



Center for
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Policy Studies

Profiling and Funding

An international comparative study

Report by

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Executive Summary

This is a discussion report for the Dutch Ministry of Education, Culture and Science. Its main goal is to feed into the discussion on diversity in Higher Education. The report reflects on the extent to which countries across the globe are promoting profiling and diversity in their higher education systems. The report is made up of eight country chapters describing how select countries are using public policies, and particularly funding mechanisms, to promote institutional profiling and differentiation in the system. The document takes stock of the current work of the “U-map” project, a European Commission-funded endeavour that proposes key dimensions by which to classify European institutions of higher education (see: <http://www.u-map.eu>). At the end of each chapter, the authors set out what dimensions seem to be particularly promoted (directly or indirectly) by the country’s policies. The countries covered in this report include:

- Australia
- Denmark
- England and Wales
- France
- Germany
- Hong Kong
- New Zealand
- Norway

The key findings per country are as follows:

Australia

- The Australian government has emphasized the importance of building unique profiles and concentrating on the areas of strength in individual universities at least for two decades. However, the government does not prescribe the profiles, but it expects universities to develop their specific mission and set their targets accordingly
- Until now the Australian funding was strongly based on equal competition between universities, although some balancing measures existed. Funding in research and to a lesser extent in teaching was dependent on performance measures. As a new initiative, Mission-based Compacts are based on government-university negotiations that take the unique mission of each university as a starting point
- The Mission-based Compacts have the dimension of research and of teaching as its core. It could be expected that some other dimensions will be strongly present in mission statements, such as the regional role and serving certain student groups (i.e. lower socio-economic and other underrepresented groups)
- There are clearly identifiable types of universities in Australia, to a large extent driven by their different history. There is however no information on whether the intentions for developing unique profiles have been successful

Denmark

- Denmark shows clear distinctions between the types of higher education institutions and the short-cycle, medium-cycle and long-cycle degree programmes they offer (universities, colleges, professional training institutions)
- The research funding mechanisms was recently changed to increasingly and heavily fund institutions based on their research performance. This is aimed at strengthening excellence and concentration. Next to that, competitive programme funds for research have been made available to encourage universities in carrying out high level research on particular areas of strategic interest to the Danish economy
- Funding for education is heavily performance-based (taximeter model)
- Development contracts (introduced in 1999) are agreed between universities and the Ministry of Science. These are a form of 'letter of intent' in which universities state their values and targets and what they intend to achieve in the next four year period. There is no automatic relationship between reaching the targets set by the university and the grants awarded by the ministry
- A recent international review panel concluded that the development contracts are barely effective as steering instruments and have become too detailed and process-oriented. They act more like an accountability mechanism instead of a profiling instrument
- There are indications that suggest that the Danish universities, thanks to their autonomy and some of the funding instruments, are becoming more strategically oriented and trying to develop an explicit institutional profile

England and Wales

- The system of higher education in England and Wales is already highly profiled with a strongly implicit system of differentiation
- There is a strong distinction between universities/ university colleges and other higher education providers which do not have the right to award degrees on their own behalf
- The primary distinction for universities and university colleges is on the lines of research funding, which is allocated on the basis of excellence. This is highly skewed towards a few world-class institutions
- Efforts to profile institutions along other lines have been scuppered by a tendency for all universities to seek access to all discretionary funds, and the largest recipients of teaching and regional engagement funds have been the largest recipients of research funds
- There is some innovation and differentiation at the bottom of the spectrum, with new institutions being created and granted powers to create alternatives to scholarship informed teaching
- Decisions taken in the immediate future against the financial background of the economic crisis and 25% cuts to the public budget are likely to have a substantial impact on university profiles without necessarily profiling featuring substantively in the debate concerning those decisions

France

- France has a wide variety of institutions. In France, diversity amongst institutions is the result of initiatives to respond to evolving national needs. The most important distinction is between Universities and “Grandes Écoles”. The universities are in the “open sector” the “Grandes Écoles” are selective
- Policies (including funding schemes) are meant to promote cooperation between separately regulated units in order to achieve synergies, efficient use of resources and increased visibility
- The key policies that affect the way institutions might profile themselves include inter alia (a) the Law for Autonomy of Universities (LRU), (b) the Pôles de Recherche et d’Enseignement Supérieur (PRES), (c) Plan Campus, (d) the creation of the Agency of National Research (ANR) in 2005, (e) the plan for the reform of the Bachelor of Science
- “Plan Campus” (the most important initiative) is a selective support scheme for campus development. It includes legal reforms to increase managerial control over institutions and huge investments in universities. Plan Campus promotes vertical differentiation
- Public funds can be (a) formula-based, (b) project-based and (c) contract-based
- Private contributions outweigh public ones in contributing to Research and Development
- The U-map dimensions that are covered include (a) research involvement, (b) teaching and learning, (c) student profile and (d) regional engagement

Germany

- In Germany the 16 federal States (“Länder”) are legally responsible for their own higher education system. The German central government has traditionally played a coordinating role in higher education policy, whilst primary direct responsibilities remain with individual States
- The main categorisation of German institutions includes Universities and Universities of Applied Sciences
- In recent years German higher education institutions have seen their autonomy in governance and funding increase
- Performance-related funding has become increasingly important in Germany, and external project-based research funding has surged
- The Excellence Initiative is a programme aimed at rewarding excellence in research, internationalisation and commercialisation of research, and promotion of young researchers in order to establish a number of internationally visible elite universities. The Excellence Initiative is the largest and most visible German higher education policy promoting institutional profiling and has attracted an overwhelming number of proposals
- The Higher Education Pact has two aims, i.e. to ensure that higher education institutions receive additional funding to cope with the rising number of students and to secure the competitiveness of German research
- Recent reforms have strengthened institutional capacity to act and led to more responsibility and efficiency in the higher education system

- Performance-based funding encourages institutions to concentrate on certain aspects rather than others
- Excellence Initiative has strengthened research capacity and output in Germany
- The U-map dimensions that are covered include (a) research involvement, (b) teaching and learning, (c) student profile and (d) international orientation

Hong Kong

- Each higher education institution in Hong Kong has its own mission, reflected in its Role Statement, agreed with the University Grants Committee (UGC). Hong Kong maintains an interlocking, yet differentiated system with 11 institutions. Each UGC-funded institution agrees its student enrolment with the UGC
- The UGC Performance and Role-related Funding Scheme (PRFS) ensure that HEIs keep to their mission. 10% of the recurrent public funds are set aside for this peer-review driven system. HEIs can earn back 10% of their block grant (as a lump sum) if they adhere to their mission and perform well in their role
- Teaching is centrally funded, based on student numbers. Basic funding for research is performance-related and based on a research assessment exercise, thus strengthening research excellence. An increasing volume of research funds are awarded competitively with the aim of strengthening focus and critical mass. The aim is to strengthen collaboration between institutions and make them internationally competitive
- To encourage knowledge transfer and professional activity by academics (i.e. community service), the UGC has made funding available
- HEIs are assessed (and partly funded) against their profile. They have developed profile indicators that track performance in all U-MAP dimensions

New Zealand

- New Zealand has a diverse tertiary education system. The system includes Universities, Institutes of Technology and Polytechnics, colleges of education and Wananga (Māori tertiary education institutions). There are also several continuing education organisations and over 800 private training establishments
- Generally, funding is paid to approved (accredited) tertiary education providers and is applicable to both public and private providers
- Funding is given through the government channels called "Votes". The Votes are "Vote Education", "Vote Research, Science and Technology" and "Vote Economic, Industry and Regional development"
- There are many forms of funding: the PBRF is formula-based and rewards excellent research. There is also funding based on the number of enrolments and a number of funding channels to support research and regional engagement (e.g. the capability funds)
- There are several project-based competitive funds (e.g. the Marsden Fund), which are meant to support the government's Growth and Innovation Framework
- As formulae change, also the focus of the funding will change. For example, the 2010 guidelines for assessing the quality of research (which has the greatest weight in the

PBRF formula) put greater emphasis on commercial research and the entrepreneurial application of research

- As of 2010 the Capability Funds are being dismantled. By doing so, the New Zealander government wants to emphasise academic results for students
- In New Zealand, the main U-MAP dimensions covered seem to be research, teaching and learning, student profile, regional engagement and knowledge exchange
- Like many other countries, New Zealand is also promoting the internationalisation and the international attractiveness of its higher education through several other initiatives

Norway

- Norway has a diversified higher education system with public universities, specialised public universities, university colleges and private institutions. The bulk of the students study at universities and university colleges
- Norway has a binary system. Although the government intends to maintain this system it is, for several reasons, under pressure. There are clear signs of both academic and vocational drift
- Since 2003 it is legally possible to change the status of the institution when particular conditions are met – since then three university colleges have been ‘upgraded’ to universities
- The establishment of Centres of Excellence (research) contributes to the diversity of the system in the sense that these centres are mostly hosted by universities. This could contribute to the ambition of creating ‘world-class universities’
- The funding system is partly performance-based. Performances are related to both teaching and research. The main component however is the basic component (on average 60% of the total allocation), based on historical aspects. The effects of the funding system on the profiles of institutions are not clear
- The future of Norwegian higher education landscape is currently under discussion. For the moment it seems that collaboration of the same as well as different kinds of institutions will be further promoted. This in turn might lead to less external diversity (between institutions) and more internal diversity (within institutions). The dilemma is the ‘incompatibility’ of deeply-rooted values in society and institutions and the ambition felt to be competitive in a global world that would require certain adaptations of the system

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1 Introduction

This study will explore current interesting practices with relation to profiling in higher education in a selected number of countries known to be active in this area: Australia, Denmark, England, France, Germany, Hong Kong, New Zealand, and Norway. The report serves as a resource to identify and explore interesting international practices with profiling in relation to funding of higher education institutions. The report forms a first input for a working conference on profiling and funding within national debates determining the future directions for Dutch higher education as initiated in the report of the Committee on the Future Sustainability of the Dutch Higher Education System (the Committee 'Veerman').

For each of the countries selected, the report addresses the following key issues:

- The types of (public) higher education institutions and their respective roles in the national higher education system
- The extent to which the government (Ministry of Education) has an active policy to stimulate and organise profiling among higher education institutions
- The role of profiling and missions of higher higher education institutions – and their achievements of profiling – in the public funding of higher education and/or in tuition policies
- The criteria used for profiling and funding of higher education institutions and the extent to which these criteria relate to the 6 dimensions of the U-MAP classification of European higher education

1.1 Profiling and funding in higher education

To explore these issues, the country reports each begin by presenting the functionality of different types of higher education institutions as a first distinction of various profiles where applicable.

The second part explores whether national policy documents, strategic agendas, official regulations or indirect incentives are in place that envisage expanding diversity between higher education institutions and teaching programmes. This particularly addresses national educational philosophies and incentives to stimulate variety, covering both a functional division of tasks, such as teaching and research, but for different types of programmes (sub-degree programmes, undergraduate and graduate programmes), different orientations in terms of professional versus academic, and the ways in which programmes are taught (such as including internships, periods abroad, face-to-face education, distance education, and various student target groups).

The third part provides the core answers to the questions addressed in this study, namely the relationship between profiling policies and public funding of higher education institutions. In what ways is public funding used to stimulate the profiling of higher education institutions? This may take several forms, such as organising profile discussions, performance agreements, multi-annual agreements, or capacity agreements. Some approaches may have a more direct steering orientation, whilst others may be more indirect. Institutions may negotiate directly with their ministries or funding authorities concerning their mission, priorities and related performance (achievements). Alternatively, performance oriented funding regimes (formula-driven) may have more indirect impacts on institutional attempts to be distinctive (or similar) to other higher education institutions or programmes (such as by using specific input and/or output indicators). Finally, is capacity funding approaches in which particular funding streams are hypothecated for students in particular disciplines or programmes.

1.2 Relation to the U-Map logic of classifying higher education

The final section of the national reports then turn to explore the extent to which it is possible to find relationships between profiling and funding policies, and the different dimensions of institutional profiling identified within the U-MAP classification project. The question is whether the themes and indicators used in the national profiling policies can be related to any of the dimensions or indicators that are used in the U-MAP project. The six dimensions of profiling raised by the U-MAP project are as follows :

- Teaching and learning profile
- Student profile
- Research involvement
- Involvement in knowledge exchange
- International orientation
- Regional engagement

1.3 Experiences with profiling instruments

Where possible the study will address experiences with profiling instruments used. Previous research has shown that differentiation instruments can also have the inverse effect (Goedegebuure and Van Vught, the Mockers and the Mocked, ...). This is particularly where they implicitly value some kinds of profiles over others, encouraging all institutions to try to improve their performance against that dimension (which is usually excellence in research. Effective diversity requires institutional funders to be clear about what their goals for diversification are, and to apply their funding models rationally in ways that will produce those outcomes. This may require for example negotiating with institutions to encourage different directions and assuring the sector that different kinds of profiling are indeed valued and will receive appropriate future funding levels. Without such an approach, there is the risk that institutions will absorb funding and apply it in

ways that benefit institutions without creating real diversity. This is a complaint heard for example on the German *Zielvereinbahrungen*.

1.4 Countries selected

For each of the countries presented below, the studies follow a common format. The country studies have been selected from higher educational systems in which profiling forms an element of public policies for higher education. The selected countries include:

- Australia (e.g. mission based compacts)
- Denmark (multiannual performance contracts on many institutional activities)
- England (capacity funding: the Additional Student Numbers approach providing specific institutional funding for students in particular programmes)
- France (multiannual contracts)
- Germany (multiannual contracts with HEIs on the basis of “Zielvereinbahrungen”)
- Hong Kong (performance related contracts)
- New Zealand (strategic vision on the basis of institutional profiles)
- Norway (two-annual profiles and performance discussions)

In the next chapters the country cases will be presented including short national descriptions of the organisation, regulations and experiences with profiling in relation to funding.

2 Australia

2.1 Types of higher education institutions and their role in the system

The higher education system in Australia combines elements of both British and American systems though it originates in the tradition of Oxford and Cambridge. The higher education sector is made up of universities and other higher education institutions, called higher education providers. The higher education provider has to be approved by the Australian Government Minister for Education before it can receive grants or its students can receive assistance from the Australian Government under the Higher Education Support Act 2003.

Higher education providers are: universities, self-accredited providers or non-self accredited providers. In 2010 the higher education system in Australia comprises 39 universities (2 of which are private), 3 other self-accrediting higher education institutions, and around 150 non-self accredited providers, most of which are private providers that offer specialized courses that are closely related to professional work.

Australian universities are generally comprehensive institutions offering a variety of programs. They differ in size, ranging from the largest with around 40 000 students down to the smallest at around 2000 students. Most range between 10,000 to 20,000 students. Many universities are located in the major cities but there is a significant number located in smaller regional centres. The larger universities usually have a number of campuses. Most of the universities are organised on the basis of faculties or schools but may also have a number of specialised research centres or institutes.

Among the 37 public universities there exists a clear typology that is well-known in the sector (Marginson 1997). To some extent the types of universities are institutionalised via specific University associations, but it is not a formal categorization of universities as recognized by Government policies. This typology includes:

- 1) The Group of 8 (Go8) - 8 old research intensive universities represented by the Go8 coalition
- 2) Technical Universities - represented by the Australian Technology Network (ATN);
- 3) Other pre-1987 universities, most of which represented by the coalition of Australian Innovative Research Universities
- 4) Post-1987 universities - that for a while were represented by the umbrella "The New Generation Universities"

It has been shown that the groups indeed distinguish from each other by research output and some indicators related to graduates (such as graduation time and employment (Ramsden 1999)). It should be remembered that entrance to universities in Australia is

competitive and therefore different types of universities tend to enrol students with a different level of preparation and background.

2.2 Public policies related to profiling of higher education institutions

Since the 1990s the Government policies have emphasized the need to develop unique profiles in universities and concentrate on certain areas (particularly in research). Yet the Australian government follows an approach of distant steering and avoids direct prescription of what the role and mission of each of the institutions should be. Institutions themselves have a responsibility to define and seek their unique profile, and the government is involved by observing whether universities are making any concentration and profiling plans.

A new measure, “Mission-based compacts”, makes the Government’s focus on individual profiles of each university more explicit. Mission-based compacts are agreements between the Government and public universities that detail public funding commitments and reciprocal institutional commitments. The mission-based compacts have several aims. Most importantly, Australian government has set ambitious targets on the system expansion, particularly among the students from lower socio-economic groups and other underrepresented groups (see Bradley review). Through mission-based compacts government enters into a negotiation with universities to achieve these targets and hopes to increase participation of under-represented groups. It is thus a tool to align institutional activities with national priorities, respecting the autonomy of institutions. Secondly, the compacts are expected to minimise duplication and fragmentation within the system and to concentrate resources for maximum efficiency and impact (DIISR 2010).

The compacts will also facilitate the distribution of performance-based funds.

2.2.1 *Criteria used for profiling*

It is important to emphasize that the Australian Government does not take a decision regarding a desired profile. Institutions themselves must define their profile, which has to be reflected in their performance data and set targets, and the Government helps universities to achieve targets that are suited to their specific mission.

When developing agreements for mission-based compact, universities must provide information on the following dimensions:

- 1) A preamble which, on a whole-of-university basis, defines an institution’s particular mission and describes how it will fulfil that mission. A preamble could also include principles under which public funding will be provided and how the compact will support the principles. Those principles could include, at the highest level:
 - The importance of opportunity for all, especially those students from groups under-represented in higher education

- Access to university based on merit, not ability to pay
 - High quality research and research training that advances knowledge and critical thinking
 - Responsiveness to the economic and social needs of the region
 - Academic freedom and institutional autonomy
- 2) A teaching and learning component which will address at least the following:
- The institution's commitments to contribute to national priorities identified by the Government in relation to the provision of student places and details of any targeted government assistance where applicable
 - Targets for performance-based funding and could also include details of other funding where eligible (e.g.: funding for structural adjustment, partnership activities)
- 3) A research component which will address at least the following:
- Funding for research and research training provided under the Higher Education Support Act 2003 and through the Collaborative Research Networks (CRN) program, and any other initiatives
 - Commitments to contribute to priorities identified by the Government in relation to a range of research and research training policy objectives

Compacts are comprehensive agreements that present a whole of institution picture, including information on all DEEWR and DIISR funding determined by other mechanisms such as formula or application-based grants. This could include support provided for purposes such as infrastructure, international engagement and innovation. The content of compacts may vary between institutions, depending on their eligibility for various types of Commonwealth teaching and research funding.

The Figure below elaborates the formation of the mission-based compacts. Australia has quite an advanced higher education information collection system, including data on research output, teaching output (such as the Graduate Destination Survey and Course Experience Survey) and some other aspects. This information is a basis for the performance profile, which feeds into compact negotiations and agreements.

In 2010 the Government and institutions formed interim agreements and first real compact agreements will be concluded in 2011. No decision has been made by the Australian Government about the future funding arrangements for compacts, or for any specific component of the mission-based compacts.

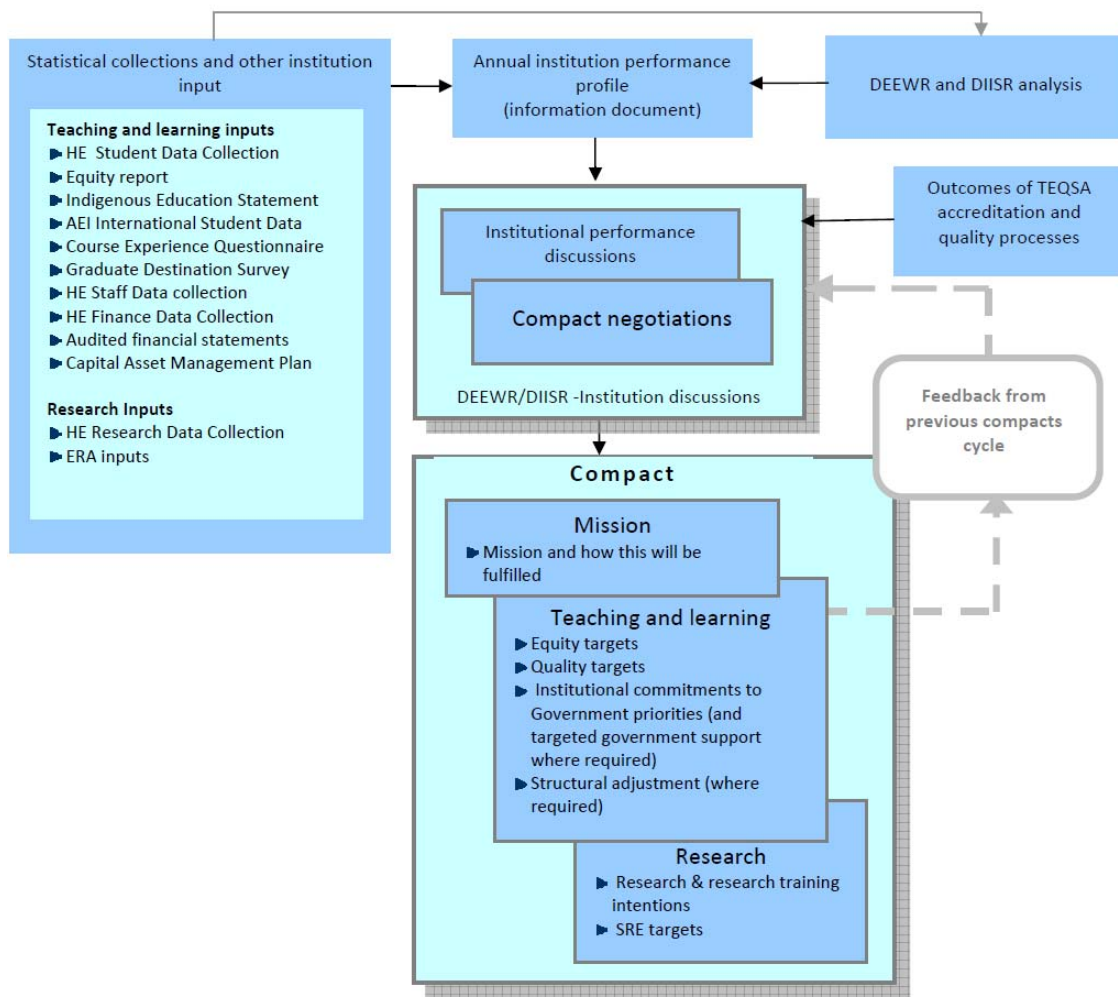


Chart 2.1: Proposed accountability model

Source: DEEWR and DIISR (2006)

2.3 The role of profiling in the funding of higher education institutions

2.3.1 Public funding mechanism and profiling

For two decades Australia has had a performance based funding in place. In research, institutional funding has been linked to the Research Quantum, a formula-based indicator including the number of publications, success with competitive research grants, and successfully completed doctoral degrees. In terms of teaching, performance information has been collected also for long time, but its link to funding has been less straightforward. The Learning and Teaching Performance Fund, established in 2006, started to distribute a financial bonus to universities who excel in teaching.

In parallel to performance-based funding there has been a tension between treating all universities as equal and making them compete on an equal basis on one hand, and taking

into consideration the different missions of the university on the other hand. Performance based funding in research was suspected to lead to a greater segregation of research-intensive and non-intensive universities since those who are strong will have more resources to build up their research strength even further. Empirical evidence does not seem to confirm this dynamic in Australia (Ville et al. 2005).

With the mission-based compacts, the individual profile of universities is taken into account explicitly. On one hand, the new development is linked to another important policy development. Australia has introduced a student centred funding system. According to this approach the Government funds a Commonwealth supported place for all undergraduate domestic students accepted into an eligible course. As such, there will be no need for agreements on the number of funded places in each university, as currently made through funding agreements under the Commonwealth Grant Scheme. Instead, the preferences of students and the restrictions of universities determine student numbers. The Australian Government announced in 2009 that it will provide \$400 million over four years to assist universities to prepare for the new operational requirements of a demand driven funding system with new quality measures in place.

Secondly, as part of the 2009 budget the Government announced it will provide an additional \$5.4 billion to support higher education and research over the next 4 years in a comprehensive response to the Bradley Review, *Transforming Australia's Higher Education System*. The additional funds are designed to support high quality teaching and learning, improve access and outcomes for students from low socio economic backgrounds, build new links between universities and disadvantaged schools, reward institutions for meeting agreed quality and equity outcomes, improve resourcing for research and invest in world class tertiary education infrastructure.

2.3.2 Private funding and the role of profiling

From 2005, institutions in receipt of Commonwealth supported places will determine their own student contribution level for each course they offer within ranges set by the Commonwealth. We have no information about the extent to which the level of tuition varies in different types of universities.

2.3.3 Experiences with profiling: intended and unintended effects

The mission-based compacts are too new for estimating any effects. In earlier times there has been some discussion that performance-based research funding leads to greater differences in research performance over time, but this is not really proven by empirical data (Ville et al. 2005). There is no information to evaluate whether the call for better concentration of research has had any efficiency effect.

2.4 Australian profiling in relation to the U-MAP dimensions

In Australia, profiling focuses explicitly on two dimensions of the U-Map:

- Research
- Teaching and learning

The other aspects are implicitly represented. When defining one's profile, universities can emphasize their contribution to the regional engagement and innovation (and present relevant performance data), and conceivably also involvement in knowledge exchange and international orientation. Student profile, particularly involvement in long-distance education is probably also a legitimate aspect of profiling.

2.4.1 Other dimensions used

An important aspect of Australian higher education is the participation of students from lower socio-economic groups and other underrepresented groups. The social dimension is part of every university's mission analysis and performance targets.

3 Denmark

3.1 Types of higher education institutions and their role in the system

The Danish higher education system comprises vocational academies, university colleges, specialised colleges (such as music academies) and universities. Within this higher education system, the two dominant institutional types are universities and university colleges. See the table below.

Table 3.1: Number of Educational Institutions with Higher Education

| | Number |
|---|------------|
| Academies of professional higher education | 10 |
| University colleges and engineering colleges | 12 |
| Maritime colleges | 14 |
| Police and defence colleges | 19 |
| Artistic and cultural colleges | 32 |
| Other institutions with medium-cycle higher education | 8 |
| Universities | 8 |
| Total | 103 |

- Since the merger of institutions in 2007/8 (see below) there are eight universities in Denmark which conduct research and offer research-based undergraduate and postgraduate programmes (Bachelor, Master and Ph.D.)
- The University College sector consists of institutions offering medium cycle undergraduate programmes (Professional Bachelor and Diploma programmes). Currently there are 12 such colleges
- Since the beginning of 2009 there are 10 Academies of Professional Higher Education (*erhvervsakademier*) offering professional programmes usually of 2 years duration (short-cycle higher education)

Three ministries share the responsibility for these institutions. The Ministry of Science, Technology and Innovation (MSTI) is responsible *inter alia* for research and university programmes, that is long-cycle, research-based higher education following the 3+2 Bologna structure (Eurydice, 2006). The Danish University and Property Agency (DUPA) carries out the Ministry's primary activities within this area. DUPA is accountable to MSTI.

The Ministry of Education is responsible for the university colleges and the academies of professional higher education.

The *Ministry of Culture* has the responsibility for the artistic and cultural colleges.

The major part of medium-cycle higher education is consolidated in eight professional higher schools and two engineering colleges, while the greater part of the short-cycle higher education programmes are combined in ten vocational academies. In 2008, just under 200,000 students studied in a higher education programme. Of these, 58% studied in a university programme, 31% in a professional bachelor programme, and 10% in a short-cycle programme (see table below).

Table 3.2: Number of Students per Higher Education Type, 2008

| | Number |
|--|----------------|
| Higher education, total | 199,465 |
| Short-cycle higher education | 18,950 |
| Medium-cycle higher education | 127,186 |
| Professional bachelor programmes | 62,460 |
| Other medium-cycle higher education | 2,138 |
| University bachelor programmes | 62,588 |
| Long-cycle higher education | 53,329 |
| Unity master's programmes (candidatus) (pre-Bologna) | 4,026 |
| Two-step master's programmes (candidatus) (Bologna) | 49,303 |

Source: UVM (Ministry of Education Denmark)

(http://www.eng.uvm.dk/~media/Files/Stat/Tvaergaende/PDF10/100629_Tal_der_taler_engelsk.ashx)

3.2 Public policies related to profiling of higher education institutions

Denmark has implemented far-reaching reforms in terms of governance, management and (recently) research funding of higher education, as well as in terms of the number and size of institutions. Funding has been used actively as a governance mechanism to achieve the objectives of higher education policy makes. The objectives of the recent reforms can be summed up in terms of three overall themes (Schmidt, 2010):

- Quality
- Merger & concentration
- Interaction & synergy

Policies to strengthen quality through performance-based research funding have been implemented in an attempt to build research environments with sufficient critical mass to increase synergy and excellence, enabling institutions to compete internationally for

knowledge and resources. In 2008, a new independent quality assurance agency was introduced (ACE) responsible for accrediting study programmes in higher education.

The Government has reduced the number of institutions by merging universities and public research institutions. The aim is to strengthen education as well as research, sharpening the profile of Danish universities and improve their competitive edge. The merger of institutions of higher education (and research institutes) took place in 2007/8 and led to the creation of large multi-campus universities. Prior to the mergers Denmark had 25 universities and research institutions, reduced through merger to eight universities and three research institutions. 97% of research activity is now concentrated at seven universities, while the remaining 3% is divided between four smaller institutions.

The new map of academic Denmark now has three large universities: the University of Copenhagen, the University of Aarhus and the Technical University of Denmark. These universities' higher resource levels will enhance their ability to attract and retain skilled students and researchers, with approximately two-thirds of public research and university education taking place here.

Interaction: The intention is for new universities will create professional synergies, which will ensure better utilisation of the country's research facilities, new possibilities for education and research, and a greater Danish share of the EU's increasing research grants to realise the potential created by the new institutions and collaboration interfaces

The new University Act from 2003 made universities "self-governing" institutions. The 2003 University Act changed the status of universities from state institutions to autonomous bodies within the public sector. The law offered more autonomy in areas such as the approval of new academic programs and the number of staff. However universities were not given the right to own and manage their estates, nor the facility to borrow from the private sector.

An international review panel¹ concluded that within the university sector and among various stakeholders there is a widespread consensus that the Danish universities have indeed gained greater autonomy through the 2003 Act, generally appearing to have become more dynamic. The Act was generally welcomed and, by and large, stakeholders view the 2003 Act as a significant forward step in strengthening universities' autonomous status and providing room for flexibility and innovation.

The starting point for the merger process was the Globalisation Strategy. This strategy, implemented in 2006, included a broad range of measures aiming at improving research and higher education. The globalisation strategy was entitled "Progress, Innovation and Cohesion Strategy for Denmark in the Global Economy". A Globalisation Council set up in 2005, consisting of representatives of many sections of society, was made responsible for the strategy. The strategy can be regarded as one of the most straightforward and explicit national level initiatives in Europe to handle the challenges of the global economy.

The most important university-oriented policy goals introduced in the framework of the globalisation strategy were to:

¹ <http://www.ubst.dk/en/universities-in-denmark/university-evaluation-2009>

- Raise the public investments in research from 0.75% to 1% of the Danish GDP
- Link the basic public funding of universities more directly to the quality of their activities
- Integrate government research institutions (GRIs) into the universities
- Double the number of PhD students
- Introduce a system of accreditation for all university education programmes;
- Increase the higher education participation rate from 45 to 50%
- Stimulate a more rapid throughput of higher education students
- Introduce better and more structured options for Danish students to study abroad
- Reduce the drop-out rates in higher education
- Allocate research funding increasingly on a competitive basis

To realise these policy goals a number of specific measures and reforms have been introduced, including the university merger processes. These have not operated in isolation, but relate to the Danish political system's overall reform efforts with respect to higher education, which include the 2003 University Act aiming at university autonomy. All these efforts are aimed at enabling the universities to compete in a number of fields with the world's best universities.

The globalisation strategy provided a framework for creating the necessary academic conditions for strategic prioritisation and profiling by stimulating merger processes to lead to a concentration of research capacities in universities. The mergers were also expected to strengthen education, and especially upper level education degree programmes, including by bringing research staff from government research institutions (GRI sector) into universities. Mergers were also intended to create the conditions for effective relationships between universities and the private as well as the public sector, to contribute to economically relevant, as well as other societal, innovations.

3.3 The role of profiling in the funding of higher education institutions

Funding arrangements represent important steering instruments for to the government. Funding of teaching and research is separated in Denmark (CHEPS Consortium, 2010). Accordingly, HEIs receive separate budgets for teaching and research. Changes in the research funding system, linking funding to outcome, have recently been introduced in Denmark, while linking funding to education has been practiced for a long time.

For the funding of education the *taximeter principle* is considered to function well (Frølich et al., 2010). A taximeter system is one which links funding directly to the number of students who pass their exams. An important feature is that HE institutions do not receive compensation for students who fail or do not take exams. In 2009, a new completion bonus was introduced conditional upon study duration. Universities are for instance only paid the completion bonus upon the student completing his/her study programme within a specified period. From 2009, the universities receive a:

- Bachelor bonus when students complete a Bachelor programme within the prescribed study period plus one year
- Master's bonus when students complete a Master's programme within the prescribed study period

Denmark has a two-tier system for resource allocation to research. The first tier are basic grants (block grants – lump sums) allocated by the different ministries directly to institutions. The second tier comprises resource allocation from the National Research Councils, strategic research programmes, and foundations, R&D funds from the different ministries, and private funds and firms.

In Denmark, the allocation of annual increases in resources for block funding of research have for some years been based on a combination of input indicators (external funding and share of educational resources, also allocated on a performance criteria) and output indicators (PhD graduates). While most research funding was allocated in an incremental way, each year 2% of the funding was allocated to a restructuring fund which was redistributed to the universities according to a '50-40-10 model':

- 50% was distributed according to universities' education funding
- 40% was distributed in accordance with universities' external research funding, i.e. research funding which universities obtained from the research councils, the EU, etc.
- 10% was distributed in accordance with the number of students having completed their PhD thesis

The 2% of research funding was to a certain extent distributed in accordance with political prioritisation of funding for PhD studies, in particular favouring natural sciences, health science and technical science.

As a follow-up to the globalisation agreement, it was decided that several indicators should be taken into account when distributing research funds. The indicators reflect quality as regards research, education and dissemination of knowledge. From 2010, a publication component has been introduced. Its components are weighted as follows:

- External funding: 20%
- Publications (adjustments for publication form, level and share of authorship): 25%;
- PhD graduates produced: 10%
- Share of educational resources (also allocated on a performance criteria): 45%

The aim of adding the publication component is to encourage researchers to publish in the most acknowledged scientific journals and to strengthen the quality of research. The publication component is very similar to the Norwegian publication indicator (*qv*). A national database has been established with publications are divided into publication forms and levels

according to lists of journals and publishing houses made by peer groups. The publication component is constructed in such a way as to not alter the relative share of resources between humanities, social science, natural/technical science and medical science. Resources are allocated conservatively across these four fields and allocated between institutions using publication counts.

Apart from the basic funding, universities can apply for targeted, programme funding. For universities, the ratio of basic funding to programme funding is 60% to 40%. Programme funding is mainly provided by the Danish Council for Strategic Research (DCSR) and the Danish Advanced Technology Foundation (DATF). In addition to the programme funding from these two organisations come two sectoral R&D programmes, the Ministry of Food, Agriculture and Fisheries' R&D programme 'The future food sector' and the Energy Authority's 'Programme for Energy Technology Development and Demonstration'. DCSR has identified ten Innovation Accelerating Research Platforms, areas where Denmark has internationally recognised researchers, competitive business clusters and/or a need for research-based solutions. The areas of priority are food, health, renewable energy (areas of traditional strength) and the use of nano-, bio- and information technologies.

Alongside funding instruments, individual higher education institutions are regulated via a dialogue between the institution's administration and the Ministry of Science. The most important of the dialogue-based instruments are development contracts. Universities draft proposals for their development contract, which is finalised following negotiations with the Ministry of Science, Technology and Innovation. The Ministry does not have the authority to impose specific targets on a university, nor the instruments to sanction any underperformance, since this would demand a change of the 2003 University Act.

The development contracts were first introduced in connection with a revision of the University Act in spring 1999, as part of a reform of university governance that offered the universities greater scope and flexibility to meet their challenges. There was no obligation on the universities to enter into contracts. Each university that wished to participate had to prepare a framework and formulate a proposal in which it stated its values and targets and what it intended to achieve in a four year period.

The second-generation university development contracts were introduced in 2004 aiming at a stronger focus on quantitative targets and indicators. Like the first generation, the second-generation contracts were not legally binding documents, but contracts were supposed to serve as the university board's tool to monitor overall qualitative targets and simple quantitative targets. The contract is a 'letter of intent, stating the strategic areas that the university intends to focus on as well as the instruments the university intends to use in order to reach the set targets' (Schmidt *et al.*, 2006, p. 14).

In 2007 the third-generation development contracts – for the period 2008-2010 – were introduced. The change was mainly occasioned by the mergers in 2007, since they resulted in

significant changes to the map of the research and university landscape. In the 2008-2010 development contracts, targets for the activities of the university must be set regarding research, education, dissemination of knowledge and – where appropriate – research-based public-sector services. All development contracts include targets for 16 activities which were considered relevant in establishing the basic targets for the performance of the universities (see table below). Universities are required to use the indicators in setting targets and formulating strategies for future activities. The introduction of indicators in the monitoring system informs policies and enhances steering.

Table 3.3: Purposes and Activities of Development Contracts

| Purpose | Activity/indicator |
|---------------------------------------|---|
| Research | Research production |
| | Internationalisation of research |
| | Attraction of external non-government funds |
| | PhD activity |
| Education | New enrolments |
| | Drop-outs |
| | Completion time |
| | Degree programmes adjusted to society's needs |
| | Entrepreneurship |
| | Internationalisation of the degree programmes |
| | Quality assurance of the degree programmes |
| Dissemination of knowledge | Continuing and further education |
| | Participation in the public debate |
| | Collaboration with the business community |
| Research-based public sector services | Public sector services provided by the university |

The negotiation process on the 2008-10 contracts was initiated in June 2007 by a letter from the Danish University and Property Agency (UBST). The letter included a list of suggested indicators for the contracts 2008-10.

The development contracts are drafted by each university and negotiated with UBST through a limited number of meetings at management level. The negotiations lead to a mutual agreement on the appropriate level of ambition. The development contract need be seen in the light of more elaborate university strategic plans which describe the university's overall prioritisations and focus areas of and the financial framework applicable for the contract period.

On top of this development contract, there may also be contracts with other ministries. Quoting from the contract for Aarhus University:²

² See: <http://www.au.dk/en/about/policy/developmentcontract/>

Aarhus University has entered into result contracts with the Ministry of Food, Agriculture and Fisheries and the Ministry of the Environment for providing extensive research-based advice to the authorities in connection with food and environmental issues. In addition, the university undertakes forensic investigations on behalf of the Danish Ministry of Justice and the National Board of Industrial Injuries. The university wishes to maintain and further expand these activities during the strategy period. Aarhus University also wishes to establish an agreement with the Danish Ministry of Education regarding, among other things, activities relating to the Danish School of Education.

Moreover, a study carried out among stakeholders revealed some of intended and unintended effects of the funding system on higher education universities (Schmidt et al, 2007), analysing the funding systems influence on institutions and their strategies.³ According to Frølich et al (2010), some Danish stakeholders claim that an increased proportion of competitive research grants fails to promote originality whilst also limiting HEIs' ability for long-term planning, forcing them to focus on areas where funding is available rather than on areas where the institutions possess expertise.

About the development contracts the international review panel concludes:

The development contracts (...) could be used as individual, helpful tools for the universities' strategic development and profiling, as well as for realising important targets, such as speeding up graduation and specific enrolment targets. However, we do not find the development contracts in their current practice effective enough as such steering instruments, as the explanatory notes to the University Act make them less appropriate for this role. The development contracts have become too detailed and process-oriented. In practice they consist of a list of indicators, on which universities provide data. For an overview of the university sector, the Parliament, as well as the Ministry, obviously needs comprehensive information and statistics on the universities' performance. This information is necessary and can be developed in dialogue with the universities, but it does not necessarily belong in a development contract.

As reported in a recent report on governance and funding reforms (CHEPS consortium, 2010), Danish stakeholders believe that in the period after the introduction of the new university act (2003) the higher education institutions have increasingly acted as more coherent institutions – as 'strategic actors'.

The international review panel also addressed the question of whether the university sector as a whole has become more diverse. The reforms were expected to lead to more intra-sector

³ The study was carried out in the framework of an OECD-IMHE project on the Funding Systems and their Effects on Higher Education Systems (see Strehl et al., 2007).

diversity through university profiling. The panel concluded that there are a number of indications that suggest that the universities are becoming more strategically oriented as indicated by their strategic plans. A second indication can be found in the careful attempts of a number of the universities to develop an explicit institutional profile, amongst other things, by using part of their basic funding to stimulate research programmes in areas where they have a strong track record. In addition, some universities have begun to proactively support researchers or research units in their applications to strategic research funds, e.g. the European Research Council.

Notwithstanding these developments, the panel argued that there remain many constraints on university autonomy. There are some indications of a 'low trust' situation when it comes to how the Parliament, Government and ministries judge universities' capacity or willingness to deliver on national strategic goals set for them. The Panel stated that many regulations and dialogue-based demands placed on the universities by authorities went beyond the expected role of national authorities as setting broad system-wide objectives. Instead the regulations intruded on university decision-making regarding "how best to achieve" the overall targets of the political system.

The panel's conclusion was that Parliament and the Ministry of Science, Technology and Innovation should consider defining the development contracts as goal steering instruments.

3.4 Danish profiling in relation to the U-MAP dimensions

Danish higher education has seen a number of reforms. In the sections above we discussed development contracts, increased autonomy, reforms in funding, mergers and the prioritisation in research. All of these instruments are believed to affect – at least in part – individual universities and colleges' decisions of to work on building their own profile, and thus being better equipped to face the global competition.

There are clear distinctions between the types of higher education institutions and the degree programmes they offer (universities, colleges, professional training institutions). As far as the university sector is concerned, the recent mergers have led to larger institutions. From the outside this has reduced system diversity, with large institutions incorporating many – sometimes stand-alone – departments and pockets of excellence. There are clear signs that the mergers in the university sector were inspired by the wish to strengthen in particular the research profile of universities – their international character, using their increased critical mass.

The mergers were expected to stimulate:

- More interdisciplinary cooperation in education
- More flexible and relevant offerings of degree programmes for the Danish students

- Greater success for Danish universities in their applications for EU research funding
- Higher quality (in the sense of impact) of the Danish university research output
- Better cooperation between the universities and the private sector with respect to innovation
- More effective knowledge relationship between the public research sector and the sector ministries

Looking at the U-MAP dimensions we note that the university development contracts include indicators for most dimensions: teaching and learning, research, knowledge transfer and public service. It is up to the autonomous institutions to decide whether it is one of the dimensions that will receive special attention in their profiling strategy. The most likely outcome is that large, comprehensive universities will argue that they are active in all dimensions. However, one of the conclusions of the recent international review of the Danish higher education system was that universities indeed have started to behave as strategic actors.

Teaching and learning profile: Through the taximeter model the government (for many years already) has strengthened quality in teaching and learning by means of a performance-based funding model. This is the case for all higher education institutions – universities, colleges, etc.

Research is also nowadays funded through mechanisms that reward performance. Basic funding takes place through a funding formula that is partly based on research performance. Alongside that, competitive programme funds for research have been made available to encourage universities in carrying out high level research on particular areas of strategic interest to the Danish economy. This implies that research concentration and the building of centres of excellence is a national policy – and universities are encouraged to do the same. Colleges are evidently not part of this game.

In terms of *student diversity* we highlight the fact that there are four types of institutions: universities, colleges, vocational academies and specialised colleges. Policies have sought to maintain the distinction between the types. Government-induced mergers within the four subsectors have taken place – not so much across the divides between subsectors but within. Each subsector will therefore be targeting particular student markets.

Involvement in *knowledge exchange* is part of the development contracts. Again, it is up to the individual universities and colleges to stress this dimension. The government-induced mergers with large government research institutes has also enabled the universities to interact more adequately with the business sector – thus increasing the transfer of technology (and knowledge in general) to their environment. The university sector is expected to be fertilised with practice oriented research, leading to close contacts with societal, i.e. private and public sector agencies.

International orientation: Internationalisation is an important goal and was heavily emphasised in the Danish Globalisation strategy. Special funds to encourage exchange of students and

mobility of staff have been made available. Danish researchers were very active and successful in generating funds from European research programmes. The merger operations in the university sector have also strengthened the international orientation of universities, which was indeed one of the specific goals underlying the merger programme.

Regional engagement is very much an issue for the attention of the university colleges and the vocational academies, institution which are catering in particular to their local labour markets.

4 England and Wales

4.1 Types of higher institutions and their role in the system

The university system in the UK and its constituent nations, England, Wales, Scotland and Northern Ireland, is extremely complex to summarise because of the system was not established as a public system, but rather firstly as a series of private institutions later granted access to public resources, later complemented with public bodies and then augmented with non-university institutions granted full university status. Belatedly, there have been some moves to create private HEIs and to give private organisations the capacity to work with accredited public bodies to award degrees. At the same time, since 1979, and the UK's first (failed) attempt to introduce full devolution, there has been the introduction of a quasi-federal fault line that makes it increasingly problematic to talk of one higher education system, but is more akin to a higher education tapestry. This makes steering the system extremely difficult, because when one player pulls at a thread to try to shape 'their' system, what eventually happens depends on the ways a host of players interact and negotiate solutions.

The question of what is a university is very simple to answer in the UK. A UK university has exclusive rights to its title through a warrant granted from the Privy Council, usually as a result of a Royal Charter or an Act of Parliament, which gives the powers to award teaching and/ or research degrees⁴. The grounds on which warrants have been granted have varied since the emergence of the modern university system with the creation of the University of London and the University of Durham in the early decades of the 19th century which were granted Royal Charters. There was a federal university system around Manchester at the turn of the 19th century where what are now the universities of Liverpool and Leeds began as colleges of the University of Manchester. Likewise, Newcastle University emerged as a college of Durham University from the free-standing medical school and a technical College, Armstrong College, merged into Kings College Durham in 1921 and Warranted as a University in 1965.

On the other hand, there were two 'big bangs', where many institutions were granted 'university title' in an attempt to reconfigure the system to reflect both its evolution along with future requirements. The first was in 1967, when a number of Colleges of Advanced

⁴ The University of Manchester was created from the constituent universities the Victoria University of Manchester and University of Manchester Institute of Science and Technology by the University of Manchester Act (2004). This Act revoked the Royal Charters of those two antecedent bodies and granted a new Royal Charter to this new university.

Technology designated in 1962 from existing technical colleges achieved university status. The second and most famous was in 1994, as a result of the 1992 Further and Higher Education Act where all the then polytechnics were granted university status. But the reaction to that sudden conversion was that after that point, those that had not met the size and disciplinary breadth criteria, such as specialist and higher education colleges, found it much harder to be granted university status. Many of those institutions which missed the cut in 1994 have subsequently placed much effort into being granted university status.

Although there is much talk of a binary system in England, it is important not to overemphasise the differences between universities and polytechnics which were less than between similarly named institutions in other countries. Prior to 1994, polytechnics could teach students for both taught and research degrees, which were accredited by the Council for National Academic Awards, which was abolished in 1994 (its residual functions passing to the Open University). It makes more sense to regard what happened in 1994 as allowing an already differentiated system to operate more freely; indeed, some former colleges of advanced technology and polytechnics now receive substantial core funding for their research activities through the Research Assessment Exercise including Aston, Salford & Brunel (former CATs) and Plymouth, Manchester Met and Brighton (former Polytechnics).

The status of university is highly coveted because it denotes autonomous institutions which receive core (government) funding for the prosecution of teaching and research, can undertake other activities necessary for teaching and research, and whose teaching is distinguished by being as a minimum informed by scholarship or research. However, those functions are not exclusive to universities, and are carried out by a variety of other bodies in the sector:

- University colleges: have powers to award research and/ or taught degrees in their own right but do not have sufficient size or disciplinary to be granted university status
- Colleges of the University of London: these are bodies which are members of the University of London but have powers to award taught degrees in their own right
- Colleges of Oxford, Cambridge, Durham, London⁵, and Manchester Universities: these are bodies which can enrol students and teach their own courses but whose degrees are validated by the parent institution
- Listed bodies: (degrees)provide teaching for degree courses accredited by institutions with degree awarding powers (universities); including further education colleges, hospitals, military academies, schools and private organisations e.g. Barclays Bank
- Listed bodies: further education colleges (foundation degrees). These provide teaching for foundation degree courses, and include some further education colleges and some sixth-form (17-18 yr old) colleges

⁵ There are institutions called London Colleges that are universities (Imperial & the University of London), University Colleges (not affiliated to UoL, e.g. Kings, University College) and University Colleges of the UoL (colleges of the School of Advanced Studies).

- Recognised bodies: these are organisations which have been granted the right to award specific degrees but which do not have the right to create new courses and/ or pathways, for example the Royal Horticultural Society's Masters in Horticulture
- The Archbishop of Canterbury: the only individual in UK accredited to award research degrees, although these are exclusively for in-service learning and are not taught

There are therefore four key variables around which universities in the UK are differentiated:

- The university (or university college) title
- Award degrees (taught degree awarding powers (TDAP), research degree awarding powers (RDAP))
- Enrolling students (research, taught masters, taught bachelor, taught foundation)
- The requirement that their teaching is informed by research and scholarship

These different categories are shown in Appendix 1. However, the UK rightly has a reputation as a having a higher education system that is more unitary than differentiated. The reason for this is that the bulk of public expenditure on higher education goes on the first four classes of institution, which are treated relatively similarly. Taking data from England, the total HEFCE recurrent grant (which covers teaching, and research overheads) is paid to 254 institutions; the 130 universities, university colleges, and colleges of universities received 97% of the £6.5bn budget, with 124 further education colleges receiving £196m between them; the FE college in receipt of the highest grant (Newcastle College, £11.4m, receives less than York St. John University, the 104th biggest HEI in terms of HEFCE recurrent grant. The point of this is that to consider profiling in the UK HEI system from a public perspective, it is necessary to look at the issue of profiling primarily in the university and university college sector.

Table 4.1: Allocation of HEFCE's Recurrent Grant, Universities and Other Providers, 2010-22

| | | |
|---|----------------|-------|
| Total recurrent grant paid by HEFCE | £6,477,189,552 | 100% |
| Total recurrent grant paid to HEIs (130) | £6,280,938,341 | 97.0% |
| Total recurrent grant paid by FE Colleges (124) | £196,251,211 | 3.0% |

4.2 Public policies related to profiling of higher education institutions

In order to understand the course of profiling in the UK, it is necessary to understand the wider political framework within which UK higher education operates. The United Kingdom has a higher education system that shows both aspects of a federal and a unitary system. There are areas where the four UK territories – England, Scotland, Wales and Northern Ireland – can diverge from one another. Scotland has an entirely different higher education system based on a four year bachelor degree, whilst the other three territories all are based on a three year bachelor degree.

The three devolved 'SWANI' territories – Scotland, Wales and Northern Ireland – have great freedom to manage their higher education systems according to their own principles, and in line with their respective devolved governmental priorities. Even in Wales, which has the weakest form of devolution, having only secondary legislative powers⁶ (although that will be reviewed in the near future), has sufficient legal basis on which to completely direct its own higher education system in the medium term (most university education policy being secondary legislation).

However, it would be misleading to assume that there are strong centrifugal tendencies within the four higher education systems, and there are several elements which tend to pull the systems close together. The first is that the UK is to all intents and purposes a common student admission space – although all four systems have their own secondary level qualifications, there is a single pan-UK body that regulates admissions by setting 'tariffs' for admissions which mean that there are strong pressures on universities to ensure comparability with institutions in other territories as well as their own.

Secondly, the 'science' element of higher education is a power reserved to the UK level, and so the Research Councils are national in scope, the Research Assessment Exercise was a national exercise (although the four territorial funding councils were free to concentrate funding according to their policy measures), meaning that an important group of all universities' stakeholders and funders are national in scope.

Thirdly, there are strong pressures on policy-makers not to deviate too far from what in practice is the English policy approach. On the one hand, there is strong structural co-operation between policy-makers in Government and the Funding Councils of the four territories, exchanging good practices, working together on areas of common interest and harmonising for statistical and other purposes.

Finally, the UK's federal financial mechanism is extremely basic which in practice means there is very limited scope for the devolved territories: only Scotland has the power to raise local taxes, a power which at the time of writing had not been exercised in the decade since devolution: the Barnett formula allocates block funding to the three devolved territorial administrations, allocations which are increased in line with English spending levels. This means that the devolved territories know that their budgets will evolve in line with policies implemented in England, which reduces the financial scope available to the territories to diverge their systems away from English behaviour, particularly where this would incur higher spending (which would have to be compensated with lower spending elsewhere).

⁶ Primary legislative powers are those to create laws by introducing legislation within an elected assembly; secondary legislative powers are those reserved to Ministers by primary legislation which are then later enacted through policy orders subject to a more limited form of parliamentary scrutiny.

The net result is to create a system in which there is no overall control of the system, and indeed the system is split both horizontally (between different government departments) and vertically (between different layers which have different funding responsibilities). In the 2009 Department of Business, Innovation and Science (the HE ministry) white paper Higher Ambitions, it was made clear in a figure the extent of the divergence of the funding streams and the problems this creates for overall control of the system.

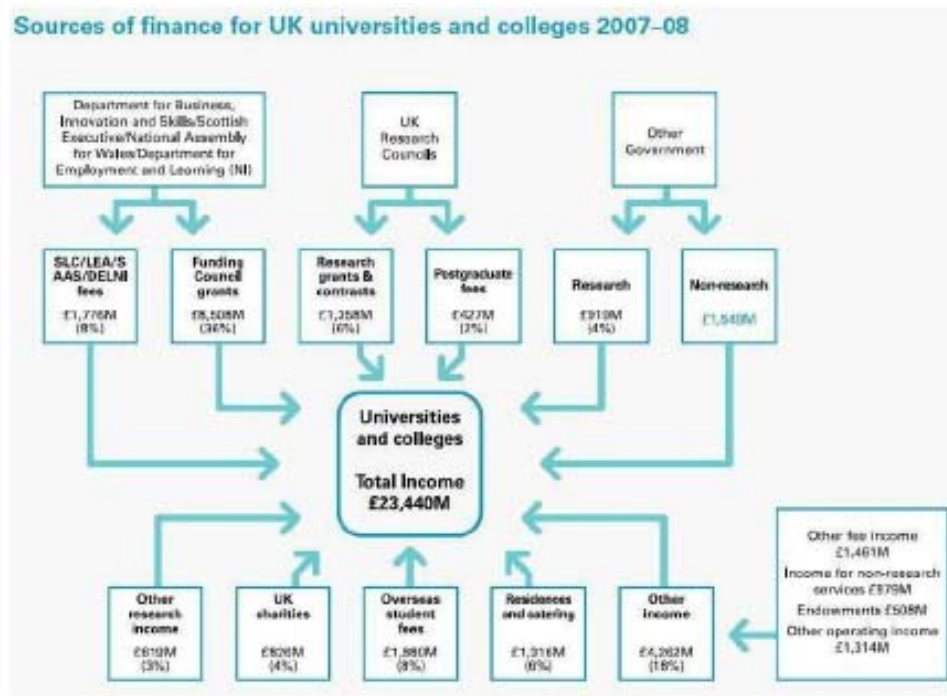


Chart 4.1: Sources of Finance for UK Universities and Colleges 2007/08

Source: BIS (2009)

4.2.1 Criteria used for profiling

Profiling in the UK is a tricky business, given that there is already on the one hand an extremely differentiated sector, and on the other, all those institutions that regard themselves as full universities or university colleges have mobilised to secure ‘fair’ treatment in terms of funding measures. To get round the complexity in the system, funding in the UK tends to be eligibility or formula based: large, one-off capital grants and research grants are allocated in the basis of those that (best) meet published criteria, and recurrent funding income is allocated on the basis of formulae rewarding all eligible institutions. This adds an additional layer of remove between the government and universities: funding and research councils have to govern by consent, and they therefore decide these funding formula and eligibility criteria on the basis of ministers’ signalled intentions but also through a negotiation process with sector representatives.

Where there are different ministers this can produce different outcomes in the different territories of the UK; an interesting example here is in the stated desire to concentrate research funding in excellent institutions to increase research efficiency; although all four funding councils are clearly concentrating their research allocations, by rewarding higher levels of excellence disproportionately. Indeed, HEFCE is funding 4* research at 9 times the level of 2*, in contrast, to lower levels of concentration in Scotland, (8:1), Wales and Northern Ireland (both 7:1). Thus, although there has been an effort to profile on a **research criterion** in the UK as a whole, there has also been different **national flavours** of concentration which have emerged as national funding councils have sought not to disadvantage their own universities, and in the case of Scotland, specifically to ensure that contract researchers in 1* departments could continue to be funded. HEFCE allocates £1.6bn of research funds through its core grant, so the concentration mechanism directs substantial flows of money to the sector.

Table 4.2: Allocation of Quality Funding Between the UK Funding Councils (2010)

| Quality level | 4* | 3* | 2* | 1* | U/C |
|------------------------|----|-------|----|-------|-----|
| England-HEFCE | 9 | 3 | 1 | 0 | 0 |
| Scotland | 8 | 3.375 | 1 | 0.125 | 0 |
| Wales-HEFCW | 7 | 3 | 1 | 0 | 0 |
| Northern Ireland-DELNI | 7 | 3 | 1 | 0 | 0 |

Source: HEFCE, HEFCW, SFC, DELNI

There are discretionary funds in all four systems (the Horizon Fund in Scotland England's 'non-recurrent funding budget', Wales' strategic objective funding and comparable activities in Northern Ireland). In practice, these apply to all eligible institutions, although eligibility criteria may be framed – as with the concentration formula outlined above – to encourage particular kinds of responses from particular kinds of institutions. All the territories apply some kind of adjustment funding for institutions which would through changes in the formula be severely disadvantaged. In England in 2010, a total of 34 HEIs received 'moderation' funding, and although it represented 0.32% of all expenditure, it was concentrated in those losing institutions, thereby moderating the sharpness of the incentive and allowing time to respond to incentives.

Table 4.3: Moderation funding provided by HEFCE, 2010, top 10 institutions

| Institution | Moderation funding |
|--|--------------------|
| Bishop Grosseteste College, Lincoln | 10.77% |
| City University, London | 4.04% |
| Royal Academy of Music | 3.79% |
| London Metropolitan University | 3.46% |
| School of Oriental and African Studies | 2.86% |
| Anglia Ruskin University | 2.82% |
| University of Chichester | 2.65% |
| Royal College of Music | 2.60% |
| Birmingham City University | 2.49% |

| Institution | Moderation funding |
|------------------|--------------------|
| Birkbeck College | 2.06% |

Source: HEFCE, 2010

4.3 The role of profiling in the funding of higher education institutions

The background for public funding and profiling has been that the last decade has been enormously lucrative for the higher education sector. This is illustrated by trends in the funding of 'science' (what in universities takes places as 'research') in the last two decades. There have been modest increases in first stream funding (HEFCs R&D funds) but a near trebling of the resources provided via the second stream, via the research councils (which is also spent in Research Council laboratories often co-located with universities). There has effectively been a doubling of public resources flowing into universities in the last decade, and this has meant that there has been the opportunity to provide something for every kind of institution.

It is clear that the parlous state of the UK public finances and the anticipated future cuts will also dramatically change the environment for public funding of higher education. It is against this background that there has been a much stronger and more visible mobilisation by the so-called 'mission groups' within higher education to try to ensure that the funding formula and special resources provided continue to meet their institutional-specific needs. There are four mission groups for the universities (organised along UK-wide lines), and with a fifth, "GuildHE" acting both as a peak interest organisation for University Colleges (similar to Universities UK for universities) as well as a mission group. These mission groups – although not officially funded – are a bottom-up response by universities to profile themselves in particular ways to maximise their funding, by changing the way funding is distributed rather than by responding directly to specified government calls for profiling.

- The Russell Group: 24 large, research-intensive universities, usually with medical schools
- The 1994 Group: smaller, research-intensive universities with an international profile
- University Alliance: institutions with a strong research profile, often supported by an applied research, consultancy and regional engagement base
- Million+: primarily large, teaching-intensive institutions who are also involved in delivering widening participation and access agendas
- GuildHE: formerly the Standing Conference of Principals, a sectoral representative as well as mission group for specialist colleges in England (there is a corresponding Scottish Body, Scottish Colleges)

This creates an environment where serious profiling is very difficult to achieve, and indeed the majority of the profiling innovation has taken place below the university level. This means that there is relatively little profiling of activity. A total of six university-status institutions in England receive no first stream funding for research out of a total of 130 HEIs, indicating the

extent to which the practice is implemented that all HEIs should be capable of benefiting from research funding if they meet the quality criteria. The five that do not are all arts schools without basic research activities and a joint teaching campus of two universities working in partnership.

4.3.1 Public funding mechanism and profiling

One commonly-cited tension in the system has been that Competitive Research Funding is allocated nationally but Research Infrastructure funding is allocated within territories; thus, it makes sense for a Funding council (which allocates research infrastructure funding) to allocate it in such a way that its institution increase their share of competitive research funding, which comes at no additional cost to them, but at the cost of institutions in the other three territories. The four territories have chosen to weight their funding of research of different quality levels in the 2008 RAE in different levels; only Scotland is funding activity rated 1*, which England is concentrating its research funding to the highest levels by applying a weighting of '9' to research rated as world class.

Although all universities and university colleges are eligible to receive this QR funding, in practice, because of the application of the QR differentiation, there has been a high degree of concentration (the full distribution is shown in Appendix 1).

Table 4.4: The Top Ten UK HEIs by HEFCE Research Quality Related (QR) funding, 2010, and Cumulative % of Total Allocation

| Rank | Institution | Grant (£) | Cum % |
|------|---------------------------|-------------|--------|
| 1 | University of Oxford | 126,035,827 | 7.86% |
| 2 | University of Cambridge | 117,842,931 | 15.21% |
| 3 | University College London | 108,978,258 | 22.01% |
| 4 | Imperial College London | 95,747,929 | 27.99% |
| 5 | University of Manchester | 84,617,452 | 33.26% |
| 6 | King's College London | 59,689,063 | 36.99% |
| 7 | University of Nottingham | 51,599,159 | 40.21% |
| 8 | University of Bristol | 50,437,149 | 43.35% |
| 9 | University of Leeds | 49,872,895 | 46.46% |
| 10 | University of Sheffield | 45,976,903 | 49.33% |

There are institutions which are far more research intensive than others: there are ten institutions which receive more than half of their core grant as first stream research funding. Likewise, slightly less than half of all HEFCE's expenditure on research through the first stream is allocated to ten institutions, with 84 institutions receiving in total only 10% of the funding. These figures are shown in the two tables below.

Table 4.5: The Proportion of HEFCE Grant Derived from Research Quality Related (QR) Funding, 2010, Top Ten UK Institutions

| Rank | Institution | % QR in HEFCE |
|------|--|---------------|
| 1 | Institute of Cancer Research | 93.3% |
| 2 | London School of Hygiene & Tropical Medicine | 79.8% |
| 3 | University of Oxford | 67.0% |
| 4 | University of Cambridge | 65.2% |
| 5 | London Business School | 62.4% |
| 6 | London School of Economics and Political Science | 62.4% |
| 7 | Imperial College London | 61.9% |
| 8 | University College London | 60.9% |
| 9 | Institute of Education | 58.6% |
| 10 | Cranfield University | 52.5% |

4.3.2 Private funding and the role of profiling

There are two sources of private higher education funding in the UK. There are firstly a number of private providers: there are two private university-level organisations, the University of Buckingham and BPP University College, as well as a number of private organisations which are Listed Providers, providing education leading to degree or foundation degree qualifications accredited by a public provider. The second source is the student fee, which varies between the territories. Scotland currently does not charge student fees to 'home' (Scottish) students, and £1,775 (c. €2,100) to other UK students; in Wales the fees are set at £1,285 to Welsh students and £3,225 to other students, whilst both England and Northern Ireland caps fees at £3,225 and in practice all institutions now charge the full fee rates. The other fees which do float freely are fees for part-time students and for overseas students, which even fifteen years ago, before the introduction of the full-time undergraduate fee at the time of the Dearing Report into the Future of Higher Education in the UK, accounted for 10% of university teaching income.

The net effects of this in England are clear and are shown in the figure below: the charged fee now accounts for around 25% of the unit of student resource. What is interesting is that the fee has not led to the introduction of a market mechanism in student places: all (public) universities in England now charge the full fee: the one university that experimented with a lower fee, Leeds Met University, felt that the negative image effects did not offset the extra recruitment. What raising student fees has done thus far is – because of excess demand over supply – is simply require students wishing to study to agree to make up for the shortfall in the public funds based around a historical unit level of resource (c. £7,500).

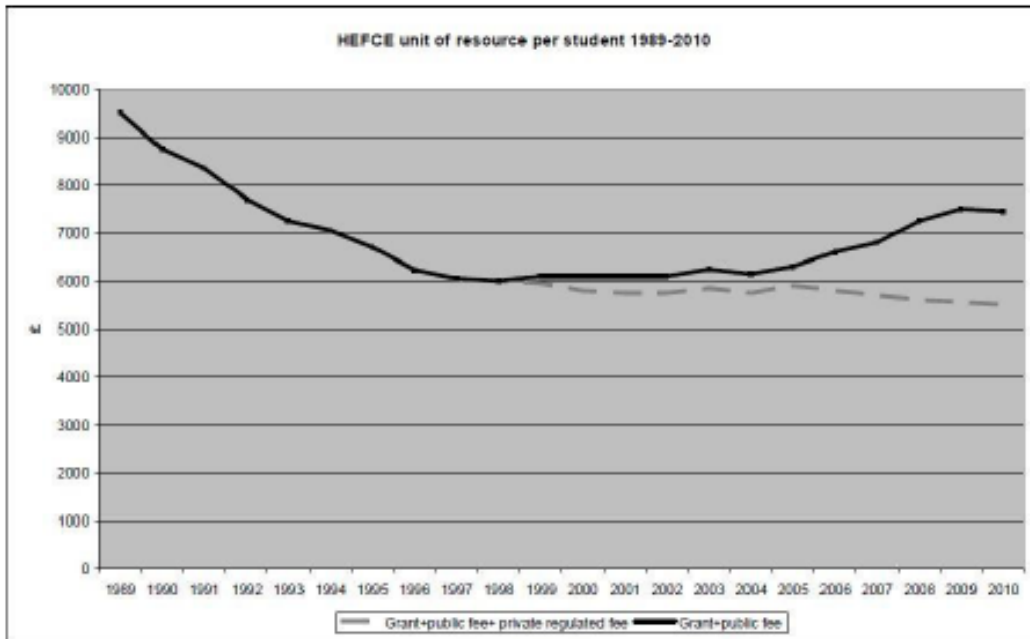


Chart 4.2: The Shifting Balance from Public to Public & Private Funding for Higher Education in England, 1989-2010

Source: www.timeshighereducation.co.uk/story.asp?sectioncode=26&storycode=412956&c=1

Nevertheless, that is not to say there has not been a profiling effect from the creation of the student market, but the signalling variable is student aptitude rather than the fee paid. The best universities are able to recruit the better students who require less intensive supervision to achieve the necessary standards, and do not require more basic skills training nor mentoring, guidance and pastoral activities. This allows the institutions that can recruit these students to allow their staff more research time, which is notionally reflected in lower staff: student ratios and higher spend per student. More teaching intense institutions have no scope to recruit more students because they are already operating at a higher teaching capacity which reflects the more intensive supervision and pastoral needs of their students and traditionally lower levels of research activity by their staff. This reinforces a binary divide based on potential student recruitment, and universities which can recruit better students can also recruit better staff because of the better environment for research these places offer, and hence the best opportunities to further ones' career (because career advancement between institutions is as a general rule primarily dependent on research performance).

Table 4.6: Ranking of Student Data from the Guardian League Table, Top Ten and Bottom Ten Universities from

<http://www.guardian.co.uk/education/table/2009/may/12/university-league-table>

| 2010 ranking | Institution | % Satisfied with teaching | % Satisfied with feedback | Spend per student (FTE) | Student: staff ratio | Career prospects | Value added score/ 10 | Average Entry Tariff |
|--------------|------------------|---------------------------|---------------------------|-------------------------|----------------------|------------------|-----------------------|----------------------|
| 1 | Oxford | 92 | 68 | 10 | 11.8 | 79 | 6.7 | 522 |
| 2 | Cambridge | 92 | 76 | 9.46 | 12.1 | 83 | 4.9 | 535 |
| 3 | St Andrews | 94 | 75 | 6.55 | 12.8 | 74 | 7.2 | 466 |
| 4 | Warwick | 86 | 60 | 8.76 | 15.2 | 76 | 6.0 | 461 |
| 5 | LSE | 73 | 63 | 7.62 | 14.5 | 86 | 5.4 | 481 |
| 6 | UCL | 85 | 60 | 8.34 | 11.2 | 79 | 7.0 | 451 |
| 7 | Edinburgh | 85 | 45 | 9.26 | 15.4 | 74 | 6.2 | 442 |
| 8 | Imperial College | 81 | 50 | 8.82 | 12.2 | 84 | 4.4 | 487 |
| 9 | Bath | 86 | 57 | 5.54 | 16.0 | 80 | 6.0 | 438 |
| 10 | Loughborough | 90 | 72 | 5.72 | 18.7 | 73 | 5.4 | 368 |
| ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 108 | Roehampton | 80 | 59 | 4.04 | 19.8 | 51 | 4.0 | 250 |
| 109 | Greenwich | 83 | 69 | 4.16 | 23.3 | 56 | 4.0 | 210 |
| 110 | Westminster | 75 | 58 | 4.08 | 18.2 | 48 | 4.5 | 247 |
| 111 | Leeds (T&AS) | 82 | 69 | 2.57 | 23.3 | 61 | 3.4 | 230 |
| 112 | JMU | 79 | 61 | 3.96 | 22.1 | 55 | 3.2 | 243 |
| 113 | Bucks NU | 74 | 60 | 4.88 | 22.0 | 49 | 3.3 | 209 |
| 114 | Bolton | 80 | 65 | 2.52 | 22.5 | 50 | 5.0 | 208 |
| 115 | Soton Solent | 73 | 57 | 3.79 | 24.8 | 53 | 3.2 | 221 |
| 116 | East London | 80 | 61 | 4.42 | 22.7 | 55 | 3.1 | 190 |
| 117 | London SBU | 76 | 55 | 2.79 | 29.6 | 59 | 5.9 | 178 |

4.3.3 Experiences with profiling: intended and unintended effects

One of the examples of the inability of the funding system to seriously profile has come in the area of the development of the third-stream funding mechanism in the UK. In 2007, the Government attempted to create a differentiation between 'business facing' universities (meaning teaching-intensive) and excellent research universities (teaching intensive). The mechanism which was supposed to be used to achieve this was the third-stream funding. However, with the application of a formula to the third-stream of funding (the so-called HEIF – Higher Education Innovation Fund), 42 universities received the maximum allowance (£1.9m in 2010-11), including the 'big five' research universities, Oxford, Cambridge, Imperial, Kings and University College London. Although a number of newer universities have subsequently chosen to profile themselves as 'business facing', the idea to incentivise innovation and reach-out through the funding mechanism faltered because of the way that funding changes are implemented in the system.

One of the more surprising decisions taken by the Government was the one-off funding of £68m provided to Cambridge University to create the Cambridge-MIT Institute. This operated in parallel with the Science Enterprise Challenge Fund which allocated around £2.5m to regional networks promoting entrepreneurship. This sent out a strong message that the greatest economic impacts are to be expected from the elite universities, and that business engagement was more a secondary mission for universities that were not good enough to attract research funding. It can be argued that this is symptomatic of the general preference in UK universities for basic research over applied research and consultancy which – together with the above-outlined tendency to allocate profiling funds on formula grounds - has blocked attempts to encourage some institutions to profile themselves as regional or business-facing institution.

A second instrument which can be examined are the Centres for Expertise in Teaching and Learning. This was a grant given to create centres with resources to improve pedagogic performance in specific areas, and to reward identified excellence in teaching as well as address institutional- or network-specific issues, problems and challenges. The CETLs ended up being far more evenly distributed than had the resources been exclusively provided to teaching intensive institutions. The figures are shown in the table below, and they clearly indicate a distribution very different to the case where the CETLs were attempting to encourage a profiling around teaching-intensive institutions.

Table 4.7: The Primary Affiliation of the CETL Leads* for the 75 CETLs, England

| Classification of CETL Lead | No. institutions |
|--|------------------|
| University Alliance (applied research intensive) | 20 ¹ |
| Russell Group (big, research intensive) | 18 |
| Million+ (large, teaching intensive) | 15 |
| 1994 Group (small, research intensive) | 12 |
| Guild HE (former colleges) | 2 |
| Other (specialist/ teacher training colleges) | 8 |

Notes:

* - the CETLs were consortia and only the lead institution has been indicated.

¹ –the University Alliance includes the Open University which receives the 35th highest recurrent research grant in England

Source: <http://www.hefce.ac.uk/learning/TInits/cetl/final/cetllist.doc>

4.4 British profiling in relation to the U-MAP dimensions

- **Student profile:** the Open University is the UK's main distance-learning provider, and Birkbeck College, London is profiled as an institution for part-time and mature students, but this has not been in response to particular funding incentives. There is a premium of 10% paid towards part-time FTEs by HEFCE, but this applies to all institutions rather than being targeted. UHI Millennium Institute has been established in Scotland to provide

access to HE in remote rural areas, universities in Cornwall, Cumbria and Ipswich were created with the same rationale in England, and there plans are currently underway to create a University Heads of the Valleys Institute to serve former mining areas in Wales

- **Internationalisation:** all the territories are involved in an RCUK group which is currently promoting a strategy to maximise the internationalisation of all UK research and in particular to maximise the inflow of research resources from international sources to the UK

4.4.1 Other dimensions used

- **Charitable giving:** HEFCE launched a “Matched funding scheme for voluntary giving 2008-2011” scheme in 2008 to encourage institutions to increase their fund-raising activities. In this, institutions allocated themselves to one of three tiers: the higher the tier, the lower the level of the match (1:1, 1:3, 1:3) but the higher the level of the overall capped fund provided (£200k; £1.35m, £2,75m)

Appendix 1: the Profiling of Higher Education in the UK

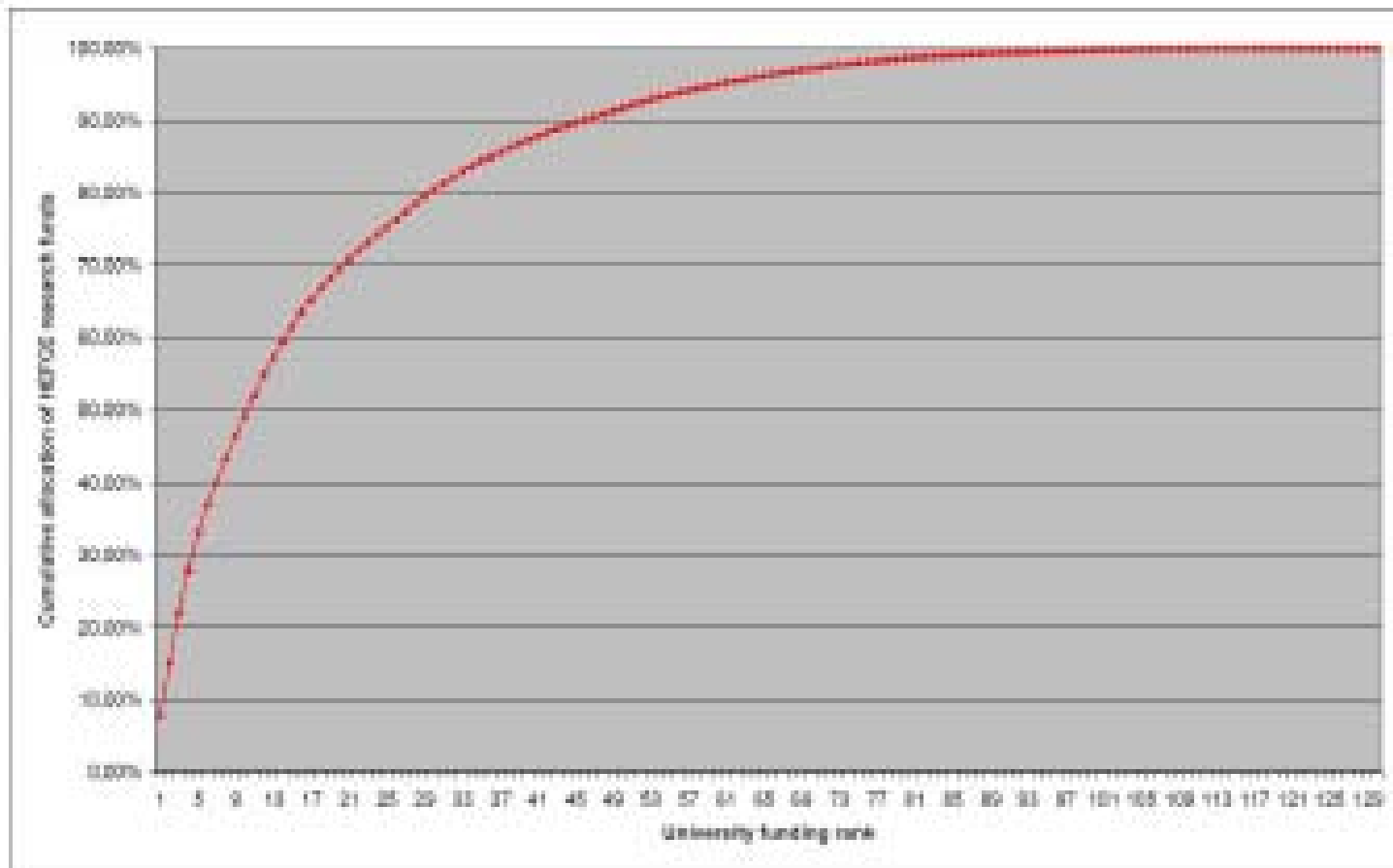
| Area of profiling Dimensions of profile/ Institutional Category | Title University/ University College Title | Teaching Teaching informed by scholarship | Awarding Powers | | Enrols Students | | | |
|---|--|---|--|--|--------------------------------|------------------------------------|------------------------------------|--|
| | | | Research Degree Awarding Powers | Taught degree awarding powers | Enrols Research students | Enrols Taught MA students | Enrols Taught BA students | Enrols Foundation Degree students |
| Universities | ✓ | ✓ | (✓) ² | ✓ | ✓ | ✓ | ✓ | ✓ |
| University Colleges | ✓ | ✓ | (✓) ² | ✓ | ✓ | ✓ | ✓ | ✓ |
| Uni Colleges of University of London | ✓ | ✓ | x | x | ✓ | ✓ | ✓ | ✓ |
| Colleges of Collegiate University | (✓) ¹ | ✓ | x | x | ✓ | ✓ | ✓ | ✓ |
| Listed bodies: full degrees | x | x | x | x | x | x | ✓ | ✓ |
| Listed bodies, foundation degrees | x | x | x | x | x | x | x | ✓ |
| Recognised bodies | x | x | (x) ³ | ✓ | x | ✓ | ✓ | ✓ |
| The Archbishop of Canterbury | x | x | ✓ | ✓ | x | x | x | x |

Source: <http://www.dcsf.gov.uk/recognisedukdegrees/>, authors' own design

Notes:

- ¹ – Colleges of collegiate universities could not style themselves as a university without acquiring separate Privy Council approval, as Imperial College, London did when it left the University of London.
- ² – In Scotland, a university must have both RDAP and TDAP to have university title; in the rest of the UK, TDAP are sufficient.
- ³ – There is nothing in principle to stop a recognised body being given RDAP for a specific research degree but it has not to date happened.

Appendix 2: the Distribution of HEFCE's QR Funding to Universities in England, 2010-11, by Rank of QR Funding



Source: HEFCE, 2010

5 France

5.1 Types of higher education institutions and their role in the system

France is traditionally a centralised higher education system consisting of a wide variety of institutions. In France, diversity amongst institutions is the result of initiatives to respond to evolving national needs (Reichert, 2009, pp. 45 ff.).

One way to categorise higher education institutions is by their entry selectivity, whereby the main institutional divide is between Universities and “Grandes Écoles”. Universities are the largest part of the system and are in the ‘open’ sector. The “Grandes Écoles” (and other specialised institutions such as the short cycle vocational programmes at “Instituts Universitaires de Technologie” or IUT) are in the selective sector (Kaiser and de Boer, 2007, pp. 21 ff.). “Grandes Écoles” are governed by a different set of laws and statutes to universities (Reichert, 2009, p. 46). IUTs (created in 1966) respond to new needs by diversifying institutional orientations, for example modifying the selection procedures, introducing new objectives and pedagogies and pro-actively opening the university to its host society. At the more advanced level, Doctoral schools or research schools run in alliance with the Centre National de la Recherche Scientifique (CNRS) or other national research institutes (which have their own regulations, selection, hiring and reward criteria) introduce other methods of selectivity or vertical differentiation into the institutional landscape (Reichert, 2009, pp. 46 ff.).

5.2 Public policies related to profiling of higher education institutions

The regulatory framework has enabled various institutional arrangements leading to a complex and segmented system. Thus, current policies (including funding schemes) are meant to promote cooperation between these separately regulated units in order to achieve synergies, efficient use of resources and increased visibility.

Several policies reforming governance in French higher education have been instituted over the years including the Innovation Act (1999), the introduction of the Bachelor/Master system, the Pact of Research (2005), the Law for research (2006) – which includes the Pôles de Recherche et d’Enseignement Supérieur or PRES (see below) –, the Law for Autonomy of Universities, called Loi relative aux libertés et responsabilités des universités or LRU (2007), the Law for the Finances (2006), the Agency for the Evaluation of Research and Education (2007), Plan Campus (2008). However, the most important initiatives with regards to institutional differentiation and funding are the PRES, the LRU and Plan Campus (Reichert, 2008, pp. 45 ff.). These mechanisms are described in section 5.3.

5.2.1 Criteria used for profiling

The recent Assessment of the higher education reforms across Europe (European Commission, 2009b, 2009c) provides information on funding mechanisms in different countries (including France). Data cover absolute and relative (to EU average) amounts, and their allocation across different sectors. The tables presented below are adapted from European Commission 2009c, pp. 79 ff. Table 1 shows the mechanisms for direct public funding (i.e. whether it is negotiated, incremental, formula-based or contractually determined) and how their relative importance changed over the last 15 years. Table 2 looks at the underlying criteria for allocation. From Table 2 it is apparent that in France whilst input indicators are still preeminent (nor has this changed over the years), output indicators have gained more importance

Table 5.1: Main Mechanisms for Direct Public Funding

| Main mechanisms for direct public funding | | | | |
|--|-------------|--------------------------|-----------------|-----------|
| <i>Legend: 0 = not important; √ = some importance; √√ = important; √√√ = extremely important</i> | | | | |
| | negotiation | historical / incremental | Formula funding | Contracts |
| 1995 | | | √√√ | √ |
| Current | √ | | √√√ | √√ |

Source: adapted from European Commission, 2009c pp. 79 ff.

Table 5.2: Underlying Criteria of Operational Grant

| Underlying criteria of operational grant | | |
|--|---|--|
| <i>Legend: 0 = not important; √ = some importance; √√ = important; √√√ = extremely important</i> | | |
| | Input-related criteria (e.g. students, study places, staff, past costs, etc.) | Output-related criteria (e.g. degrees, credits, assessments, publications, grants, etc.) |
| 1995 | √√√ | √ |
| Current | √√√ | √√ |

Source: adapted from European Commission, 2009c pp. 79 ff.

5.3 The role of profiling in the funding of higher education institutions

The regulatory framework mentioned under section 5.2 refers to three key policies that cover funding mechanisms, which in turn may impact upon how institutions decide to profile themselves:

- LRU: the Law for Autonomy of Universities (10th August 2007) enabled universities to choose to benefit from more autonomy. Autonomous universities manage their budget, the organisation of their infrastructures, and the employment contracts of their employees, both teacher-researchers and administrative staff. In 2009, there were 20

autonomous universities (out of about 85 Universities) which accounted for 32,000 employees and €1.8bn in salary costs (European Commission, 2009a). The LRU enabled diversification of funding sources, even allowing institutions to establish foundations and use the funds thus generated, even encouraging the business sector to contribute to these foundations (Reichert, 2009, p. 51). Institutions must now develop more detailed funding strategies and become more entrepreneurial, competing for public and private funds (which remain, none the less, negligible)

- The PRES: this is a scheme which provides funding incentives to stimulate inter-institutional cooperation and pooling of resources. It was created in 2006 to foster cooperation between universities and Grandes Écoles (and national research laboratories through the “mixed labs”) within a region or a large city, in order to improve efficiency through synergies and reach research critical mass to achieve global visibility (European Commission, 2009a). It is one of the instruments defined in the Law for Research (European Commission, 2009b, pp. 254 ff.)
- Plan Campus (or Operation Campus): a means to strengthen the French HE system and restore its former pre-eminence (Aust *et al.*, 2008). It is a selective support scheme for campus development (Reichert, 2009, p. 49). The approach has two parts, firstly a set of (contested) legal reforms which increased managerial control over institutions, and secondly, a set of huge investments in universities. The original plan was to create ten world class universities starting in 2007, investing around €2bn, encouraging mergers, stimulating international attraction and building critical mass. Every participating university has a contract agreed with the state in which 20% (rather than 3%) of funding is tied to contracted outputs, and the government is also investing substantially in almost all institutions. Each Plan campus may cover part of a PRES rather than all PRES members (*Ibid.*). Plan Campus promotes vertical differentiation and as recruitment in this area is likely to be competitive, vertical differentiation between different institutions predicated on research strength and potential will probably be the result (*Ibid.*). The PRES and the Plan Campus provide Public Research Organisations and Higher Education Institutes with extra resources to encourage them to increase their mutual cooperation.

In addition, there are two other noteworthy reforms (Kaiser, 2007, p.39):

- The creation of the Agency of National Research (ANR) in 2005. The ANR has the objective to fund research projects. Its missions are twofold: fostering the production of new knowledge, along with promoting cooperation between public laboratories and industrial research centres. In 2009, the budget of the ANR was €819m (of which €653m were allocated through call for projects)
- The plan for the reform of the Bachelor of Science established in 2008-2012 for 5 years allocated € 730m in 2009. These funds aim to better orientate first-year university students and reduce drop-out rates

The 2009 higher education budget was about € 23bn. From 1980 to 2007, the average expenses for students had grown by 35% (at current prices). In 2005, France dedicated 1.3% of the GDP to the higher education, which made France ranking 14th out of the 28 OECD countries (Ministère de l'Enseignement supérieur et de la Recherche, 2008, p. 14).

5.3.1 Public funding mechanism and profiling

There is a variety of modes by which institutions are funded in France, which indirectly affect how their profiling (Kaiser, 2007, pp. 48 ff.). The main source of public funds is the central government that pays for staff (both directly and indirectly), buildings and equipment and other recurrent cost (both directly and indirectly). The Law on New Public Budgeting (“Loi Organique relative aux Lois de Finances”, or LOLF) passed in 2001 (enacted as of 2006) compels universities to follow certain procedures to benefit from public funds. LOLF is seen as a way to increase transparency and parliamentary control over public sector performance. Its aim is to reform the financial management of the entire public sector, making clear how public money is used by different ministries (French Ministry of Education Website, 2010). In practice, the LOLF requires universities to formalise their strategy and report procedures, which were seen as major changes in the French landscape. Budgeting is thus performance-based.

In general, public funds are allotted in three ways⁷, namely (a) formula-based, mainly through the so-called S.AN.RE.MO model, (b) project-based and (c) contract-based:

- The S.AN.RE.MO allocation model is applied to universities, Instituts d’Etudes Politiques, IUTs, and engineering schools (Kaiser, 2007). It is input-based and is based on the number of students enrolled. Study programmes are categorised in a grid that serves as a weighting device. The level and type of programme determines the weight. The distribution of financial resources is determined by four criteria: the need for additional staff hours, the type of pedagogical function (technical vs. general), the amount of floor space, and compensation for non academic support staff. The funding formula determines the theoretical need. Whether in fact government provides these resources is not guaranteed. The basic funds allocated based on the formula comprise both teaching and research. The resources allocated through the S.AN.RE.MO model cover around 78% of the public budget
- Some public funding is contract-based (on four-year basis). The concept of contracts between the state and individual institutions, introduced in 1984, was at first limited to research and in 1989 extended to all activities (including teaching). The contracts are commonly called “Contrat quadrinial” (four-year contracts). The contract listed institutional priorities and commitments: the institution developed a four-year plan and entered into a contract with the state to implement the planned activities (Reichert, 2009, p. 50). In 2003, there were some evaluations of the contract policy and the four-year contracts. The main conclusion was that the contracts were successful but should be revised if they were to play an important part in the steering of higher education in the context of the new Financial Law LOLF. The LRU removes these prior limitations (e.g. the impossibility for funds to roll-over year on year), but contract-based funds remain important for additional funding for necessary institutional action. The OECD (2008, p. 93) points out that four-year contracts have yielded increased practical autonomy for institutions. Moreover, in addition to the four-year contracts, there are contracts between the state and the region that comprise a substantial amount of the research

⁷ Private higher education institutions may receive public funds if they are recognised by the State

funding. The research element of the four-year contracts therefore covers only around 5% of overall research funding. The teaching element comprises all teaching activities but the amount of funds allocated through the contracts is only one fifth of total public funds allocated to higher education. Although the four-year contracts are also known as the unique contracts, there is a clear divide between the part in which research is addressed and the part that addresses teaching. The latter is far less detailed and negotiations are done with the president of the HEI only. The research part is more detailed and addresses issues for specific research units within the university. The resources allocated through four-year contracts cover around 16% of the public budget.

- Finally, about 6% of the public budget is allocated through specific funding and project based funding, which can be either competitive or non-competitive

Public research funding consists of a number of flows of resources (see Kaiser, 2007, pp. 50 ff.), including:

- Resources allocated through the basic university funding (part of the S.AN.RE.MO model)
- Resources allocated through the State-Institution contracts (four-year contracts) and the contracts between the region and the institutions
- Resources allocated to the research organisations
- Research funds allocated on a competitive basis by research councils such as the ANR

These flows, with the exception of the latter (competitive funds), are based on recurrent assessment and output based criteria.

Table 5.3: Specific Funding to Support Initiatives by Higher Education Institutions

| Specific funding to support initiatives by higher education institutions | |
|---|--|
| Specific (targeted) teaching funds for: | Specific (targeted) research funds for: |
| C indicates competitive; N indicates negotiations-based; E indicates evenly distributed across institutions | |
| Encouraging the participation of students from socially disadvantaged or non-traditional backgrounds (E) | Strengthening training of young researchers (C) |
| For encouraging mergers/amalgamations between institutions (C) | Setting up public-private partnerships (C) |
| Encouraging excellence in teaching (C) | Encouraging innovations, research commercialization, spin-offs (C) |
| Encouraging innovations in curricula (C) | |
| | |

Source: adapted from European Commission, 2009c pp. 79 ff.

Finally, while the central government remains the key player in higher education financial policies, it has increasingly shared financing with territorial authorities, for example through two initiatives called U2000 and the “Université du 3ème millénaire”, or U3M (Kaiser, 2007, p. 49):

- U2000 is a plan that ran from 1990 to 1999. Its goal was to invest in higher education infrastructure to accommodate rising student numbers. A crucial element was co-operation between the central government and local authorities, so that local authorities' financial contributions could augment national contributions (*Ibid.*, p. 53)
- U3M's main goal was to ensure higher education and research contributed to national and regional economic development, necessitating \close relations between teaching, research and industry. U3M was a joint effort of the State and the territorial authorities, complemented by European structural funds. The total budget for the 2000-2006 was over €7.25bn. 80% was covered in planning contracts between the state and the regions (Contracts de Plan de l'État-Régions). The ministry of education contributed €2.5bn to these contracts (*Ibid.* p. 54)

5.3.2 Private funding and the role of profiling

Table 4 below shows that the private contributions outweigh public ones in contributing to Research and Development (R&D). However, the public purse is more committed to education. Thus private funding endorses a stronger institutional research orientation.

Table 5.4: Expenditures on Higher Education and R&D by Sector of Performance

| | | | | |
|--|---|---|---|--|
| Expenditure on tertiary education institutions in 2005 (as a % of GDP) | From public sources of funds 1.1% | From private sources of funds 0.2% | Total 1.3% | |
| R&D expenditures, 2006 (as a % of GDP) | Higher education expenditures (HERD): 0.38 % | Private sector expenditure (BERD): 1.32% | Government research institutes expenditure (GOVERD): 0.36% | Total domestic expenditure on R&D (GERD): 2.09% |

Source: adapted from European Commission, 2009c pp. 79 ff.

5.3.3 Experiences with profiling: intended and unintended effects

In the case of France it seems that extant policies favour universities' research component. Traditionally, French universities have not been considered research institutions although that has changed of late. The 2006 Research Act and the 2007 University Act encourage universities to become more strategic in research production (Huisman and van Vught, 2009, p. 27 ff.). The (often contested) legal reforms which have taken place in France over the years have increased managerial control over institutions. Investments in universities are meant to improve the system, especially through contract-based subsidies. Plan Campus encourages mergers, stimulates international attraction and builds critical mass in the system (20% of funding is tied to contracted outputs). Most universities have joined into one of the ten university urban confederations into which substantial sums are being invested (the Pôles de Recherche et d'Enseignement Supérieur). The French state has also

taken out a €35bn loan (known as “Great Loan”), around €15bn of which is being spent on science projects in ways that will support French university research excellence.

5.4 French profiling in relation to the U-MAP dimensions

The previous analysis suggests that profiling in France focuses on the following U-MAP dimensions (see also Table 3 above):

- Research involvement
- Teaching and learning
- Student profile (e.g. total enrolments, gender ratios, distance learning)
- Regional engagement

5.4.1 Other dimensions used

Other funding may be devoted to supporting specific university activities (e.g. internationalisation).

6 Germany

6.1 Types of higher education institutions and their role in the system

In Germany the 16 federal States (“Länder”) are legally responsible for their own higher education system. Higher education policy is an aggregate of sixteen potentially different policies for higher education. German higher education is overwhelmingly publicly funded, and institutions have to follow the budgeting and accounting legislation of German public administration. These laws, although set by the individual states, are more or less similar across the country (Kaulisch and Huisman, 2007).

There are different ways to categorise the institutions, but usually the distinction is made between the Universities (including “Technische Hochschulen”, “Pädagogische Hochschulen”, and Theological Colleges), vocationally-oriented Universities of Applied Sciences (called “Fachhochschulen”), and Colleges of art and music. The Universities of Applied Sciences emphasise practical relevance and strong ties to the world of work. Those who study at a German University of Applied Sciences have a better preparation than traditional university students for positions and assignments in specific industries and work fields. The Universities of Applied Sciences above all offer degree programmes in the field of technology, business and management, social studies, media and design. On the other hand, it is not possible to study medicine, education or law at a University of Applied Sciences. The strong applied or practical focus of the Universities of Applied Sciences is also reflected in the profile of their lecturers and professors. Many of them have prior experience in industry, business or social work. This know-how qualifies and enables them to provide students with insights into the processes, working methods and expectations of companies, or social and cultural institutions. The final element of transfer of knowledge and practice to students comes through compulsory study internships: as a rule students are required to complete one or two practical semesters.

Alongside these types of institutions there are professional academies: “Berufsakademien” and “Fachschulen”. In these professional academies, academic training is combined with practical professional training in companies or in training establishments (Kaulisch and Huisman, 2007, Eurydice, 2008). Since 2003 a number of “Berufsakademien” have been integrated with “Fachhochschulen” (Eurydice, 2009). Moreover, whilst the key differentiation is between Universities and University of Applied Sciences, the existence of institutions specialised in distance learning is also worthy of note (Kaulisch and Huisman, 2007, p.31)

In 2009 there were 394 higher education institutions in the Federal Republic. This was comprised of 104 universities, 6 colleges of education, 14 colleges of theology, 51 colleges of art, 189 universities of applied sciences and 30 universities of applied sciences for public

administration. Only 18% of German higher education institutions are private institutions (mainly institutions of the armed forces and the churches), but less than 2% of the total student body are enrolled in those institutions. In the past decades there has been an alignment between universities and universities of applied sciences, greatly facilitated through reforms of study programmes (Bologna) and research promotion, but there is no political will to further unify the binary system (European Commission, 2009b)

6.2 Public policies related to profiling of higher education institutions

The German central government has traditionally played a coordinating role in higher education policy, whilst primary direct responsibilities remain with individual States. Since the 1970s steps have been taken to some extent standardise different States' legislation (Jongbloed and Salerno, 2002, p.74). The Framework Law for Higher Education, passed in 1998 was drawn up on the basis of the organisational principles of autonomy, diversity and competition, seeking to deregulate the sector to facilitate the realization of these principles (Orr et al., 2007, p.6). In recent years German higher education institutions have seen their autonomy in governance and funding increase steadily:

- Commercial/private sector accounting is gradually replacing traditional line-item budgeting and accounting, with formula funding and contracts more important than history-based funding
- Every state has introduced performance related resource allocation systems to encourage third party funding, increased output in terms of graduates, publications etc.
- In 2005 the remuneration of professors was reformed. The traditional remuneration system, which applied to all professors nationwide, was based on seniority; the new system includes a (lower) basic salary complemented with performance-related benefits for exceptional performance in research, teaching, arts, continuing education and promotion of young researchers (regulations can differ among states and even among institutions within one State).
- In 2005 the Federal Constitutional Court abolished the ban on tuition fees laid down in the 2002 higher education framework act as the Federal Government had lacked legislative competence in this matter. Following the ruling, seven States (Baden-Württemberg, Bavaria, Hamburg, Hesse, Lower Saxony, North Rhine-Westphalia and Saarland) introduced tuition fees. In general, revenues from tuition fees must be invested into teaching and improving study conditions (European Commission, 2009a)

These changes empower diversity in missions, academic profiles and links to society, but it has been pointed out that, in the context of the Bologna process, the boundaries between Universities and Universities of Applied Sciences are in fact blurring (van Vught, 2009, p.29).

6.2.1 Criteria used for profiling

In general, German higher education institutions have limited control over the size and structure of their personnel budget, which affects key university operations such as teaching and research capacity (Orr et al., 2007, p.8). However, institutions have been made more efficient by granting them further autonomy, allowing them to build an individual profile in a particular area whilst encouraging more competition (Kaulisch and Huisman, 2007, p.46). The German federal system has recently been reformed to create a clearer division of labour between the two governmental levels ("Föderalismusreform") so the competence for teaching now lies exclusively with the States. However, the governments agreed on a support scheme to allow the Federal Government to be involved in the provision of university funding to take account of increased costs reflecting increasing numbers of students (European Commission, 2009c, p.2).

Performance-related funding has become increasingly important in Germany, and external project-based research funding has surged (European Commission, 2008, pp. 30-31). The Excellence Initiative (see next section) is the most prominent central instrument to promote in-country institutional differentiation. Since the States play the leading role in higher education policy-making, presenting a clear-cut national picture is an arduous task. Each State implements a different funding model based on its own political agenda and regional context so that no single German allocation model can be determined (Orr et al., 2007, p.11). However one may look to individual State criteria used to support institutional differentiation (e.g. North Rhine Westphalia, which was used as a case in the recent "Independent Assessment of the Bologna Process"). Table 1 shows the mechanisms for direct public funding (i.e. whether it is negotiated, incremental, formula-based or contractually determined) and how their relative importance changed over the last 15 years. Table 2 looks at the underlying criteria for allocation (i.e. whether funds are disbursed on the basis of input or output).

North Rhine Westphalia introduced performance-based funding in 1993. The system was constantly expanded and modified, and introduced for all higher education institutions in 2004. The part of the public grant distributed on the basis of performance rose from 14% in 2004 to 17% in 2005 to 20% in 2006. The parameters are weighted differently for Universities and Universities of Applied Sciences. The criteria included for Universities of Applied Sciences include the number of students completing their course of study within the regular programme duration, graduates based on number of semesters and gender equity, the number of professors based on gender equity and third party funding (European Commission, 2009a, p.273).

Table 6.1: Main Mechanisms for Direct Public Funding

| Main mechanisms for direct public funding | | | | | | | | |
|--|-------------|-----|--------------------------|-----|-----------------|-----|-----------|-----|
| <i>Legend: 0 = not important; √ = some importance; √√ = important; √√√ = extremely important</i> | | | | | | | | |
| | negotiation | | historical / incremental | | formula funding | | contracts | |
| | Uni. | UAS | Uni. | UAS | Uni. | UAS | Uni. | UAS |
| 1995 | √ | √√√ | √√√ | √√√ | √ | √ | √ | √ |
| Current | √√√ | √ | √ | √ | √√√ | √√√ | √√√ | √ |

Source: adapted from European Commission, 2009b pp. 84 ff.

Table 6.2: Underlying Criteria of Operational Grant

| Underlying criteria of operational grant | | | | |
|--|---|-----|--|-----|
| <i>Legend: 0 = not important; √ = some importance; √√ = important; √√√ = extremely important</i> | | | | |
| | Input-related criteria (e.g. students, study places, staff, past costs, etc.) | | Output-related criteria (e.g. degrees, credits, assessments, publications, grants, etc.) | |
| | Uni. | UAS | Uni. | UAS |
| 1995 | √√√ | √√√ | √ | √ |
| current | √ | √ | √ | √ |

Source: adapted from European Commission, 2009b pp. 84 ff.

6.3 The role of profiling in the funding of higher education institutions

In Germany most university funding is public and a differentiation can be made between the basic subsidy (“grundmittel”), which covers *inter alia* staff costs, and research grants from the research councils (“drittmittel”). The basic subsidy is over 80% of institutional income and research grants account for about 16%. An additional 4% comes from private funds such as contract research (Kaulisch and Huisman, 2007, p.39). As mentioned above, performance-based and block research grants are increasingly important for many States.

Nevertheless, the contemporary allocation model also has significant consequences for performance-based funding, since universities have only limited influence over the size and structure of their personnel budget, which in turn has consequences for key operations such as teaching and research (Orr et al., 2007, p.8). It must be noted that Universities of Applied Sciences are not currently eligible to access targeted funds for research because their main purpose is teaching and learning; this may conceivably change in the light of substantial pressure for equalisation between universities and UASs (European Commission, 2009b pp. 84 ff.).

6.3.1 Public funding mechanism and profiling

Orr et al. (2007, pp. 9 ff.) list different methods of performance-based funding, including (a) indicator-based funding, (b) project-based funding, (c) mission-based funding and (d) discretionary funding. In Germany, we can identify that indicator-based funding dominates.

Indicators included in funding formulae include:

- Teaching and Learning: number of students, number of graduates, number of international students
- Research: amount of third-party funding, number of doctorates and post-docs, and (in the case of Bavaria) publication numbers
- Gender equality: proportion of female students or professors

There are several policy mixes in Germany to promote research, such as the “High-Tech Policy” or Cluster policies (see European Commission, 2009c). However, the two publicly funded initiatives most relevant for the diversity discourse are (a) the Excellence Initiative and (b) the Higher Education Pact:

- The Excellence Initiative (launched in 2005) is a programme aimed at rewarding excellence in research, internationalisation and commercialisation of research, and promotion of young researchers in order to establish a number of internationally visible elite universities. The Initiative provides top universities with €1.9bn in additional funding over five years (2006-2011). An additional €2.7bn will be available for the next phase (2012-2017). It has three funding tracks including (I) clusters of excellence, (II) the creation of Graduate schools and (III) institutional strategies to promote top-level research (German Research Foundation, 2009). Over a five-year period in two rounds, tracks I and II receive 62% of the funds (€975m to support 30 clusters of excellence and €200m for the promotion of graduate schools). Track III, which supports entire universities, receives the remaining 38% (€725 m). The review process involves two phases and academics and scientists from a variety of disciplines have a say in the final decision (Ibid.). Also, while it initially targeted only research, for the period 2010-2013 €10 m is also devoted to teaching and learning.
- The Higher Education Pact (2007) is a programme with two aims. The first is to ensure that higher education institutions receive additional funding in order to cope with the rising number of students that is expected to attend higher education institutions in the future. Secondly, it provided for the reimbursement of overhead costs for German Science Foundation-funded research projects in order to secure the competitiveness of German research. The programme is to run until 2020, the first phase will end 2010 and the agreement for the second phase from 2011 to 2015 was signed in June 2009 (European Commission, 2009a)

Table 6.3: Specific Funding to Support Initiatives by Higher Education Institutions

| Specific funding to support initiatives by higher education institutions | |
|--|---|
| Specific (targeted) teaching funds for: | Specific (targeted) research funds for: |
| C indicates <i>competitive</i> ; N indicates <i>negotiations-based</i> ; E indicates <i>evenly distributed across institutions</i> | |
| To enhance the provision of higher education in specific regions (N, E) | Strengthening the organizational basis for the training of young researchers (C, N) |
| The higher education pact to increase the number of study places (N, E) | Encouraging excellence in research (C) |
| Encouraging innovations in curricula (C) | Encouraging institutions to increase the quality of PhD training (C) |
| | Excellence Initiative (C) |

Source: adapted from European Commission, 2009b pp. 84 ff.

6.3.2 Private funding and the role of profiling

In general, researcher mobility and internationalisation are facilitated by private foundations and public agencies such as the German Academic Exchange Service (DAAD), Alexander von Humboldt Foundation, Fulbright etc. and not directly through the government (European Commission, 2009b, pp.86). Unlike most other European countries, German higher education institutions cannot set up commercial companies to generate revenue. They may collect private funds but several conditions apply (Eurydice, 2008 p.78).

6.3.3 Experiences with profiling: intended and unintended effects

The policies previously mentioned promote further differentiation and competition within the German higher education system. Recent reforms have strengthened institutional capacity to act and led to more responsibility and efficiency (output orientation, performance-based funding) in the higher education system (European commission 2009a). Moreover, performance-based funding encourages institutions to concentrate on certain aspects rather than others (e.g. teaching or research or internationalisation). However, universities' rigidity in handling personnel costs and regional differences mean that reallocations between universities remain generally limited, which in turn may limit the actual profiling scope.

Targeted funding programmes such as the Excellence Initiative has strengthened research capacity and output in Germany. The Excellence Initiative is the largest and most visible German higher education policy promoting institutional profiling and indeed it attracted an overwhelming number of proposals (van Vught 2009, p. 30). German policy-makers seem to be looking at the United States as their paradigm for encouraging differentiation but the effects of the Excellence Initiative are not yet fully visible (*Ibid.*). Although there is evidence of increased cooperation among universities, and between universities and other public research organisations (effectively reducing the "pillarization" of the sciences), fears have been voiced about a "solidified" vertical differentiation whereby diversity might benefit exclusively a few excellent universities to the detriment of the system as a whole.

6.4 German profiling in relation to the U-MAP dimensions

The previous analysis suggests that profiling in Germany focuses on the following U-MAP dimensions:

- Research involvement
- Teaching and learning
- Student profile (e.g. total enrolments, gender ratios, distance learning)
- International orientation

6.4.1 Other dimensions used

Other funding may be devoted to supporting specific university activities for regional engagement (see Table 3 above).

7 Hong Kong

7.1 Types of higher education institutions and their role in the system

In July 1997, Hong Kong became a Special Administrative Region of the People's Republic of China. The legal system of the Hong Kong SAR is based on the principle of 'one country, two systems', meaning Hong Kong still has a slightly different system compared to mainland China.

The University Grants Committee (UGC)⁸ is responsible for advising the Government of Hong Kong on the developmental and funding needs of higher education institutions in Hong Kong.

Hong Kong has eleven degree-awarding higher education institutions. Eight of these institutions come under the purview of the UGC, including seven universities and one teaching training institution (the Hong Kong Institute of Education). The other three degree-awarding institutions are the Academy of Performing Arts, the Hong Kong Shue Yan College (the first private university in Hong Kong) and the Open University of Hong Kong. All except the last two of the institutions are almost completely government funded.

The eight higher education institutions which are funded through the UGC are:

- City University of Hong Kong (CityU)
- Hong Kong Baptist University (HKBU)
- Lingnan University (LU)
- The Chinese University of Hong Kong (CUHK)
- The Hong Kong Institute of Education (HKIEd)
- The Hong Kong Polytechnic University (PolyU)
- The Hong Kong University of Science and Technology (HKUST)
- The University of Hong Kong (HKU)

There were a total of about 70,000 students taking publicly-funded programmes at different levels at the eight UGC-funded institutions in the 2008/09 academic year. The student enrolments for sub-degree, undergraduate, taught postgraduate and research postgraduate programmes were around 5,300, 54,000, 2,600 and 2,800 respectively.

There is a centralized admission system in which all eight of the UGC-funded institutions participate. Each institution sets its own entry requirements with applicants considered for admission on the strength of their pre-tertiary education results.

⁸ <http://www.ugc.edu.hk/eng/ugc/index.htm>

The Hong Kong higher education sector is regarded as an interlocking yet differentiated system. Each institution has its own mission – which seems to make sense in a region and system of this size - its role statement.

7.2 Public policies related to profiling of higher education institutions

The UGC-funded institutions are quite autonomous in terms of the control of curricula and academic standards, the selection of students, conduct of research, staff recruitment and their terms of employment, and internal resource allocation. In Hong Kong, public funding accounts for over 80 percent of universities' operating budgets.

The UGC has a vital role in assuring the overall quality of higher education under its purview. The Committee in recent years conducted a series of objective reviews/assessment exercises to promote quality in higher education, including the Research Assessment Exercise, Teaching and Learning Quality Process Reviews, and Performance and Role-related Funding Scheme

Public resources for UGC-funded institutions comprise a mix of recurrent and capital grants. For UGC-funded institutions, the bulk of the recurrent grants are disbursed on a triennial basis in the form of a block grant (to provide institutions with both stability and flexibility). Separately, non-recurrent funding is also provided to institutions on a project basis to finance major capital works projects and minor campus improvement works.

Since the 2001-04 three-year period ('triennium'), the UGC has established an increasingly stronger link between institutional funding and their performance. We will return to this issue below.

An important body in the governance of Hong Kong higher education is the Quality Assurance Council (QAC). The QAC was established in 2007 under the remit of the UGC and functions as a semi-autonomous body assuring the quality of programmes (however funded) offered by UGC-funded institutions through 'Quality Audits'.

A QAC quality audit is intended to assure that institutions deliver quality teaching and learning in accordance with their role and mission statements. A quality audit examines whether an institution has procedures in place appropriate for its stated purposes. The QAC therefore defines quality in terms of 'Fitness for Purpose', with institutions having different purposes reflecting their missions and the role statements agreed with the UGC.

In 2009, the UGC embarked on the Higher Education Review 2010. This Review examines the development of the higher education sector in the context of the entire landscape of the post-secondary education, with a view to recommending strategies for the future development of the sector, with a particular emphasis on:

- The vision and role of higher education in Hong Kong

- The demand for and provision of higher education opportunities and the increase in the diversity of higher education
- The quality assurance for higher education
- The research support strategy and research funding mechanism
- The relationships and collaboration among providers of higher education from a system perspective
- The position of higher education in Hong Kong in the context of globalization and the value of internationalisation generally, and the rapid development of higher education in Mainland China and the region specifically

The UGC believes that internationalisation helps diversify the local higher education sector, and therefore permitted UGC-funded institutions to increase the non-local student quota for publicly-funded programmes at the sub-degree, degree and taught postgraduate levels from 10% to 20% of the approved student number targets.

7.3 The role of profiling in the funding of higher education institutions

Recurrent grants support institutions' academic work and related administrative activities with capital grants⁹ are used to finance major works projects and minor campus improvement works. For each triennium, the UGC engages in a substantive process of discussion with institutions on their Academic Development Proposals (ADPs) and student number targets. Once allocations are approved, institutions have a high degree of freedom in deciding on how available resources are put to use. However, the institutions must adhere to approved student number targets.

Determination of the block grants is largely based on a methodology developed by the UGC. The amount of grants comprises four elements:

- Teaching - about 68%
- Research - about 20%
- Performance and Role Related - about 10%
- Professional Activity - about 2%

The Teaching element in the recurrent grant is based on student numbers, their levels (i.e. sub-degree, undergraduate, taught postgraduate and research postgraduate), mode of study (i.e. part-time and full-time) and disciplines of study.

The Research element is primarily related to the quality and number of active research staff and the cost of research in respective fields. The number of active research staff in each cost centre is identified in the context of a Research Assessment Exercise which assesses the research performance of different cost centres within institutions. This RAE 'rates' the

⁹ Capital projects carried out by institutions are supported by two avenues, namely the Capital Works Programme, and the Alterations, Additions and Improvements (AA&I) block allocation. This involves negotiation, competition and (ultimately) approval (or disapproval).

research quality of active research staff. This funding system was inspired by the British RAE and was implemented in Hong Kong in 1993.

The Performance and Role Related element was introduced to stimulate awareness of the importance of institutional performance against mission ('role'). The 2005/06 to 2007/08 triennium drew upon the results of a 2004 UGC Assessment Panel undertaken under the Performance and Role-related Funding Scheme (PRFS).

The Professional Activity element of funding is associated with professional activities which the Research Assessment Exercise is unable to assess or to assess adequately, but forms part of all members of academic staff's duties. These include, for example, community service undertaken and advice rendered on societal or professional issues, and is calculated based on the number of academic staff.

The UGC also takes into account the special needs of individual institutions and other factors not captured by the funding formula and provides extra-formulaic adjustments where required. Earmarked grants for specific purposes are allocated outside the block grant system, such as for knowledge transfer activities, or for the areas of excellence scheme (see below).

We now return to a description of the research funding, since it is an important instrument in the profiling discussion. The UGC provides funding to support research activities of institutions by the following mechanisms:

- Research element of the block grant (RAE-based, see above)
- Research Postgraduate places
- Competitive RGC (Research Grants Council) funding

UGC and RGC funding, in the form of block grants and earmarked grants respectively, constituted the bulk of institutional research funding. Together, the two sources of funding made up about 77% of total research expenditure in 2008/09.

Hong Kong seeks to enhance the competitive element of research funding, and to this end, two major reviews were carried out in 2009-10. One concerned how to conduct the Research Assessment Exercise (RAE), hitherto the main factor affecting the allocation of the Research element of the block grant. The other concerned how to enhance effectiveness and competitiveness in the allocation of research postgraduate (RPg) places and research funding.

The Government agreed to the creation of 800 new research postgraduate (RPg) places, launching the Hong Kong PhD Fellowship Scheme in September 2009. The Scheme aims to attract the best and brightest students globally (including from Hong Kong), irrespective of their country of origin and ethnic background, to pursue their PhD studies and research in UGC-funded institutions. The Fellowship provides monthly stipends and attractive fringe benefits for these scholars.

Additionally, the Research Grants Council (RGC), established in 1991, operates under the aegis of the UGC. It is responsible for advising on the needs of Hong Kong's higher education institutions in the field of academic research and for the distribution of funding for academic research projects undertaken by academic staff of those UGC-funded institutions. All applications for research funding are assessed by local and overseas experts of the UGC/ RGC, based on the academic quality of research proposals. The type of research is not one of the assessed criteria, with the UGC/ RGC aiming to give equal support to different types of research.

Apart from the block grants allocated by the UGC, the Earmarked Research Grant (ERG) is the largest single source of funding for supporting academic research in Hong Kong's higher education. The ERG is managed and disbursed by the RGC. There are four main funding schemes under the ERG: the General Research Fund; the Collaborative Research Fund; the Direct Allocation; and the Joint Research Schemes.

A new HK\$18bn (€1.8bn) Research Endowment Fund (REF) was established in February 2009. The Fund has been set up as a trust, meaning it will start to earn investment income, thus providing greater funding stability and certainty to institutions' research. Out of the HK\$18bn, the investment income of at least \$14bn will be used to replace, from the 2010/11 academic year onwards, the bulk of the existing earmarked research grants distributed annually to the RGC, thus providing greater funding stability. In addition, the investment income from up to \$4 billion of the REF will be deployed to support theme-based research, thus allowing institutions to work on research proposals on themes of a longer-term nature, strategically beneficial to Hong Kong's development.

The Areas of Excellence (AoE) Scheme was launched by the UGC in 1998 in order to facilitate the formation of quality research consortia to explore important questions across a broad range of disciplines. Four rounds of the Exercise have been held, with the fourth taking place in 2007. The UGC has thus far committed research funding to ten projects, each led by one university. The UGC has put in place a peer review mechanism to assess whether the projects merit "sustained funding". Institutions are required to show their own strong support to such projects by matching the UGC amount. The UGC has embarked on the fifth round of the AoE Scheme.

Not only does the UGC provide funding support for research activities in institutions, it also promotes knowledge transfer - in both technological and non-technological disciplines - between institutions and the society, to stimulate socio-economic impacts and improvements to business and the community.

In 2009/10, the UGC introduced an additional stream of recurrent funding earmarked for the institutions to strengthen and broaden their endeavours in "knowledge transfer". Institutions have all set out institutional-wide strategy, policies, action plans and performance targets to systemise and intensify their efforts in knowledge transfer in line with institutions' respective roles and missions. Institutions submit annual reports to the UGC to account for their progress in this regard.

In summary, research funding is centred on three core elements:¹⁰

- 1) Excellence - through the RAE
- 2) Focus and mass - through AOE scheme
- 3) Interaction (through knowledge transfer funds)

Competition fosters innovation and "hunger" to succeed. But increasingly policy-makers realise that the competition in research is not from within Hong Kong - it is from outside. Academics are urged to find ways to work together to achieve real critical mass and impact.

7.4 Hong Kong: profiling in relation to the U-MAP dimensions

Profiling is built into the Hong Kong system primarily through the specific role (mission) that each of the eight publicly funded institutions is expected to agree on with the (funding) authorities. Apart from that, institutions are encouraged to strengthen their research profile by means of various competitive funding programmes (RAE, AOE, ERG/REF). Research funding is very much performance-based and nowadays oriented on strategic themes often associated with large projects coordinated by one or two universities.

Student numbers are agreed through a central planning exercise (there is no open input to this exercise). Internationalisation is strengthened through scholarship schemes. The Professional Activity element of recurrent funding is associated with knowledge transfer.

An important profiling instrument is the PRFS. Through its performance and mission-related funding (PRFS), the Hong Kong authorities seek to strengthen role differentiation among higher education institutions, thus promoting diversity and excellence. The size of PRFS funds involved was increased to around 10% of the recurrent funding for all 8 UGC-funded institutions.

The PRFS's primary purpose is to provide assurance that the institutions are adhering to their roles and that they perform well in those roles. The Scheme ties together funding allocation, performance and performance against role. The PRFS is a peer review-driven exercise aimed at assisting institutions to reflect on their role and find ways to improve, encourage and recognise performance according to their mission. It is not about penalising institutions, but rather facilitating institutions to further advance and stretch their limits.

The UGC's PFRS Assessment Panel conducted peer review assessments on the basis of institutional self-evaluation documents and senior management presentations. Institutions were asked to produce evidence of good performance and to demonstrate that they were thinking about their performance. Based on the assessment results, institutions were able to "earn back" the 10% recurrent funding that had been provisionally set aside for the exercise.

¹⁰ This is very much similar to the Dutch situation.

As an example of how the U-Map dimensions show up in policy discussions about an institution's role and mission, we now present the case of the University of Hong Kong.¹¹

The University of Hong Kong has developed Profile Indicators (PIs) to monitor and assess progress towards realizing its strategic objectives. PIs are used to identify areas of strengths and weaknesses. The following PIs are used for the period 2009-2014. The PIs are categorized under three main headings and an 'other' category:

1) Enhancing the student learning experience

- Admission profile – qualifications and numbers at different levels
- Number of international / non-local students and exchange students
- Student enrolment-to-professoriate staff ratio and professoriate staff mix
- Hong Kong University Student Learning Experience Questionnaire (HKUSLEQ)
- Number of student placements and internships
- Number of student residential places
- Number of scholarships
- Number of students winning international competitions
- Graduates profile - including academic standing and employability
- Employers' satisfaction level

2) Advancing research and innovation

- Profile of refereed academic research outputs – types and numbers
- Average number of citations per staff member
- Funding for research
- External competitive research grants received
- External prestigious research awards received
- Research Assessment Exercise (RAE) scores
- Number of research postgraduate students
- Completion profile of research postgraduate students

3) Promoting knowledge exchange and demonstrating leadership in communities across the region

- Number of professional and continuing education programmes
- Number of students in professional and continuing education programmes
- Types and number of contract research projects
- Types and number of patents obtained
- Number of economically active spin-off companies
- Types and number of publications and postgraduate theses on open access
- Types and number of performances, public lectures, community events, etc.

4) Other PIs

¹¹ See: <http://www3.hku.hk/strategic-development/eng/implementation-and-profile-indicators/>

- Profile and number of academic staff
- Profile and number of international academic staff
- Expenditure profiles
- Profiles and amount of external funds received

The list shows that all six U-MAP dimensions (teaching & learning; student profile; research involvement; knowledge exchange; international orientation; regional engagement) are represented in this list.

8 New Zealand

8.1 Types of higher education institutions and their role in the system

New Zealand has a diverse tertiary education system. Higher education is regarded as part of a greater whole, namely 'tertiary education', or 'post compulsory education and training'. There are a variety of ways in which providers of tertiary education and training are currently categorised (Jongbloed and Salerno, 2002, pp. 80 ff.).

Tertiary education institutions include (a) Universities, (b) Institutes of Technology and Polytechnics (ITPs), (c) colleges of education and (d) Wananga (Māori tertiary education institutions). There are also other providers such as private training establishments (PTEs), industry training organisations (ITOs) or continuing education organisations. New Zealand has eight universities, over 20 polytechnics, four colleges of education and several hundred private tertiary education organisations¹².

The purposes of higher education are - much as in other countries - teaching, research and serving the community in a number of ways. The structure of education includes 12 years of schooling, followed by a 3 year bachelor's degree and an honours degree taking an extra year. When continuing, students may take a post-graduate diploma, a Masters, or a Doctorate. Tertiary education institutions (TEIs) are public institutions that are Crown (i.e. state) entities and thus required to follow standard public sector financial accountability processes (Jongbloed and Salerno, 2002, p. 83).

Most research takes place in universities and the so-called Crown Research Institutes (CRIs), which constitute an important part of New Zealand's knowledge infrastructure. Polytechnics provide vocational, professional, and continuing education although they also engage in applied and technical research that aids development, supports innovation and local communities (OECD, 2007, p. 119 ff.).

8.2 Public policies related to profiling of higher education institutions

In 2000, New Zealand embarked on a comprehensive reform of its tertiary education system. The Tertiary Education Strategy (TES) was established to improve the strategic directions and priorities of the system. The Tertiary Education Commission (TEC) was to negotiate the strategic directions and priorities with providers (OECD, 2007, pp. 157 ff.). In

¹² The 1989 Education Act defines private tertiary institutions rather broadly, as 'establishments, other than public institutions, that provide post-school education or vocational training'.

2006, further reforms were meant to allow the government to focus its investment in New Zealand's tertiary education particularly into development priorities (OECD, 2007, pp. 157 ff.). Each tertiary education provider must develop a plan, to be agreed with the TEC, showing how it will focus on priority areas. Universities' research function is being increasingly targeted, with the Government particularly interested in developing strategies for innovation and commercialisation of research results. For the latter reason, there is funding to support consortia that include universities, CRIs, and businesses.

The Education Act 1989 (as subsequently amended) establishes a system for setting, communicating and implementing the government's objectives for tertiary education through the Tertiary Education Strategy, the Statement of Tertiary Education Priorities, and tertiary education organisations' (TEOs) charters and profiles. This system covers both tertiary education and research. The governance framework is shown in Chart 1 (taken from OECD, 2008, p. 182)

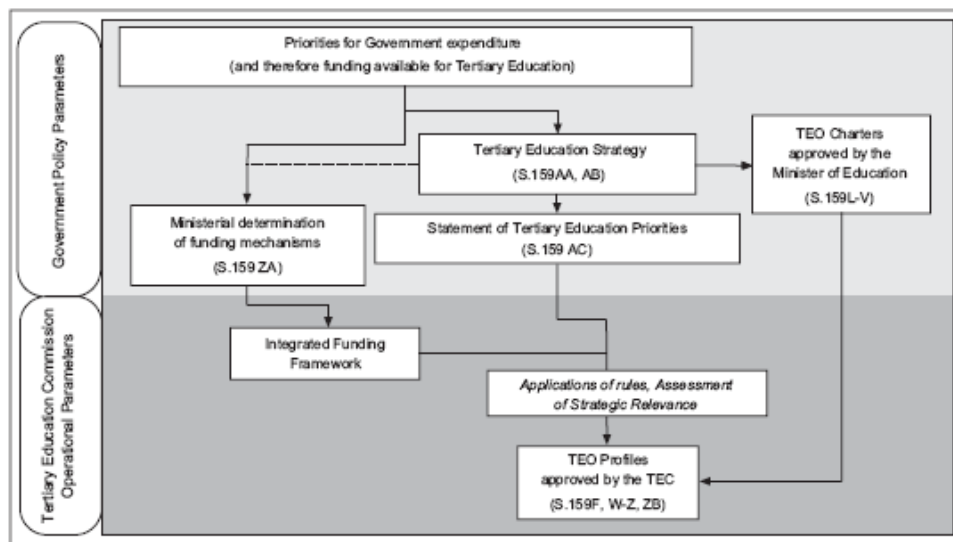


Chart 8.1: Governance Framework of Tertiary Education

Source: OECD, 2007, p. 182

The Ministry for Education, which receives its funds through the Parliamentary Education Vote ("Vote: Education"). Those funds are provided to the TEC, who is responsible for providing the government's contribution to tertiary education, including some support for research in the country's eight universities. Researchers in the higher education sector obtain support through the TEC, primarily the Performance-Based Research Fund (PBRF), the Royal Society of New Zealand (primarily through the Marsden Fund for basic research), the Health Research Council for medical research and the Foundation for Research, Science and Technology (FRST) for strategic research (see above). The CRIs (and firms) can also seek funding from the Marsden Fund, the HRC and FRST. Whilst most of the Marsden Fund and Health Research Council support is provided to university researchers, universities receive a relatively small share of FRST funding.

8.3 The role of profiling in the funding of higher education institutions

Public funding policies in New Zealand can be direct and indirect. Government funding for tertiary education providers is still predominantly delivered through tuition subsidies for eligible student places. The funding formula is based on Equivalent Full-Time Student (EFTS) units, the standard unit of measurement for student enrolments. EFTS-based funding is provided by the government as a contribution towards the cost of tertiary education and training, and is paid to approved tertiary education providers on behalf of domestic students enrolled in quality-assured courses leading to quality-assured qualifications. EFTS funding is applicable to both public and private tertiary education providers (although historically private providers had received less because of several restrictions, such as restrictions on the areas of training – now abolished).

EFTS funding has changed in nature over the years (see also Jongbloed and Salerno, 2002). Of particular relevance here is the introduction of “research top-ups” to encourage research-based postgraduate study. In 2000, a system was introduced which allocated research funding through a process involving differential top-up subsidies, with undergraduate degree programmes receiving the lowest top-up rate, then correspondingly more for ‘taught’ postgraduate programmes, with research-based postgraduate degrees. Receiving the highest The PBRF (described below) has gradually replaced the EFTS research top-up component which now no longer exists. EFTS funding is meant to allow TEIs to meet demand for tertiary education, thus it is renegotiated and can change at every budget cycle. For example, for year 2010 1,735 additional full time places at universities and 3,173 extra full time places at ITPs are being funded compared to what had been previously budgeted, but the funding for places will be prioritised towards areas of high demand (Ministry of Education of New Zealand, 2010)

Several initiatives undertaken by different government agencies promote research intensity in tertiary education providers. The government has three main budget channels to support research and innovation. In almost all cases (see OECD 2007, pp.160 ff.) funds are applicable to tertiary education providers, CRIs and private businesses (in the context of New Zealand’s overall endeavours in innovation policy). Funding is by direct public funding (as opposed to tax credits or incentives, which exist for instance in other “small” countries such as The Netherlands or Ireland). Budget channels are called “votes”, and include the following (*Ibid.*):

- Vote: Education
 - The intended funding of research activity by local and central government agencies for 2007/08 was €531m (NZ\$1,211m). Of this, the intended investment in R&D was €415 m (NZ\$946m). The majority of this (€264 m or NZ\$601 m) came from the Vote: Research, Science and Technology (RS&T); a substantial portion (€128 m or NZ\$291 m) came from general university funding through Vote Education. The contribution from other central government agencies was €21 m (NZ\$48m), with local government contributing €2.6 m (NZ\$6m) (European Commission, 2010)
- Vote: Research, Science and Technology (Vote RS&T)

- The Vote: RS&T currently stands at €286 m (NZ\$652m) (2007/08 Budget) excluding GST (Goods and Services Tax) (European Commission, 2010)
- Vote: Economic, Industry and Regional development

Of the three funds mentioned above, the Vote Education is responsibility of the Ministry of Education. Those funds are allocated to universities and other tertiary education providers through the following forms of funding, part of six Tertiary Education Organisation Component (TEOC) funding elements, administered through TEC (Tertiary Education Commission, 2010a, 2010b):

- Performance Based Research Funds (PBRF): seeks to reward excellent research in the tertiary education sector. It is provided to universities, ITPs, Wānanga and PTEs. According to the 2008 Annual Report, in the 2009 funding year, the funding allocated by means of the three PBRF performance measures was to set at NZ\$238.7m. 45 TEOs are eligible for PBRF funding in 2009. Of this group, 27 are participating in the measures that form the PBRF. The 27 participants are all eight of New Zealand's universities, 10 of the 17 eligible institutes of technology and polytechnics, two of the three eligible Wānanga, and seven of the 17 eligible private training establishments (Tertiary Education Commission, 2010c). The PBRF model is formula-based and includes three elements:
 - Quality Evaluation: 60 %
 - Research Degree Completions: 25%
 - External Research Income: 15% percent

New guidelines (July 2010) for assessing the quality of research place greater emphasis on commercial research and the entrepreneurial application of research (Tertiary Education Commission, 2010d)

- Tertiary Education Institution Base Investment: provides funding to ensure ITPs, wānanga, and universities have the capability to provide quality and relevant research and education. It supports them to deliver tertiary education in line with their core role and function. It includes (*Ibid.*): (a) an "equity funding" to support access of Māori students, Pacific students and students with disabilities, (b) Tripartite Funding (for universities only) to increase universities' competitiveness in recruitment and retention within the international labour market, (c) the ITP Business Links (for ITPs only) foster greater engagement between ITPs and business, and (b) the ITP Regional Network (for ITPs only) provides \$40m of capital funding to operating funding in 2009-10 to support regional ITP provision, including institutions operating in a rural or regional catchment
- Industry Training Organisation Sector Leadership is a capability funding to identify strategic trends influencing current and future skills needs, develop strategic training plans to assist industry to meet those needs, and promote employers and employees training that will meet those needs
- Priorities for Focus supports specific priorities for different sorts of providers. These include (2009 data):

- \$12.506m over three years to support ITPs and wānanga to build and enhance their literacy and numeracy teaching capability
 - \$10m per annum to support universities to make key shifts in line with the Tertiary Education Strategy
 - \$1.5m per annum to increase academic research within the wānanga sector
- Supporting Change is a capability funding to promote make changes to ITPs' and Wānanga's portfolio of provision
 - Encouraging and Supporting Innovation (ESI) encourages and supports innovation, and drives collaboration within the tertiary sector. ESI Funding allocations are project-based ESI and can be accessed by ITPs, universities, wānanga, ITOs and PTEs

It is noteworthy that by the end of 2010, the TEOC Capability Fund is being discontinued. The Government has stated that it wants to focus taxpayers' funding fully on the expected outcome from the tertiary sector, namely academic results for students (Ministry of Education of New Zealand, 2010).

Research in the higher education sector is promoted also through the following funds from Vote: RS&T (see also a detailed table in OECD, 2007, p. 161):

- The Marsden Fund (The Marsden Fund, 2010): supports project-based funding (European Commission, 2010). It was established by the government in 1994 to fund excellent fundamental research. The Marsden Fund is administered by the Royal Society of New Zealand under the Terms of Reference issued by the Minister of Research, Science and Technology. The research is not subject to government's socio-economic priorities, but is investigator initiated. The Fund supports research excellence in science, technology, engineering and maths, social sciences and the humanities. In 2008/09, the Marsden Fund Council invested \$54.0m on research projects, which represents 7.4% of the Vote: RS&T. This includes a \$2.25m budget increase from the Government, announced in the 2008 Budget and a one-year spending of accumulated funds
- The New Economy Research Fund (NERF): was established as part of government's Growth and Innovation Framework to fund high risk, novel research which could lead to the emergence of new industries in New Zealand. A total of \$322m (excl. GST) has been invested in 140 NERF research projects between 1999 and 2005 (some projects have had multiple contracts). The research has been conducted by Crown Research Institutes, universities and private companies. The research topics are varied, although nearly two-thirds of the total funding has gone to biotechnology projects (Ministry of Research, Science & Technology of New Zealand, 2010a; European Commission, 2010)
- Research for Industry (RFI): aims at increasing the competitiveness of New Zealand industries and sectors through strategic research. Recipients of RFI funding are predominantly public sector institutions, including Crown Research Institutes and universities. Other recipients include specialist research companies, and not-for-profit research centres¹³. It is public funding for thematic research, channelled through the

¹³ NERF and RFI are very close. The current approach seems to be the NERF being used for more 'blue sky' research and the RFI fund being applied to more readily commercial research (see <http://www.frst.govt.nz/files/RFI%20Evaluation.pdf>)

Foundation for Research, Science and Technology (FRST), and allocated on a competitive basis. In 2007/08 the Vote: RS&T budget for RFI was NZ\$ 200,660,000 (Ministry of Research, Science & Technology of New Zealand, 2010b)

- Other competitive funds channelled through FRST include, *inter alia*, environmental and social research, and Māori knowledge and development research, and sustainable energy research (European Commission, 2010)
- Project-based funding is also available through the Health Research Council for Medical Research

8.4 New Zealand profiling in relation to the U-MAP dimensions

The previous analysis suggests that profiling in New Zealand focuses on the following U-MAP dimensions:

- Research involvement
- Teaching and learning
- Student profile (e.g. equity in access, and EFTS system)
- Regional engagement (through capability funds, which are, however, being downsized)
- Knowledge exchange (e.g. start-up firms, patent applications etc.) is indirectly supported by the new guidelines for assessing the quality of research, which focus on the commercialisation of knowledge

9 Norway

9.1 Types of higher institutions and their role in the system

Norway has a diversified higher education system. It has a variety of public and private institutions with different tasks, different mixes of functional emphasis (some-research driven, others more teaching-driven) offering different degree types and having different degrees of intensity in basic and applied research, innovation and continuing education, and catering for different regional and national, more rarely global student groups. The current system comprises:

- 1) Seven public universities and six specialised institutions at university level
- 2) Twenty-six university colleges
- 3) Twenty-five private higher education institutions with (some) accredited study programmes and, consequently, (some) public funding

An alternative to higher education is tertiary vocational education.¹⁴ The total number of higher education enrolments is 220,000 (2007).

The public universities are located in Oslo, Bergen, Trondheim, Tromsø, Stavanger, Ås and Agder. The total number of students is 85,000 (2007). Of the specialised institutions at university level, five are state-run and one is private (the Norwegian School of Theology). The specialised university institutions offer professional programmes at masters and postgraduate level and grant doctoral degrees. These institutions specialise in economics and business, music, sport sciences, veterinary science and architecture and design. The number of students is 6,500 (2007). Apart from teaching, the universities and specialised institutions have a “national responsibility” in research and doctoral training. Universities are broad institutions covering most branches of study; they have both professional programmes and general disciplinary programmes. More than one fourth of all R&D takes place in the HE sector, mainly within the universities and specialised university institutions.

Twenty-four out of the twenty-six university colleges are public. As in the Netherlands the current university colleges are the result of a major merger process, which took place in the 1990s. 98 vocationally oriented institutions were merged into twenty-six multi-disciplinary

¹⁴ Tertiary vocational education consists of vocational training courses lasting from half a year to two years. Most of the schools offering this kind of programme are private; their courses, however, must be accredited by the Norwegian Agency for Quality Assurance in Education (NOKUT). Established after 2003, this sector is still quite small, and is omitted from this chapter.

and multi-programme colleges. For geographical and historical reasons the university colleges differ from each other in several ways. In 2007, the number of college students was 85,000. University colleges have an important role in decentralising access to higher education. They predominantly offer three-year professional bachelor programmes (in engineering, nursing, social work, etc.). This sector also offers professional programmes of varying length, from one to five years (e.g. in teacher training and business administration). Several university colleges offer masters programmes and three of them have the right to award doctorates in one or more subjects. The university colleges also (increasingly) engage in research and development (regional) work. This research is preferably connected to practice within specific fields or to problems particularly relevant to their regions. Highly competent research environments with adequate depth could also play a role in research training in collaboration with a university or a specialised university.

In addition to private specialised institutions at the university level and the two private university colleges, there are twenty-five private higher education institutions receiving public funding for some or all of their programmes. These publicly funded programmes must be accredited by the national quality assurance agency – NOKUT. Two private university colleges have institutional accreditation (Diakonhjemmet University College and the Norwegian Teacher Academy Bachelor & Master Studies). The number of students that attend private education is 29,000 (2007), which equates to around 13% of all higher education students. With the exception of the Norwegian School of Management (BI) with more than 10,000 students, most of the private institutions are quite small.

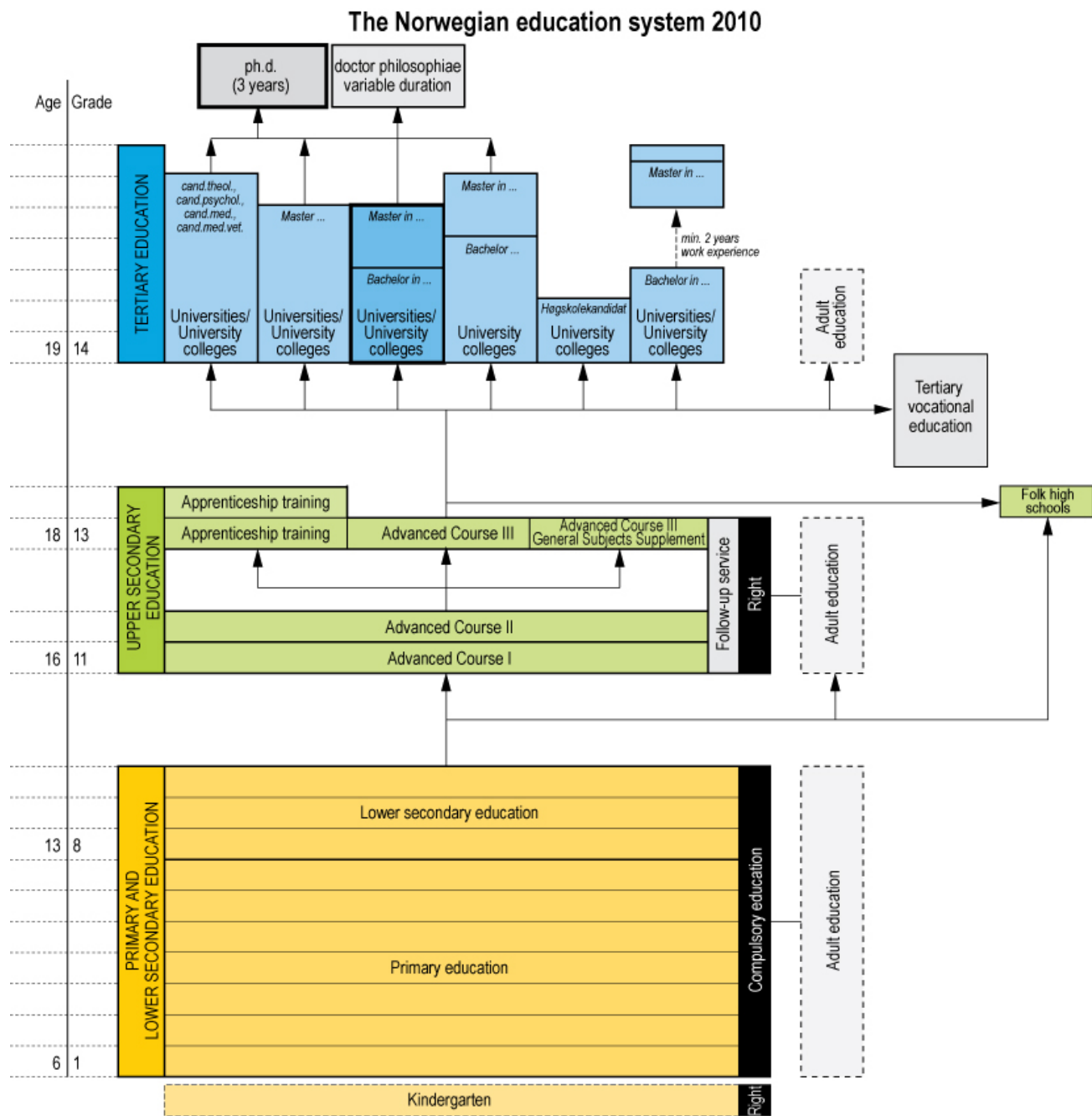


Chart 9.1: The Norwegian Education System, 2010

The overall responsibilities for all higher education institutions are the same: to provide higher education at a high international level, to conduct research, academic and artistic development work at a high international level and to disseminate knowledge. However, underneath these commonalities lie degrees of difference, mainly related to the research task and to their self-accreditation rights. Universities, including specialised universities, have a national responsibility for basic research and for PhD training; university colleges are oriented toward professional practice and development work (associated with regional responsibilities). Moreover, universities may offer study programmes at all levels without external accreditation, while university colleges must apply for external accreditation by NOKUT for study programmes at masters and PhD level. In 2003, a system for institutional accreditation was introduced – one of the consequences being that some university colleges initiated efforts directed towards becoming universities (qv).

NOKUT is the controlling authority for educational activity at all Norwegian universities, specialised universities, university colleges and institutions with single accredited higher education programmes. Through its evaluation procedure NOKUT decides on the recognition of the institutions' internal quality assurance systems and carries out checks to see whether their educational provision meets national quality standards. Institutions are responsible for the quality of education with NOKUT evaluating the internal quality assurance system of all institutions in cycles of no more than six years ('meta evaluation'), accrediting new programmes of those institutions without self-accrediting powers in relation to national standards (as self-accreditation depends on institutional type).

Traditionally, university degree types were inspired by the continental university model, with a four-year first degree, and a two-year second degree on top. Some professional degrees have traditionally differed from this structure (e.g. teacher training or medicine). In the university college sector, the first degree traditionally varied between two and four years. Normally, a second degree was not offered in the college sector. During the last decade, however, a few colleges have been granted the right to offer second degree programmes and even doctoral studies in given subjects.

In 2003, the 'Quality Reform' was implemented that changed *inter alia* the degree structure, grading system and quality assurance system in line with the basic principles of the Bologna process. Since then the basic degree structure in Norwegian higher education consists of a three-year bachelors degree, a two-year masters degree and a three-year doctorate. There are a number of exceptions to the basic degree structure: the old university two-year degree, five-year consecutive masters degrees, six-year professional programmes, masters degrees within one or one and a half year, four-year bachelors degrees (music and arts) and four-year teacher education.

9.2 Public policies related to profiling of higher education institutions

Traditionally the higher education system could be said to belong to the continental mode of steering with emphasis on input based factors (e.g. number of students) instead of output factors (number of graduates produced). However, during the last 15 years state steering of the sector has changed as a result of ambitions of strengthening higher

education institutions' institutional autonomy and internal governance & management structures. While the spirit of new public management has affected the organisation of Norwegian higher education, as in many other countries and even if one can distinguish between different types of higher education institutions, Norwegian higher education remains rather coordinated and integrated. And although state coordination has generally been strong in Norway, policy-making is generally dialogue-based and consensus-oriented. Policies and decision-making are generally not imposed on the institutions from the government, but shaped through dialogue and negotiation. Very often, policies are developed with the use of (government-appointed) commissions – as will be shown later also in the current debate on “the future of Norwegian higher education”). The composition of commissions may vary, but their members are normally selected from the sector and/or from important stakeholders.

Since the turn of the millennium, the two most important system-level reforms have been the implementation of the Quality Reform (2001-2004) and a new national act for higher education (2005). The Quality Reform brought the introduction of a new, more output-based funding system for higher education, the introduction of an independent quality assurance agency responsible for accrediting institutions and study programmes in higher education and the enhancement of the institution's autonomy. The new Act on Higher Education (2005) created a common regulative framework for both public and private higher education.

The basic principle of the Norwegian higher education system is education for all. Tuition fees do not exist and are regarded as 'non-negotiable'. An important characteristic of the Norwegian higher education system is the permeability between the university and university college sector (Kyvik 2008). Access requirements are the same for universities and university colleges: an upper secondary diploma provides access to higher education. Institutions have barely any autonomy in student selection and admission policies, with government laying down detailed admission rules. The application process and study place distribution system is organised nationally. Students apply for a place within a unified admissions system, according to a strictly standardised pattern, in which students may choose up to 15 optional study places. These centrally decided admission regulations leave limited room for institutions to design distinct student recruitment policies or to develop a particular student profile.

The government has long underlined the importance of student mobility: there should be a credit system so that students who change their educational objectives should 'lose' as little time as possible. The government has therefore encouraged institutions to recognise courses of other institutions as far as possible, and have been quite successful in their efforts (Kyvik, 2008:172). A flexible degree structure has also been developed that makes it rather easy to combine courses from different type of institutions. Despite this striving for equality, universities and their degrees still enjoy considerable more social recognition than the university colleges. This distinction has increased further because of value placed on international research competitiveness and global rankings (cf. Reichert 2009:63).

Three trends are typical for the evolution of the university college sector in Norway: academic drift, standardisation and regionalisation (Kyvik, 2008: 169-170). There are several processes of academic drift in Norway:

- Vertical extension of teaching programmes (extension of two-year to three-year programmes, introduction of masters and doctoral programmes in some colleges)
- Horizontal extension of teaching programmes (introduction of university programmes in colleges)
- Development of research activities (research is nowadays by law a task of university colleges)
- More emphasis on theory in vocationally-oriented programmes
- Introduction of academic appointment system and reward structure in university college sector.

While there is a clear (political) recognition of the importance of a diversified higher education system, at the same time there has been a political desire to homogenise the different elements. According to Kyvik (2008: 170),

“there has been a standardisation of steering and organisation principles (...), there has been standardisation of structure and content in teaching programmes, and there has been a standardisation of working conditions and career structure among academic staff. These standardisation processes have taken place over a very long period irrespective of policy aims of creating and maintaining a diversified higher education system, and probably without any clear vision by policy makers at different points in time”.

Regionalisation is another trend in Norway – driven by various pressures. On the one hand, there is a tendency to decentralise because central administration is overloaded. On the other hand, de-localisation is supposed to bring economies of scale, higher quality of primary processes (e.g. through multi-disciplinary collaboration) as well as of administrative services.

Institutions may apply to change their status according to specific criteria. NOKUT must approve the changed status prior to ministry permission, meaning the ministry cannot approve without NOKUT's approval but it may reject a NOKUT recommendation. To become a specialised university a university college should fulfil the following criteria (Stensaker, 2004):

- The right to award a PhD degree in one or several areas and must have successfully graduate students from such a programme; the accreditation standards set by KOKUT for this PhD programme(s) must be met
- The right to award masters degrees in a minimum of one academic area, must have graduated students for at least two years and the accreditation standards must be met;
- Demonstrate in other academic areas/disciplines that it produces R&D of high quality and that it has a scientific staff with formal qualifications
- Possession of an adequate (research) infrastructure (libraries, labs, budgets, research management systems)
- Possession of a well-established academic network – both nationally and internationally

To become a university, the following additional criteria must be met:

- The right to award masters degrees in at least five academic areas/disciplines and must have bachelors programmes in more academic areas/disciplines than those covered by the masters programmes
- The right to award PhD degrees in at least four academic areas/disciplines, where two of these must be related to regional needs and at the same time be of national importance. The institution must demonstrate a stable and continuing production of PhD graduates in at least two of the four areas

For many decades, some colleges have sought to become universities, while the national policy was to limit the number of universities to the four of Oslo, Bergen, Trondheim and Tromsø, and to concentrate research funding primarily to these institutions. As part of the Quality Reform, however, there has been a change in this policy, towards an opening up to allow institutions to change their status. Through the 2002 amendment of the Universities and Colleges Act, university colleges and specialized university institutions may apply to be accredited as universities.

In recent years three former university colleges have successfully changed their status.

- The University of Stavanger has about 8,500 students and 1,200 administration, faculty and service staff. The academic activity is organized in 3 faculties, the Museum of Archaeology and also includes two national centres of expertise. Many of the externally funded research activities are made in collaboration with the International Research Institute of Stavanger (IRIS)
- Agder University College was established by a merger in 1994, when the six public regional colleges in the Agder counties became one institution. The University College received full university accreditation and became the University of Agder on 1 September, 2007. In 2009, the University of Agder had approximately 8,000 students, 1000 employees and an annual budget of about NOK800m
- The Norwegian University of Life Sciences (University of Ås), having about 2,600 enrolments
- In addition, the (private) Norwegian Lutheran School of Theology is accredited as a specialized university institution
- Some other HEIs are in the process of applying for a changed institutional status (OECD 2005)

However, the new universities are not intended to have the same profile as the four traditional (pre-2005) universities, underlined by the fact that a central criterion for becoming a university is that two out of the required four PhD programmes must have "regional relevance and national significance". The intention behind this criterion is to prevent university colleges from emulating existing universities, and rather develop their own profile. Given the existing competition for students in the new funding system, there is a possibility that existing universities could also emulate university colleges, something which in the long run, could create a less diversified system (OECD 2005).

Reichert (2009) concurs that the - in principle clearly - binary divide between universities and colleges (e.g. universities being mainly responsible for scientific research) has become more blurred over the last decades – as indicated amongst other things by the changed status of the three former university colleges. It is important to note that the former university colleges that recently received university status are still funded on a university college model (Reichert 2009:63). There are more colleges in the pipeline to upgrade themselves to university status. Therefore, Reichert argues that the current Norwegian system provides incentives for institutions to become universities, resulting in an academic drift at the system level. “The government seems ambiguous about this; on the one hand, it accepts this drift, allowing status “upgrading” under certain conditions, but on the other hand, it does not provide equal terms with universities in terms of adapted funding”. Reichert (2009) also argues that moves upwards in the system (academic drift) are leading to greater institutional convergence at the cost of diversity at system level. This convergence is openly conducted, with rules publicly laid down and supervised which set the conditions and criteria as well as the process for being upgraded (see above).

Following the introduction of the Quality Reform, institutions receive block grants and can decide on the nature and scope of their courses and programmes. During the last four years the overall number of programmes has doubled, particularly at the university college level.

“Interestingly, the two institutions with (successful) ambitions to become universities were in the forefront in this respect, especially at the masters level. Thus, in this context, increasing diversity with respect to programmes was linked to institutional convergence with respect to profiles” (Reichert, 2008:80).

Another aspect related to the diversity of the Norwegian higher education system concerns research policies. The Ministry of Education and Research is responsible for developing and implementing the Norwegian research policy. The Research Council of Norway has the primary responsibility for developing and implementing the national research strategy, as well as for identifying priority areas for basic and applied research. Approximately one-third of all public allocations for research are channelled through the Research Council. The Council also serves in an advisory capacity to the government on all research-related issues.

In 2003 the Norwegian government launched the Centres of Excellence scheme. This highly competitive scheme is a national programme under the auspices of the research council. The research council provides the basic source of funding for the scheme – NOK10-20m annually for a maximum of ten years. Other funding comes from the hosting institution and from third party income. High scientific quality is the main criterion for the selection of the centres. The goal of the scheme is to establish time-limited research centres characterised by focused, long-term research efforts of a high international calibre, with researcher training an important aspect.

CoE host institutions can be universities, university colleges or research institutes. A host institution for a centre usually cooperates with one or more research institutions, organisations or enterprises in respect of the establishment, operation and funding of the centre, who form a CoE consortium. Currently there are twenty-one CoE (and recently

eight more were established), the vast majority of them hosted by universities. This means that in practice a limited number of the higher education institutions are actively (i.e. financially) supported to be engaged in world-class research.

The future of the Norwegian higher education landscape is currently under discussion with the role and type of different institutions and programmes up for debate. The small size of many university colleges, the formal demand that a university should have at least five masters programmes and four PhD programmes is seen as insufficient, too formal and too constraining, whilst the number of institutions awarding PhD raise questions of critical mass and quality of research training environments. In 2006 a national committee was installed to advice on Norway's future higher education system – the Stjernö committee. This committee proposed rather radical solutions that have been widely publicly discussed but have yet to lead to formal changes (yet). The commission articulated a fear that university colleges would continue to apply for university status, which would in turn imply the establishment of even more doctoral programmes (in order to satisfy the NOKUT criteria). This would be undesirable in terms of funding and critical mass and making, according to the committee, a highly fragmented yet homogeneous institutional landscape a more likely result (Reichert 2009:65).

The Stjernö committee – in favour of relatively strong government steering, which is not to the liking of the institutions who gained more institutional autonomy after the 2003 Quality Reform – concluded that institutions should cooperate more. This might include:

- A multi-campus model, in which the country would be divided into eight regions with all institutions in one region forming one university (creating 'universities' from 8,500 to 32,500 students); diversity would take place within the regional institutions
- A binary model with in total five universities and six university colleges
- A networking institutions with a university at the centre of each network
- Mergers among institutions of different profiles

While it is unlikely that the committee's proposals will become a reality, voluntary cooperation arrangements and mergers are likely to be promoted as one instrument to increase competitiveness. For institutional diversity the creation of bigger units would shift diversity more toward internal institutional structures rather than emphasise increased external diversity of institutional profiles.

9.3 The role of profiling in the funding of higher education institutions

The funding model before 2002 was primarily based on historical traditions and student numbers. The post 2002 model is more performance-based, both for teaching and research. The current Norwegian funding model has three main components:¹⁵

¹⁵ The percentages are averages and may vary between institutions and form year to year.

- 1) An education related component of on average 25% of the total allocation, based on the number of credits, number of graduates and the number of international exchange students; 31% for university colleges and 22% for universities
- 2) A research related component of on average 15% of the total allocation; 6% in university colleges and 22% in universities. One-half of the funds are redistributed on the basis of performance and one-half is related to quality and strategic considerations, which include funding of positions for doctoral students. In contrast to the education component there is a ceiling limiting the institutions revenue generation. Performance is related to production of scientific publications and the degree of funding from the EU and the research council of Norway
- 3) A 'basic component', which is on average 60% of the total allocation; for university colleges it is about 70% and for universities 50-55%)

Because this model comprises various elements – performance-based, strategic considerations and historical aspects – its effects are hard to assess. Nevertheless, institutions have clearly become more concerned about the recruitment of students, drop out rates and time to degree, as well as research quality and number of publications (Kyvik, 2008: 177).

The new funding model provides incentives for institutions in relation to their profiles – substantial institutional autonomy allows an institution to decide to concentrate on one or more of the performance-based funding aspects. In practice however it maintains the divide between research-intensive universities and teaching-intensive colleges. For example, in 2006, the public university college sector derived up to 3% of their budgets from the output-based research grant, whereas the corresponding figure for universities was 23%. Moreover, it is mainly the universities which host the Centres of Excellence, which are engaged in world-class basic research. The impression is that introducing a performance element to public funding has increased competition among institutions but that currently has no clearly visible effects on institutional profiles.

The current funding system has attracted some criticisms. It places too much emphasis on quantity rather than on quality, and risks punishing well-performing institutions where other institutions are performing even better. The Stjernö committee proposes to increase the strategic component at the expense of the output-based funding components, to establish contracts between the ministry and the institutions on a three or four-year base, and to use evaluations when allocating money for research. The first two measures would increase the margin which institutions would have for choosing diverse institutional development paths.

9.4 Norwegian profiling in relation to the U-MAP dimensions

Norwegian higher education is at a crossroads. First, although limitations in terms of institutional autonomy still remain, such as the centrally steered and administrated admission of students, there are clear signs that the boundaries of the binary systems are becoming increasingly blurred, due to for instance the introduction of a lump sum budget system and possibilities for upgrading the institution's status. Secondly, globalisation and

rankings have resulted in efforts to increase critical mass, create bigger institutions and centralise new efforts. This creates tensions between centralisation on the one hand and regionalisation and enhanced institutional autonomy on the other hand. As things currently stand, voluntary forms of inter-organisational cooperation (as against more extreme forms of centrally imposed cooperation) – with financial incentives from the government – are more likely to be developed.

Because the values related to global competition and the pursuit for excellence are at odds with traditional Norwegian values deeply embedded in society (e.g. equality) the discussion on diversity is complex and its outcomes uncertain. There are attempts to strike a balance between deeply rooted beliefs in equity, fairness and the superiority of cooperation over competition with the conviction that flexible responses are needed to address increasingly diverse demands and to face international competition. Reichert (2009:82) believes that it is unlikely that differentiation would be expressed in extreme external diversity between institutions. To her it seems more likely that institutional diversity will increase internally than externally.

In relation to the U-MAP dimensions, the picture of the Norwegian higher education landscape is unclear. The impressions are the following:

- Teaching and learning profile: in principle the government wants to maintain the binary divide where universities are, compared to university colleges, research-led. At the same time measures have been taken that blur the boundaries between these two sectors. University colleges are allowed to establish masters and doctoral programmes – although due to programme accreditation by NOKUT. Arguably, the possibility for upgrading university colleges is at odds with encouraging institutional diversity. Simultaneously, performance-based components for teaching in the funding model may stimulate institutions to focus on their teaching and learning profile (but it seems more likely that this will lead to a focus on efficiency)
- Student profile: because entrance qualifications are the same for universities and university colleges and admission is centrally organised this dimension does not seem to play a role here
- Research involvement plays a role. Universities are research led, and have strong incentives through funding models to maximise research performance, with the centre of excellence scheme creating a profile division between ‘winners’ and ‘losers’. At the same time, university colleges have responded to the opportunities to engage in applied research and regional work, with some university colleges trying to increase their research efforts as a potential route toward university status
- Involvement in knowledge exchange: unknown
- International orientation: this does play a role; the number of international exchange students, the degree of EU research funding and the establishment of centres of excellence can stimulate institutions to have an international focus
- Regional engagement: does not play a role in the funding system but is considered important; it is particularly the university colleges that play an important regional role (through applied research - development work), amongst other things with respect to local labour markets

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