Chancellors no longer see themselves as representing their peers but as university managers in their own right, and that they now wield much of the power, to the detriment of academic boards (Kogan and Hanney, 2000: 190).

Boards and presidential teams

Bargh *et al.* (1996) – cited in Sizer and Cannon (1999) – in their study on governing boards in British universities stress how dependent boards are on university management teams. The authors realized that, while the legislation makes boards the keystone of university governance, it is in fact the Vice-Chancellors and their inner circle that have the greatest scope for action. Similarly, G. Jones in his work on governing boards in Canadian universities looks at relations between the executive authority (president and administrative team) and the governing authority (governing board and senate). The author concludes that the executive authority has the upper hand over the board for two reasons, one being that the executive team has all the information the board requires for its decision-making, and the other that it deals with management on a daily basis. So the conclusion that the boards are dependent on the administrative (or executive) team cuts right through all of this research: boards that are only occasionally involved in university governance find it hard to assert themselves against teams which exercise their authority on an ongoing basis.

Conclusion

The significance of this research lies mainly in its emphasis on the three pressures that characterise contemporary university governance: the redistribution of power among elected academics at various levels in the university pyramid (departmental heads, deans, president); the shift of power towards elected executive leadership and away from deliberative or representative bodies; and the delicate balance between executive teams and governing boards.

However, the research can be criticized on two counts. First, many authors explore only one of the many facets of governance. Second, while the collegial aspect of leadership is sometimes mentioned (too) rapidly in passing (Bauer *et al.* 1999; Kogan and Hanney, 2000), the executive team formed by the president, vice-presidents, deans and in some cases the registrar is all too often presented as a coherent entity, and there is no de-construction of the relations between team members. This criticism should of course be qualified by the scope of the goals set for such research, which views developments in higher education systems from a macro standpoint, in studies that encompass not only national authorities and the content of reform but institutions and the academic profession. In projects of this scope, it is hard to analyse in detail "university configurations" (Musselin, 2001) at all three levels, in particular their internal organisation.

The contribution of the empirical survey: a plurality of leadership styles and diverse and fragmented "governance systems"

Our surveys in French universities suggest that a complete analysis of their modes of governance can only be provided by taking two inseparable aspects into account: firstly, the identity of the various leaders, the relationships of co-operation or competition between them and their respective leadership styles; and, secondly, the nature of the relationships that are established between these leaders and the various representative bodies, *i.e.* the Senate (*Conseil d'Administration*, CA), the Board of Studies (*Conseil des Études et de la Vie Étudiante*, CEVU) and the Academic Council (*Conseil Scientifique*, CS).[3] It is the interaction of all of these dimensions that we shall call the "governance system".

Four universities, four styles of governance

Because of the centralised system of steering of higher education in France, French universities have identical governance structures, all of which are defined by the same Act of 26 January 1984 (Savary Act). However, behind this supposed uniformity, there a wide diversity of local arrangements. A brief description of the forms of governance found in the four universities that we studied shows that each of them has succeeded in developing its own specific governance style by adapting the structures defined by the Act. This challenges the widespread idea regarding the uniformity of the French higher education system.

University 1 – An alliance between the president and the Senate

The president of University 1 governs with a "bureau" or executive committee in which the participants vary according to circumstances, and he

invites whomever he wishes depending on the decisions to be made (*i.e.* trade unions when administrative staff policy must be defined, deans when budgets and allocation of posts are discussed, etc.). However, elected representatives from the Senate are systematically invited to these preparatory meetings. The relations between the president and deans are relatively loose and informal, and they meet occasionally in informal meetings. There are no vice-presidents appointed to carry out specific missions, so his executive team consists only of three vice-presidents, each of whom chairs one of the three representative bodies, but they do not constitute a particularly cohesive team. Similarly, relations are loose between the president and the university's chief administrative officer the registrar (*secrétaire-général*), for they rarely co-operate or consult on decision-making, except in situations of crisis that need to be solved rapidly. On the whole, the central administration of the university has difficulty in exercising leadership on management and administrative matters, which remain under the decentralised authority of the faculties.

University 2 – Centralised governance, with strong ties of solidarity between the president and the administration

Unlike University 1, the president's executive committee in this university is clearly identified, and it includes the vice-presidents and main administrative officers and meets regularly. The committee members accept the president's authority and share his strategic policies and his belief that the university should be steered from the top, so there is a strong sense of solidarity among this team. The key members of this committee are the vice-president for initial and continuing training programmes, the vice-president for research, the vice-president for personnel management and the registrar (*secrétaire-général*). The latter co-operates fully with the executive team, making available his technical and management skills, but he is not involved in the development of strategic policies and confines himself strictly to a technical support role. The deans are explicitly and deliberately excluded from this committee, which generates strong feelings of resentment and frustration. The members of representative bodies (except for the Board of Studies) feel that they have been deprived of their decision-making responsibility by the executive committee, but, although they disapprove of this situation, they do not necessarily oppose its proposals.

University 3 – A president divided between the interests of faculties and the university strategy

The president of University 3 has an executive committee that meets regularly and also plays a key role in decision-making processes, but its composition is very different from that of University 2, for it only involves

deans. The committee prepares all decisions presented to the Senate for approval, and, as at University 2, the elected representatives of the Senate are critical of this procedure since they feel that they are not able to express their views on the choices and compromises reached between the president and deans. The other official vice-presidents (the VP representing students and the VP representing administrative staff) do not participate in the executive committee's meetings, having decided not to do so of their own accord since they considered that the discussions did not concern them and that they were unable to influence decisions. The vice-president for research is an exception, however, for he pursues an activist policy with the Academic Council and outside partners (in particular the regional government), deliberately sidestepping the deans. At the same time, the registrar plays a limited role in this type of governance, and is hampered by the fact that his administrative staff is too small and not highly skilled. Strengthening the central administrative units is in fact a priority for the president, and he assigns to them most of the administrative posts created in order to reinforce them and make them a power that can counterbalance the group of deans.

University 4 – A president not closely involved in governance

The university president is actively involved in outside activities with the ministry and the French Conference of University Presidents and tends to keep his distance from the internal management of his institution. In addition, there is an open conflict between him and the registrar and chief accounting officer. The two main administrative officers are critical of the president because of his lack of authority over academic staff, while the president is critical of the bureaucratisation fostered by the registrar and chief accounting officer. Within the university, it is often said that administrative aspects have gained the upper hand over policy aspects, and the president is criticised for not sufficiently defending the interests of the academic community against an increasingly encroaching administration. The president meets with deans twice monthly, but none of the participants are really satisfied with this arrangement, for deans do not feel fully involved in university governance and the president feels that they are too weak to transmit and implement university policies in their units. The representative bodies are also in a delicate position in this system of governance (except for the Academic Council, which has independent responsibility for the management of academics' careers); the Board of Studies deals with student issues, but has no role in reviewing curriculum development. In late 1998, the Senate went through an unprecedented crisis when its members blocked the voting of the annual budget in order to denounce the lack of transparency of the budgetary process and to demand a change in the Financial Commission, which was suspected of favouring one of the university's units.

Consequently, these universities have four highly individual styles of governance that differ greatly from one another. By comparing them, we obtain two results that provide the basis for a discussion in the light of the literature presented in the preceding section. Firstly, the power relations between the president, the registrar and the deans are often imbalanced. Secondly, the relationship between the president and the representative bodies may differ considerably, for in some cases these bodies are strong and participate in developing institutional policies, while in others they have been deprived of power by the executive team and must be content with passively approving its proposals. We shall attempt to explain these results in the two subsections that follow.

A plurality of leadership styles

We shall focus on the major differences between the professional identities, the concerns and leadership styles of the various university leaders (presidents, registrars and deans).[4] These differences make it difficult for them to co-operate and sometimes generate conflicts, with the result that the executive teams are much less cohesive than the literature would lead us to believe.

Presidents who are closer to registrars than to deans

A comparison of how presidents and deans respectively describe their leadership role shows that there is a sharp cleavage between these two actors.[5]

Differences in how presidents and deans conceive their role. A number of data show that presidential leadership has grown stronger over the past ten years. Presidents have become actively involved in many significant initiatives. They have defined institutional strategies and are playing an active role in management fields that until now had been regulated by individual disciplines, they are defining research policies, establishing expenditure control indicators, promoting curriculum development policies and investing in human resource management (redistribution of posts, internal mobility, etc.). The way that they describe their role reflects a definite pro-active approach, for they speak of their goals for their institutions, of the initiatives and changes that they wish to promote, the projects that they want to implement, etc. While presidents define themselves as managers, the contrast with how deans describe their role is striking. Deans continue to see themselves as primus inter pares, and feel that their primary role is to represent the interests of their faculty outside the university, and to act as the last resort for arbitrating interpersonal conflicts inside the university, but on the whole they are careful not to intervene too actively in the affairs of their colleagues.

And also differences in how they conceive the university. Presidents and deans also disagree on the issues of the rationalisation and modernisation of the university, in particular regarding the role that its central administrative units should play and the issue of management of academic positions and careers. Presidents' views on these subjects are in fact closer to those of registrars than to those of deans.

Deans and presidents disagree about the role of the central units (*cf.* Table 3). In the view of presidents, their key role is to rationalise the management of the university, while this aspect is less important to deans, who mainly expect central units to provide them with day-to-day management support (70.4% of them consider that it is a high priority for central units to be available to assist them in their day-to-day management). The greatest differences of opinion (X^2 = 0.001) concern two questions: "the role of central units is to rationalise the management of the university" and "the role of central units is to centralise the management of key resources". Naturally, registrars give the highest priority to the rationalisation of management and the centralisation of financing and posts, but the percentage of presidents who defend the same position is nearly as high.

Table 3. **Differing opinions on the role of the university's administrative units**

Q 138. Which of the following missions of the central administrative units of the university seem to you to have high priority?	Presidents (N = 13)	Registrars (N = 27)	Deans (N = 90)
	% responding "high priority"		
Promote ministerial policies in faculties	28.6	25.9	40.4
Rationalise the management of the university	**84.6**	**86.2**	46.7
Centralise the management of key resources within the university (financing, posts, etc.)	69.2	72.4	27.6
Assist faculties, *i.e.* help them with concrete aspects of their management	66.7	62.1	**70.4**

Source: Author.

There is also a gap between views on the management of academic positions and careers and the management software marketed by AMUE (*cf.* Table 4). The first three items (Q 97, 103 and 134) clearly show that deans, unlike the other two actors, take a position of defending their peers: nearly one-third think that a vacant teaching post is the property of their department, nearly 80% defend the independence of specialist commissions[6] as opposed to intervention by the institution, and lastly 60.4% are critical of administrative burdens imposed by the university and their negative impact on academics' capacity of initiative.

Table 4. **Differing opinions on the rationalisation of the management of the university (%)**

	Presidents (N = 14)	Registrars (N = 25)	Deans (N = 100)
Q 97. "When a teaching post becomes vacant, do you think that it should remain the property of the department?"	0	3.4	27.1
Q 103. "Specialist commissions should only play a advisory role and the institution should have control of its recruitments"	66.7	51.8	21.2
Q 134. "The administrative burdens imposed by the university restrict the initiatives of academics"	33.3	27.6	60.4
Q 119. "The introduction of *Nabuco* is a good thing because it makes the situation more transparent"	88.9	80.9	58
Q 124. "*Apogée* is a technical and bureaucratic tool" (% that disagrees)	67.7	78.9	33.3

Source: Author.

Lastly, both regarding Nabuco and Apogée, the reluctance of deans is clear, while presidents and registrars view them as sources of progress for the university.

Consequently, there is disagreement over the power of the university over faculties, and each actor reacts according to the nature of their function and role: deans wish to preserve both the independence of their faculty and the academic profession, while presidents firmly defend the independence of the university, and registrars are favourable to a greater rationalisation and centralisation of resources and more transparent management.

The last important point that should be stressed is the closeness of the positions of presidents and registrars. Attention is often called to the conflict between the leaders elected by academics and the administrative managers appointed by the ministry, but we have tried to show that the cleavage of different nature, pitting presidents and registrars against deans.

Differences in styles of leadership between presidents, registrars and deans

The ways that presidents, registrars and deans conceive of their respective roles coincide closely with how the members of the university view their leadership styles (Table 5).

The perception of the leadership styles of the three groups of actors shown in the table prompts two main comments. Firstly, university presidents are perceived in two contradictory ways, since an equal number of respondents (roughly 30%) describe them as "co-operative" and "very interventionist". Secondly, registrars and deans have more uniform profiles. Deans are more often described as "co-operative" and are viewed as being closer to staff (by

Table 5. **Different leadership styles of presidents, registrars and deans**

Q. 136 "How would you describe the leadership style of the following actors?"[a]	The president	The registrar	The dean of my faculty
Co-operative	36.2	29.9	40.6
Very interventionist	27.2	13.1	12.4
Controlling	13.3	29.6	9.7
A good channel of information	9.9	17.1	15.8
Close to university staff	13.3	10.3	21.5
Number of replies	1 490	1 116	1 269

a) "Do not know" replies were deleted because they were too numerous (between 23 and 50% of respondents).

Source: Author.

21.5% of respondents). On the other hand, registrars have the highest percentage of responses on the item "controlling" (29.6% of respondents as opposed to 14% for the other actors) and the lowest percentage for the item "co-operative" (29.9% as against 36% for the other actors). Ultimately, each actor stands out for a specific characteristic which best sums up their leadership style as perceived by the members of the university (outside of executive teams): presidents are generally "very interventionist", registrars are generally "controlling" and deans are "co-operative" and "close to staff".

These differences in the views, conceptions and leadership styles of presidents, registrars and deans lead to governance relations that are often complex and at times adversarial.

Intrinsically fragile co-operation between the various leaders

The relationship between presidents and deans: unsatisfactory compromises on both sides. In the vast majority of universities, deans are deliberately not included in executive teams; they are rarely consulted prior to decision-making and generally are merely kept informed of the decisions made by executive teams and representative bodies (see Mignot-Gérard and Musselin, 2002, *op. cit.*).

In one of the four universities studied (University 3), the relationship between the president and deans was unusually close, for they met weekly in an executive committee responsible for preparing all decisions to be made by the Senate and for developing the university's major strategic policies. However, this close relationship limited the freedom of action of both sets of actors, since the president was required to satisfy the demands of deans on certain issues (in particular, on budget allocation) more often than was the case in other universities, while deans sometimes had to give their support to institutional policies unfavourable to their own faculty, which made them

vulnerable to criticism from that quarter. Consequently, their membership in the committee put the deans in an uncomfortable position, for if they were too close to the president, they ran the risk of losing the confidence of those who elected them, but confining themselves strictly to a role of defending the interests of their departments was incompatible with their participation in university governance. This complex trade-off led the president of the university progressively to weaken the position of deans and instead build a stronger and larger administration more closely involved in key decision-making within the university.

The relationship between the president and central administration: the ambiguities of sharing the power to make and implement decisions. Of the four universities that we studied, only one had a mode of governance in which the executive team and chief administrative officers were closely associated (University 2), which shows that it is not a foregone conclusion that the president and administration will necessarily form an alliance.

The dual management model of governance characteristic of French universities is disappearing in European universities, for in most countries (United Kingdom, Germany, Ireland, the Netherlands, etc.) administrative management has been placed under the authority of university presidents. In France, it can be said that registrars have greater scope for action than presidents, since they are appointed by the minister, have authority over all of the university's administrative departments and have strong qualifications in the fields of administration and public finance. On the other hand, they have been placed under the authority of presidents, since they are supposed to provide the technical resources for implementing presidents' decisions. Consequently, it is obvious that the boundaries between the authority and responsibilities of registrars and presidents are sufficiently unclear to result in rivalries or at least to require both of them to negotiate an agreement as to their respective roles. Will the registrar influence decision-making? Will the president try to control implementation? How will their respective rationales affect management decisions? Will the registrar try to influence decisions on academic issues?

In the rare cases in which both of them co-operate consensually (University 2), the registrar says that he accepts his subordinate position but finds it difficult to refrain from intervening actively in many situations. In return, he expects the president to relinquish his role as primus inter pares and fully assume the role of head of the university. For academics who are members of the executive team to be credible in the eyes of the administration, they must break with their conception of their own role and actively become managers who defend the interests of the university rather than their faculty or peer group. The pro-active attitudes of the vice-presidents

of University 2 is very revealing of this shift in identity, for not only have they committed themselves to their full-time duties of vice-president, but they have clearly understood that their actions posed a threat to the independence of academics, and they have been willing to accept the unpopularity of their decisions. In our view, it is only if the executive team behaves in this way that the administrative officers will agree to place themselves under their authority and limit themselves to a technical support role.

When we look more closely at the behaviour of the different leaders who must co-operate in decision-making and in the day-to-day management of French universities, when we compare how they envisage their function and study how they are perceived within the university, very different leadership styles come to light. When we observe more closely the concrete situations of co-operation between all these actors, we see that they have very different interests and that their co-operation entails tensions and difficult compromises. It is important to emphasis that any alliance that they form will be very fragile.

Stronger representative bodies than in other countries?

Our surveys on French universities show that the relations between representative bodies and presidents are more ambivalent than one would be led to expect by the literature, which describes a general trend towards a weakening of collegial bodies and a corresponding strengthening of the executive power. However, to show that this is the case, it is necessary to make a detailed study of the cohesiveness of the executive team, the relationship between this executive committee and the Senate and the degree to which members of the executive team play an active role in the advisory bodies. In other words, it is necessary to analyse how the various dimensions of what constitutes the university's "governance system" interact.

Very different roles across universities and representative bodies

Just as leadership in the university is embodied by a number of actors whose interests do not always coincide, we believe that it is important to stress the diversity of representative bodies.

Our observations suggest that the Senate and the two other advisory bodies cannot be placed on the same level, since the former makes top-down decisions while the latter are more responsible for reviewing the bottom-up decisions made by faculties. Members of Senates also express their discontent with having been deprived of their decision-making responsibility much more often than members of Boards of Studies and Academic Councils (Mignot-Gérard, 2003).

Thus, field observations show that Senates and Boards of Studies and Academic Councils play very different roles, for Senates act more as a

countervailing power to the executive team, while the Academic Councils and Boards of Studies play more of a role of implementing institutional strategies.

Furthermore, aside from this difference between the Senate and the other advisory bodies, it must be stressed that the strength of each body varies considerably across institutions. For example, some Senates may be only a "rubber stamp", while some others play an active role in defining the university's strategic policies. As for the other advisory bodies, their decision-making power depends largely on the role that members of the executive team are willing to give them. We shall try to show that the role of the Senate depends on the cohesiveness of the executive team, and that even if the Senate seems passive in its regard, this team cannot afford to ignore it completely. Next, we shall see that the role played by the other advisory bodies depends on vice-presidents becoming actively involved in defining institutional strategies.

Senates: the ability to block or destabilise the executive team

The case of University 1 shows that some Senates are closely involved in decision-making. In University 1, the university president is very careful to invite elected representatives from the Senate to meetings in which discussions of the budget or allocation of posts are prepared. They appreciate this style of democratic leadership, which enhances the legitimacy of the university president. Furthermore, by organising consultations in which negotiations are concluded with the different stakeholders and by letting them engage in discussion and express disagreements, the president manages to build compromises that should not later be challenged by the Senate. However, democracy has an organisational cost, for preparing decisions involves lengthy discussions, a loss of energy, but above all it slows down the entire decision-making process. What is more, the tradeoffs that emerge from these processes based on wide consultation are often conducive to maintaining the current balance of power or reproducing the status quo rather than introducing radical change, since they are result of compromises between a number of conflicting interests.

It is no doubt for this reason that most presidents prefer to make decisions before they are discussed by the Senate and to confine this body's role to one of formally validating decisions. However, this does not warrant concluding that Senates are completely useless, for our surveys show that presidents are always careful about the atmosphere prevailing in Senates. Although Senates rarely use their veto power against the executive committee's proposals, their members can nevertheless cause a good deal of trouble, for if they fail to attend meetings, decisions may have to be postponed because of the lack of a quorum (this occurred for a vote on the budget in University 2); if some Senate members express their discontent, it can force

executive teams to clarify and prepare their decisions more carefully (for example, the president of University 3 felt obliged to include a representative of the student body and the administrative staff in his executive committee). Lastly, if the Senate is unsuccessful in influencing decision-making directly, it can, as in University 2, contribute to fostering the image of an "autocratic" executive. As a result, some universities have Senates that are closely involved in decision-making. Even though most of them are a "rubber stamp", presidents are aware that a vote of sanction always remains a possibility, and they can never entirely ignore "exit" or "voice"[7] behaviour on the part of Senate members.

Advisory bodies (the Academic Council and Board of Studies): channels for communicating institutional policies

The issue of the usefulness of the other advisory bodies is not posed in the same terms as for the Senate, since the elected representatives do not (or very seldom) express discontent due to a feeling of having been deprived of their power. A distinction must be made between two situations, however, for the comments of members suggest that in some advisory bodies the representatives are somewhat apathetic, while in others they are relatively enthusiastic about their work. In the first case, they say that although they enjoy participating in their representative body, it does not deal with significant issues, for the proposals that they make either concern routine issues that do not require any in-depth discussion (such as voting on enrolment fees or procedures for monitoring academic performance) or else they are so completely reworked by the Senate that they wonder what purpose they serve. In the second case, they say that they play an important role in the university, and they feel that they are involved in decision-making and that their proposals have a real value because they are generally respected and validated by the Senate.

To understand why these advisory boards do not have the same importance across universities, it is necessary to place each one in the context of its relations with the two other bodies. This context must be understood as a sort of "market of key decisions" in which the bodies are in competition. In universities, certain kinds of decisions invariably attract the attention of representative bodies, such as the vote on the annual budget, the ranking of annual requests for the creation of academic posts and the promotion of academic staff. Two examples can illustrate this competition between the various bodies. In University 2, the Board of Studies is responsible for the allocation of annual budgets, which gives it special importance (and which also undermines the power of the Senate). In University 1, it is the Senate that manages posts and promotions of academic staff and examines projects for new curriculum from the financial standpoint, and the strong role that the

Senate plays on these two key issues is naturally at the expense of the Academic Council. Given the limited number of key decisions for the three bodies, some of them fail to develop significant activities and are therefore of less interest than other bodies.

The other important variable is the extent to which members of the executive team are involved in defining institutional policies and their ability to provide leadership in a representative body in order to implement this policy. For example, at University 3, the vice-president in charge of research developed a policy that consisted of reorganising research teams into larger units so as to give them greater visibility and enable them to have access to appropriations granted by the regional government. This vice-president made the Academic Council responsible for reviewing and screening the requests for financing of the various teams, and, since regional appropriations are an important source of financing (nearly one-third of the university's research budget), the Academic Council has become a significant decision-making body with a good reputation within the university.

Consequently, to understand the diversity of roles played by universities' representative bodies, it is necessary to situate them within their local context, which has three dimensions. Firstly, the specificity of local issues, which are determined by the priorities set by the executive team. Secondly, the role of the body depends on its ability to establish its relevance, *i.e.* to gain responsibility for certain issues involving key local decisions that have not been too thoroughly prepared at a higher level or that will not be reviewed by another body. Thirdly, the role of a body is linked to the involvement of the members of the executive in its leadership. The bodies considered to be important in the functioning of institutions combine these three characteristics, *i.e.* they are responsible for key local decisions, they are relevant and they are steered by an active vice-president who calls meetings regularly, provides leadership, has them discuss issues and establishes decision-making criteria with them. Conversely, an advisory body may appear to be useless for three opposing reasons, because it has been deprived of its power by the management team, because it has no key issues to address or because it has been deprived of key issues by another body.

Two important conclusions can be drawn from this empirical analysis of the role of representative bodies in French universities. Firstly, the relationship between the members of the executive team and the various representative bodies is complex and far more ambivalent that the literature suggests. Although the power relations between the president and the Senate are a zero-sum game, the power of the other advisory bodies varies in importance depending on whether vice-presidents become involved in them and play a pro-active role. Secondly, we believe that these bodies are less moribund than the studies conducted in other countries suggest, for Senates

continue to play a role as a countervailing power to the management teams of universities, while the advisory bodies no doubt contribute to some extent to the wider acceptance of institutional policies by the university community.

General conclusion

In this article, we have sought to show that the leadership within university organisations is divided among a number of actors whose interests do not necessarily coincide. These differences can make their co-operation difficult and often prevent it from resting on solid foundations. What is more, just as it would be inappropriate to speak of "university leadership", it would be wrong to consider representative bodies as monolithic actors, for it is necessary to distinguish between those bodies that participate in implementing institutional policies (the Board of Studies and the Academic Council) and those that prevent the arbitrary exercise of executive power (the Senate). Consequently, the relationship between the executive and deliberative bodies is neither one-sided (it does not necessarily lead to the weakening of collegial bodies) nor a zero-sum game (the interests of these bodies and of executives may coincide).

These empirical observations, which in some cases run counter to the accepted wisdom, suggest that we should undertake a renewal of the methods of investigating the governance of university organisations. The main theoretical implication of these observations is the need to shed greater light on the relational dimension of university governance. Consequently, it is not enough to investigate the behaviour of university presidents to encompass the characteristics of university leadership, for it is indispensable to analyse the relationships (whether adversarial or co-operative) between them and their administration and deans. It is also essential to look more closely at the relationship between presidents and representative bodies and among these bodies themselves, for the role of the Senate must be seen in relation to the cohesiveness of the executive team, and the role of advisory bodies will depend on the involvement of vice-presidents and their interdependence with other collegial bodies participating in decision-making processes. Ultimately, the governance of a university is the product of this complex web of relationships, *i.e.* the relationship of co-operation between the various leaders, the relationship between leaders and representative bodies and the interdependence between these bodies.

The governance structures of French universities under the 1984 Act

French universities are organized into *facultés* (faculties) known as "UFRs" (*Unités de formation et de recherche*), which vary in size and structure, as they

may consist of a segment of a discipline (such as the UFR of Modern History), a discipline (History) or a set of disciplines (the UFR for Social Sciences).

The university is headed by a president, who is a an academic drawn from the university, who is elected for a five year, non-renewable term by an assembly composed of all the elected members of the university's three deliberative bodies, which are described below. The president works with a small group of close collaborators (known as the bureau or executive committee), but this group's composition may vary across universities since it is defined by each university's statutes. The president proposes the names of the people he would like appoint to positions of vice-president. These vice-presidents are drawn from the academic staff (there is also generally a vice-president for administrative staff and a student vice-president) and are appointed by the president to be responsible for special missions (such as the vice-president for international policy, the vice-president for research policy, etc.).

The faculties (UFRs) are headed by deans, who are members of the faculties' academic staff who are elected by the Faculty Council for a five-year term that may be renewed once. UFRs are generally divided into departments managed by department heads, who are also chosen from among the academic staff.

This academic leadership (president, deans) is supported by administrative and deliberative structures, both of which are represented at the university and faculty levels.

Firstly, there is an administrative structure, which is managed by the chief administrative officer or registrar (*secrétaire-général*), a civil servant appointed by the ministry. The registrar is in charge of all central administrative units at the university level (personnel, accounting, enrolments, etc). Each UFR also has an administrative officer, who plays the same role as the registrar in the UFR and is in charge of managing the administrative units of the UFR, departments and research laboratories.

Secondly, there are deliberative structures. At the university level, there are three bodies. Two of them (the *Conseil scientifique,* or Academic council, and the *Conseil des Études et de la Vie Universitaire* or CEVU or Board of Studies) prepare proposals that are then submitted for decision to a third body, the *Conseil d'Administration* or Senate. The CEVU has between 20 to 40 elected members, 75 to 80% of whom are academics and student representatives (each of these two categories has the same number of seats), while 10 to 15% are representatives of the administrative staff and 10 to 15% are qualified persons from outside the university. The Board of Studies deals with issues related to various aspects of student life on campus and also with management of the curriculum. The Academic Council also has 20 to 40 elected members, 60 to 80% of whom are representatives of the university

staff (with at least half of these seats for academic staff), while 7.5 to 12.5% are graduate students and 10 to 30% of the remaining seats are for qualified persons from outside the university. This body defines research policy and is responsible for allocating ministerial research budgets to the university's research teams. The Senate has 30 to 60 elected members, 40 to 45% of whom are academics, 20 to 30 % qualified persons from outside the university, 20 to 25% students and 10 to 15% administrative staff. The Senate decides upon the proposals made by the two other bodies and the annual allocation of operating budgets. It is also responsible for ranking annual requests from UFRs to create academic and administrative posts. Each body elects a vice-president. The law stipulates that the various disciplines within the institution must be equitably represented in the composition of these bodies. Each faculty also has a deliberative body known as the *conseil d'UFR* or Faculty Council, which may have no more than 40 elected members, 20 to 25% of whom are qualified persons from outside the university, with the remaining seats being divided equally between academics, students and administrative staff.

Notes

1. AMUE (Agence pour la Modernisation des Universités et des Établissements) was set up to introduce management software into French universities and provide them with a variety of services to modernise their internal management practices and operational management. The software mentioned in this paper is Nabuco (budget and financial management) and Apogée (educational management and student monitoring).
2. In a subsequent paper (Clark, 2001), B. Clark rejects two possible interpretations of his paper, one being the university as a passive object carried away by external forces, and the other the university as a firm (Clark, 2001). It could be said that this optimistic interpretation contrasts with a number of other papers which warn of the risks of the commodification of higher education (see for instance Areser, 1997 or Vinokur, 2002.)
3. A formal description of the governance structures of French universities established by the Act of 26 January 1984 (Savary Act) is presented at the end of this article.
4. We shall not discuss vice-presidents in this section for it is much more difficult to show regular patterns in their behaviour, for this group seems much more scattered than the three other groups of actors presented (depending on the university, vice-presidents do not have the same duties and do not devote the same amount of time to these duties, some are teachers while others are administrators, some chair representative bodies while others are responsible for special missions, some are very active, *i.e.* have policies that they seek to implement by providing leadership in representative bodies, while others are far less active, etc.
5. For more details, see Mignot-Gérard and Musselin, 2002.
6. In France, "specialist commissions" designate the commission that make decisions regarding the recruitment of academics; these commissions are made

up of academics who are specialists in the discipline in which a candidate is being recruited and are relatively independent from the university's management; their decisions are rarely challenged by the university' representative bodies.

7. This refers to Hirschman's typology "Exit, Voice, loyalty".

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