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Quality-related funding, performance agreements and profiling in higher education

An international comparative study

Final Report

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Executive Summary

This report provides an overview of relevant policy information and stakeholders' views on quality-related funding, performance agreements and profiling in a number of selected countries. The study is conducted for the Dutch Ministry of Education, Culture and Science. It is envisaged to feed into the Dutch higher education debate around profiling and the potential instruments that can stimulate a more diversified higher education system. The report particularly focuses on instruments in the domain of teaching, but cannot escape from describing some major issues that address research as well.

The countries selected for this study have in one way or another recently gone through a process to stimulate quality, diversity, profiling or performance agreements.[1] The countries provide a variety of perspectives and insights about policies, objectives, trade-offs and the struggle to achieve the desired effects. Where possible the opinions and expectations from stakeholders are reflected.

Quality-related funding

An important fact is that many countries have quality improvement of education as a major theme in their higher education strategies. Australia, England, Finland, New Zealand and Sweden are eminent examples of this. This does not immediately imply that this is related to funding instruments, though this is the case in a few countries. For example, in the Finnish case it is aimed to make Finland an international competitive and attractive system in terms of teaching and research, e.g. to attract high profile collaborations.

There is a tension between on the one hand providing a clear and transparent monitoring and assessment framework to measure quality and performance in relation to funding, and on the other hand doubts about the validity of indicators and measurements. In the Hong Kong case this is solved in an interesting way by making institutions to provide their own indicator framework with quantitative and qualitative indicators to be assessed by the University Grants Committee. This overcomes the Australian objections against a fixed format without room for individual flexibility on topics where they want to be assessed.

An interesting development is also towards more nuanced indicator sets about quality, including participation (by particular groups), student experience, satisfaction, attainment and learning outcomes. Problems with some indicators concern the complained that achievements are often beyond the control of the institutions.

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[1] The countries selected include: Australia, Denmark, England and Wales, Finland, Germany, Hong Kong, New Zealand, Norway and Sweden.

Implementation and regulative power can form major obstacles or advantages. The Hong Kong case shows that strong state steering and authoritative position of the central bodies like the UGC greatly helps in the "role adherence" of HEIs. On the contrary, the English case shows that strong institutional interest groups can easily manipulate the conditions and implementation practice in a way that not much change is realised of that the intended effects are not reached.

Sweden appears to be the only case with a direct link being made between the outcomes of quality evaluations and funding, with a premium on the highest evaluation scores. Maybe because the proportion of the budget is still relatively small, the institutions appear to accept this development. However, real experiences with this system have to be awaited. Closely related to this the Finnish bonus for polytechnics that have the highest scores on the national performance criteria. Both developments aim at stimulating excellence.

Performance agreements and profiling

A strong tendency can be seen towards contract management. Quite a number of countries include agreement negotiations, role-statements or performance contracts as substantial elements in the government-institution relationships. This is marked as an explicit profiling objective in Australia, Finland, Hong Kong and New Zealand, but in most cases such contracts have multiple purposes, like stimulating overall performance, quality and national priorities.

Like the quality initiatives mentioned above, also these performance contract activities appear to include a multitude of dimensions and indicators. In a few examples, like Germany, Australia and Norway, this is said to lead to such a broad range of performance areas, that all institutions develop in the same direction. Particularly if they all have to meet targets on the same indicators. In the Finnish model it was chosen for a limited number of performance areas and indicators. Regardless some individualised targets, all institutions have to perform on common dimensions. This is different only in Hong Kong where institutions themselves define the assessment criteria. In the Australian model, the performance scores are also evaluated against the past performance of the individual institution.

The Norwegian case is interesting in terms of an already diversified higher education system that is aimed to become even more diverse while at the same time having a need to balance regional functions and an optimal size of institutions. The voluntary network model to bring about diversity and profiling proves to be a slow and rather invisible as most diversity happens underneath the surface within HEIs.

The performance contracts do not always appear to result in the intended profiling effects, quality improvement and strategic positioning, in many cases they have transformed the government-institutional relationships into more transparent processes based on dialogue. In addition, like the German Excellence Initiative as well as the performance contracts (*Zielvereinbarungen*) made HEIs much more aware about their own identities.

Summary and conclusions by country

Australia

- There are clearly identifiable types of universities in Australia, to a large extent driven by their different history: 8 traditional research universities, some technical universities, innovative research universities, and the new generation (post-1987) universities.
- In a few general system-wide development proposals, Australian higher education faced several substantive capital injections: *Backing Australia's Future* in 2004 and the *Transforming Australia's Higher Education System* in 2009 in response to the *Bradley Review*.
- Current reforms are focused on mission-based compacts, an Indicator Framework that underpins performance-based funding, to monitor quality and standards, to increase vocational, professional and community relationships.
- The number of publicly funded placed will be decapped (demand driven funding).
- Improving the participation of students from lower socio-economic backgrounds is a longstanding commitment.

Quality-related funding

- 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.
- A new performance funding mechanism envisaged that rewards universities that meet their targets.
- Two components: facilitation of mission-based compact agreements and target achievement, and a reward funding for progress against performance targets. So institutional performances compared against own past performance.
- To measure performance and Indicator Framework is set up with four categories and 12 indicators:
    - Student participation (undergraduates, low-SES students, other underrepresented groups)
    - Student experience (undergraduate retention, satisfaction)
    - Student attainment (progress and retention rates for different groups)
    - Quality of learning outcomes (teacher qualifications, learning outcomes, employment, graduate destination, further study)
- Serious discussions on the Indicator Framework: asking a refined framework, less stress on retention (outside universities' control).
- Universities wish flexibility in indicators that fit their missions.

Performance agreements and profiling

- The Australian government since the 1990s has emphasized the importance of building unique profiles and concentrating on the areas of strength in individual universities. However, the government does not prescribe the profiles, but it expects universities to develop their specific mission and set their targets accordingly.
- Since 2008 Mission-based compacts intended to generate a holistic strategic framework for the institutions to align with government reform agenda. First compacts to come into effect in 2011 and will be 3 to 5 year agreements.
- Mission-based compacts are agreements between government and institutions about funding and individual strategic commitments.
- The Mission-based Compacts include the institutional mission, priorities for teaching, research and innovation. Then it includes the institutional strategies to achieve the priorities and how the government funds the institution. Also wider dimensions included, such as the regional role and serving certain student groups (i.e. lower socio-economic and other underrepresented groups) .
- Compacts seen as drivers for institutional mission differentiation. Universities Australia wants a strong link with compacts and performance based funding.
- So far negotiations were taken with 41 institutions, together painting a picture of universities to focus on their strengths in relation to government's reform agenda, proactive institutional alliances and all preparing for demand driven funding which should stimulate growth (some institutions stress they cannot further increase capacity).
- Strong voices for Tertiary Education Quality and Standards Agency to guard quality is not compromised in view of growth.
- TAFE institutions want to stimulate flexible learning pathways and course delivery.
- Many institutions aim at agreements to improve: students' experiences and outcomes, first year retention, assessment practices, professional development of teachers.
- Big step to make institutions agree on targets. But tension between generic and individual targets. Generic targets push towards greater conformity instead diversity, but individual targets to "unequal treatment".
- Additional targets require additional investments and additional funding

Denmark

- Denmark shows clear distinctions between different types of higher education institutions and the short-cycle, medium-cycle and long-cycle degree programmes they offer at universities, colleges and professional training institutions.
- Recent reforms particularly envisaged to stimulate quality, merger & concentration and interaction & synergy.
- In 2007/08 a number of mergers took place between universities and research institutes to create focus and mass.
- The research funding mechanism was recently changed to increasingly and heavily fund institutions based on their excellence in research performance. Next to that, competitive programme funds for research have been made available to encourage high level research in particular areas of strategic interest to the Danish economy.

- Since 2006 the Globalisation Strategy aims at stimulating research investments, mergers, PhD education, accreditation, participation, persistence & study progress and student mobility.

Performance agreements and profiling

- Funding for education is performance-based (taximeter model) because only successfully completed credits are rewarded and since 2009 a diploma bonus is given for students who complete a programme within the nominal duration plus one year.
- 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.
- The development contracts are primarily a dialogue-based instrument between the ministry and the institutions. There is no automatic relationship between reaching the targets set by the university and the grants awarded by the ministry.
- Since 2004 the development contracts also include quantitative targets and indicators that merely serve as a monitoring instrument. Only in 2008-2010 the ministry tried to link the contracts to real university performance and funding. But still the contracts are more a letter of intent, without targets being met having an automatic relationship with funding.
- The contracts include four activity areas with in total 16 activities/indicators attached to them (research, education, dissemination of knowledge and research-based public services).
- The contracts now also include institutional priority areas and the strategy of the institutional management to accomplish objectives therein. As this is negotiated with the ministry, also the societal needs are reflected in the contacts.
- Some institutions also have contracts with other ministries (food, agriculture, fisheries, environment))
- 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. Nevertheless the contracts are perceived to have stimulated clear profiles among at least a number of universities. The panel suggested to redirect the development contracts more as goal steering instruments instead of monitoring.
- Related to this, the increased emphasis on competitive funds fails to stimulate originality as is rewards initiatives in priority areas instead of areas where research units possess expertise.
- 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. Competitive funds are only allocated for politically prioritised themes.

- Though from a management perspective it is positively evaluated to have stronger focus and steering power, academics feel that the contracts reduce their academic freedom and show a situation of "low trust" between the ministry and institutions.
- The integration of targets and indicators in the contracts in a limited number of areas is perceived to have standardised the contracts among the eight universities instead of the envisaged differentiation.

England and Wales

- The system of higher education in England and Wales is already highly profiled with a strongly implicit system of differentiation between various types of universities and their constituent colleges.
- 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.
- The authority relationships for education lay with the territories (England, Wales, Scotland and Northern Ireland, but for science it lays with the UK. There is no overall control over the system.
- 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.

Quality-related funding

- Most quality profiling can be found in the area of research, with the research assessment exercise as the dominant instrument. But the research councils from the different funding councils for England, Scotland, Wales and Northern Ireland apply different funding ratios. In addition, all territories provide "adjustment" funding to alleviate severely disadvantaged 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.
- The envisaged budget cuts have aggravated the activities of the "mission groups" (Russel Group, 1994 Group, University Alliance, Million+ and GuildHE) to maximise their share of the public budget rather than responding directly to the government's calls for profiling.
- There have been clear examples of funding profiling initiatives that stranded on their implementation, like the "business-facing" and "teaching intensive" research fund. All further profiling ideas have been worked into the formula based mechanisms, not leading to profiled but particularly strengthening traditional elite research universities.

- The mentioned tendencies have blocked attempts of institutions to profile themselves as regional or business-facing institutions.
- 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. The 2003 initiative for the Centres for Excellence in Teaching and Learning (CETL) made this explicit. However, again a bad implementation made the profiling initiative die out:
    - The focus on competition for these funds made it also open for "strong palyers" and made the tuition fees very important.
    - The innovation learning methodologies were immediately replaced with "research pedagogy".
    - There were no realistic targets set.
    - In the beginning the emphasis was on capital investments rather than teaching content
    - It soon became clear that after 2008 there would be no further public support, which made most of the CETL's a dead end street.

Finland

- Finland has a binary system of two complementary sectors: 25 polytechnics offering professional bachelor and master programmes and 20 universities to conduct scientific research and offer research based education.
- Polytechnics are municipal or private institutions, authorised by the government. Universities resort under the authority of the government (Ministry of Education and Culture).
- Within the reform agenda to stimulate the international competitiveness of Finland and its higher education system, internationalisation, quality and efficiency became key focus ares in higher education. The new University Act of 2010 was a result of this reform and made universities independent legal bodies with stronger internal governance structure and ties to the outside world.

Performance agreements and profiling

- Since 201 the annual negation agreements (originally meant as tri-annual negotiations) were replaced with four-year agreement periods (the first period still limited 2010-2012).
- The agreements set the tasks, profile and focus areas per HEI in view of national priorities and addressing the basic state funding principles.
- Between the four-year negotiations there will be annual written feedback loops.
- The agreements include 5 activity/performance areas:
    - basic studies & quality of study process: degrees by level, international degrees, exchange students, teacher training students. For quality number of students, degrees and credits are related to numbers of teachers and researchers.
    - scientific postgraduate education: doctorates per professor

  - research development & innovation: publications, refereed articles, competitive funds, international funds related to FTE academic and as proportion of total revenues.
  - internationalisation: international staff mobility per academic FTE
  - social impact: proportion of supplementary funding, fee-based services and employment of graduates.
- In the five domains performance indicators are used which are sometimes further specified for universities and polytechnics. There can also be variations by discipline.
- The new funding model includes a number of these indicators in the funding formula.
- 6% of the state university funds are a strategic component, which means that they are allocated on the basis of the extent to which individual institutions adhere to national priorities and objectives, including the own unique strategy and profiling.
- In the polytechnics only 0,5% (€4 million) is performance based funding in the sense that it will be allocated to the polytechnics that have succeeded best on the national performance criteria.

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 individual *Länder* all use their own governance and funding models which makes an all-inclusive analysis and evaluation difficult.
- 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 agreements and profiling

- Formula-based and performance-related funding have become increasingly important in Germany since the 1990s, and external project-based research funding has strongly increased too.
- In the last decennium, a wish to also reckon individual institutional wishes and needs triggered a trend to use a combination of formula funding and individual target agreements: *Ziel- und Leistungsvereinbarungen*. By now, about all *Länder* use them in one way or another.
- The *Zielvereinbarungen* breathe the wish for diversity and profiling. They create flexibility with different targets per institution. The critical issue is whether the state is strong enough to differentiate beteen the institutions and not subject all of them to the same set of target areas and levels.
- Though the opinions about the effectiveness of the target agreements differ, the however appear to create a transparent dialogue between the government and institutions. Nevertheless, many of such agreements cover too much and are too vague.

- Institutions use the multi-annual contracts as a means to protect themselves agains annual cut backs.
- Though in many cases the financial volume related is limited, quite a number of institutions have taken over the idea for internal resource allocation.
- The Excellence Initiative which was 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 élite 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. About 15% of the institutions received substantial funds for their accepted plans.
- The Excellence initiative is said to have raised institutional dynamics, vitality and self-awareness. It made 'known' differences in quality and performance explicit.
- The Excellence Initiative is perceived as strengthening research capacity and output in Germany.
- The Excellence Initiative, however, only addresses particular aspects of differentiation and will not create system-wide variety.
- 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. About 100,000 extra study places are foreseen.
- 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 but a clear differentiation is not visible. The *Wissenschaftsrat* advocates more functional diversity.

Hong Kong

- Hong Kong has 11 degree-awarding institutions that together form an interlocking, yet differentiated system. Each UGC-funded institution agrees its student enrolment with the UGC Each higher education institution in Hong Kong has its own mission, reflected in its Role Statement, agreed with the University Grants Committee (UGC).
- There is rapidly developing self-financed private higher education sector in Hong Kong.
- The eight institutions funded through the University Grants Committee (UGC) have a high degree of autonomy with regard to selection of staff and students, curricula and academic standards, acceptance of research programmes and internal allocation of funds.
- Institutions have to have their own individual mission or *role statement*. These roles are agreed with the UGC

Quality-related funding

- 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.

- Related to the *Performance and Role-related Funding Scheme* (PRFS) discussed below, the institutions have to make Academic Development Proposals (ADP) which show how they want to develop in their strategy, teaching and learning, advanced scholarship and business & community relationships. This is evaluated against their institutional profile.
- The Quality Assurance Council (QAC) conducts institutional quality audits to assure that they deliver quality teaching and learning in accordance with their role and mission statements.

Performance agreements and profiling

- 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
- HEIs are assessed by an Assessment Panel (and partly funded) against their profile. The institutions have developed profile indicators that track performance in various dimensions of their missions:
    - Overall strategy
    - Advanced scholarship
    - Teaching, learning and student achievement
    - Community development
    - Administration
    - Partnership working / collaboration within the HE sector
- Each institution has to develop criteria that demonstrate their achievements including benchmarks, effectiveness, valid measures and qualitative information. The UGC decides whether the suggested criteria and indicators are appropriate.
- To encourage knowledge transfer and professional activity by academics (i.e. community service), the UGC has made funding available and has added Community Service to its performance criteria.
- All in all, the UGC and other stakeholders think the whole PRFS and ADP developments have made institutions more strategic. But critics argue there is too much pressure towards research and a copying of popular taught programmes or concepts. Role adherence is a critical factor in which a strong government plays a crucial role.

New Zealand

- New Zealand has a ethnically diverse population as well as 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.
- The Tertiary Education Commission (TEC) negotiates the strategic directions priorities with the individual institutions and funds them as well.

Performance agreements and profiling

- The basis for what is funded is the Tertiary Education Strategy (TES) which sets out the priorities for the three-year planning periods. For the 2010-2013 period the priority areas are the targeting of priority learner groups, improved system organisation and performance and quality research leading to innovation.
- The HEI's have to negotiate with the TEC what they will achieve over the next 3 years. For each priority areas impact measures are defined (indicators). Agreements on the profiles and envisaged achievements as well as actual performance influence the level of public funds available to an institution.
- Funding for teaching is dominant over research funding. And teaching allocations are mostly based on the number of enrolments (student achievement component), a part for costs related to profile development, and a part as Industry Training Fund. In order to have institutions profile themselves in line with the national priorities set out in the TES they are asked to shift their balance of provisions/activities:
    - In volume and quality: indicated by study success, literacy, professional qualifications, achievement by minorities, degree numbers, etc.
    - In efficiency: build critical mass, reduce duplication (per sector).
    - In stakeholder involvement: building regional facilitating networks, meeting the needs of industry.
- Research and innovation 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 are several project-based competitive funds (e.g. the Marsden Fund, the New Economy Research Fund, the Research for Industry, etc.), 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
- Like many other countries, New Zealand is also promoting the internationalisation and the international attractiveness of its higher education through several other initiatives.
- Because of the situation of almost open entrance where institutions predominantly respond to the demand by students, is relatively difficult to centrally steer.

Norway

- Norway has a diversified higher education system with 7 public universities, 26 specialised public universities, 25 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 under pressure for several reasons. There are clear signs of both academic and vocational drift.
- Since 2003 it is legally possible to change under particular conditions the status of the institution. Since then 3 university colleges have been 'upgraded' to universities. Criteria include PhD training capacities, have good quality master graduates, demonstrate high quality research, qualified researchers, adequate infrastructure and academic networks. Colleges have difficulties to offer PhD level facilities.

Performance agreements and profiling

- The Quality Reform in 2001-2004 resulted in the introduction of an independent quality assurance agency, a new degree structure, student completion requirements, emphasis on institutional autonomy and internationalisation as well as a new output-based funding mechanism.
- The allowance of colleges to become universities after a tough review does not lead to a change in the way the institutions are funded.
- The ambitions to become a university leads to an overall pressure towards more master programmes
- The establishment of Centres of Excellence (research) contributes to the diversity of the system. Because high scientific quality, international reputation and the capacity to invest substantial institutional and third-party funding are the main criteria, these centres are mostly hosted by universities. This could contribute to the ambition of creating 'world-class universities'.
- As such diversity is stimulated through the research funding model with one-third of all research funds being allocated on a highly competitive basis through the Research Council.
- 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.
- The Norwegian Network is an initiative to stimulate stronger profiling ans task division among and within institutions through voluntary "network self-governance". The lack of external pressure has made that the outcomes were disappointing initially but gained strength with the recommendations of the Sternö Committe (Veerman of Norway).

- The Sternö Committee was critical about Norwegian HE: no central research strategy, little staff mobility, no international orientation, some regions unable to attract students and staff and public funding too static and a controversial performance-related part.
- The Committee, that found out that the Norwegian system is already quite diverse, advised that institutions should merge into larger entities with a stronger regional profile.
- Based on these results, some universities and colleges chose to merge or start intensive collaborations.
- Performance-based funding is driven by scientific publications and relative income from the research council or EU funds. Third party funds should stay within limits. But there are still substantial strategic and historical parts and funds for teaching are mostly related to earned credits and awarded degrees.
- Though the new funding model since 2005 seems to stimulate profile building through performance components as well as a strategic compartment, the many performance areas make that institution can internally set some priorities while the system-wide divide between research intensive universities and teaching intensive colleges is maintained.

Sweden

- Sweden has a number of different type of higher education institutions including 14 state universities, 21 state university colleges, 3 private universities and 12 other private HEIs.
- The system is governed by the Parliament, Ministry of Education and Research, the Higher Education Agency and the Swedish Research Council.
- In 2010 a new quality evaluation system was implemented to evaluate the learning outcomes of study programmes.

Quality-related funding

- Since 2007 a process has been started to give HEIs greater autonomy. With a 2010 bill they receive a special public law status with a lot of deregulation in terms of internal organisation and staff no longer being civil servants as from 1-1-2011.
- Many stakeholders before were critical about greater autonomy as many think that the State had done a good job before.
- There are plans to make public funding dependent on multi-annual contracts, to start in 2011. But up till now, the 1993 system is still mostly in operation.
- The funding mechanism for teaching is based on numbers of students and study performance. But the budget depends on the previous agreed number of students and achievements. If one underperforms, a corresponding amount is not paid out. Over-performance can be carried over to the next year with a 10% maximum.
- Since 2010, institutions with the highest scores in the quality evaluation assessment will receive extra funding. The evaluation criteria include students' theses, self-evaluations of the programmes and site visits and questionnaires among alumni.

- The quality-related extra funding with €30 million is only 1,5% of the total operational budget and is taken away from that operational budget. Therefore this proportion is rather small. The evaluations start in 2011. There are no projections about what proportion of the programmes will receive such funds. But as a programme once gets this money, it will continue for four years until the next evaluation round.

1 Introduction

Profiling and funding are currently major themes in the higher education debate in the Netherlands. Funding issues strongly relate to the period of public cut backs necessary after the financial crisis. Profiling as a means of stimulating further differentiation of Dutch higher education is a direct outcome of the recommendations of the Committee Future Sustainability of the Dutch Higher Education System, chaired by the ex-minister Veerman. Immediately after the launch of the committee's report (Veerman *et al*., 2010), the Ministry of Education, Science and Culture organised a public debate on the ideas around implementation opportunities for profiling and differentiation.

One of the activities has been the publication of a CHEPS report "*Profiling and Funding in Higher Education, and international comparative study*" in August 2010. That report explored through a quick scane the profiling policies and their potential relationships with funding of higher education in a selected number of countries. Based on that first inventory of a number of national policies and practices with relation to profiling, it could be concluded that regardless of a number of interesting national initiatives, it is hard to identify "good practice examples" of how to stimulate diversity and institutional identity in higher education. Knowing about national policies, does not immediately guarantee that universities will act according to the expectations. In addition, specific datails of implementation processes often hide part of the potential policy effects because they try to balance the interests of various stakeholders or guarantee a transition period.

The current study forms a follow-up study on the above-mentioned report and aims at providing a more detailed overview of national steering frameworks, funding models including incentives quality and diversification in higher education institutions, implementation issues and where possible institutional responses. Instead of taking profiling as the first entrance point, this report particularly looks a quality-related funding elements that envisage to stimulate performance and diversity. As such, it is also meant to be a major input for the work of a new Committee that has to come with suggestions to further stimulate institutions and programmes to build a stronger profile. The outcomes of this process are envisaged to be an important input for the national higher education strategy paper to be launched by the Ministry in autumn 2011.

This report adresses the following key issues:

- Quality-related funding mechanisms: the extent to which public funding is related to the quality of teaching.
- Profiling and funding: performance agreements on institutional strategies and targets in various performance areas.

1.1 quality-related funding

In order to seek instruments that may help stimulate quality and diversity, the first perspective of this study is to look for national funding models that have a relatively strong focus on quality intheir public funding mechanisms. The question is whether in addition to more generic (performance) indicators with relation to "teaching and learning" – like degrees and duration of studies – more specific quality indicators or measuring mechanisms are used in a number of selected countries. One can think of qualifications of teachers, quality-evaluation related indicators, level of master theses, etc. For this part of the study, a few countries is selected that appear interesting in terms of the way in which quality-related funding is advocated, discussed, implemented and experienced. This means that next to a general description of the funding model, more detail is sought about arguments, discussions, opinions and working. This will however still be done at a national level in order to keep the study within manageable proportions.

The countries selected for this part of the study are:

- Australia: Learning and Teaching Performance Fund and the mission based compacts
- England: the establishment of the Centres of Excellence in Teaching and Learning as well as the capacity funding system
- Finland: a national strategy towards quality and internationalisation, reflected in quality issues and performance indicators
- Hong Kong: the Teaching and Learning Quality Process Reviews, the Performance and Role-Related Funding Scheme as well as the Academic Development Proposals
- Sweden: a small compartment of funding related toe excellence in the national quality evaluation process.

1.2 Profiling and performance agreements

This part of the study more explicitly looks at public funding arrangements in which the government (ministry) together with the individual institutions discuss and agree on how the institution will contribute to national priorities, particularly in the higher education domain. This means that the focus will be on performance agreements, mission-agreements, agreement-negotiations, etc. and the way in which these are practically used. The countries selected for this part of the study are:

- Australia: the operationalisation of the mission based compacts.
- Denmark: the fourth generation of performance contracts between the government and institutions and their evaluation by an international review panel.
- Finland: the development towards the recently implemented agreement negotiations with a simplified structure of performance indicators.
- Germany: both the performance contracts between state governments and the institutions and even within the institutions (*Zielvereinbahrungen*) as well as the operationalisation, agreements and impact of the Excellence Initiative.
- Hong Kong: the experiences with the Performance and Role-Related Funding Scheme which links 10% of the public budget to the mission- and profile fulfilment.

- New Zealand: the role and operation of the TEC in negotiating with the institutions about their role and profile in the higher education system and the experiences from the institutions' side.
- Norway: the tensions in a system where colleges have the opportunity to become a university which may run counter the idea of profiling. In addition the development of strategic contracts with higher education institutions.

1.3 Research methodology and plan of the report

This study will be structured on a country by country basis. This means an alphabetical description of the various countries selected. Per country there will be not a fixed format as the questions vary by country. In order to put quality-related funding, profiling and performance agreements in context, each chapter starts with a short description of the national higher education system. In addition, many cases also show some general descriptions of the governance reforms within which funding arrangements often take a major role. Where relevant for profiling, a link is made to the U-map classifications and its dimensions to see whether those dimensions also can be used as a ordering device if one thinks about profiling.

The country reports are based on literature review, including national policy documents, research reports, articles, websites and news bulletins. In addition, in all countries we have contacted a few representatives to reflect on the discussions and experiences with the themes addressed. At the end of the report an overview of literature and interviewees is given per country.

2 Australia

2.1 The higher education system

The higher education system in Australia combines elements of both British and American systems though it origins 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.

The Federal Government has principal responsibility for public funding of all public universities. The University title is only delivered to institutions which undertake comprehensive teaching and research across at least three fields of education and include research training at doctoral and postdoctoral level. 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) - a coalition of eight old research intensive universities;
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.

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 central question arises how this profiling can be achieved and particularly how the funding framework that currently is being developed will facilitate or encourage such a profiling of institutions. The emphasis is not on the technical details of the funding mechanism, but to sketch the outlines and how funding issues are closely intertwined with the policy priorities for Australian higher education as formulated by the national government. The emphasis will be on the teaching and learning component of the funding reform.

Information was gathered through the central documents available on the internet. Further details were obtained from experts at the Commonwealth Department Education, Employment and Workplace Relations (DEEWR) and key organisations in the field as well as experts on Australian Higher Education. These are listed at the end of this paper. We are grateful to all of them for their cooperation.

2.2 Towards a new framework for funding

The HE sector has undergone several changes in the funding system combined with several funding injections to Australia's research and innovation capacity in areas of national economic significance. A major injection, known as *Backing Australia's Future* (BAF) involved a broad-based package to provide additional funding over four years from 2004. A central tenet of BAF was the diversification in funding to providers. Grant funding was provided to each university to ensure the supply of a fixed amount per discipline towards an agreed number of student places, with an additional percentage bonus contingent upon a university' adherence to national governance protocols, and compliance with workplace relations requirements. This reform was intended to create more flexibility in the academic and administrative organization.

In 2008 the Bradley Commission addressed the question how well the HE sector was structured, organized and financed to position itself and the country internationally. The review team argued that Australia's future depends upon a strong tertiary system and that without reform the long-term prosperity is at risk. It presented a package of reforms including the $6.5 billion price tag including an immediate ten percent increase in the grant scheme amounts followed by re-introduction of indexation as well as other financial injections (e.g. regarding research infrastructure, student loans and entitlements).

Not all of the recommendations were accepted by government, but according to Magarry (2010) they shaped the reform agenda by

- dismissing with the notion of linking university funding with student demand and caps on numbers,
- giving a commitment to using the Australian Qualifications Framework to improve the articulation between vocational education and training (VET) and universities, and for the Skills Australia statutory authority to advise on effectiveness; this should lead to a more cohesive national tertiary education system,
- confirming the goal that by the year 2020 twenty percent of higher education enrolments would be from students from low socio-economic backgrounds.

As a response to the Bradley Review, the Government announced in "*Transforming Australia's Higher Education System" (2009)* a comprehensive 10-year reform package for the higher education sector. This includes Government's commitment to investing in the future of higher education and ensuring Australia's higher education system better meets future needs. Universities will have access to up to $550 million in additional funding. 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 (upgrading the TAFE infrastructure), reward institutions for meeting agreed quality and equity outcomes, improve resourcing for research and invest in world class tertiary education infrastructure.

Reforms include the introduction of a demand driven funding system, significantly improved indexation on grants and the establishment of a new relationship between the Australian Government and each individual university. The following pillars constitute the current reform agenda:

1) Development of Mission-based Compacts for government to work in partnership with providers;
2) An Indicator Framework underpinning performance-based funding;
3) The development of standards, to be monitored through the establishment of the Tertiary Education Quality and Standards Agency (TEQSA) as a national tertiary quality agency to regulate the sector;
4) Increasing partnerships with vocational education providers and community organizations to raise aspirations and increase the participation of students from low socioeconomic backgrounds.

The introduction of the Mission-based Compacts coincides with the introduction of a student demand driven funding model for the allocation of government supported places. Students eligible to use the Higher Education Contribution Scheme (HECS) are entitled to access government income contingent loans. Under current funding arrangements each public university is allocated a quota of government supported places in a variety of discipline clusters which are funded at different rates. From 2012 these arrangements will cease and every undergraduate student that gains entry into an eligible course will be entitled to a government supported (HECS) place. In other words, from 2012:

- There will be no limit on the total number of government supported places, and
- No individual university will be allocated a quota of government supported places.

Thus, 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.

The rationale for this policy is to give universities the capacity to enrol enough students to meet the Government's target of 40% of all 25-34 year olds having a Bachelor or higher degree by 2025. In addition, it will ensure all eligible students are able to study at university, thus eliminating unmet student demand for university places. Universities will also be given greater flexibility to respond to changing patterns of student demand.
The new performance funding system supersedes a previous reward funding program, the Learning and Teaching Performance Fund (LTPF). The LTPF ranked universities post-hoc based on their performance and then paid reward funding to the highest performing universities.

The following concentrates on the mission-based compacts and the indicator framework for performance-based funding as these instruments are aiming to make the Government's focus on individual profiles of each university more explicit. HE performance funding is a key component of the teaching and learning section of compacts. It will provide incentives to universities to improve outcomes for students and achieve national objectives.
TEQSA will provide an independent assessment of whether institutions have achieved their teaching and learning performance targets. As its role in performance-based funding is yet to be determined, TEQSA will not be discussed here further.

It is important to note that the whole process is still in development and several details still have to be agreed. But the major contours are becoming quite apparent.

2.3 Mission-based compacts

2.3.1 General aims and scheme

The idea of mission-based compacts was first proposed in the white paper 'Australia's universities: building our future in the world' (2006) ahead of the 2007 budget. From the outset, compacts were envisaged as university-specific funding agreements designed to encourage universities to engage actively with the broader community and industry.

Compacts are intended to provide a holistic, strategic framework for the relationship between the government and individual higher education institutions and "provide a framework for jointly achieving the Government's reform agenda and institutions' individual missions. They will support universities to pursue their distinctive missions and to contribute to the Australian Government's aspirations for the higher education sector as a whole" (DEEWR 2009c).

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. Through mission-based compacts government enters into a negotiation with universities to achieve these targets. It is thus a tool to align institutional activities with national priorities. Secondly, the compacts are expected to minimise duplication and fragmentation within the system and to concentrate resources for maximum efficiency and impact (DIISR 2010).

Another aim of mission-based compacts is that they will enhance institutional autonomy while encouraging greater collaboration and sectoral diversity and they will facilitate the distribution of performance-based funds.

The compacts bring together in a single document key activities and targets in the areas of innovation, research, learning and teaching. It presents a comprehensive picture of the institution, including information on all government 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. Compacts will include information on:

- The university's mission,
- Government and university priorities for teaching and learning, and research, research training and innovation,
- The university's strategies for achieving the mission and contributing to government priorities, and
- Details of government funding provided through Government programmes.

The following will focus on the general operation and the teaching and learning component of the compact in particular.

The preamble defines the particular mission of an institution by identifying key strengths. The mission statement requires also a broadly defined strategy for how to achieve that mission on a whole-of-university basis. Current missions of Australian institutions are expressed in a wide variety of different forms, ranging from concise 'vision statements' through to strategic planning documents. A mission statement, as expressed in a compact, will be a clear statement of the role and specific place that an institution sees itself occupying within the higher education sector. 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. The preamble can include principles under which public funding will be provided and the compact will support the principles.

The part on the teaching and learning component will include

- the institution's commitment to contribute to national priorities identified by the government in relation to the provision of student places
- targets for performance funding, and
- could also include details of other funding were eligible

This part will include agreement on performance expectations for teaching and learning. Teaching and learning funds will largely be performance based funds, which means that universities need to achieve targets in key areas relating to student experiences and outcomes in order to receive funding. The scope of teaching and learning will encompass undergraduate education and postgraduate coursework. It may include outreach and linkages with other institutions, including other tertiary education providers and schools.

2.3.2 General issues on compacts

A discussion paper "*Mission based compacts for universities: A framework for discussion*" was released in July 2009 and formed the basis of consultations with Vice-Chancellors, peak bodies that represent groups of universities and other key stakeholders. In late 2009, meetings were held with each eligible HE provider regarding their individual mission, strategic direction and how they propose to respond to the Australian's HE reforms. Every eligible institution signed an Interim Agreement for the 2010 year.

Predictably, the discussion focused on the indicators uses to assess performance in teaching and learning (see below on the performance funding framework). On the use of mission-based compacts in government funding there were concerns that compacts could become overly complicated, increase bureaucracy, add further processes for preparation of submissions and protracted negotiations, and impose greater data collection and reporting burdens. Other concerns are loss of transparency, inappropriate central control and a tendency to compromise outcomes (Group of Eight, 2010b).

A key issue is whether compacts can be seen more broadly as drivers of institutional mission differentiation or in our terms more institutional profiling. A few examples will illustrate this discussion. For instance, the Australian National University advocates differentiation through a restructuring of institutions:

> "*In a restructured system, the missions of different universities must become increasingly, genuinely and pragmatically distinctive. Public funding for universities should match their mission, fully funding agreed activities, and recognizing the different costs related to different missions*" (Submission to the Review of Australian HE, 2008).

Monash University supports the introduction of compacts as an approach to setting institutional funding levels. It is Monash's view that operating grants for core university functions such as research and education should continue to be delivered using metrics-based methodologies. The best use of compacts-based funding would be as a mechanism for encouraging diversity in the HE sector by recognizing and funding distinct missions of individual universities.

Universities Australia (2010) advocates a strong connection between university compacts with the entire Performance Funding program more generally. Once these indicators have been determined, consideration needs to be given to the relative weighting of each, and whether the weighting will be the same across the entire sector regardless of diversity in institutional mission and focus or of regional differences, especially in socio-economic

status (SES) and demographic characteristics. Capacity to reflect such diversity in mission accentuations seems desirable.

The Group of Eight is very critical about the impact of compacts on more structural diversity (Background paper November 2010a).

2.3.3 Process and timing

Following the interim agreements which were negotiated with institutions as a transitional arrangement, the Government released a draft Compact template to universities for consultation that will culminate in the first mission-based compacts coming into effect in 2011.

So far negotiations were undertaken with 41 institutions. The discussions covered their missions and strategic directions, how they propose to respond to the Government's reforms, and their achievements and aspirations in teaching and learning. Altogether 38 Interim Agreements have been made publicly available on the DEEWR website.

The overall impression of all these documents can be summarized as follows:

- They paint a picture of a diverse HE sector with institutions strongly focused on developing their strengths to enhance their place in the new HE environment and contribute to the government's reform agenda.
- Many institutions have been proactive in seeking alliances with other tertiary providers with a view to addressing aspects of the government's reform agenda.
- Institutions are planning for the introduction of a demand driven system, but most do not anticipate significant changes in broad strategic direction at this time. Some universities indicated they were currently working on new strategic plans to be finalized in 2010.

Regarding increasing participation and attainment, universities acknowledged the merits of an expanded HE sector and are positioning themselves to meet the Government's new policy objectives and targets. While there is broad commitment to expansion, some institutions indicated they lacked capacity to accommodate significant further growth in student numbers. They suggested that additional infrastructure funding to cater for growth in student numbers would be advantageous.

There was much support for the role of the Tertiary Education Quality and Standards Agency (TEQS) in ensuring that quality standards were not compromised as the system expands to provide new opportunities to students who would not otherwise have access to higher education.

Another aspect worth mentioning is that in order to engage under-represented groups, most institutions intend to pursue innovative approaches, consistent with their individual university mission. Strategies cited include: embarking upon new partnerships with TAFE providers, development of new, flexible learning pathways, new approaches to course delivery (blended learning) and better support for students.

Other recurrent themes that can be found in most interim agreements align with national priorities in learning and teaching: improving first year retention, improving assessment practices, strengthening curriculum design, the professional development of teaching staff and the like.

The interim agreements are the starting point for a dialogue between the Government and all HE providers for a negotiation process in early 2011 and the first compacts are expected to be finalised by April which will cover 2011-2013. The compacts are three year agreements covering 2011-2013. Once established, consideration will be given to making compacts 4-5 year agreements.

Compacts may be reviewed, renegotiated or amended by mutual agreement, to take account of changes in the operating environment, changes in performance targets, missions, or the introduction of new funding elements.
The relationship of compacts and the larger performance and accountability framework is presented diagrammatically in the figure (see Annex).

2.4 Performance-based Funding

2.4.1 Towards a performance indicator framework

The new performance funding will involve setting performance targets for universities, assessing performance and providing reward funding to universities that meet targets. It consists of two components:

- A Facilitation Funding component tied to agreement to the 2011-13 Compact and performance funding targets;
- A Reward Funding component to reward universities for progress against performance targets.

Each university's performance will be compared against its own past performance and not in comparison to other universities. Facilitation Funding will also be provided to assist universities in developing and implementing strategies in order to meet performance targets.

The Facilitation Funding is a formula driven share of the available funding, payable each year of the compact (2011-13) on the basis of agreement on strategies for achieving the university's teaching and learning mission and agreement to targets relating to specific government goals. Each university's maximum possible Reward Funding will be calculated on their proportional share of CGS basic grant amount (or its equivalent after the introduction of the demand driven funding system), consistent with the focus of performance funding being on improvement of teaching and learning.
There has been some confusion about the compact funding. In "*Transforming Australia's Higher education System*" it was stated that the Facilitation Funding would only be conditional in 2011 and 'will be rolled into base funding in 2012.' However, it now appears

that both components are conditional on agreeing to performance funding. In other words, the conditionality has extended to the life of the compact and will only be received for each year on the basis the university agrees to be assessed against the performance indicator framework.

The Government undertook extensive sector consultation in the development of the new performance funding system to gather feedback and encourage sector support. This involved establishing an Indicator Development Group comprised of experts from the higher education sector in 2009. The group assisted in the development of a draft indicator framework, outlined in the discussion paper, *An Indicator Framework for Higher Education Performance Funding*, which was released for consultation in December 2009. The draft indicator framework included four categories of performance indicators and 12 indicators. These categories are:

1) Student participation and inclusion (number of undergraduate students; low SES participation; other underrepresented group participation),
2) Student experience (first year undergraduate retention; satisfaction first year and undergraduate students),
3) Student attainment (progress and retention rates of all undergraduate students, low SES students and students from an underrepresented group),
4) Quality of learning outcomes (teaching qualifications; learning outcomes; employment, graduate destination survey, and further study outcomes).

For various indicators special instruments (like surveys) will be developed for use in performance funding.

2.4.2 Discussion on performance indicators

The indicator framework has been discussed extensively with stakeholders and has resulted in fairly significant changes. A few points of critique and responses from the Australian Government are notable from the perspective of funding and profiling.

Where there was general support for the inclusion of a low SES target, many responses acknowledged a difficulty in achieving the national 20% low SES participation target. Other universities recommended setting low SES target for each university referring to the state low SES population. Government has set a five year goal of a 2.5 percentage point performance improvement for low SES participation for each university (see below Table 1). Government promises that universities whose percentage of low SES students is above their state-adjusted share of low SES target in 2015 will receive Reward Funding for achieving excellent performance, provided they stay above this target. Moreover, universities that already have high low SES participation and maintain this performance would be eligible for Reward Funding.

Sector feedback to the discussion paper resulted in the refinement of the performance framework. The major points and argumentations are the following:

1) The removal of a performance indicator based on the number of domestic undergraduate students. Some universities considered that the participation indicator

should not be included in the framework because a higher student intake may not align with the individual mission of each university. Apart from this, since universities already receive funding support for student enrolment numbers, there is no need to include participation indicators in reward funding.

2) The removal of performance indicators related to retention, progress and completion rates. Universities argued that there are many factors that influence these results that are outside the university's control, e.g. student difficulties in balancing financial, family or work commitments.
Regarding the category of student attainment concerns were expressed for assessing retention and receiving completions data. Some universities suggested that retention data should be disaggregated by course level, disciplines, and student groups.
Generally since funding mechanisms provide sufficient incentive for participation (and thereby retention and completion rates) Government decided not to include retention and complete rate indicators in Reward Funding.

3) The removal of the employment and further study outcomes indicator (Graduate Destination Survey). Universities were concerned that factors affecting this indicator are outside the sphere of a university's influence. For example, economic and regional factors, as well as field of education may affect the employment rate of students. For this reason Government decided not to include this indicator in Reward Funding.

4) The refinement of an indicator "the proportion of staff with a Graduate Certificate in Higher Education". Many universities felt this indicator was too narrow to measure teaching quality. They expressed concerns that an indicator of teaching qualification is an input rather than an outcome indicator. Whatever the use of this indicator, the guidelines indicate that, to be eligible for Reward Funding, universities would be required to supply data that would help DEEWR to identify those dimensions of teaching qualifications that contribute to improvement in learning outcomes. Quantitative targets have not been set for this indicator, and the Ministry agreed to work together with universities and others to develop a composite indicator of teaching quality.

2.4.3 Current reward funding model

Following the November 2010 consultation, the Government has finalized the performance framework. This resulted in a simplified framework with three instead of four performance categories and seven indicators with a strong focus on enhancing equity, student experience and quality (table 1). The Reward Funding component will be payable based on performance against targets in three performance categories: (1) participation and social inclusion, (2) student experience, and (3) quality of learning outcomes.
To ensure fair and equitable treatment, all universities that wish to participate in Performance Funding will be required to agree performance targets for all of the indicators.

Table 2.1: Reward Funding Model

Category 1: Participation and social inclusion
1A Proportion of domestic undergraduates who are from a low SES background (measured by Census Collection District) 1B Proportion of domestic undergraduates who are from another underrepresented group
Category 2: Student Experience
2A Domestic undergraduate satisfaction with teaching Combination of Course Experience Questionnaire (CEQ) Good teaching Scale and Overall Satisfaction Item (GTS/OSI) 2B Domestic undergraduate experience Measured using data from a newly developed University Experience Survey (UES) to replace or supplement the CEQ GSS.
Category 3: Quality of learning outcomes
3A Domestic undergraduate satisfaction with generic skills Measured using CEQ and General Skills Scale (GSS) 3B Domestic undergraduate value added generic skills Measured using data from a newly developed Australian version of the Collegiate Learning Assessment (CLA) to replace or supplement the CEQ GSS 3C Composite indicator of teaching quality

Source: based on the revised performance indicator framework of DEEWR Nov 2010 (http://www.deewr.gov.au/HigherEducation/Policy/Documents/RewardFundingPaymentTable.pdf).

The indicators under 1A, 2A and 3A have been set initially in the framework for the short term. As said before, their respective baselines have been established in 2010 and 5 year aspiration target of 2.5 percentage point improvement over the baseline agreed for 2015 students. The government will set an ambitious five year goal for these indicators (the low SES, satisfaction with teaching and satisfaction with generic skills targets) and annual targets for 2011, 2012 and 1203 (the Compact period). Increasingly demanding targets will be set towards achievement of the aspirational goal and targets for the first three years will be improvement of 0.25, 0.65 and 1.25 percentage points above the baseline.

Four of these indicators use existing data collection methods (1A, 1B, 2A and 3A). Only two indicators (1A and 1B) are fully available for use in setting quantitative performance targets in the 2011-13 Compact period. Data for these indicators have been collected for a number of years through the Department's higher education data collection system. These indicators are generally well-accepted by universities. Whilst data for the indicators using the Course Experience Questionnaire (2A and 3A) has been available for a number of years, implementation of these indicators will be delayed due to a break in the time series data that occurred following a recent change in the survey category nomenclature. In addition, the Government will work with the provider of the CEQ and the sector in 2011-13 to review the instrument. Despite having a relatively high response rate, the sector expressed

concerns with the use of this indicator for Performance Funding due to the delays in receiving data. This should be addressed as part of the review of the CEQ.

Three indicators (2B, 3B and 3C) will be developed during the Compact period:

- The development of the UES will be contracted out and it is intended that it will be based on existing student experience surveys,
- The adaptation of the Collegiate Learning Assessment for the Australian higher education sector will require consultation with the Council for Aid to Education (the providers of the US version of the survey), and
- The composite indicator of teaching quality will be a completely new indicator and therefore will require extensive consultation and research to determine appropriate components and available metrics.

The sector's has expressed a desire to be consulted on the development of these indicators and the Government has agreed to this. The Department is committed to working with the higher education sector to ensure the Performance Funding Framework used has the confidence of the higher education sector and encourages universities to improve outcomes for students and achieve national objectives.

2.4.4 Critical issues on performance indicators

Although the indicator framework has been finalized there remain a number of problems related to both the selection of indicators and the way in which they have been specified.

Institutional missions. An issue related to the discussion on institutional profiling is the extent to which the indicator framework allows universities some flexibility in the choice of performance indicators. Universities would prefer that a more flexible framework was set up to allow universities to select from a menu of common indicators those which best suit their purposes and circumstances and then to identify customized indicators more closely related to their specific objectives. The draft performance funding guidelines (October 2010) included the option for universities to negotiate indicator weightings (within a given range) that reflect their institutional missions and goals. The final framework now only includes two quantitative performance indicators for use during the first Compact period, therefore the Government has considered it appropriate to fix the indicator weightings for the 2011-13 Compact.
In this context it has been decided to weigh Reward Funding towards the student experience and quality of learning outcomes categories (each 40% and the participation indicator 20%). Universities can adjust the weight of the indicator categories up or down by 5 percentage points to suit their mission and goals.

Teaching quality. In the first draft framework the "proportion of academic teaching staff holding a Graduate Certificate in Higher Education" was an important indicator for teaching quality. Now DEEWR replaced this indicator with a composite indicator of teaching quality designed "to help DEEWR to identify those dimensions of teaching qualifications that contribute to improvements in learning outcomes (…) contributing to an evidence base that would inform research on factors that impact on learning outcomes".

Some universities are critical that a workable performance indicator especially for teaching quality will not be available in the near future.

Student-staff ratios. A concern expressed by the NTEU - strongly supported by several universities - is that the framework does not include reference to student-staff ratios (SSRs). These are recognized as a key indicator of the quality of reaching and of the student experience. The Bradley review recognised that SSRs have blown out to an undesirable level. For stakeholders high SSRs are a key constraint on quality improvement, especially at a time of significant growth in enrolments.

Use of surveys. Regarding surveys that are or will be specifically developed for use in performance funding, universities have put forward that the University Experience Survey (UES) in particular should be broad enough to be used in a context of a wider variety of types of higher education provision. It will need to yield robust and useful data on students studying in various ways (part-time, online, mixed modes, on-campus students). This instrument needs careful validation where these differences are taken into account.

Target setting. The Group of Eight observes that the revised performance indicator framework does not include retention and success indicators for low-SES students at undergraduate level. There are currently no funding incentives to encourage a focus to this end and the GO8 proposes to include an indicator of progress. As well the group is disappointed that there are no performance indicators for progression of low SES students to postgraduate study. An exclusive focus on BA degree qualifications without any attention to postgraduate entry and success could leave some areas of inequality in HE unchanged.
Universities will have either an excellence or an improvement target for the low SES indicator (1A). The details of calculating these are in the final Performance Funding Guidelines (expected in 2011). Each university is required to make the same percentage point improvement on their baseline performance. This ensures equity in target setting. For the other underrepresented group indicator (1B), universities are able to select which group to target. Once universities have informed the Government of which group they will choose, the Government will have a greater understanding of baseline performance levels and each university's capacity to improve, which will inform target setting.

Measuring value-added of learning. Universities are 'very concerned' about the proposed use of the Collegiate Learning Assessment (CLA) to measure value added to students' generic skills and the likely financial implications of its use. For example, Marcia Devlin (Deakin University) argues that some universities (mainly the top research universities) would likely benefit more than other universities from this indicator. Another objection raised by the GO8 is that the very idea of paying universities for improved valued-added ignores the fact that value-added is relative to the circumstances of each student. It is impossible to know whether a university is improving value-added over time, because measurement cannot standardize results for different cohorts. Others also have listed a number of problems with using the CLA or similar tests to measure value-added by a particular higher education institution. Given these limitations universities prefer that

Government, in partnership with universities, explore options for alternative, robust indicators of student learning that would be more suitable for Australian higher education.

2.5 Conclusions on compacts, funding and profiling

The Australian case is an intriguing one in the context of the current debate on funding models and institutional profiling. Compacts mark the start of a new relationship between the Australian Government and higher education institutions. They are based on shared goals to improve students' educational experiences and outcomes, and will facilitate alignment of institutional activity with national priorities. In this concluding section some considerations will be presented on mission-based compacts and how these might relate to the profiling of higher education institutions.

Institutional diversity. A basic idea of mission-based compacts is that it provides an opportunity for universities to tailor the compact to reflect their different circumstances. Universities have the scope to outline their own unique mission including other priorities such as international education, postgraduate education or issues related to dual sector status. Experience with Interim Agreements have shown that, while everyone worked with the same template, the full diversity of the sector was clear once agreements were completed. Each institution is positioning itself in relation to the rest of the sector in order to maximize their funding potential. Universities are doing this by highlighting areas of strength in teaching and learning, and identifying areas in which they wish to expand in the future.

More conformity. However, this general vision on mission-based compacts has another side and several universities and peak bodies are reserved about the actual outcomes of compacts. In addition to using the compacts to allow each university to define its particular vision and mission, performance based funding has been designed to encourage universities to improve outcomes for students and to achieve national objectives. In the view of the critics, Government now sees compacts as 'having teeth' and a useful mechanism for achieving its own objectives for higher education. With the introduction of the Compacts each university would negotiate and agree to targets. This is not the case in the template for learning and teaching where the Government has set minimum improvement targets for each of the indicators. A tension has been signalled 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. In the view of some experts the former may predominate because the use of a common set of performance targets for all institutions provides a strong incentive for institutions 'to more desired behaviour' leading toward greater conformity rather than institutional diversity.

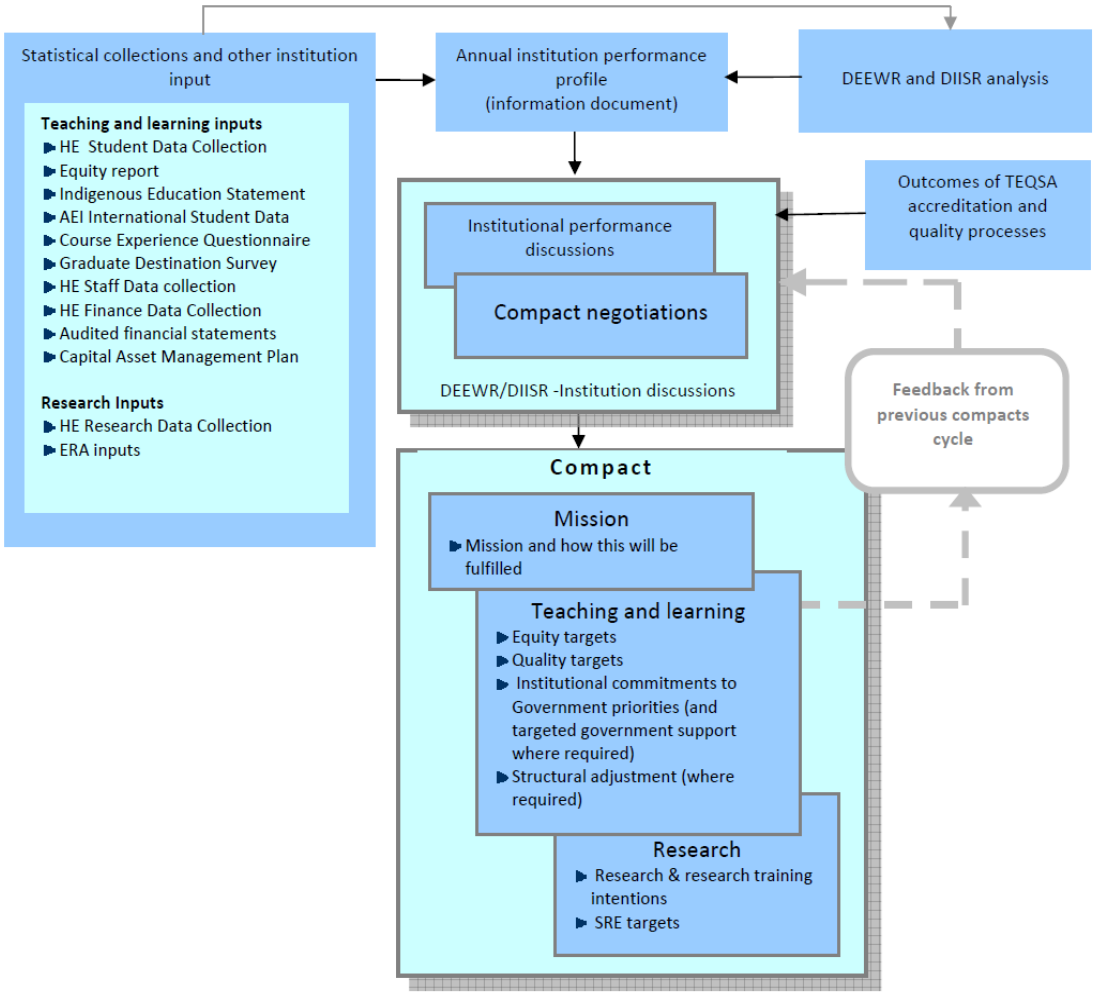
Additional funding. Virtually all stakeholders agree with the Government's participation and social inclusion targets. There is however concern that increases in

Government funding announced in the 2009 will not be sufficient to cover the additional costs universities will face in trying to achieve these targets.
According to Government's commitment to investing in the future of higher education, universities will have access to up to $550 million in additional funding, designed to support high quality teaching and learning, and meeting national priorities in student demand. This means that mission-based contracts cannot be seen as just a vehicle to redistribute the available financial resources. This additional funding is allocated to institutions on the basis of meeting their targets and allocation is in principle independent from performances of other institutions. This means that each university's performance will be compared against its own past performance and not in comparison to other universities. Universities are free to spend their Reward Funding payments as they choose. To what extent public investment needs re-adjustment because of increasing participation while maintaining the quality of education or student experience is too early to consider.

New opportunities. The question has been raised whether compacts will generate real changes and provide an opportunity for structural reforms. For some, compact are seen as a way of gathering information on the likely impact of the student demand driven model. The problem arises when in an attempt to implement the government's policy and take into account other policy initiatives and priorities (such as TEQSA and the AQF), bureaucratic decision makers find it necessary to impose common funding and accountability measures across the sector in an attempt to reward relative performance.

In conclusion. It is fair to state that - if appropriately implemented - mission-based compacts combined with performance funding may have the potential to encourage and reward individual institutions to pursue their own missions or strategic ambitions and develop areas of strength. For this to work however, each institution must genuinely be able to exercise a high degree of flexibility and autonomy in negotiating its own set of priorities and agreeing to its own set of performance indicators. The whole process is too new for assessing any outcomes in this respect.

Figure 2.1: Proposed compact accountability model in Australia



Source: DEEWR and DIISR (2009)

3 Denmark

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

The Danish higher education system compromises 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/Tvaergaaende/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 panel[2] 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:

- 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

[2] http://www.ubst.dk/en/universities-in-denmark/university-evaluation-2009

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 did not have the authority to impose specific targets on a university, nor the instruments to sanction any underperformance, based on the 2003 University Act. However, after the university mergers state steering through contracts has gradually increased, since the performance in research increasingly was linked to funding (Interview data).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. For the first time the Ministry tried in the 2008-2010 contracts to establish a link between stated objectives and university outcome and funding.

The 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 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. In other words, these contracts are related to the changed governance of universities from the elected collegiate governance to the Boards with appointed rector. Thus, the development contract is an instrument for the university management to put its priorities on the agenda which have to be negotiated with the Ministry.

At the same time, the aim of the development contracts is the tool for the Ministry to ensure the increasing contribution of universities to societal needs. There is a growing requirement that universities and their research must contribute to society. In that sense, some parts of the contacts today are very similar, as the ministry puts a uniform concept as a template.

On top of this development contract, there may also be contracts with other ministries. Quoting from the contract for Aarhus University: [3]

> *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*

[3] See: http://www.au.dk/en/about/policy/developmentcontract/

> *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.*

Earlier, there was no straightforward link between the funding system and the institutional strategies. The universities signed development-contracts with the Ministry of Science, Technology and Innovation, and in these contracts the universities were obliged to formulate their institutional strategies. However, a university development contract was not a legally binding document. It was rather a letter of intent issued by the individual university stating the strategic areas that the university intended to focus on for a given period of time as well as which instruments the university intended to use in order to reach the set targets. Accordingly, a university development contract differed from a classic development contract in the sense that there was no automatic relationship between reaching the set targets and the grants awarded (Interview data).

The behavior of the universities is changing as the new contracts have direct impacts on institutional strategies in several ways. Firstly, the earmarking of competition funds for research obliges the institutions to focus on politically prioritised areas, and secondly the taximeter-system steers the institutions towards the preferences of the students. These tendencies are expected to become even more pronounced in the future as one of the main aims of the University Act and the new contracts is to make the institutions act more strategically. This trend will be further strengthened in the coming years as funding will be directly linked to research outcome and other performance parameters (Expert Interview).

A university top administrative officer notes, that the above changes have fostered a university to become a more unified system instead of a decentralized collegial body with plans, that is development agreements, which are followed up and reported upon. Some of actors, such as the management of universities evaluate this development as positive, since they gain leverage in prioritizing within the university and contributing to the development of otherwise a conservative institution. Academics on the other hand tend to perceive this as a negative development threatening their professional autonomy (Interview data).

Contracts so far have not been internationally reviewed. However, there was an international panel in connection with an evaluation of the University Act in 2009 which recommended to open up the system for more individual contracts between universities and the Ministry. Currently, the National Audit Office (in Danish "Rigsrevisionen") and the University Board shall conduct an annual university results' review. The results are then incorporated into the University's Annual Report, and published by the Ministry. This procedure applies to all universities in Denmark (Interview data).

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.[4] According to Frølich *et al*.

[4] 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).

(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'.

One of the biggest Danish university's top administrative officer noted that university contract management has developed over years from more verbal agreements where objectives were questioned toward the current contracts with very specific and standardized targets. In his view, the current contracts are very similar for all eight Danish universities. He reported that there are indications that the next contract will again open more possibilities for universities to develop more individually (Interview data).

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 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.

The tasks are defined by the universities (and thus differ) and are dependent on the core activities of the universities. However all universities in Denmark conduct research, offer education and provide public services. 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 faultline 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 degrees[5]. 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 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

[5] 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.

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, London[6], 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.
- 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:-

[6] 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).

- 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 powers[7] (although that will be reviewed in the near future), has sufficient legal basis on which to completely

[7] 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.

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.

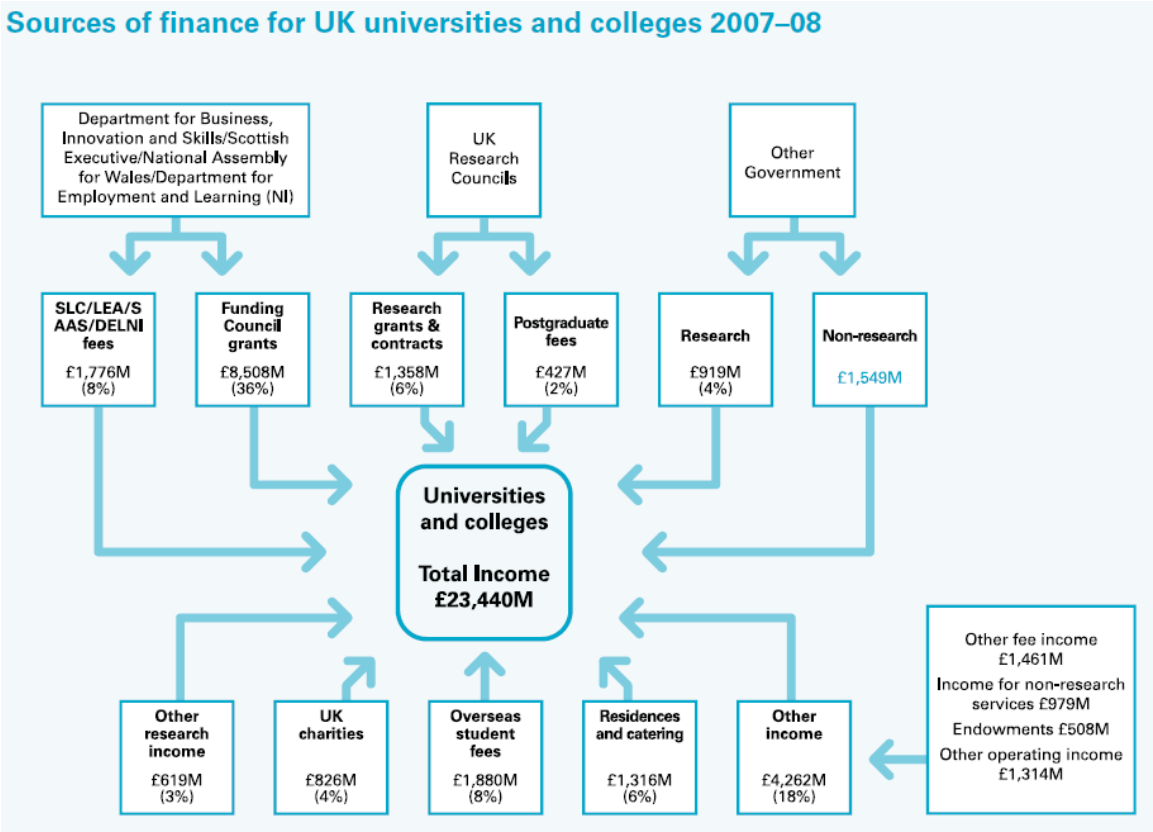
Secondly, the 'science' element of higher education is a power reserved to the UK level, and so the Research Councils are national in scope, the Research Assessment Exercise was a national exercise (although the four territorial funding councils were free to concentrate funding according to their policy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

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.

Figure 4.1: Funding sources of British universities



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 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

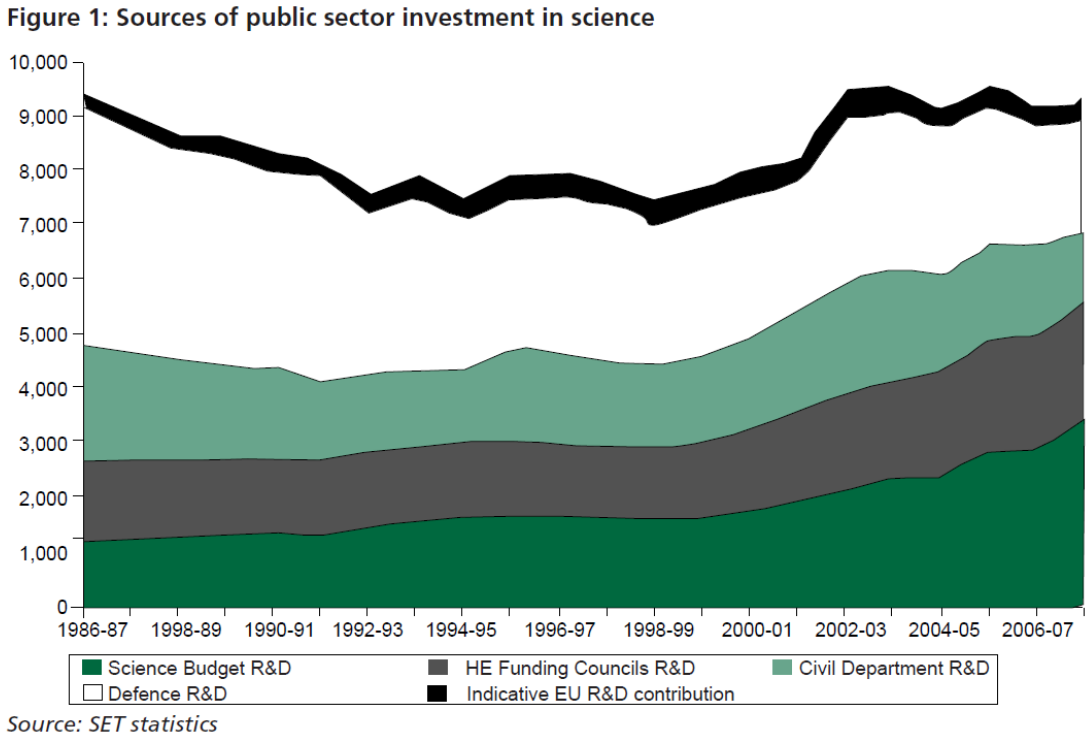
Institution	Moderation funding
Bishop Grosseteste College, Lincoln	10.77%
City University, London	4.04%
Royal Academy of Music	3.79%
London Metropolitan University	3.46%
School of Oriental and African Studies	2.86%
Anglia Ruskin University	2.82%
University of Chichester	2.65%
Royal College of Music	2.60%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

Figure 4.2: Sources of Public sector investments in science



Source: *BIS (2010)* http://www.bis.gov.uk/assets/biscore/corporate/docs/h/09-1447-higher-ambitions.pdf

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%

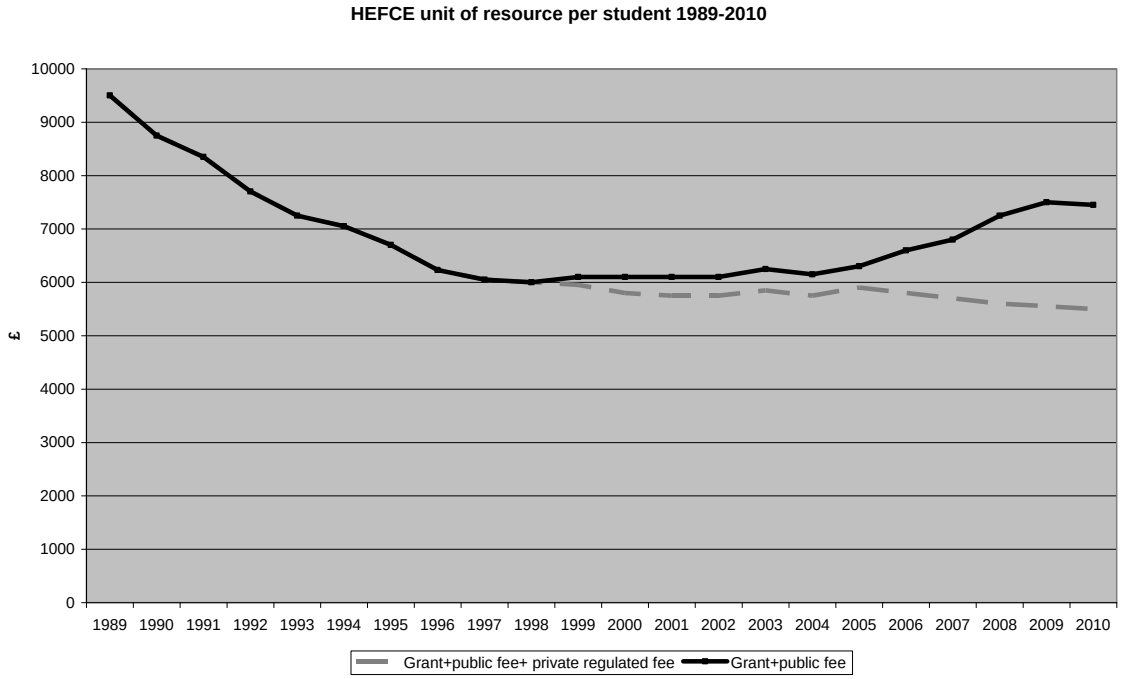
4.3.2 Private funding and the role of profiling

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).

Figure 4.3: 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).

Figure 4.4: ranking of student data from the Guardian League table, top ten and bottom ten universities .

2010 ranking	Institution	% Satisfied with teaching	% Satisfied with feedback	Spend p/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

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

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.

4.4 Case Study: Profiling through excellence in teaching and learning: the case of the Centres for Excellence in Teaching and Learning (CETLs)

The Centres for Excellence in Teaching and Learning (CETL) policy was announced in the UK March 2003 as part of a landmark Government White Paper to create a basis for teaching excellence amongst even those institutions whose research performances were weak. Seven years, and £350m (€400m) later, it is hard to conclusively point to evidence that demonstrates that they have created alternative forms of teaching excellence besides the research-led teaching model dominant in the UK before the amalgamation of universities and polytechnics. Regardless of their outcomes, CETLs offer an interesting experiment through which to understand a 'big bang' approach to stimulating profiling – the CETLs were 'too big to steer', and ended up being forced into an HE system that rearranged the CETLs to their own needs rather than *vice versa*. More detail on this is presented as an appendix to this chapter: the most important elements of this case are:-

- The competitive model was chosen for purely political reasons without consideration of how the higher education system would react to it.
- The competitive model was seen as using competition to raise standards, which was necessary to justify a tripling of the student fee

- The need for a competitive model that the sector would accept led to the acceptance of the idea of 'research pedagogy' as an alternative to research-led teaching.
- The novelty of the idea of 'research pedagogy' made it impossible to set realistic targets for these centres without constraining the innovation they would need to survive.
- The first two years of the programme was dominated by a need to spend some time-limited capital funding which crowded out the time to develop content-based plans.
- Any possibility for the CETLs to achieve system-benefits disappeared when it was clear from 2008 that CETLs would not be continued or repeated.
- CETLs did not achieve a system-wide transformation effect but clearly had more nebulous benefits difficult to balance against the vast amount of committed resources.
- The most obvious remaining benefits of the programme are the buildings which were developed from the capital stream.

5 Finland

5.1 Introduction

This chapter provides the case study of Finland. Finland is an interesting higher education system to look at in the framework this study because the funding of Finnish higher education is partially based on institutional performance in the area of quality of teaching. The report is based on document analysis and interviews with key stakeholders in Finland.

5.1.1 The Finnish higher education system

The Finnish higher education system consists of two complementary sectors. There are 25 polytechnics in the Ministry of Education sector: four are run by local authorities, eight by municipal education consortia and 13 by private organisations (www.minedu.fi). In addition there are 2 special kinds of institutions. The polytechnic sector offers Bachelor degrees and since 2002 also Master degrees. In addition, polytechnics arrange adult education and open education geared to maintain and upgrade competencies. The teaching arrangements in adult education are flexible and enable mature students to work alongside their studies. Some 20% of polytechnic students are mature students. The polytechnics are known also as Universities of Applied Science (UAS) internationally. Total number of students in the UAS sector was about 121,000 in 2009, including 16,000 undergraduate and 5,500 master students (Ministry of Education and Culture, 2010a). In the UAS there were 20,044 bachelor degrees and 940 master degrees awarded in 2009.

The university sector consists of 20 institutions and offer Bachelor, Master and Doctorate degrees. The universities housed a total number of 145,330 students in 2009 and awarded 10,775 Bachelor degrees, 10,535 Master degrees, and 1,642 doctoral degrees. Finland is known for its relative high participation rate in higher education, which relates back to 1995 when the Finnish Government set a target that 60% to 65% of each new age group should receive higher education (Ministry of Education, 2002). The rapid growth in higher education numbers has been accommodated to a large extent by the polytechnic sector.

The responsibilities of the university sector and polytechnics are clearly divided. The mission of universities is to conduct scientific research and provide research-based instruction and postgraduate education. Polytechnics train professionals in response to labour market needs. The role in R&D in polytechnics is getting increasingly important, but the nature of polytechnic research is different. It is related to applied research, and it targets the regional needs and the needs of small and medium size enterprises (SMEs, www.minedu.fi).

Governance and funding is also somewhat different in the two sectors. Polytechnics are municipal or private institutions, which are authorised by the government. The authorisation determines their educational mission, fields of education, student numbers and location, but polytechnics have autonomy in their internal affairs. The central government and local authorities share the costs of polytechnics. The government allocates resources in the form of core funding, which is based on unit costs per student, project funding and performance-based funding. Polytechnics also have external funds. Finnish students have no tuition fees in higher education. On the experimental basis, Finland recently introduced tuition fees to international students in the Master phase. Similarly to universities, polytechnics operate on the basis of performance agreements. The Ministry of Education, the polytechnics and their maintaining organisations conclude three-year performance agreements, in which they agree on target results and their monitoring and on major national development projects. Student numbers and project funding are determined annually.

5.2 Governance in higher education and reforms over the last ten years

There are two parliamentary legislations that govern the higher education system, the Universities Act of 2010 and the Polytechnics Act of 2003. Education is the responsibility of the Ministry of Education and Culture. The Finnish National Board of Education (FNBE) works with the Ministry to develop educational aims, content and methods.

The universities have the Ministry of Education and Culture as the regulating and supervising authority and the polytechnics have – in addition to the ministry – the maintaining agency to supervise them. This maintaining agency can either be a local authority, a joint municipal body or a limited liability company. The polytechnics and professionally oriented higher education institutions are mostly municipal or private. Universities are maintained by the state and enjoy extensive autonomy. Both the polytechnics and universities are responsible for the evaluation of their own operations and outcomes in conjunction with the Higher Education Evaluation Council. It is worth noting that polytechnics are fairly new in the Finnish higher education system having only started in 1991 on a trial basis and more permanent from 1996 onwards. Only in 2003 the Polytechnics Act passed, based on which polytechnics are non-research institutions offering four or five year degree courses that are to serve regional development.

Higher education institutions develop their curriculum independently or in cooperation with other institutions without the involvement of education authorities. The Finnish matriculation examination provides general eligibility for higher education. In addition, those with a Finnish polytechnic degree, a post-secondary level vocational qualification or at least a three year vocational qualification also have general eligibility for university education. Universities may also admit applicants who have completed Open University studies or those who are otherwise considered by the university to have the necessary skills and knowledge to complete the studies.

5.2.1 The new University Act of 2010

The new University Act of 2010 included a radical change in higher education steering (Dobson, 2009b; Aarrevaara *et al.*, 2009). With an eye to make Finnish higher education more competitive, to promote internationalisation, quality and an efficient use of resources, universities were given the status of independent legal persons and as such separated from the State (Ministry of Education, 2009). The major reasons for change were the conclusions from an evaluation of the Finnish innovation system as well as the Academy of Finland's evaluation of *The state and quality of scientific research in Finland*. Both reports indicated that compared to its international competitors, the Finnish system of higher education and research lacks internationalisation and therefore Finland may become a less attractive partner in terms of innovation policies. So besides strengthening the basic conditions for research and education, transferring and exploiting competencies is regarded of crucial importance, next to a disconnection of resources from structures and volumes but more strongly enhancing quality and impact (Ministry of Education, 2009).

In the new steering model a key objective is to increase the autonomy of universities and polytechnics in terms of financial and administrative autonomy. This implies more flexibility to organise their own operations. For the polytechnics this particularly meant that the central regulation of study places would be replaced with institutional flexibility in this regard.

A major element of the 2010 University Act is that it changed the legal status of universities into independent legal entities, either in the form of institutions under public law or foundations under private law. In this capacity universities are able to raise private funds and free to decide how to use capital income and to manage their assets. Where the universities until 2009 rented their buildings from government, since 2010 there are three new regional companies owned by the universities (67%) and the Finnish government (33%) to manage the university properties. Universities can use their shares in these companies as collateral for loans at the private capital market.

Agreements and agreement negotiations

Since 2010, the annual agreements between the ministry and the individual institutions was abandoned and will be replaced with four-year agreement periods. As a transition phase, there first will be a 2010-2012 agreement period. The agreements are envisaged to be more strategic, simplified and limited to only the most central indicators (Ministry of Education, 2009). The agreements set the tasks, profile and focus ares for each higher education institution as well as discipline specific degree targets and other quantitative objectives and development measures for the institutions. It also addresses the basic principles for State funding. The agreements also indicate how each institutions will implement the national higher education objectives.

In 2008, the annual negotiations with the universities and polytechnics included agreements on reforming the HEI's strategies in order to be utilised in the 2010 negotiations on the overall strategy for higher education. It is the ambition that the individual institutional profiles will form a nation wide coverage of the educational and research

needs of Finnish society. In their profiles, the institutions can give different weights to R&D, youth degree education, adult education, lifelong learning, regional and innovation activities. Institutions should structurally develop in the direction of their respective agreement with the ministry.

For the 2010-2012 agreement period each higher education gets goals in the form of a three-year average objective for degrees by discipline. In universities this goes for master and doctoral degrees, in polytechnics for polytechnic (bachelor) degrees. Universities themselves have to decide on their targets of bachelor degrees and polytechnics do this themselves for master's degrees (Ministry of Education 2009).

In the agreement period cycles there will be target negotiations every 4 years and written feedback loops on the operational development annually. The Ministry of Education and Culture can so steer and monitor the attainment of the institutions regarding the agreed objectives.

Performance criteria used for university-ministry agreements and funding

The new steering model aims at a structural development of higher education institutions linked with the general reforms of the research system and the modernisation of higher education in Europe. This means that the main objectives are to improve the quality of teaching and research, to boost international competitiveness, greater effectiveness, profiling and internationalisation. In the new steering philosophy a number of performance criteria are set that are used as a main direction in the agreement negotiations with universities and polytechnics. Some of these parameters also serve as inputs for the new funding model as will be explained later on. The performance areas for higher education institutions are defined in 5 different domains (Ministry of Education, 2009):

1. Basic studies and study processes (quality of study processes): The educational process has to become more flexible, prior competencies better valued and a more diversified offer of open higher education secured. In addition is the reformed admission and selection process envisaged to smoothen the transitions from secondary to higher education. All in all, drop out should decrease and completion and transition into work increase.
2. Scientific postgraduate education: This domain is built around more transparent research careers and career mobility between universities and other types of organisations. Also doctoral degree targets (per professor) are regarded as an important element.
3. Research development and innovation: Higher education is the foundation of the innovation system with key competence areas in energy and the environment, metals and engineering, forestry, health and well-being and information and communication services. Publications, research council funding, international research funds and R&D related ECTS credits obtained by students are regarded crucial indicators.
4. Internationalisation: Internationalisation is a key focus area for the 2010-2012 period increasing the quality of Finnish higher education services. Finland has to be seen as a genuinely international, strong and attractive higher education and research community that helps solving global problems. Student and staff mobility (longer than 3 months) is regarded important.

5. Social impact: The objective is a closer collaboration between universities and polytechnics with the world of work and the innovation system, including regional development, the social and commercial utilisation of research outcomes and to produce relevant graduates for the labour market.

In order to monitor and steer higher education institutions, a number of performance indicators has been designed and linked with target volumes for the 2010-2012 period.

Table 5.1: Performance indicators used in the agreement negotiations

Performance areas	Universities	Polytechnics
General	• Bachelos's degrees • Master's degrees • Doctorates • International degree students • Exchange students (+3 mnths) • Students in teacher training	• Polytechnic degrees • Master's degrees • Professional teacher training • International degree students • Exchange students (+3 mnths)
Quality / study process	• Students (FTE) / academic • Master degrees / academic • % students with 45 ECTS or more • % of successful graduates	• Degrees/teacher • Students (FTE) / teacher • % students with 45 ECTS or more • % of successful graduates
Sc. postgrad education	• Doctorates / professor	
R&D and Innovation	• Sc. publications / FTE academic • Refereed articles / FTE academic • % of national competitive R&D funds • % of international funds	• Publications / FTE academic • ECTS in R&D / students • % of national competitive R&D funds
Internationalisation	• International mobility / academic	• International mobility / academic
Social impact	• % of supplementary funding • % of employed graduates	• % income from fee-based services • % of employed graduates

Source: Ministry of Education, 2010

The new administrative and governance model for universities

Under the new University Act of 2010 the management and administration of universities is strengthened in order to better (independently) respond to external challenges and opportunities. Therefore role, status and position of the Rector have changed, giving him stronger decision making power. The Rector no longer is elected by the senate but appointed by the newly introduced Board of Directors (Dobson, 2008). This Board of Directors must for at least 40% consist of members from outside the university community, including the Chair and the Vice-Chair. In addition, the financial administration and management will also need more entrepreneurial competences as the responsibility for solvency and liquidity are transferred to the universities (Ministry of Education, 2009). This will particularly strengthen the position of the university's Director of Administration.

Staffing policies

Until 1998 professors were appointed by the head of state but this responsibility has shifted to the university leadership in 1998. This shortened the appointment of professors and increased the role of peer review in the appointment process. The flexibility has opened up possibilities for appointment of part-time professors and efficient links between industry and universities. In 2006, a new salary system based on work load and performance was adopted instead of the seniority based salaries. The universities have the authority to decide on the implementation and application of the system at the institutional level. Different models of salary systems are applied in the polytechnics depending on the legal status of the maintaining organisation. With the new University Act that came into effect in January 2010, university staff no longer are government employees but of the respective institution that can then follow their own staffing policies (Ministry of Education, 2009; 2010a).

Quality evaluation

With regard to quality assurance, universities and polytechnics have been given responsibility for the evaluation of the quality of their activities since 1997 and 2003 respectively. The national quality assurance system is coordinated by the Finnish Education Evaluation Council, FINHEEC which is an independent body assisting universities, polytechnics and the Ministry of Education and Culture in their evaluations. The most important activities of this council are evaluations of the institutions' own quality assurance systems, being the methods and processes to maintain and improve the quality of teaching and research. These institutional audits started in 2005 and it is hoped that all institutions will be evaluated by the end of 2011. So far, the University of Tampere as well as the Helsinki University of Technology (HUT) did not pass the first round of evaluation and had to go through a second process. This has been regarded as problematic as the HUT is one of the key players to make the new merged Aalto University into a "world class university" (Dobson, 2009a).

University mergers

Besides the new law other strategies discussed right now are mergers of universities and alliances between universities and polytechnics in order to consolidate the Finnish higher education system. As a result of the mergers the current number of institutions of twenty universities and twenty-six polytechnics will be reduced to fifteen universities and eighteen polytechnics. It is also a goal to establish four alliances between universities and polytechnics by 2020 (Ministry of Education and Culture, 2010b).

The network of universities and polytechnics will be developed so that overlaps in programmes are reduced and administrative and support services are brought together. This will be done through merging universities and polytechnics, intensifying cooperation in teaching, research and shared equipment. In the polytechnic sector already three remarkable mergers have been carried out and the regional network has been made more compact and a service centre for universities has been established.

One of the most remarkable developments has been the merger of the Helsinki University of Technology, Helsinki School of Economics and University of Art and Design Helsinki into the innovation university called Aalto University. The Aalto University is official since 1 January 2010 and is aimed to become a "world class university". Other major mergers are the joint consortium of the University of Turku and the Turku School of Economics which will be operational in 2011. The University of Eastern Finland formed from the Universities of Kuopio and Joensuu started joint operations in 2010.

Admission process

The development of the joint application system developed for the student selection of universities has come into operation since the academic year 2008-2009. The full joint application system became operational from 2010-2011 onwards. The utilization of matriculation examination grades will be increased in student selections. Universities will also increase their reporting of student selections to secondary level institutions (Eurybase2007/08).

5.3 Funding in higher education and reforms over the last ten years

The steering of higher education has been developed towards management by results since the late 1980s. Budgeting based on operational expenditure and performance agreements was adopted in 1994. The principle underlying management by results is that the objectives set for institutional activities and the resources needed for their implementation are determined in negotiations between the ministry and each university.

The most notable reform in funding was the shift from line item budgeting to lump sum budgeting. It was the cornerstone leading to increased financial autonomy, it is hoped that it will make financial administration more compatible with financial structures of companies. The reforms are supposed to make it possible for universities by 2010 to accumulate private funds, borrow money and make investments in the markets. For the polytechnic sector further legislation is still awaited to streamline lump sum budgeting, mainly because of their ownership structure. The extension of the maintaining agency's financial regulations make a strong point for transformation of polytechnics to a company.

Since 2006, universities have been allowed to establish university companies which promote direct interaction with society with a view of generating private funds. There has also been the establishment of the national and regional innovation systems in the forms of policies, organization structures and funding programmes meant to increase creation of infrastructure for partnership.

In 2010, together with the new University act, a new funding mechanism has been implemented. This new funding scheme places more emphasis on performance and impact (Ministry of Education, 2009; Ministry of Education and Culture, 2010a). The Ministry of Education and Culture will make the funding decisions annually as a part of the agreement

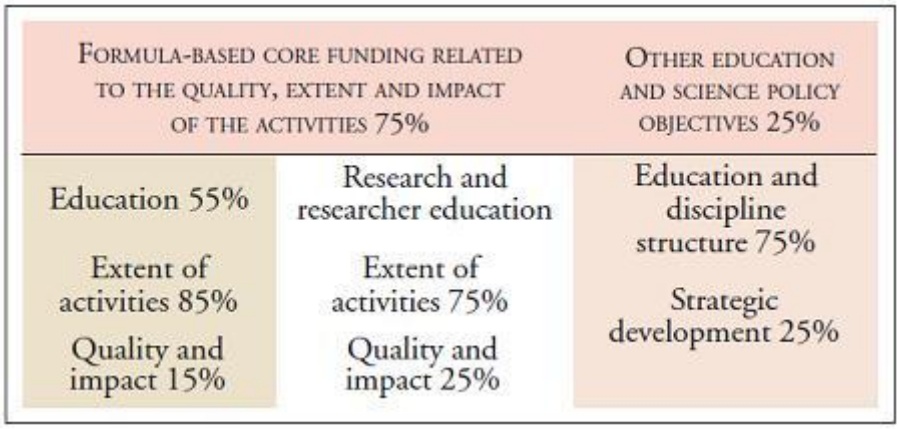
negotiations between the ministry and the institutions. During the agreement period the funding will be reviewed only when needed.

5.3.1 The university funding model

From the 2010-2012 planning period, state funding for university expenditure is determined on the basis of a formula according to the same principles for all universities. In the long run the profitability of the activities should be reflected in the funding received by an individual university. The traditional separate performance-based funding and discretionary project funding of the previous agreement periods will be abandoned. The performance perspective will now be taken into account in the regular allocation criteria of funding.

The starting point is that the university will take care of the expansion and redirection of the educational range offered within the framework of the overall funding through internal structural development. Therefore, from 2010 onwards, the university funding is allocated to the universities and in accordance with the Government Programme, the funding model emphasises the importance of quality and effectiveness. In addition, the weight of research has been added in proportion to education. In education, the relative weight of quality and effectiveness is less than that for research so that the educational resources of all universities can be ensured. The funding is allocated as a lump sum and comprises the following elements:

Figure 5.1: Elements of university funding and their relative weights



Source: Ministry of Education, 2009.

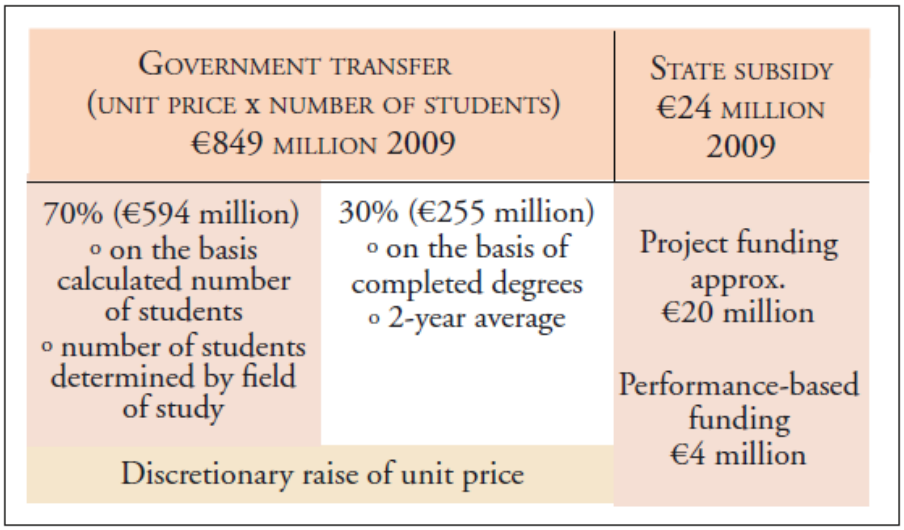
The share of formula-based core funding related to the other elements are calculated by the Ministry of Education and Culture. This is also the case for the relative weights give to quality, extent and effectiveness of the activities and other education and science policy objectives. In total about 94% of the overall funding to the universities is formula based. Only 6% of the State funding is strategic development funding (in figure 5.1 the bottom-right element) which corresponds to the project funding of the previous funding models.

This strategic development funding is related to the strategy work done in the universities which means that universities have to take into account national education and science policy objectives set by the Parliament and the Government. During the 2010–2012 period, key development targets are the development of researcher careers and internationalisation. This means they have to show how they operate in relation to the Ministry of Education's action programme for fostering researcher education and researcher careers for 2007–2011 and the higher education internationalisation strategy programme (Ministry of Education, 2009b). The strategy funding will be agreed upon in negotiations between the Ministry and the university on the basis of the university strategy, differentiating profiling, consolidation of focus areas and refocusing. The agreement will include a few key strategic focus areas, on which the Ministry of Education funding decision is particularly based.

5.3.2 Polytechnic funding scheme

The State funding for 2010 is based on the number of students in 2009. The formula for polytechnic funding is to be changed in conjunction with the reform of the Government subsidy system from 1 January 2010 which says that the number of students is agreed upon by field without making a distinction between youth and adult education.
The educational field-specific overall number of students includes youth and adult education leading to a polytechnic degree, education leading to a polytechnic Master's degree, specialisation studies, open polytechnic education, teacher training, as well as preparatory education for immigrants.

Figure 5.2: Elements of polytechnic funding and their relative weights



Core funding

Even though agreeing upon degree targets was introduced as a new element to the steering of polytechnics, degree targets do not affect the funding of polytechnics in the 2010–2012 agreement period. The Ministry of Education will make an initial proposal on the field-specific number of polytechnic students for 2010–2012 on which the funding will be based. Then the polytechnics will monitor the formula-based and realised numbers of students and then come with more nuanced proposals.

Project funding

The Ministry of Education will support development targets emerging in the strategy work of polytechnics with project funding during the 2010–2012 agreement period. On average, 20 million euro of project funding will be allocated annually. The polytechnics can apply for project funding in two project categories: research and development and other development projects supporting the strategy of the polytechnic. The latter has to be focused on the promotion of internationalisation, structural development and support of study processes). It total one institution can only four proposals.

Performance-based funding

The Ministry will reserve annually a total of €4 million for performance-based funding that will be allocated to polytechnics that have succeeded best on the performance criteria. The criteria for performance-based funding are included in the goals and indicators of the agreement.

5.3.3 Tuition fees

Finnish legislation does not allow for tuition fees from degree students, but this year a new reform passed that introduces fees on a trial basis until 2014 for students from outside the European Union and the European Economic Area coming to study in specialised master's programmes.

5.4 Effects of the reforms and other explanations of improved performance

The transformation of the Finnish higher education has been quite comprehensive within the last fifteen years. There are no major contradicting opinions about the direction and priorities among the stakeholders of the higher education system. The coordination and commitment indicates the shared opinion that the integration of the higher education policy with those of social and economic goals has been the right policy.

Generally governance and funding reforms over the past decade are said to have led to the improvement of effectiveness, efficiency and quality of education and research. Current

reforms have increased the power of middle management and the university leadership and new and more flexible appointment procedures facilitated the appointment of part-time professors and links between universities and industry.

Funding reforms increased financial autonomy and therefore are widely believed to have led to improved overall performance. Further reforms have made the financial administration of higher education institutions more compatible with the financial structure of companies.

Government investments in research and development have increased more rapidly in Finland than in most other OECD countries, and a target level has been set to 4% of GDP. In 2006 3,4% of GDP was allocated to GERD. The rate was relatively high in comparison to other countries, but it has grown less than average from 2002 to 2006. The development of research has taken place within the framework of national and regional innovation systems and research programmes. Companies have therefore considered Finnish higher education institutes as attractive partners for cooperation.

The transition from earmarked funds through programme funding related to topics such as the information society and improvement of teacher education towards full lump sum funding has been regarded as positive. The universities had criticized the previous situation because earmarking of funds decreases their financial autonomy. The transition from the previous yearly negotiation to four-year performance contracts including budget frames is also welcomed because the old model was supposed to be on tri-annual negotiations.

The government through the ministry has identified areas that they need to work to improve the higher education system. The first was to increase investment in higher education; particularly in research. In order to achieve this they sought to introduce reforms that would attract investment to higher education. The system of performance negotiations and contracting has shown to be effective for the implementation of the reforms. The partners within the agreements exhibit confidence in the negotiation process that is characterized by trust through an open dialogue. The Finnish government's ability to provide the funds as and when needed and to commit to mid-and-long term plans has created an almost seamless process. Further governance and funding reforms that promoted the inclusion of the business sector ensured corporation between higher education institutions and industry.

The distinction of objectives of both the universities and polytechnics has created a balancing effect between the supply and demand for professionals in the labour market. It has ensured that the specific needs of the nation in research and regional needs of experts are met through horizontal differentiation of the higher education institutes.

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 to 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 *Legend: 0 = not important; √ = some importance; √√ = important; √√√ = extremely important*								
	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 *Legend: 0 = not important; √ = some importance; √√ = important; √√√ = extremely important*				
	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

As said about 80% of the university budgets stems from public grants. There are three different procedures to allocate this grant (Wolter 2006:14):

- *A formula- or indicator-based part*: This component is based on the measurement of particular indicators, mostly automatically by means of a formula. The indicators can refer either to demand- or to performance-oriented variables. Such allocation procedures represent the most direct form of competitive institutional budgeting.
- *A contract- or mission-based part:* Parts of the budget can be designated in order to realize politically important objectives or programs for the further development or the profiling of the institution (e.g. further internationalization, gender equity or continuing education).
- *An incremental-discretionary part:* This is a rather non-competitive component of budgeting because the procedure carries forward the previous annual budget modified

mostly only by a moderate amount. This component provides a certain financial stability for institutions and protects them against massive budget cuts.

Reforms of funding in German higher education have concentrated on indicator-based procedures of allocation since the 1990s. During the last years, these methods have been complemented by contract- or target-oriented components. Among the 16 German states there is a colourful mixture of these three components, each weighted differently. However, incremental and discretionary parts still dominate allocation decisions in many German states.

There has been a clear trend that more states' allocate their operational public grant on the basis of formulas. Again, there is a significant difference between the states; from states mostly or completely using formulas for allocating their public funds (e.g. Brandenburg or Hessen), to states (such as Bavaria) where formula-based funding is marginal. During the last decade another trend has been that many indicators in the funding formulas are performance-based. Again, the proportion of performance-based indicators differs from one state to another. According to the logic of formula-based allocation, all institutions will be treated equally by the formula and competitive behaviour among the institutions determines the winners and the losers. In this way, performance-based indicators in formulas may contribute to the establishment of a diversified higher education system. But it is also possible that because the indicators are the same for all institutions, institutions will focus on the same aspects and therefore contribute to a more homogeneous system.

To allocate the state grant solely through formulas is in principle transparent and transaction costs may be relatively low. However, specific policy goals or initiatives concerning individual institutions cannot be implemented by formula (i.e. all cases are treated equally). Therefore, there has been an increasing trend towards using a combination of formula-funding and individual target agreements *('Ziel- und Leistungsvereinbarungen')* to enact higher education policy. This complementary steering instrument of target agreements looks more promising to develop a diversified higher education system than indicator-based formula funding does (see further below).

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 *competitive*; N indicates *negotiations-based*; E indicates *evenly distributed across institutions*	
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.

Institutions of higher education are facing great challenges in Germany: In many states (*Länder*) the number of young people qualified to enter university is set to increase

significantly by 2020.[8] And demand for university graduates in the labour market is expected to grow as well. At the same time, international competition demands that universities put a greater emphasis on research. In order to maintain the performance of institutions of higher education and give more new entrants access to university, the Federal Government and the states have taken three measures so that German higher education can develop to become one of the world's three best science nations by 2020: the Excellence Initiative, the Higher Education Pact 2020 and the Joint Initiative for Research and Innovation.

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 élite universities. The Initiative provides top universities with €1.9 billion in additional funding over five years (2006-2011). An additional €2.7 billion 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 (€975 million to support 30 clusters of excellence and €200 million for the promotion of graduate schools). Track III, which supports entire universities, receives the remaining 38% (€725 million). 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 million is devoted to teaching and learning.

The first two rounds of funding have selected 37 excellence clusters, 39 research schools and nine future concepts at 37 institutions of higher education in 13 states (website *Bundesministerium für Bildung und Forschung*). The federal government claims that the positive effects go far beyond the universities which were successful in the contest. The government mentions that, inter alia, new models have been developed for cooperation between universities, research institutions and industry. The Initiative for Excellence has made a decisive contribution towards heightening the profile of the universities and towards establishing research-friendly structures. This is confirmed in a report which the Joint Commission of the German Research Association (DFG) and the Science Council presented in November 2008.

The Higher Education Pact (2007) is a programme with two aims. The first aim 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. The states will admit a total of 91,370 additional new university entrants by 2010. The Federal Government will provide €11,000 per new entrant over a period of four years. Approximately €565 million have been earmarked for payments until 2010. The second aim is the provision for the reimbursement of overhead costs for German Research Association-funded research projects in order to secure the competitiveness of German research. In this context, the projects funded by the German Research Association are to receive an

[8] For example, the new states are expecting a decline in the number of new entrants by 63,000 between 2011 and 2015. Therefore, the institutions will continue to receive lump sums from the Federal Government and the states to enable them to maintain their capacities.

additional 20 percent of funding. In the period from 1007 to 2010, the Federal Government will finance 100 percent of these costs. The one-off payment has been granted for collaborative research centres, research centres and research schools since 2007. Since 2008, it has also been provided for other DFG-funded research projects.

The first phase of the Higher Education Pact 2020 has, according to the ministry, already achieved considerable success. It is said that it has stopped the downwards trend in the number of new university entrants and sustainably strengthened research at German universities.[9]

In June 2009, the Federal Government and the states agreed on a continuation of the Higher Education Pact (second phase 2011-2015). It includes a programme for the admission of new university entrants and a programme for the provision of one-off payments for research projects supported by the German Research Association (overheads) in order to enhance their research intensity and excellence despite the challenges posed by the increasing number of students. The Federal Government alone is providing more than €5 billion for the second programme phase. The aim is to give the 275,000 additional new entrants expected between 2011 and 2015 a chance to pursue a high-quality university education. In the second programme phase, the costs per additional university entrant will increase from €22,000 to €26,000, of which the Federal Government will provide €13,000. The states will take on general funding responsibility. Providing one-off payments for research projects supported by the German Research Association (DFG) will increase universities' ability to develop new strategies. The Federal Government will fund 100 percent of the one-off payments for these DFG-research projects, which will amount to 20 percent of the project costs. This will make an additional €1.7 billion available to universities.

The Joint Initiative for Research and Innovation supports the large science and research organizations: the Helmholtz Association (HGF), the Max Planck Society (MPG), the Fraunhofer Society (FhG), the Leibniz Science Association (WGL) and the German Research Foundation (DFG). The Federal Government and states intend to provide the non-university research institutions with planning certainty and to increase funding by at least 3% per year up to 2010. In return, the science and research organizations have committed themselves to heightening their profile, expanding cooperation with industry, exploring new fields of research as well as supporting up-and-coming young scientists and women in leading positions. The Federal Government claims on its website that the Joint Initiative for Research and Innovation is already showing the first signs of success: the number of doctoral students in all the science organizations has increased and has prompted the founding of the Helmholtz Management Academy and the introduction of Leibniz-Humboldt professorships.

6.3.2 Target agreements as a steering instrument

In the framework of enhancing the financial autonomy of German higher education institutions, amongst other things by replacing the system of line-item budgeting by lump

[9] A midterm review by Berthold, Gabriel and von Stuckrad in 2009 confirms that in the first two years the number of new entrants has increased as planned.

sum budgeting, target agreements *('Zielvereingbarungen')* were introduced as a steering instrument, starting in 1993 in the state North Rhine-Westphalia. A simplified description of a target agreement is: fix targets by consensus, give the funding, and evaluate the results (Pritchard, 2006:100). There are however several variants of target agreements in Germany. Theoretically, target agreements are directly linked to institutional profiling (e.g. Ziegele and Müller, 2005; Lange, 2009). The instrument, complementary to other forms of allocating public money, can be regarded as the government's 'wish' to establish a diversified higher education landscape. The basic idea is that for a number of years funds will be appropriated on the basis of institutional targets, which together build the profile of the institution. The advantages for the institutions would be that it should create funding certainty for a number of years *('Finanz- und Planungssicherheit')*. The advantage for the government would be that institutions pay attention to targets that the government sees as important. Moreover, it has been argued that this steering instrument fits the notions from new public management of empowering organizational management. In principle, target agreements with individual institutions also create some flexibility and opportunities to focus (different targets for different institutions). This flexibility, potentially in conflict with another aim of these target agreements namely creating certainly, is dependent on the time frame – flexibility reduces when the time frame is too long.

Ideally, a particular amount of money is attached to each agreed upon target. Ziegele and Müller (2005) argue that for reasons of effectiveness a target agreement should focus on a limited number of priorities that are considered to be important for the institution's profile. The state's challenge would then be to see if these different profiles result into a higher education system that meets the expectations. The contours of the state's vision should be presented in the state's strategic plan. The target agreements between the state and the individual institution should not cover all the subjects that an institution is supposed to take care off. In such a case they would not contribute to establish particular profiles: "Die Idee der Profilbildung und Prioritätsetzung würde nicht hinreichend verfolgt werden" (Ziegele and Müller, 2005: 25). Only if it is possible to develop target agreements between the state and the institution that 'only' specify particular priorities, then such target agreements would be a strategic funding component in addition to formula-funding. Ziegele and Müller (2005) advocate that a substantial amount of funding should be based on such specific contracts. In their view, goal performance by the institutions with respect to agreed upon targets should have financial effects (rewards or penalties). Sechlin (2008) holds a different position when he argues that target agreements can be used to develop a 'dialogue' between the state and the institution. In other words, he gives a different meaning to these agreements: he sees them as a means of communication. If it turns out that (some) goals have not been accomplished, then (financial) punishment from the state should not be the automatic reply. There should be the opportunity to discuss the goals and efforts in order to look for improvements: "Das Instrument der Zielvereinbarung ist insofern fehlertolerant und umfasst Rückkopplungsmechanismen zur Verbesserung des Planungs- und Steuerungsprozesses" (Sechlin 2008:85). It also means that by using target agreements the state as negotiating partner is directly involved with the institution's strategy-development and its feedback (Sechlin 2008). In this respect, it can be regarded as an incentive to develop or encourage the strategic capacity of institutions. It can however, as we will describe later, also be seen as 'state interference in disguise'.

Currently, all states use target agreements as a steering instrument and also many higher education institutions have developed 'their version' of target agreements for their institutional management ('management by objectives'). There is significant variation as regards the use of this instrument. Also the opinions on the relevance of this steering instrument differ. Nearly all states have strategic plans or strategic agendas for higher education at state level and these strategic plans provide a starting point for the target agreements with the individual institutions. In 2008, in about half of the states the target agreements are very comprehensive; i.e. covering 'all' subjects and specific performance is not funded on a one-on-one basis. They are more a 'performance catalogue' for which in return the state pays a certain amount of money (instead of a direct one-on-one relationship between a single goal and a single 'tariff'). This implies that there is not a direct relationship between performance on a particular goal and the rewards or penalties. Indirect effects such as loss of reputation are however quiet conceivable. In other states the target agreements focus on a limited number of strategic goals (for instance in the area of innovation) or a limited number of projects.

The opinions on and experiences with target agreements differ greatly. While recognizing that this instrument does not function optimally (yet), some argue that it contributes to institutional profiling and that is has (already had) an impact on the institutions (for instance in combination with other 'new' instruments and reform processes). Others argue that it does not work well (or as intended) as regards an increase in performance or institutional profiling, but it does add to the transparency and legitimacy of state-institution relationships. And there are some that are highly critical about the instrument as such as well as its effects. Below we list a number of these concerns and criticisms.

Some of the targets agreements cover too much ground and many remain vague. "If they want to cover everything, they cover nothing". The first target agreements were very general agreements about desirable goals that could be easily agreed upon by both parties, amongst other things because there were no penalties if these broad goals were not achieved ('no harm done') (Lange 2009). Later, some governments specified the measures perceived as needed for goals accomplishment, which brings us to a second comment.

While advocating a philosophy of steering from a distance, assigning money to specific targets could be seen as an infringement on institutional autonomy ('power by the purse'; the state using a backdoor for interference). The instrument of target agreement in practise has often been transformed in a new top-down routine which is applied as a bureaucratically formalized procedure rather than as a participatory strategy of institutional planning and development. Often, the state has proved to be very unimaginative because such target agreements pursue all the same objectives and utilize the same key ideas and indicators for all institutions (Wolter 2006). When the target agreements have the same format for all the institutions, which frequently happens, and as the result of that the same kind of incentives, they do not contribute to establishing distinguished institutional profiles. Instead of more differentiation and profiling such strategies produce more homogeneity because all institutions have to follow the same partly trendy norms, criteria and standards – a special case of "mimetic isomorphism" (Schimank, 2006). Target agreements are often regarded as reciprocal arrangements with mutual rights and duties based on negotiations between different partners but of equal

rank. However, this ideal does not work in reality. Rather there is an asymmetrical relationship between the state and institution. The state has the budget at its disposal, whereas the institution is responsible for the evidence of the outcomes.

Target agreements run the danger of becoming a routine as well as a political game between the state and the institution which at the end of the day it does not effectively change the institution's behavior. Lange (2009) argues for instance that in some states institutional leadership was keen on agreeing upon multi-year contracts to protect them from annual cutbacks. In this respect, not the content of the agreement but tactical considerations were decisive.

Both contract partners – the state and the institutions – have to stick to the rules once they have been agreed upon. It has occurred that the state was changing the rules during the process; this obviously undermines the effectiveness of the target agreements.

In many cases not the whole chain of 'agreement, implementation, and feedback' is in practice taken into account. Usually there is not a systematic monitoring of the target agreements during their term. And also the consequences of the agreements are in some cases not specified.

The effectiveness of target agreements also is context-dependent. For instance it depends on the capacity of institutions to make them work. The willingness and capabilities of institutional leadership to translate the agreed upon targets in the institution is another condition that must be fulfilled. Moreover, target agreements are part of a mix of (financial) instruments (they do not operate in isolation), which implies that they should be compatible with other instruments such as for example the indicators in the funding-formulas. This is not always the case as Sechlin (2008) demonstrates. He points out that in North Rhine Westphalia one part of the target agreement (reduction of the number of drop outs) is (potentially) in conflict with one of the indicators in the funding-formula (number of students in the first tow years). The latter encourages a university to attract many students, 'regardless' the number of drop outs.

The non-profit organization Higher Education Information System (HIS) reports that, although target agreements have been implemented in all German states, their financial relevance is marginal (compared to other funding components). In most cases, the amount of money attached to target agreements as a form of performance-based funding is small.
These comments do not necessarily say that target agreements have not been successful at all. First, there are differences among the German states. In some cases they are regarded as more successful than in others. Second, all states use this steering instrument for a number of years – it has not been dispensed with in any single state. Third, there is an indirect effect. A significant number of institutions have used the 'same' instrument within their institutions. This indicates that it is having an impact on institutions (although not necessarily in terms of strategic profiling) and that there is some believe or trust that target agreements ('management by objectives') might work. However, there is no strong evidence that target agreements are visibly fulfilling one of its most important functions, namely contributing to the establishment of a more diversified German higher education landscape.

6.3.3 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).

6.3.4 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.

In their recent report *"Empfehlungen zur Differenzierung der Hochschulen"* the Wissenschaftsrat (WR) goes into the differentiation issue in German higher education. The WR argues that more functional diversity in the German HE system is desirable. Institutions should be encouraged to develop new organizational forms for enabling them to deal with an increasing number of students, to improve completion rates, to compete internationally in research and to contribute to solve societal problems. Laws and rules of the federal state and the individual states should allow for more functional external differentiation, without abandoning the binary system.

According to the WR, the German higher education system is in a (gradual) process of differentiation. It concerns both external (different types of institutions) and internal differentiation (within large institutions). In this context the debate about the binary system and the Excellence Initiative get much attention. Both this structural characteristic of the German system and the Excellence Initiative contribute to a more diversified system. They state for example that differentiation is among other things the result of the increasing

focus on research excellence and relates to the efforts to create a level of world class research (Wissenschaftsrat 2010, p.5).

While the WR observes a process of differentiation over the last years, it also sees some movements in the opposite direction (*'Entdifferenzierungsphänomene'*). These counter movements are the consequences of the introduction of the Bachelor-Master structure. This has strengthened processes of academic and vocational drift. The universities of applied sciences, at least some of them, are developing more research-based teaching programmes and (some of) the universities are offering vocational driven Bachelors and Masters besides the more research-driven teaching programmes. The result of this is the development of more diversity within the two higher education sectors but that simultaneously in some disciplines across the sectors the programmes show more similarity than before. Also the Excellence Initiative may have some perverse effects that could lead to homogeneity instead of heterogeneity (see later).

The WR also stresses that differentiation processes are dependent on exogenous factors. The economic or demographic situation can play a major role. The possibilities for differentiation in a situation of economic prosperity and growing student numbers are different from a situation of financial constraints and declining student numbers. In Germany, the regional differences between the states are a key challenge in the discussions about differentiation that need to be taken into account by both the states, including the federal state and the institutions. The federal state and the states should attune their activities to prevent the establishment of an asymmetrical HE landscape in the sense of 'high level HE regions' versus 'low level HE regions'. This seems paradoxical: on the one hand a wish for more differentiation of organizational types and on the other hand a wish to avoid too much asymmetries between states, which could prevent the establishment of different profiles.

The Excellence Initiative has certainly been an instrument that contributed to the development of the system towards more diversity. It has led, according to the WR, to more institutional dynamics and vitality and stimulated processes of raising self-awareness, *also* within those institutions that were not successful in the Excellence Initiative process. Because of the Excellence Initiative universities have been triggered to pay more attention to their profile, strategies, structures, strengths and weaknesses. Obviously differences in quality and performances were always 'known', but they have become much more explicit and include different audiences. Particularly institutions as a whole instead of individual academics or academic units got increasingly engaged in issues of quality and performance. The increased competition for financial resources for research and for the best academics and students as well as the strive for a higher research reputation and more international visibility have affected and changed the German higher education in terms of its diversity. A modest stratification of the system is, according to the WR, justified when negative side-effects can be avoided. The WR also argues that financial resources for promising stratification instruments, such as the Excellence Initiative, have to be *additional* resources: "Finanzmittel für entsprechende Stratifizierungsinstrumente müssen daher stets als *zusätzliche* Mittel bereitgestellt werden" (Wissenschaftsrat 2010, p.7).

While the WR observes that the Excellence Initiative has had positive effects for the diversity and dynamics in German higher education, it also warns for perverse effects. The WR argues that a one-sided focus on promoting research excellence (bringing the smartest brains together to create world class universities) can be a dangerous strategy that may be counterproductive in the long run. Other important aspects of HE, such as education, life long learning, knowledge transfer, internationalisation and social cohesion, run the risk of being neglected while they are considered to be important. This one-sidedness should be avoided. To encourage a more 'balanced diversity' the WR proposes to include these other aspects for example in performance-based budgeting systems. Moreover, having or creating 'modest' competition, not just in the area of research, is also seen as a valuable way to increase system diversity.

The vertical differentiation in the German HE system as the result of the Excellence Initiative is not identical with other forms of differentiation based on different dimensions. In other words, the Excellence Initiative by itself can and will not result in the required horizontal differentiation; it concerns just one specific process of differentiation. It is, and should not be, regarded as *the* instrument that leads to an all embracing functional differentiation of the HE system. If the specific performance areas stressed in the Excellence Initiative would be the only strategic consideration for all universities, then undesirable homogenization would be the result. Such a risk of homogeneity is further increased as the result of the competition among higher education institutions that is strengthened by the Excellence Initiative. Nearly all the universities increasingly decide to focus exclusively on performances that are considered important in international top research and thereby ignoring the attractiveness of other profile characteristics. The other profiling characteristics are being pushed away by a one-sided dominance of research excellence, which can lead to a dysfunctional spectrum of university activities: "Zudem ist „Exzellenz", die als Kategorie der Differenz funktionieren soll, in der Gefahr, zu einer Kategorie von Ähnlichkeit zu werden, indem die Selbstbeschreibung als exzellente Forschungsinstitution vielerorts zum Standard geworden ist" (Wissenschaftsrat 2010, p.27).

In addition, the WR argues that because of the continuous underfunding of the universities, these institutions see no other option than to participate in the excellence game. The strategy of 'backing winners' implies however that due to a lack of resources the non-winners have hardly any possible to increase the quality of their services. An increase of quality is however welcomed or even required. Overemphasizing the Excellence Initiative and the accompanying competitive forces block the search for attractive alternatives and this diminishes the functional diversity of the system as a whole.

The Excellence Initiative is a successful instrument to promote and realize differentiation, but it must be accompanied by other structures that incentivize valuable tasks other than top research. The German HE system does not only need top research universities but there should also be institutions delivering other services of outstanding quality – the spectrum of quality entails more than just research. "Ein ausdifferenziertes Hochschulsystem verfügt notwendig auch über Universitäten, die auf unterschiedlichen, gerade in ihrer Unterschiedlichkeit funktionalen Qualitätsniveaus agieren" (Wissenschaftsrat 2010, p.28). It should be avoided that because of a lower status in the research hierarchy certain disciplines and HE institutions become less 'scientific' ('*Entwissenschaftlichung*'). This can be

avoided if the federal state or the states make the Excellence Initiative resources available as additional resources and that they also in addition fund the other, 'less successful' institutions properly.

The WR supports the continuation of the binary divide of universities and universities of applied sciences ('Fachhochschulen'), while acknowledging that this divide is somewhat blurring. The binary divide is useful insofar it makes, to the extent possible, mandates and performance levels transparent. In current practice the boundaries of the binary divide are soft instead of hard – but their consequences, for instance with respect to funding, are real. The future development of the HE system requires that the binary divide does not, or no longer, prescribe in detail or jam the action potential of institutions. Strategic actorhood should not be tempered 'completely' by legal constraints related to the binary divide. Moreover, it should not block student transfers from one sector to the other on the basis reputational differences. This stretching of the binary divide is seen as useful and in the transformation phase some unclearness should be taken for granted. Therefore, the WR believes that the binary divide should not be applied too strictly and supports the initiatives of universities of applied sciences to develop themselves, for instance, through more collaborative arrangements. Differentiation within the two sectors by establishing colleges and professional schools is welcomed. Moreover, the WR advocates stimulating processes of internal differentiation. In more specific terms, this means that the creation of service types and fields of activity needs to be strengthened across faculty borders in the form of graduate schools, teacher training centres, centres for continuing education, or organizational units being in charge of "diversity management".

The WR lists a number of recommendations for universities of applied sciences, universities, the federal state and the states. The recommendations for *universities of applied sciences* are:

- regional developments and demographic dynamics should be a crucial part of their strategies
- study programmes should be attuned to the needs of students that should actually be recruited
- make strategic choices of disciplines ('focus') and consequently factor in structural consequences (staff structure)
- bachelors programmes should not be too specialised in order to facilitate transfers to Masters programmes (of other institutions)
- to improve access of study programmes for 'vocational professionals' by organised cooperation with 'education providers of the vocational sector'
- the establishment of partnerships ('Verbünden') that enhance the possibilities for joint profile development and divisions of tasks
- to develop identities that (again) stress the cultural aspects of academic institutions.

The WR recommendations for *universities* are:

- to develop a stronger focus on internal differentiation that also emphasises 'teaching oriented areas' and as the result of that adapt their staff structures
- to develop alternative profiles next to the research driven 'World Class University' perspective

The recommendations for the *federal state and the states*:

- to develop federal funding structures that enable universities of applied sciences to compete for instance with non-university research organisations
- to encourage new organisational forms and adapted existing forms based on the 'Experimentierklauseln', such as Colleges and professional schools
- to discourage or counteract the one-sidedness of the excellence discourse and to promote other performances by means of additional financial resources
- to motivate institutions to make strategic choices ('*Schwerpunktsetzungen'*) and to apply incentive structures for this
- to prevent in due time by means of adequate agreements the dysfunctional differentiation of higher education regions, where highly diverse courses of actions exist
- to develop alternative scenarios for the capacity planning, particularly locations and infrastructure, because of the different demographical dynamics
- to stimulate the development of new organizational forms through a broad interpretation of the current organizational types and to enable the adaptation of terminology
- to discourage the risk of dividing the university sector in 'research-intensive' and 'teaching-only' universities

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

Other dimensions used

Other funding may be devoted to supporting specific university activities for regional engagement (see Table 6.3 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'. Therefore Hong Kong still has a slightly different system compared to mainland China.

On behalf of the government of Hong Kong, the University Grants Committee (UGC)[10] is responsible for advising the Government on the developmental and funding needs of higher education institutions in Hong Kong.

Hong Kong has eleven degree-awarding institutions of higher education. Eight of these institutions are under the aegis of the UGC, including seven universities and a 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 fully 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)

A total of about 70,000 students are 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 are respectively around 5.300, 54.000, 2.600 and 2.800.

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

[10] http://www.ugc.edu.hk/eng/ugc/index.htm

The Hong Kong higher education sector is seen as an interlocking yet differentiated system. Each institution has its own mission (its so-called role statement), which seems to makes sense in a region and system of this size.

The Hong Kong (HK) higher education scene is currently undergoing a quite rapid, change. From a position even seven years ago, when practically all degrees were awarded by publicly funded institutions, now there is a rapidly developing private- or self-financed-sector in Hong Kong. The self-financed sector includes (new) private universities as well as self-financed degree level activities by the publicly funded sector. The degrees being awarded are both locally accredited (some full degrees, some "top up") as well as "franchised" - that is to say delivered locally by HK institutions but based on a curriculum and leading to a degree from an overseas institution. It seems that the total size of the self-financed degree sector may be approaching that of the publicly funded sector- with the large majority of those places being franchised degrees.

The expansion of the self-financed degree sector will have a further boost with the Government's recent announcement of reserving 4 new sites for private universities, with a total student capacity of about 18,000. It seems likely that several of the (new) self financed Community Colleges (which are currently awarding 2 year Associate Degrees) will seek to upgrade themselves and apply to become private universities.

The HK Government has an overall plan of expanding the private higher education sector, while consolidating the publicly funded sector. The assumption is that the self-financed degree sector will be largely teaching in nature, certainly initially. The government does not intend to give recurrent funding to the self-financed sector, so the opportunity for that sector to recruit research active staff will be small. However, the Government will provide all qualified students, irrespective of whether on public or private courses, with means-tested grants and loans. So, a viable private sector, with fees that are affordable, has and will continue to grow. Thus, there will be significant role differentiation between a growing teaching dominated, demand driven, private sector- and the public sector.

7.2 Governance, autonomy and policies related to profiling

The UGC, modeled after the British University Grants Committee, is the intermediary between the higher education institutions and the Government. On the one hand, the UGC safeguards the academic freedom and institutional autonomy of the institutions, while on the other it ensures value for money for the taxpayers. The UGC has neither statutory nor executive powers. Each of the higher education institutions is an autonomous body with its own Ordinance and Governing Council. The institutions have substantial freedom in the control of curricula and academic standards, the selection of staff and students, initiation and acceptance of research, and the internal allocation of resources. Nevertheless, because the institutions are largely supported by public funds, and in view of the social, cultural and economic importance of higher education, the Government and the community at large have a legitimate interest in the operation of the institutions to ensure that they are providing the highest possible standards of education in the most cost-effective manner. The UGC seeks to maintain an appropriate balance in these matters.

The main function of the UGC is to allocate funding to its funded institutions, and to offer impartial expert advice to the Government on the strategic development and resource requirements of higher education in Hong Kong. Specifically, the Committee has to determine precise grant recommendations in the light of indications of the level of funding that can be made available, overall student number targets by level of study and year to meet community needs as agreed with the Government, the breakdown of these numbers between institutions, as agreed in principle by the institutions. The Committee also provides the institutions with developmental and academic advice, having regard to international standards and practice. In respect of capital works projects, the UGC advises both institutions and the Government on campus development plans and proposals made by institutions, with a view to supporting their academic and overall development.

The UGC's role is to help develop an 'interlocking' higher education system, whereby the whole higher education sector is viewed as one force, with each institution fulfilling a unique role, based on its strengths. The UGC is expected to play a proactive role in strategic planning and policy development to advise and steer the higher education sector in satisfying the diverse needs of stakeholders. Members of the UGC and its sub-committees visit the institutions periodically to gain first-hand knowledge of developments on the ground.

The eight higher education institutions funded through the UGC are statutorily autonomous corporations. The five main areas of institutional autonomy are:

- Selection of staff
- Selection of students
- Curricula and academic standards
- Acceptance of research programmes
- Allocation of funds within the institution

The institutions are diverse in character. Each university has its individual mission, its so-called *role statement*.[11] The role statements underline the idea that each institution fulfils a unique role. While at first glance the role statements may look very similar, there are subtle differences. Two universities have applied roles (they are the two former polytechnics); two institutions have comprehensive research-led roles; one has a narrower research-led role; one is a small liberal arts university, while another has a liberal arts philosophy; and one is an Institute of Education – a teacher training college).

The differential roles of the institutions reflect their varying origins and the way they have been and are responding to the complex and evolving needs of Hong Kong. While institutions have a lot of freedom, this does not exempt them from public interest and accountability requirements. Nor does it mean that their policies should not be under review by themselves, and by others.

Within the eight public institutions funded by the UGC, the wish of the HK administration is to encourage and reinforce role differentiation of institutions. In the 2003/04 academic

[11] The Role Statement of the University of Hong Kong is included in the Appendix to this chapter.

year, the UGC worked with the eight institutions to review their role statements and to make them more distinctive. This view was stressed in a review by the UGC carried out by Lord Sutherland, one of the UGC members[12]. Institution-specific roles were agreed with the eight institutions. This policy was articulated in a document issued in 2004 and titled: Hong *Kong Higher Education: To Make a Difference, to Move with the Times*.[13] This document also includes the eight revised role statements, which describe the different types of strengths or functions predominating in each institution. The document stated that the roles of each institution should be diversified both in teaching and research, whilst each institution should also seek international competitiveness in its defined teaching and research areas.

Institutions have a lot of freedom to create their own profiles. But, according to the UGC, this can work against role differentiation. Many institutions seem to want to be research intensive. However, not all institutions can be research intensive, since public funding could never support such a proposition and neither does their student and staff body allow such to happen. But the UGC recognizes - and encourages - that it is legitimate for all HK institutions to aspire to be the best in HK (and internationally) at X or Y, and thus concentrate their resources/energies there.

To encourage role differentiation, a *Performance and Role Related Funding Scheme* (PRFS) for the 2005-2008 triennium was implemented.[14] This was done to encourage institutions to find ways to further improve and encourage performance. This important undertaking ties together funding allocation, performance and performance against role. One of the outcomes has been a move to evaluate more comprehensively than in the past the outcomes expected of different programmes. We will return to the PRFS below.

Another important policy goal for the UGC is enhanced collaboration among institutions. Institutions are encouraged to commit to collaboration with other institutions to achieve synergy and critical mass for the whole sector. To achieve this, the UGC has established a Restructuring and Collaboration Fund in 2004.

The UGC has a vital role in assuring the overall quality of higher education under its aegis. An important body in the governance of Hong Kong higher education is the Quality Assurance Council (QAC). The QAC has been established in 2007 under the aegis of the UGC and functions as a semi-autonomous body for assuring the quality of programmes (however funded) offered by UGC-funded institutions. It performs Quality Audits. The UGC in recent years conducted a series of objective reviews/assessment exercises to promote quality in higher education, e.g. the Research Assessment Exercise, Teaching and Learning Quality Process Reviews.

A QAC quality audit is intended to assure that the 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. Therefore, the QAC defines quality in terms of 'Fitness for Purpose', where institutions

[12] Stewart R. Sutherland (2002), *Higher Education in Hong Kong. Report of the UGC*.

[13] See: http://www.ugc.edu.hk/eng/doc/ugc/publication/report/policy_document_e.pdf.

[14] See: http://www.legco.gov.hk/yr04-05/english/panels/ed/papers/ed0207cb2-781-1e.pdf

have different purposes which reflect their missions and the role statements they have agreed with the UGC.

In 2009, the UGC embarked on another review, 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 will help diversify the local higher education sector, and it therefore allowed the 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

Public resources for UGC-funded institutions are composed of recurrent grants and capital grants. For the UGC-funded institutions, the bulk of the recurrent grants are disbursed on a triennial basis (in order to guarantee some stability) in the form of a block grant (to provide institutions with more 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. In Hong Kong, public funding accounts for over 80 percent of the universities' operating budget.

Hong Kong has a "Block Grant" funding mechanism. This means that institutions receive the UGC funding as a lump sum and have considerable freedom to use the funds are they think fit. Of course, there are some constraints, and the UGC expect them to follow the planning parameters they proposed to the UGC as the basis of the grant. But basically, the UGC wants the institutions to remain true to their roles, strengthen their niches- as identified by themselves- and focus their research endeavours to get critical mass and international excellence.[15]

[15] More info on the procedure can be found at http://www.ugc.edu.hk/eng/ugc/publication/note/nop.htm.

Recurrent grants support institutions' academic work and related administrative activities; and capital grants[16] are used to finance major works projects and minor campus improvement works. For each three-year period (triennium), the UGC engages in a substantive process of discussion with the 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 the resources available are put to best use. However, the institutions have to 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 quality of research of active research staff. This funding system was inspired by the British RAE and was implemented in Hong Kong in 1993.

Since the 2001-04 triennium, the UGC has established an increasingly stronger link between funding for institutions and their performance. The *Performance and Role Related element* was introduced to strengthen accountability with respect to the institutions' performance, and to reward institutions' performance against mission ('role'). For the 2005/06 to 2007/08 triennium it was informed by the result of an assessment undertaken by a UGC Assessment Panel in 2004. For the 2005-08 triennium, the PRFS outcomes were taken into account when the UGC made its decisions on the overall allocation of student numbers and recurrent funding to the institutions. How the PRFS actually functions is described more in detail below.

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 should be undertaken by all members of academic staff. These include, for example, community service undertaken and advice rendered on societal or professional issues. It is calculated based on the number of academic staff.

[16] 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).

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 allocations outside the block grant system, such as grants for knowledge transfer activities, and grants for 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 means of the following ways:

- 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 research funding for the institutions. Together, the two sources of funding made up about 77% of the total research expenditure in 2008/09.

Hong Kong has a wish to enhance the competitive element of research funding. In this connection, two major reviews were carried out in 2009-10. One was on the way to conduct the Research Assessment Exercise (RAE) which has been the main factor affecting the allocation of the Research element of the block grant; and the other one on how to enhance the 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 and has launched the Hong Kong PhD Fellowship Scheme in September 2009. The Scheme aims to attract the best and brightest students around the world (including 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 arrangements for scholars.

Continuing our discussion on research funding, the *Research Grants Council* (RGC), which was 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 determinants and the UGC/RGC aims 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$18 billion *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$18 billion, the investment income of at least $14 billion 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 the institutions to work on research proposals on themes of a longer-term nature and strategically beneficial to the development of Hong Kong.

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 committed research funding to ten projects so far. Each is 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 the *transfer of knowledge* - in both technological and non-technological disciplines - between institutions and the society, with a view to bringing about socio-economic impacts and improvements to the community and businesses.

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 forth institutional-wide strategy, policies, action plans and performance targets to systemise and intensify their efforts in knowledge transfer which are in line with the institutions' respective roles and missions. Institutions submit annual reports to the UGC to account for their progress in this regard.

All in all research funding is centred on three core elements:[17]

(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 the 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.

[17] This is very similar to the Dutch situation.

7.4 The PRFS: design and implications

We will now describe in more detail the functioning of the *Performance and Role Related Funding Scheme* (PRFS) – how the evaluation framework was set up for the 2005-2007 triennium, its results, and how it is expected to function in the near future.

The primary purpose of the PRFS is to provide assurance that the institutions are adhering to their roles and that they perform well in those roles. The PRFS 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. The idea of the UGC is not to penalise institutions, but to encourage and facilitate them to advance, and stretch their limits. However, as we will see, the PRFS is based on the idea that 10% of an institution's funding is at stake.

For the PRFS, an Assessment Panel was established by the UGC. This international panel conducted assessments of a peer review nature on the basis of the self-evaluation documents submitted by the institutions and presentations made by the senior management of the institutions. 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 learned whether they would "earn back" the 10% recurrent funding that had been provisionally set aside for the exercise.

Each institution had to submit a document to the Assessment Panel. This submission included proof of an institution's performance on the basis of a set of indicators. The indicators consisted of a subset of *common indicators* (which were the same across all institutions and were set by the UGC) and a number (no more than 10) *self-suggested indicators*. In preparing the PRFS, the UGC went through an extensive consultation with the eight institutions before it came up with an agreed set of indicators and criteria for assessing the institutions' PRFS achievement.

Taking into consideration the institutions' comments, the UGC issued a letter in the beginning of 2004, informing institutions of the principle for selecting self-selected indicators, the common indicators, the assessment methodology, and requirements of the submissions.

The PRFS consisted of two rounds of assessments: The first round took place in March 2004 and was meant to evaluate the institutions' proposals for the self-suggested indicators and criteria. In this round, institutions also were invited to propose how they intended to confront the common indicators. This (short) round did not yet involve any detailed descriptions of an institution's performance. It was primarily meant to arrive at an agreed template of indicators that could be used in the next step.

The common indicators are presented in table 1. The UGC defines indicators as a set of specific criteria based on the institutions' role, with suitably proposed benchmarks (i.e. qualitative or quantitative evidence against peers or internal discrete or longitudinal data where plausible). The indicators were to have the following properties:

a. Indicators should address both outputs and processes with reference to relevant input measures where appropriate. Indicators should enable an assessment to be made of both the delivered output and efforts to achieve the desired output.
b. Indicators should enable longitudinal comparison to be made over time, such that changes in performance can be assessed in subsequent PRFS exercises
c. Indicators should allow evidence to be presented both qualitatively and quantitatively; and
d. As far as possible, each type of indicator should be agreed by both the UGC and institutions.

The institutions were invited to propose a set of up to 10 self-suggested indicators that they felt reflected the distinctive features of their role and reflected a comprehensive picture of the institution's work. Self suggested indicators should not be covered already by the common indicators (table 1). The idea was that, while some of the ten indicators might relate to activities that formally were not part of the institutions' agreed role, they were broadly consistent with that role. Such activities could relate to activities that were not funded by the UGC, but which were important to the overall role of the institution.

Table 7.1: Common Indicators

1. Strategy	The effectiveness of strategic and business plans, and of the planning and resource allocation processes, in supporting achievement of the institutional role.
2. Advanced scholarship	The quality of advanced scholarship[18] appropriate to the role of the institution, and the proportion of staff engaged in such scholarship. The effectiveness of institutional processes in supporting such scholarship.
3. Teaching, learning, and student achievement	The effectiveness of processes for the approval and review of programmes in ensuring that: • appropriate outcome standards are set, and are achieved by students; • appropriate resources are in place to support programmes; • curricula and assessments are appropriately designed; • teaching and learning is effective in enabling students to achieve educational outcomes The effectiveness of teaching and learning in promoting the acquisition of: • Subject knowledge, skills, and conceptual understanding; • Broader attributes needed for employment and to play a full part in the community, including team-working, leadership, language proficiency, and communication and inter-personal skills.
4. Community development	The activities of the institution in relation to the achievement of public policy goals to which higher education might reasonably contribute, and which are relevant to the role of the institution. The participation of the staff and students of the institution in activities in which their expertise is applied for the benefit of the wider community.
5. Administration	Measures taken to ensure that institutions: • have an appropriate governance and management structure that is sufficient to manage existing operations, and has the capability to initiate development and respond to change; • are fully accountable for the effective management of their public and private resources.
6. Partnership working	Collaboration links, affiliations or other forms of associations with other institutions in the higher education sector, and with government, business, industry, the professional and the wider educational community.

Each institution's list of self-suggested indicators was submitted to the UGC, along with criteria as well as measures and benchmarks for assessing the indicators. The Assessment Panel provided commented on each institution's indicators. The panel considered the appropriateness of indicators proposed by an institution in addition to the common indicators. In relation to self-suggested indicators, the UGC considered whether additional activities undertaken outside the agreed role were complementary to and supported that role or, alternatively, were detracting from the achievement of the primary role. The Panel then set out its decisions reached on the indicators (both the common as well as the self-suggested ones) and offered guidance on the further development by institutions on

[18] Advanced scholarship is defined as research having outputs concerned with the scholarship of discovery, integration, application and teaching. In addition to the conventional scholarship of research-intensive institutions, it includes such activities as the application of knowledge and know-how through professional practice and consultancy, authorship of text books, pedagogical development, etc. For the four types of scholarship, see: Boyer, E. L. (1997). Scholarship reconsidered: Priorities of the professoriate. San Francisco: Jossey-Bass.

criteria, measures and benchmarks. It turned out that some of the self-suggested indicators were actually applicable to more than one institution (table 2). For these cases – the *optional indicators* - the Panel proposed a common wording and definition.

The UGC views on the self suggested indicators proposed were mostly about the character of the self-suggested indicators. Some institutions were urged to refine their indicators, or set benchmarks for them, while others had identified criteria instead of proposing indicators. The institutions had to revisit and refine their indicators.

The use of the optional indicators was, as their name implies, entirely optional. They were to be used if they are found to be of relevance, i.e. if they enable an institution to demonstrate more readily its adherence to its role. It was up to the institution to demonstrate if/how these optional common indicators were found to be of relevance and to suggest the necessary criteria and measures & benchmarks.

Every institution was expected to develop criteria to enable it to demonstrate its achievement against the common indicators as well as the optional indicators selected. The institution was expected to set out the performance criteria that it considered appropriate to its role and circumstances. These criteria should include:

a. Benchmarks of best practice against which the institution compares its own performance (dependent upon role and indicator; such benchmarks can be international, regional or local).
b. The measures used by the institution to assess the effectiveness of those of its systems relevant to the indicator.
c. Appropriate numerical measures, including measures used to compare performance over time, added value measures, and value for money measures.
d. Qualitative measures, such as peer reviews of teaching and research, and surveys of employers' satisfaction with the abilities of graduates.

Criteria are about effective performance: how does an institution know that it is performing well? How would it wish the UGC to judge its performance? Criteria may be expressed in tabular or narrative form. Measures and benchmarks are the evidence that can be used to show that an institution is succeeding in what it sets out to do. Measures may be quantitative or qualitative. Benchmarks are usually external and enable institutions to compare their performance with that of peers.

Table 7.2: Optional indicators

Value added	The effectiveness in teaching and student support in enabling students with a range of entry qualifications to achieve awards of international standing. The effectiveness of teaching and student support in enabling students with a range of language abilities on entry to achieve acceptable standards of proficiency in English and Chinese. The effectiveness of teaching and student support in enabling students with a range of accomplishments on entry to secure graduate level employment.
Whole person development	The effectiveness of the curriculum, internship and mentoring arrangements, and co-curricular activities that complement academic programmes in promoting: • Cultural awareness • Work related and professional skills • Participation in community service • Potential to take on leadership roles in public service and the community.
Continuing education (CE)	The effectiveness of CE programmes in: • Catering for professional, advanced business and executive requirements • Supporting the knowledge-based economy and society • Providing updating and upgrading opportunities that draw on the expertise of the institution • Responding to changing market demands • Generating revenues sufficient at least to cover costs
Internationalism	The effectiveness of institutional strategies in promoting cultural exchange and international awareness through attracting students from outside Hong Kong, promoting international exchanges and providing opportunities for study outside Hong Kong.
Access to higher education	The effectiveness of strategies that aim to recruit students with non-conventional qualification, or whose attainment in not accredited by formal qualifications, and to enable them to succeed in programmes leading to degrees and other higher education qualifications.
Technology transfer and innovation	The effectiveness of institutional strategies to leverage technological expertise and innovation to promote the development of Hong Kong and the region as a knowledge-based society through applied research, creation of intellectual property, training of technologists and nurturing entrepreneurship.

In relation to each indicator, the UGC considered whether the criteria and benchmarks selected by the institutions to measure their performance were appropriate. In setting benchmarks, institutions might ask themselves which other institutions (internationally, regionally, or locally) they regarded as their peers, and in which respects they sought to compare themselves with such peers. They might consider also whose standards and achievements they aspired to, in terms of their own future improvement. In particular, the UGC/Panel considered whether these criteria might be satisfied easily, and suggested a

degree of complacency on the part of the institution or, alternatively, whether they were challenging and suggested a culture of continuous improvement.

After having agreed on the indicator framework, the institutions were requested to submit in the *second round* a written self-assessment of performance against the two types of indicator, in relation to the institution's role. The assessment set out the extent to which each institution is fulfilling its role, together with commendations and recommendations based on performance against the benchmarks of local and international excellence.

The institutions had to submit substantive self assessment reports (of between 8000 and 10000 words) to the Assessment Panel. The key assessment questions to be dealt with were:

- What do we do?
- Why do we do it?
- Why do we do it in the way that we do?
- How do we know we are succeeding?

The first two questions are relevant to adherence to role, the second two are relevant to performance.

The Panel used the institutions' submissions to evaluate on the basis of the finalised template of indicators. The evaluation took place in the middle of 2004. The evaluation process involved the assessment of the institutions' written self-assessment submissions, as well as a face-to-face oral submissions in the shape of Questions & Answers sessions involving the institution's senior management and the Assessment panel. The Panel considered the sufficiency, quality and relevance of evidence provided in the institution's submission. The Panel, through its discussions sought to test and verify the conclusions reported in the submission, which were reached by the institution through its process of self-assessment. In particular the panel sought to establish:

- whether the institution understands and works to adhere to its role
- whether such adherence is coherent across faculties and departments;
- how the institution measures its performance
- whether an awareness of the chosen measures is shared by all staff who should contribute to their achievement.

At the end of the evaluation, and based on the panel's recommendations, the UGC communicated the panel's assessments to the institutions along with the UGC's comments. The conclusions deal with the issue whether the institution is adhering to its role in a constructive and creative manner; and how well it is performing in relation to that role. The institutions subsequently provided the UGC with a progress report to address those comments.

In the PRFS assessment – its rating of the institution's submission – the panel took four steps to arrive at a decision. The steps are:

1. Evaluating adherence to role
2. Evaluating performance
3. Evaluating strategic vision
4. Combining judgments to give an overall rating

The assessment categories for the judgements in the first three steps are: Fail; Low; Medium: High.

Step 1 is the assessment of the appropriateness of the criteria and benchmarks selected by the institution to measure its own performance in relation to its role.

Step 2 is the assessment of the sufficiency, quality and relevance of the evidence provided in the submission of performance against criteria.

Step 3 is the assessment of the extent to which the submission as a whole is a reflective and evaluative account.

Step 4 determines the final overall rating, combining the ratings from the first three steps. The rating from the first area (adherence to role) cannot be improved upon by the ratings from the other two.

Each institution was given an overall rating of low, medium, high or excellent. Had a fail judgment was to be made, then no overall PRFS rating was to be given.

Actually, the result of the 2005-08 exercise was that the UGC was satisfied that all institutions should be able to "earn back" the 10% recurrent funding that had been provisionally set aside for the exercise and that was "at risk" in the exercise. The UGC found that every institution had demonstrated, to different degrees, adherence to role and effective performance. The UGC rated highly a significant number of aspects of performance of three institutions and allocated an additional one-off lump sum in 2005/06 to them. The UGC rewarded three institutions: the University of Hong Kong, the Hong Kong Polytechnic University and the Chinese University of Hong Kong. For the City University of Hong Kong, the UGC did explicitly express concern about the signs of 'mission drift' at the institution. This even led to the stepping down of the president. However, the university was not given a 10% penalty.

It should be stressed that the PRFS exercise was not a simple "reward and punish" exercise. For the 2005-08 PRFS, except aiming at reflecting on the institutions' comparative merit, the UGC also asked institutions to produce progress reports to the UGC within a time period on how they took on board and implemented comments about their role adherence and performance monitoring. Institutions did take the preparation of these progress reports very seriously - which translated into concrete improvements within the institutions (e.g. reviewing research strategy).

On the future of the PRFS exercise:

The UGC decided not to implement a formal PRFS for the 2009/10 to 2011/12 triennium, although it did consider the institutions' Academic Development Proposals in that context. The PRFS exercise is to be repeated for the coming 2012-15 triennium, integrating it into the UGC's Academic Development Proposals (ADP) exercise.[19] The ADP is an exercise very much about student numbers in respective fields. Such an academic planning discussion is carried out with the eight institutions normally once every three years. In such a planning exercise, the UGC invites institutions to submit an ADP to the UGC so that it may

[19] See section 3, above.

recommend to the Government how it should allocate the student places at different levels and hence allocate recurrent funding among the institutions. Institutions' roles and performance are central factors in the UGC's consideration of the institutions' academic development proposals. In the new ADP it was decided to focus more on strategic issues and performance rather than on a high level of detail of individual program offerings as in the past. It will combine both a less micro managerial approach, together with the key elements of:

1. Focus on quality of taught programmes
2. Adherence to role
3. Quality research
4. Competition and collaboration where appropriate
5. Community engagement

In July 2010, the UGC made it clear to the institutions how it intended to proceed for the 2012-15 exercise, and how the 2005-08 PRFS experience and considerations on role differentiation would be integrated into this broader exercise. The UGC agreed with institutions four broad evaluation criteria for their ADPs, as follows (please note that role adherence remains a central theme in the assessment):

1. Strategy – The institution has a strategy which enables it to deliver high quality and internationally competitive taught programmes which are consistent with its role; and which incorporates, where appropriate, collaboration with other institutions and the provision of any relevant self-financing activities.
2. Teaching & Learning – The institution provides teaching and learning opportunities which are effective in enabling students to achieve outcomes which:
    a. attest to personal and intellectual development
    b. match international standards for the award of degrees
    c. prepare students for their careers, and
    d.meet the needs of Hong Kong.
3. Advanced Scholarship – The institution engages effectively in advanced scholarship appropriate to its role, and uses that scholarship to inform its undergraduate teaching and future research activity.
4. Community (including Culture and Businesses) – The institution has working relationships with the community (including businesses) that are appropriate to its role, which facilitate knowledge transfer and inform its teaching; and contributes to the transmission and preservation of cultural value.

It was stressed that it is essential that institutions fulfill different roles, given the privileged (in the financial sense) and responsible position that they have in Hong Kong's society. All eight institutions cannot lead Hong Kong in the same areas/programmes. To maximize efficiency and effectiveness of limited resources, the UGC stated that its institutions need to differentiate and excel in different areas/niches. The UGC thus decided that role differentiation would continue to be a central goal of its policy and be a major theme of the ADP exercise for 2012-2015.

The UGC believes that it is important to have a means to assess the performance of the institutions and feels this is best done through self-reflection and analysis of the institutions themselves. In order not to burden the institutions with several exercises, the UGC has

decided that the best way to take forward the above aims is to put in place a modified ADP exercise, which includes key elements of the previous PRFS as an integral part of its underpinning rationale. The ADP exercise will be based on by the two guiding principles of competitive bidding: (a) to enhance the role of each institution; and (b) to advance the international competitiveness of individual institutions as well as that of the higher education sector as a whole.

Like the PRFS exercise, institutions will have to provide a written self-reflective document (the ADPs) for the UGC's consideration, in which an institution will assess itself against its own chosen criteria and benchmarks, using both qualitative and quantitative data. This is followed by a series of interactive face-to-face discussions between institutions and the UGC, before the UGC will come to a conclusion on the overall comparative merit of their submissions. Institutions' performance in their ADPs will be reflected in the eventual total number of student places to be allocated to them.

The UGC is still in the process of finalizing the details of the ADP preparation. It has indicated to the institutions how the four broad evaluation criteria are to be understood in relation to the PRFS indicators (table 3).

Table 7.3: ADP criteria versus PRFS indicators

New criteria/indicators for 2012-2015	Mapping to PRFS indicators
Strategy	Strategy Administration (as the means of implementing strategy) Deep collaboration Aspects of Partnership Aspects of Internationalism
Teaching and Learning	Teaching, Learning and Student Achievement Aspects of Continuing Education Value Added Whole Person Development Aspects of Access to Higher Education Aspepcts of Internationalims
Advanced Scholarship	Advanced Scholarship Aspects of Technology Transfer and Innovation
Business and the Community	Community Involvement Aspects of Partnership Working Aspects of Technology Transfer and Innovation Aspects of Continuing Education Aspects of Access to Higher Education

7.5 Hong Kong: profiling policies and their impact

Profiling is built into the Hong Kong system mainly through the specific mission (*role*) that each of the eight publicly funded institutions is expected to agree on with the (funding)

authorities (i.e. the UGC). 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. Internationalisation is strengthened through scholarship schemes.

Student numbers are agreed through a central planning exercise (there is no open access in Hong Kong). However, there is nowadays no longer detailed adherence to set student numbers in each and every discipline. The institutions have flexibility to move places around and to slim/delete/increase individual programmes as they think fit – with the parameters set out therein. Adhering to the manpower planned numbers which the Hong Kong government considers important will still however be necessary, but otherwise the UGC is more interested in institutions thinking and reasoning for undertaking the programmes they provide., rather tan the detailed numbers.

An important profiling instrument is the PRFS – which is currently being integrated into the ADP (Academic Development Proposals) exercise. Through this performance and mission-related exercise, the Hong Kong authorities seek to strengthen role differentiation among higher education institutions, thus promoting diversity and excellence. In the previous PRFS exercise the size of PRFS funds involved was around 10% of the recurrent funding requirement of all 8 UGC-funded institutions. In the revised exercise its size can no longer be identified.

While the UGC has stressed role differentiation and continued to state that institutions fulfill different roles, there has been criticism that the roles agreed provide carte blance for the comprehensive universities to do whatever they want, but restrict the other institutions unwarrantedly. The UGC responded to this by saying that comprehensive universities also need to focus their resources, in a strategic manner, in order to succeed. The UGC will examine all programmes with the same criteria, regardless of the roles of the institutions.

As an example of how the various dimensions of an institution's activities show up in policy discussions about its role and mission, the case of the University of Hong Kong (HKU) is included in the appendix. The appendix illustrates the efforts the HKU has made to monitor its performance on dimensions related to the criteria stressed by the UGC and the goals included in its own mission (role) statement (also included in the Appendix).[20] This university has developed Profile Indicators (PIs) to monitor and assess progress towards realizing its strategic objectives. It uses the PIs to monitor achievements and identify areas of strengths and weaknesses.

Are the profiling policies in Hong Kong having the envisaged or desired impact? This is still not clear. But the UGC feels it certainly has made institutions think strategically about their roles and how they might do better. The HKU illustrates this point. But the conclusions of some may not have been what the UGC would have liked. Most institutions are comfortable with their roles, but a couple are not. All higher education institutions aspire to be recognized, and, internationally, recognition is through research. So the UGC is

[20] See: http://www3.hku.hk/strategic-development/eng/implementation-and-profile-indicators/

pushing against a strong "instinct" to go for research. There is also an inclination to copy popular programmes, leading to a higher degree of homogenization than is desirable. But at the same time, the feeling at the UGC is that the institutions are beginning to see the sense in focusing their efforts and see that such will lead to more chances of getting more funding - either through research of through other funding initiatives - and recognition.

In short: profiling policies in Hong Kong focused on three key recurring themes: 'performance'; 'mission' (i.e. role); and 'differentiation'. While the PRFS was seen as a useful exercise to stress (and reward) role differentiation ('profiling') one has to state that it also can be seen as stressing role *adherence,* that is: having institutions stick to their role and not actually giving them room for change. The change it did bring though was a stronger focus on institutional strategy and performance.

Summary box with main issues for 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 with the UGC on its student enrolment.
- The UGC through its Performance and Role-related Funding Scheme (PRFS – in its 2004 version) ensures that HEIs keep to their mission. 10% of the recurrent public funds was set aside for this peer-review driven system. HEIs can earn back 10% of their block grant (lump sum) if they adhere to their mission and perform well in their role. All did, three even received a bonus (extra funding).
- Teaching is funded centrally, based on student numbers. Basic funding for research is performance-related and based on a research assessment exercise, thus strengthening research excellence. Additional research funds are awarded competitively and increasingly 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 and has added Community service to its performance criteria.
- HEIs are assessed (and partly funded) on how they stick to their profile. They have developed profile indicators that track performance in the various dimensions of their mission.

Appendix with a few examples

Role Statement of the University of Hong Kong

The University of Hong Kong (HKU)

a. offers a range of programmes leading to the award of first degrees and postgraduate qualifications in subject areas including Arts, Science, Social Sciences, and Business and Economics;
b. incorporates professional schools such as Medicine, Dentistry, Architecture, Education, Engineering and Law;
c. pursues the delivery of teaching at an internationally competitive level in all the taught programmes that it offers;
d. offers research postgraduate programmes for a significant number of students in selected subject areas;
e. aims at being internationally competitive in its areas of research strength;
f. as an English-medium University, supports a knowledge-based society and economy through its engagement in cutting-edge research, pedagogical developments, and lifelong learning; in particular, emphasizes whole person education and interdisciplinarity;
g. pursues actively deep collaboration in its areas of strength with other higher education institutions in Hong Kong or the region or more widely so as to enhance the Hong Kong higher education system;
h. encourages academic staff to be engaged in public service, consultancy and collaborative work with the private sector in areas where they have special expertise, as part of the institution's general collaboration with government, business and industry; and
i. manages in the most effective and efficient way the public and private resources bestowed upon the institution, employing collaboration whenever it is of value.

Source: UGC Notes on Procedure
(see: http://www.ugc.edu.hk/eng/ugc/publication/note/nop.htm)

Hong Kong University: Profile Indicators for assessing achievements

The following profile indicators (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
   - Profile and number of academic staff
   - Profile and number of international academic staff
   - Expenditure profiles
   - Profiles and amount of external funds received

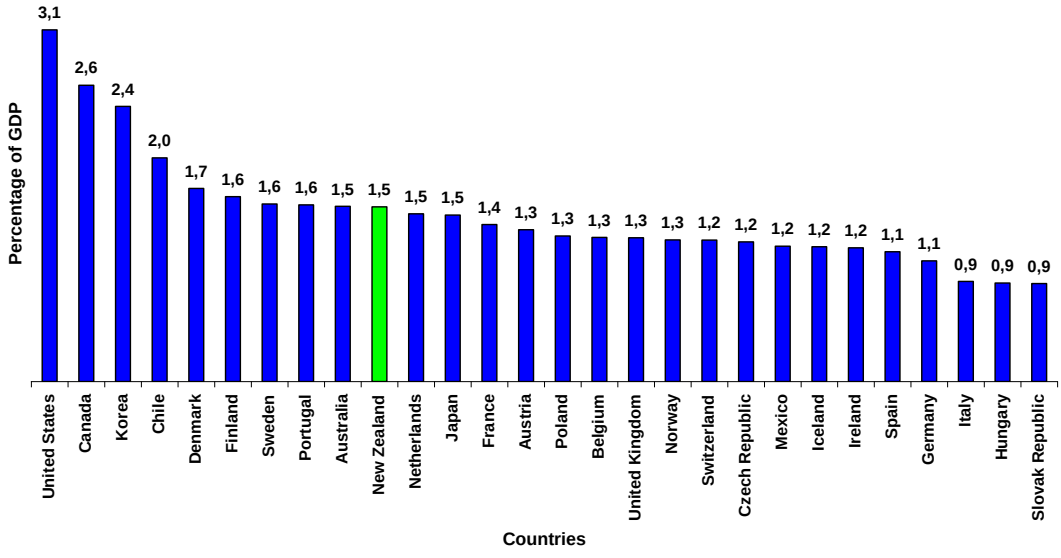
Source: http://www3.hku.hk/strategic-development/eng/implementation-and-profile-indicators/

8 New Zealand

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

New Zealand is a small country that accounts for just over 4.3 million inhabitants. It is ethnically diverse. According to the 2006 Census its inhabitants are European (56.8%), Asian (8%), Māori (7.4%), Pacific Islander (4.6 %) mixed (9.7%), and other (13.5%). New Zealand has an annual population growth rate of +.901% (World Factbook 2011). The OECD's Education at a Glance 2010 shows that (as of 2007) New Zealand's public expenditure on education as a percent of its Gross Domestic Product (GDP) is 5.9%. 1.5% is spent on higher education, of which 1% are public funds (including public subsidies to households attributable for educational institutions, and direct expenditure on educational institutions from international sources) and .5% are private funds (net of public subsidies attributable for educational institutions). These data put New Zealand slightly above the Netherlands in overall educational expenditures (in 2007 the Netherlands spent 5.6% of GPD in education) but equal in expenditures on higher education.

Figure 8.1: Expenditure on Higher Education Institutions as % of GDP (source OECD, 2010)



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 categorized (Jongbloed and Salerno, 2002, pp. 80 ff.). Tertiary education institutions include:

- Universities
- Institutes of Technology and Polytechnics (ITPs)
- Colleges of education
- Wānanga (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 organizations.

Like in other countries, the purposes of higher education are 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 Organizations (TEOs) 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 the country'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.).

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 approve 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 is meant to allow TEOs 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 were being funded compared to what had been previously budgeted (Ministry of Education of New Zealand, 2010).

8.2 The Tertiary Education Commission

8.2.1 Composition and Role

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), a Crown Entity established by the 1989 Education Act, was to negotiate the strategic directions and priorities with providers. In 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.).

The TEC's key purpose is realizing the TES. The Ministry for Education receives its funds through the Parliamentary Education Vote (called "Vote Education"). Those funds are then 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, through the Performance-Based Research Fund (PBRF) and funding for Centres of Research Excellence. Therefore, the TEC manages government funding for TEOs, provides policy advice to the Ministry and implementation across the sector, and supports TEOs.

It allocates NZ$2.8 billion a year on behalf of the Government to support New Zealanders to take part in tertiary education (TEC, 2010b). The Commission has independent statutory powers relating to planning and approval of Government funding for individual tertiary education organisations (*Ibid*, p.5)

TEC provides funds to (*Ibid*):
- Eight universities
- 20 Institutes of technology and polytechnics
- 348 Private training establishments
- 38 Industry training organisations
- Three wānanga
- 50 Schools
- 58 Other tertiary education providers

The TEC employs around 270 staff across seven directorates. Its governing body is the Board of Commissioners. It is appointed by, and responsible to, the Minister for Tertiary Education. It comprises at least six, but not more than nine, members[21]. The positions of Chair and Deputy Chair are appointed by the Minister for Tertiary Education. The Board also appoints a non-voting Learner Participant to work with it on an annual basis (TEC Website, 2011).

[21] Current members' profiles are available at http://www.tec.govt.nz/About-us/Who-we-are/Board-of-Commissioners/

Leadership and strategic advice are provided by the Executive Team which is also responsible for the performance and deliverables of the organisation. It currently includes nine members[22], each with a specific responsibility covering:

- The Chief Executive's Office
- Corporate services
- Māori strategy
- Policy advice and government services
- Private training establishments and community education
- Strategic information and evidence
- Tertiary investment and monitoring

8.2.2 Functioning

As mentioned above, the TEC's activities are meant to ensure that the government's priorities for tertiary education are achieved. The government's Statement of Tertiary Education Priorities (STEP), incorporated in the TES, includes (Ministry of Education of New Zealand, 2008):

- Increasing educational success for young New Zealanders–more achieving qualifications at level four and above by age 25
- Increasing literacy and numeracy levels for the workforce
- Increasing the achievement of advanced trade, technical and professional qualifications to meet regional and industry needs
- Improving research connections and linkages to create economic opportunities

The TEC has established its own priorities to contribute to the Tertiary Education Strategy's priorities. According to the TEC's *Statement of Intent 2010/11–2012/13*, priorities for the next three years include:

- Priority learner groups are effectively targeted and supported
- Improved tertiary education organisation and system performance
- Quality research that helps to drive innovation.

The TEC sets out what it expects to fund in a *Plan Guidance document*, and subsequently agrees with individual TEOs what they will achieve over the three-year Plan period. Thus, each TEO must develop a three-year plan showing how it will focus on the TEC's priority areas, and have this plan approved by the TEC. The TEC collects data annually to monitor progress and allow necessary adjustments within the plan's timeframe, which in turn means that agreements can change over time. Moreover, it is important to note that during the engagement process (see below) the TEC also takes into account regional economic development and (short and long term) sustainability of institutional strategies (interview data). The TEC's publicly available *Investment Guidance* sets out how the TEC will make investment decisions and, as part of this, how it will assess a TEO's plan (TEC, 2011).

For each priority, impact measures to assess progress are set out. For example the TEC will look at five year qualification completion rates, focusing on:

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[22] Current members' profiles are available at http://www.tec.govt.nz/About-us/Who-we-are/Executive-team/

- Change in numbers of Māori and Pacific peoples achieving at higher levels
- Specific target
- How it compares to the overall student population

Table 8.1: Priorities and related impact measures

Five year qualification completion rates[6]

Impact	Measure	Trend		Target
		2007	2008	2013
Increased numbers of Māori and Pacific peoples achieving at higher levels	Māori learners	42%	42%	44%
	Pacific peoples learners	38%	37%	40%
Comparative measure	All learners (excluding Māori and Pacific peoples)	47%	48%	50%
	All learners	46%	46%	48%
Increased numbers of young people (aged under 25) achieving at higher levels	Young people under 25 with a tertiary qualification	51%	54%	57%

Literacy and numeracy

Impact	Measure	Trend			Target
Literacy and numeracy		2007	2008	2009	2013
Improved literacy language and numeracy skills outcomes from level one to three study	Percentage of learners who demonstrate statistically significant increases in literacy and numeracy skills as measured by the Literacy and Numeracy for Adults Assessment Tool[7]	N/A	N/A	N/A	75%

Source: TEC Statement of Intent 2010/11–2012/13, p. 18

Since in New Zealand institutional autonomy is enshrined in the legislation, the government's "ownership interest" does not translate into actual "ownership" of the providers. TEOs are very autonomous in what they teach, how they employ staff, how they recruit students, &c. Hence, there is much business which is not government-funded (e.g. working with business and international students). Although there are certain priorities, institutions themselves are responsible for defining local needs and the relationship with local business. This means that the TEC-approved plan is not merely compliance with government requirements, but includes institutional priorities that may go beyond what is specifically dictated by the government (interview data).

In principle, disagreements can occur between the TEC and the TEOs, which would affect the amount of funding allotted. In this case, the legislation allows for appeals procedures and a re-negotiation if applicable. But in practice disagreements do not occur (interview). The process by which the TEC approves the plan put forth by a TEO is consensual. The word most commonly used to describe the TEC-TEO relationship is *engagement*—agreements are set between the individual provider and the TEC and any issues that might arise within the three-year timeframe are discussed at this level.

In other words, the TEC agrees with each individual provider on the latter's plan taking the local circumstances in due consideration. Different TEOs have different priorities depending on their local context and this is taken into account in the engagement process. For instance, in the north of the country there is more focus on the Māori students, which is not a significant issue in the south; hence it would be unreasonable to put that kind of pressure indiscriminately on all providers. The TEC also meets with Universities New Zealand[23], which through the eight vice-chancellors of the eight universities represents New Zealand's university sector as a whole. However, this is less important than the individual TEC-TEO agreements (interview data).

Finally, the TEC itself is subject to assessment. To ensure it delivers its services, the Statement of Intent includes a *Forecast Statement of Service Performance* (TEC, 2010b, pp. 31 ff.). This section provides measurable targets that ought to be met by the TEC itself over time. The outputs are grouped according to:

- Operational activities and services delivered directly by TEC to manage the Government's investment, leading to improved performance of the tertiary system
- Funding teaching and learning delivered by TEOs through the TEC's investment decisions
- Funding research delivered by TEOs through TEC's investment decisions

For each, output measures are set as well as the impact on the tertiary sector. For example[24], within the Tertiary Scholarship component (which falls under funding for teaching and learning):

- The output measure is the average number of medical intern places funded
- The impact on the tertiary sector is access to tertiary education is increased in accordance with the criteria determined by the Minister for Tertiary Education
- The 2011 forecast is 314

Another example might fall within the component "funding research delivered by TEOs through TEC's investment decisions, the main instruments are PBRF and funding for Centres of Research Excellence:

- The output measure is Research degree completions (measured by PBRF eligible research degree completions)
- The impact on the tertiary sector is strengthening research outcomes
- The 2011forecast is 2,550[25]

8.3 Funding and Institutional Profiles

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.

[23] See: http://www.nzvcc.ac.nz/

[24] See full list in TEC 2010b, pp. 31 ff.

[25] In this case it means maintaining the current completion rate of research degrees

However, currently most funding is still devoted to teaching and learning and to date there has not been a significant redistribution from teaching and learning to research (about NZ$ 1 billion). About NZ$ .25 billion is PBRF funding (interview data). True, support for commercialization of research is a landmark of the current government's profile (epitomized perhaps most notably by last year's decision to merge the Ministry of Research, Science and Technology with the Foundation for Research, Science and Technology (which was the funding body) into the new Ministry of Science and Innovation). But this is not *per se* an entirely novel phenomenon. New Zealand has seen decades of low investments in R&D as proportion of GDP, which has become an often-heard topic of political debate.

Until the recently there was an uncapped funding system in terms of the students, whereby more students led *ipso facto* to more endowments for the institution. Such a system incentivised providers to attract as many students as possible rather than trying to profile themselves in a certain way (e.g., internationalization, or more research, or more business links). A cap on enrolments was introduced as part of the 2006 reforms. Today, providers are in fact forced to allocate their funds—in other words, providers must decide where more funding should go.

The TEC's *Investment Guidance 2008-2010* sets out sets out how providers are asked to shift the balance of their provision in order to better achieve the STEP priorities. This is the first attempt to provide some form of investment guidelines, with the goal of steering providers.

The funding mechanism has three elements, including:
- Student Achievement Component (SAC) to provide the government contribution to the costs of teaching and learning and other costs driven by student numbers,
- TEO Component to provide the government contribution to costs that support each TEO to focus on its specific and distinctive role in the network of provision
- Industry Training Fund (ITF)

There are three kinds of shifts that the TEC is seeking to achieve STEP priorities[26]:
- Shifts in the volume and quality of provision: the four STEP priorities each seek to build a type of provision (educational success for young people, literacy, language and numeracy levels, advanced trade, technical and professional qualifications, and economic opportunities from research); in addition each sub-sector has specific shifts required to better meet their distinctive contribution (for example, increased achievement by under-represented groups in universities; growth in applied diplomas and degrees in Institutes of Technology and Polytechnics (ITPs); strengthening diploma levels and above in wānanga; continuous improvement in Industry Training Organisations (ITOs); and a continuing performance approach in Private Training Establishments (PTEs)). For public TEOs, Cabinet has agreed in principle that funding will be split 30 percent in TEO Component funding and 70 percent in SAC funding. The 30 percent share of funding for the TEO Component will be applied at the sub-sector level. Individual institutions will receive varying amounts of TEO Component funding,

[26] Taken *verbatim* from TEC Investment Guidance 2008-2010, pp. 4-5

depending on their circumstances. For all other TEOs currently receiving Student Component funding, access to TEO Component funding will be minimal. It will be limited to specific situations where funding is needed to support innovation, and to secure the continuance of unviable but necessary and relevant provision that serves the needs of a particular region, industry or community. For Industry Training Organisations, Cabinet will decide on the desirability of having a TEO Component. Cabinet will also decide on the criteria, duration and formula for the funding allocated via the TEO Component. A supplement outlining key funding decisions will be released by the end of April 2007.

- Shifts to make the tertiary system more coherent and therefore efficient; to build critical mass and reduce duplication. Each sub-sector has their own contribution to make here: universities are asked to enhance differentiation and complementarity; ITPs' regional facilitation role requires cross-sector understanding; wānanga are asked to increase cross-sector collaboration activities; and PTEs are asked to consider how their particular contribution builds the network of provision. In order to achieve this without reducing pathways for students, sub-sectors are also asked to collaborate with stakeholders and each other to ensure that their particular contribution forms a well-integrated part of the tertiary network.
- Shifts in the way that TEOs work with their stakeholders: ITPs building regional facilitation, wānanga advancing mātauranga Māori, and ITO strategic leadership in meeting the needs of industry

According to information gathered through interviews, the current system can be characterized has having the following strengths and weaknesses:

- It clearly separates research funding from the rest, and is thus a relatively simple system (strength)
- There is good continuous interaction between TEC and providers through the process of "engagement" (strength)
- The current system has little discretionary funding[27]. Providers re-allocate funds internally leaving the TEC somewhat dependant on their "good will" (weakness)

8.3.1 Research Funding

Though the TEC funds are devoted mostly to teaching and learning, researchers in the higher education sector can also obtain TEC support through PBRF and funds for Centres of Research Excellence. Universities also receive funds through other channels (CRIs and firms can also seek funding from the Marsden Fund, the HRC and FRST mentioned below; whilst most of the Marsden Fund and HRC support is provided to university researchers, universities receive a relatively small share of FRST funding):

- The Royal Society of New Zealand (primarily through the Marsden Fund for basic research)
- The Health Research Council for medical research (HRC)
- The Foundation for Research, Science and Technology (FRST) for strategic research

[27] This had been envisaged in 2006, but then not implemented

The research funding system has changed over time. In the late 1990s research was funded through the top-up system[28] but it was subsequently decided to re-allocate that money and give also new money to established Centres of Research excellence (currently there are seven[29]). This change is said to have yielded more diversity on the research side: the process redistributes the funds with the result that about 50% of the money goes to the two biggest institutions, which in turn has an impact on the way universities operate (interview data).

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 TEOs, 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 NZ$1,211m. Of this, the intended investment in R&D was NZ$946m. The majority of this (NZ$601m) came from the Vote: Research, Science and Technology (RS&T); a substantial portion (NZ$291 m) came from general university funding through Vote Education. The contribution from other central government agencies was NZ$48m, with local government contributing NZ$6m (European Commission, 2010)
- Vote: Research, Science and Technology (Vote RS&T): latest data show that funds stand at NZ$652m (2007/08 Budget) excluding 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 (TEC, 2011).

The PBRF rewards 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 were 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 (TEC, 2010a). The PBRF model is formula-based and includes a quality evaluation (60 %), research degree completions (25%) and external research income (15%). 2010 guidelines for

[28] "Research top-ups" were introduced 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, and research-based postgraduate degrees receiving the highest The PBRF has gradually replaced the research top-ups, which now no longer exists

[29] See http://www.morst.govt.nz/rst-links/nz-tertiary-sector/

assessing the quality of research place greater emphasis on commercial research and the entrepreneurial application of research (TEC, 2010b)

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 NZ$322m (excl. GST) has been invested in 140 NERF research projects between 1999 and 2005 (some projects have had multiple contracts). The research has been conducted by Crown Research Institutes, universities and private companies. The research topics are varied, although nearly two-thirds of the total funding has gone to biotechnology projects (Ministry of Research, Science & Technology of New Zealand, 2010a; European Commission, 2010)
- Research for Industry (RFI): aims at increasing the competitiveness of New Zealand industries and sectors through strategic research. Recipients of RFI funding are predominantly public sector institutions, including Crown Research Institutes and universities. Other recipients include specialist research companies, and not-for-profit research centres[30]. It is public funding for thematic research, channelled through the Foundation for Research, Science and Technology (FRST), and allocated on a competitive basis. In 2007/08 the Vote RS&T budget for RFI was NZ$ 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 Discussion

This section mainly reports expert opinions as gathered through interviews. Most noteworthy issues to keep in mind are:

[30] 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)

- Stakeholder involvement and political will: students can be vocal against changes because having had uncapped system for a lot of time there is a feeling that anyone is entitled to enrol. However, now universities can reject applicants, which contested by students. Moreover, New Zealand has a very liberal student support system, which includes interest free loans and several grant schemes. Thus, students are very reluctant to accept the idea of caps and limitations in funding. Naturally, this is a political issue that re-emerges at every election
- The issue of commercialization of research is strongly felt but, again, it is a political issue and it is certainly not unique to New Zealand. Though there are changes to the PBRF (e.g. increases, and changes in the guidelines to give more weight to applied research), how much difference this makes remains a moot question because it rests upon four key matters: (a) having enough money in a (economically) constraint environment, (b) most research programmes are medium to long term so that any change will be perceptible only in the longer run (c) it would only apply to those researchers who are entrepreneurial in nature and (d) entrepreneurial success, even in the research field, needs skills that are beyond research skills (e.g. management skills)
- Government steering can be only moderate because it navigates in a constrained demand environment– students can still decide where to study, what courses, &c. The capacity of the centre to steer is limited in a system that is so responsive to student demand, with much institutional autonomy, many funding mechanisms operating, and many overseas students.

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 short-cycle tertiary vocational education.[31] 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 and multi-programme colleges. For geographical and historical reasons the university

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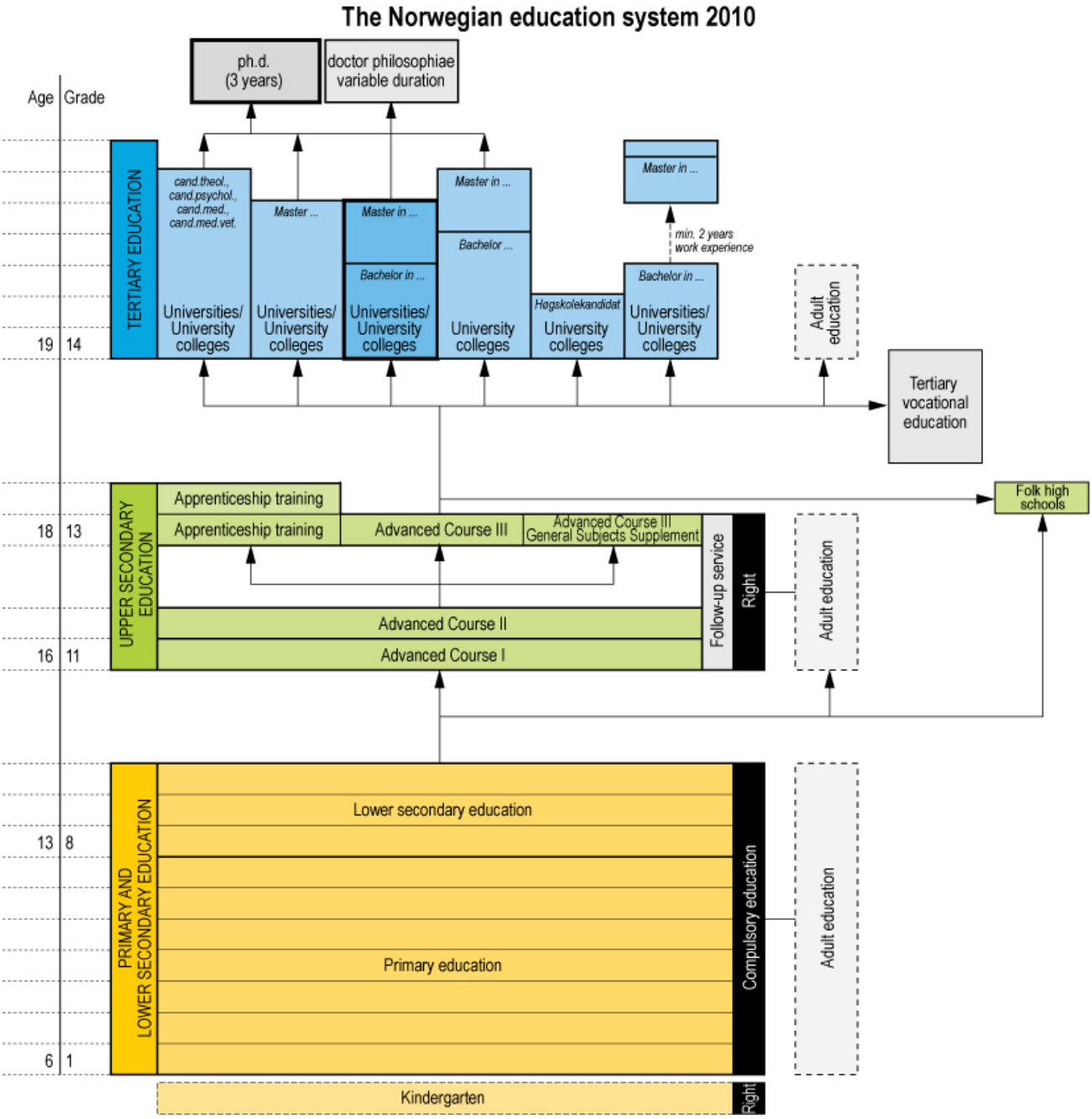
[31] Tertiary vocational education consists of vocational training courses lasting from half a year to two years. Most of the schools offering this kind of programme are private; their courses, however, must by accredited by the Norwegian Agency for Quality Assurance in Education (NOKUT). Established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

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.

Figure 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, based on the report of the 2001 Mjøs Committee and inspired by the Bologna process, has been one of the most far reaching reforms in Norwegian higher education after the Second World War. With this reform 'reforms long overdue' could finally be implemented with the Bologna process as their external legitimization (Maassen 2010). 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, a new degree structure, student completion time, the enhancement of the institution's autonomy, a new internal university governance system and stronger emphasis on internationalisation and student exchange. The new Act on Higher Education (2005) created a common regulative framework for both public and private higher education. According to Maassen (2010), it did, however, not stimulate task-reallocation among institutions, institutional cooperation and institutional profiling. Arguably the opposite happened after 2002. Academic drift of university colleges, and consequently a steep growth of master and doctoral programmes, vocational drift of universities by offering more professionally oriented master programmes and a decrease in formal institutional education cooperation because of a new funding system. (see further below)

The basic principle of the Norwegian higher education system is education for all. Tuition fees do not exist and are regarded as 'non-negotiable'.[32] 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.

[32] An example of this relates to the mandate of the Stjerno Committee (see also later). The high-level, national committee on the future of Norwegian higher education, installed in 2006, got an extensive mandate from the minister with the exception of, among other things, tuition fees. This was not supposed to being touched upon.

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 acidic 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. However, once NOKUT has approved an application it is *in practice* hardly possible for the Ministry of parliament to stop the process, and to deny the institution in question university status (Maassen 2010). It means that here in fact the government's hands are

tied. 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 NOKUT 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 is 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 the award masters degrees in at least five academic areas/disciplines and must have bachelors programmes n more academic areas/disciplines than those covered by the asters 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).

The NOKUT-criteria for upgrading university colleges concern among other things the right to awarding doctoral degrees. In 1995, there were ten Norwegian institutions that had this right. In 2010, there are 22 institutions with doctoral degree awarding powers; the increase has mainly taken place in the university college sector. At the moment, more university colleges are in the process of obtaining this right. As the Stjerno Committee and NOKUT observe, this trend is not without problems. Many of the new doctoral programmes are based on small and vulnerable academic environments and they have few students. A NOKUT-evaluation on this concludes (Skodvin and Stensby 2010):

- The major challenge in establishing new doctoral programmes is to demonstrate an adequate academic level and sufficient breath, depth and internal coherence;
- The majority of research groups at university colleges are fragile and not very active in terms of scientific publications;
- The new doctoral programmes are narrow in scope;
- The number of students in these doctoral programmes is low.

Skodvin and Stensby (2010:18) note that the establishment of new doctoral programmes is mainly driven by institutional strategy (improve prestige) and is not 'sufficiently academically based'. In their overall assessment of Norwegian higher education, they report that while the ministry states that it will maintain the binary divide, there is a sincere risk on unintended institutional drift that can result in 'pale *copies* of the originals'. There is a drift of university colleges to become universities, either by themselves or through cooperation and mergers. They argue that that are various reasons that pull the system in the direction of increased institutional isomorphism (homogeneity), despite the ministry's efforts to increase the system's diversity. These reasons are that there is one law regulating all the institutions, the institutions have a common job position structure, a joint reward and career system and, by and large, a common set of academic norms and values. Moreover, the lack of a consistent policy for higher education contributes to the 'fact' that different governmental steering tools pull into many different directions.

Reichert (2009) observes the same kind of trends. She 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, 2009:80).

Also Skodvin and Stensby (2010), in a section on academic drift in Norwegian higher education, report a significant growth in the number of master programmes that are offered by university colleges. In 2003, 45 master programmes[33] were offered by universities; in 2010 this number is 145. Over the same period the number of students per master programme remained by and large the same. In 2003, approximately two-thirds of the university colleges offered one or more master degree level programmes; in 2009, all university colleges are offering such programmes. They argue that university colleges have done this primarily for reasons of status and not for economic reasons, because in the Norwegian funding system undergraduate education is economically more profitable for higher education institutions than graduate education is. Another reason, related to reputation, is that no college 'wants to be left behind'.

In the period from 2003 to 2010 the share of master degree level students at university colleges has doubled, whereas this share at the universities slightly decreased. Notwithstanding this there are basically very few master degree level students at university colleges – in 2009, one out of thirteen university college students is doing a masters. In the 'ambitious' universities (see next paragraph) 10% of their students are enrolled in master programmes; in the 'less ambitious' colleges this number is 5%.

As also reported by Reichert (2009), Skodvin and Stensby (2010:14) indicate that particularly university colleges with ambitions to upgrade their status to university level have developed master programmes: "The increases in the number of master degree programs are particularly large in the state university colleges of Agder, Bodø, Lillehammer, Oslo and Vestfold (…) All of them have (or had) university ambitions." Most of these colleges have increased the number of master programmes by a factor 3 or 4. These ambitious universities also happen to be among the largest colleges in the country – size

[33] The number of 45 master programmes does not include the programmes of the university college in Stavanger, which received the university status in 2005.

matters. But there are no indications that the growth of master programmes has added to the diversity of the higher education system.

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.

9.3 Future reforms in Norwegian higher education?

The central theme of higher education policy discussions in Norway since the 1960s has been the focus on a more effective organization and structuring through, amongst other things, task-reallocations ('division of labour'), institutional and programmatic mergers and new funding mechanisms. The diversity of the higher education system was always present as a prominent issue. As a result of that a number of reforms were initiated in the early 1990s. The aforementioned 'merging reform' in the university college sector is one example. Another interesting example concerns the establishment of the 'Norwegian Network' (*Norgesnettet*), aimed at stimulating a division of functions and tasks among higher education institutions (Maassen 2010). The underlying idea of the Norwegian Network was that through voluntary networking Norwegian higher education institutions would develop a more effective division of labour as well as mutual cooperation. It was meant to improve institutional profiling and a more efficient use of public resources fro higher education. Concretely four types of connecting links were mentioned in the government White paper (1991) that prepared the ground for the introduction of *Norgesnettet*: student mobility, contacts between academic staff, educational cooperation,

and communication through ICT and mass media. The establishment of the Norwegian Network was based on voluntariness (no direct government interference), without positive or negative incentives and no additional funds from the government were made available. Currently the general view is that the Norwegian Network was not very successful (Maassen 2010) – it did not lead to a better division of labour and institutional cooperation, not to institutional profiling. This did not really change after the turn of the Millennium. Although one of the most comprehensive reforms in recent Norwegian higher education history was, generally speaking, successfully implemented, the abiding issues of task-reallocation, cooperation among institutions and institutional profiling remained on the table.

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. A number of shortcomings were perceived (e.g. Maassen 2010): a rather negative set of evaluations by NOKUT of professional bachelor programmes; signals from the university sector that the Quality reform has a negative effect on the research capacity and activities of the universities; complaints from Norwegian industry about the quality of HE graduates; worries about the lack of innovation oriented activities in the HEIs; and a decrease in the number of international students studying in Norway. This led to the setting up of another national committee in 2006: the Stjernö committee. This committee that consisted of 12 members was asked to advice on Norway's future higher education system. The committee started to analyse the current state of Norwegian higher education and got to the following conclusions:

1. There is no national higher education and research strategy in Norway. The regional policy forms the main frame, also for higher education and research.
2. Norway is the only OECD country with 'technical' university definition, based on number of Master and PhD programmes.
3. The Norwegian binary system is moving towards an integration of the two main sectors.
4. The ambitions of individual institutions, and not politics, are the driving force behind the main structural system changes in Norwegian HE, and in essence most ambitions are concentrated around the issue of university status for the university colleges and elite university status for (3 of) the 4 old universities.
5. There are major quality concerns about bachelor level professional education at the university colleges. One reason for this is that the ambitious university colleges have used bachelor level funding for the development of new Master and PhD programmes.
6. Master and doctoral level education is highly fragmented and in large parts of the HE system very unproductive and inefficient.
7. There is a large influence of unions on academic salary structure. One of the consequences is limited flexibility for the institutions to introduce performance based salary schemes. This has caused, among other things, a low average salary level for senior academics.
8. There is a growing diversity of knowledge needs in the Norwegian society, and especially the university college sector is important for addressing the needs related to the practice and developments of the large public and private professional sectors.

9. The forecasted demographic developments show that there will be a growth of the Norwegian student population until 2015. However, this growth is not equally spread over the country, since there is also a growing move of young people to urban areas (urbanisation of student population).
10. There are major worries, expressed for instance by the Norwegian research council, about (top) basic research funding, recruitment and quality.
11. There is no effective institutional or national support system for international research funding acquisition. This has become visible, e.g. in the low success of Norwegian applicants to the grants of the European Research Council.
12. The public funding system for HE is not effective: it 'punishes' cooperation; the basic component not transparent and (too) large; and the performance part is controversial.
13. In general the growing importance of the international (and especially European) dimension in HE and Research policy and practice is largely neglected in public debates on HE.
14. There is a growing difficulty for many regional HE institutions to attract (and keep) senior academic staff, and for some of them it has even become difficult to attract (enough) students.

This analysis of the current state of Norwegian higher education and research and of its future challenges is perceived as correct and comprehensive. The minister, the higher education institutions and other important stakeholders agreed with the diagnosis of the committee. But there was absolutely no agreement on the proposed solutions that, in general, are regarded as far too radical.
Based on the analysis and after internal discussions, the 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, identified four alternative approaches for Norwegian's future higher education system:

a) 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' with a minimum size of 8,000 to 10,000 students, with the exception of the University of Oslo); diversity would take place within the regional institutions. This model is based on geography.
b) A binary model with in total five universities and six university colleges.
c) A network structure with a university at the centre of each network. This can be regarded as the renewal of the Network Norway model.
d) Mergers among institutions of different profiles. A stimulation of differentiation in higher education.

These four alternatives formed the basic components for two plans. Plan A consists of a combination of the multi-campus model and mergers (a and d). If Plan A was to be rejected, the committee suggested Plan B, that consists of a large number of 'problem-solving' reforms and policies.
In more detail the commission's plan A consisted of:

- Voluntary merger processes of all higher education institutions leading to an overall minimum size of 8,000-10,000 students. Exception is the University of Oslo, which was regarded to be large enough already. The institutions can determine themselves

with which institutions they would like to merge. The merger process does not need a strict regional basis.
- The current number of 38 recognised institutions should be reduced ideally to 8-10 institutions in 2026 – as part of the process a number of small institutions should be closed.
- The government and parliament should determine the final institutional structure.
- The new institutions should develop their profile and priorities in close dialogue with the Ministry of Education.
- A new body with international experts should be established for advising the Ministry of Education about the institutional developments and profiles.
- The whole reform and merger process should be funded adequately (estimate of what is needed: between Nok 300-400 million).

After discussions in and feedback from the higher education sector and other major stakeholders, the minister rejected Plan A; she did not want to support the model of having 8-10 large, integrated multi-campus institutions. For a moment, some believed that this was the end of the Stjernø proposals. Those criticasters, however, had not taken into account Plan B. This plan consists of the following proposed reform measures:
- Strengthen doctoral level education by developing national research/graduate schools
- Change the definition of a university and the accreditation procedures, by focusing more on capacity and quality than on the number of master and doctoral programmes, as is currently the case.
- Change the funding system, in order to stimulate institutional cooperation and strategic behaviour.
- Handle the small higher education institutions. If it is not possible to merge or close them, make sure that they have a viable future.
- Discuss the notion of one or more elite universities in the Norwegian context. Analyse how the top of Norwegian academia can continue to compete with top milieus in the rest of the world.
- Strengthen professional education at the bachelor level.
- Establish centres of excellence in education, based on the existing model of centres of excellence in research (funded by the Norwegian research council).
- Adapt and strengthen the Norwegian internationalisation in HE policy. Analyse among other things the effectiveness of the support structure for Norwegian students abroad.

While the Minister and the main stakeholders from the sector had declined the main recommendation of the committee (Plan A), the minister took Plan B very seriously. The consequence is that the result of the commission's work is not another overall reform (like the previous Quality Reform), but is translated into a number of initiatives and reforms, implemented since late 2007.

In addition, a number of institutions have taken the commission's analyses and some of its recommendations as a starting point for a regional cooperation and/or merger process (Skodvin and Sternsby 2010; Maassen 2010):

- In 2009, the University of Tromsø and the University College of Tromsø have merged into a new institution (university). This merger has changed the 'power balance' among the institutions in the region. In consequence, two other university colleges – Harstad and Finnmark – have decided to work more closely together and reallocate some tasks, and consider a possible merger with the new University of Tromsø.
- The University of Bergen has developed a close cooperation (network) structure with three regional høyskoler, aot in the area of PhD education;
- The university college in Oslo and the university college in Akershus will merge into a new institution (høyskole) in 2011, and this new institution intends to apply for university status in 2015.
- In 2007, the university colleges of Buskerud, Vestfold and Østfold and the University of Life Sciences established a network alliance called Oslo Fjord Alliance. They want to strengthen their regional and national academic position. This alliance started with a reallocation of tasks in terms of study programmes and research activities. In 2009, these institutions said they want to become one institution in the near future.
- Three university colleges in the western part of Norway (Molde, Ålesund and Volda) decided recently to start a cooperation process with the goal to merge in the future (the Vestland Alliance).
- For a number of years there has been cooperation between university colleges in the Lillehammer region with the aim to establish a university in the region. The ambition is to apply for accreditation (to upgrade its status) in 2012.

Interestingly, while these processes are initiatives of the institutions and the ministry indicated in 2007 not to interfere in these processes, the ministry has decided to make extra funds available (Nok 50 million in 2010) for stimulating and supporting the further development of these processes. This is regarded as an important signal from the ministry: without direct interference it indicates that the ongoing merger and cooperation processes are considered to be important in the process to come to a better allocation of tasks in Norwegian higher education and to realise more effective forms of institutional cooperation and profiling.

After the publication of the Stjernö committee report several things have happened. Besides the mergers and increased number of cooperations between institutions, the minister initiated several actions, encouraged by Plan B. the actions put into operation include:

a. PhD education: stimulation of the establishment of national research schools. One round for establishing national graduate schools has in the meantime been organised, with funding from the Norwegian research council. At the same time, the number of higher education institutions that is offering a PhD degree has increased to 22 and it seems difficult for the Ministry to put a stop this process.
b. University definition: While the definition of what is a Norwegian university has not been changed dramatically, the Ministry has asked NOKUT to focus in the applications for new PhD programmes more on quality than on quantity. NOKUT recently proposed new criteria for university colleges, focusing indeed more on quality and capacity, and these are still under discussion.

c. Funding system: Some minor changes in the public higher education funding system have been introduced, and a major change is prepared.
d. Small higher education institutions: The Ministry has indicated that small institutions do not have to close, and that instead they will receive extra funding from the Ministry to strengthen their recruitment and staff foundations.
e. Bachelor professional education: Various measures have been taken to strengthen bachelor level professional education. This includes the announcement of the establishment of *centres of excellence for education*. NOKUT is preparing the tender for the first round of funding for these centres.
f. Internationalisation: The Ministry has published a green paper on the renewal of the internationalisation of higher education policies.

The dynamics described above indicate that the Norwegian higher education landscape is changing. On the one hand we see several government initiatives, evoked among other things by the recommendations of the Stjernö committee, as well as initiatives of the institutions. The Minister has indicated regularly that she is satisfied with the current change dynamics, both through her ministry, and the institutional initiatives, and does not see a need for more far reaching higher education reforms at short notice. On the other hand there are voices calling for more government actions because there are still several problems such as the continuing 1) fragmentation of PhD (and Master level) education, 2) difficulties of smaller regional institutions to attract students and staff, 3) ambitions of the stronger university colleges to apply for university status, 4) inefficiencies of the public funding system, 5) move of students to the urban areas, 6) worries about the international competitiveness of Norwegian top fundamental research, and 7) worries of low Norwegian success in FP7 (and especially the ERC). These 'criticasters' fear that the outcome would be a highly fragmented yet homogeneous institutional landscape (see also Reichert 2009:65). The establishment of bigger units, for instance, would shift diversity more toward internal institutional structures rather than emphasise increased external diversity of institutional profiles.

9.4 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, introduced as part of the Quality reform, is more performance-based, both for teaching and research. The current Norwegian funding model has three main components:[34]

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

[34] The percentages are averages and may vary between institutions and form year to year.

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 pubic budgets are made available to the higher education institutions through the budget allocation letter – an individual letter for each institution. Various performance objectives are mentioned in these individual budget letters and the institutions are encouraged to fulfil them.

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.

Apart from legislation and public funding, the minister steers higher education through dialogue. The ministry of education and research has formal governance meetings annually with all the public institutions. This dialogue, or consultative meeting, is based on reporting, evaluations and assessments of the performance of the institutions. The institutions are represented by their leadership, governing board members, students and staff representatives. In addition, the ministry conducts more informal meeting with stakeholders such as the Norwegian Association of Higher Education Institutions.

9.5 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 is 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: dos 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.

10 Sweden

10.1 Introduction

Sweden is an interesting higher education system to look at in the framework this study as in Sweden there have been serious discussions about relating part of the public funding to the quality of education. This will be the main focus of this chapter, but first an overview of the Swedish higher education system will be given to put the funding issues in their wider context.

10.1.1 The Swedish higher education system

The system of higher education consists mainly of universities and more specialized colleges. There are 14 state universities and 21 state university colleges (högskolor) in Sweden, as well as 3 private universities (Chalmers University of Technology, Stockholm School of Economics and Jönköping University) and 12 other private tertiary education institutions (Högskoleverket, 2010). The clear majority of the public funding is disbursed directly from the government through the Ministry of Education and Research. Additional R&D funding is secured in open calls from research councils, sector agencies, research foundation (semi-public and private) and the EU as well as from industry.

The 1993 reform reduced the detailed influence of central government but called for more planning, accountability and control at the institutional level and therefore a stronger and more pronounced institutional governance. The internal devolution of authority, awaited by many academics, did not occur. Instead, the responsibility for those in leadership positions in universities and colleges increased. Collegiality and management in combination became the primary model of institutional governance, supported by a new network of interest groups consisting of the academic elite, scholarly organizations, and the business establishment (De Boer *et al*., 2010a).

With the return of the social democratic government in 1994, the political balance of power gradually began to change. The political representation was enlarged in the governing boards of the institutions. Rectors were replaced by people from outside (often industrial leaders or politicians) as chairman of the board. The "unholy" alliance between state and industry was strengthened at the expense of the academic elite. Oddly enough, this did not meet with any big resistance until recently (De Boer *et al*., 2010a).

Swedish universities and university colleges have three main missions: to educate, to perform research, and to interact with society. The latter, the so-called "third mission", was

added in 1997, and includes technology transfer (among other things), and was subject to much debate but is today generally an integrated part in education and research . Higher education institutions are expected to also serve the local community, contribute to overall social development and ensure that benefit is derived from their research findings.

The main criteria for operational grants for education are the number of full time equivalents and student performance. The amount of funding varies depending on the disciplinary domain. There is also a funding cap that limits the size of funding a HEI may receive. Direct governmental allocations for research and third level programmes are mainly based on historical/incremental funding, but from 2009 a small performance-related component has been introduced for allocation of public research funding.

Parliament (*Riksdag*) and the government (through the Ministry of Education and Research) have the overall responsibility for higher education and research, and thus determine the higher education regulations, including objectives, guidelines and resource allocation. The key regulations that determine the way in which higher education institutions operate are embodied in the *Higher Education Act* which is laid down by parliament and the *Higher Education Ordinance* which is laid down by the government (Högskoleverket, 2010). Several government agencies are involved in the implementation of government policies. The Swedish National Agency for Higher Education (*Högskoleverket*) is responsible for higher education, while the Swedish Research Council is responsible for research.

The Bologna structure has improved the international comparability of Swedish education. The former degree system has been reformed and structured to fit the new three-cycle system. Higher education is organized in courses that can be combined into study programmes, leading to the general university degrees. There are also about 40 study programmes in first and second cycle leading to professional degrees.

A new national quality assurance system was decided by the parliament in June 2010 (Government bill 2009/10:139). The system started in 2011and has two components: evaluating courses and programmes and reviews of degree-awarding powers. The Swedish National Agency for Higher Education should be responsible of these evaluations and reviews. The evaluations should primarily cover assessments of whether the different study programmes meet the learning outcome requirements stipulated in the Higher Education Ordinance. In addition, higher education institutions can receive extra funds if their first and/or second cycle programmes have received the highest quality score in the quality evaluation process. If a study programme has serious shortcomings, the higher education institution can have its degree-awarding powers questioned or withdrawn (Ministry of Education and Research, 2010a).

10.1.2 Governance and funding in Swedish higher education

The public higher education institutions in Sweden are formally government agencies under the jurisdiction of the government and parliament (Riksdag). They are therefore subject to general rules and regulations that apply to all governmental agencies, but there is also a

special regulatory framework for higher education, laid down in the 1993 *Higher Education Act* and *Higher Education Ordinance*. The private higher education institutions are only bound by the first chapter of the *Higher Education Act*, and there are separate laws and regulations for the private institutions. Private institutions have to comply with general quality requirements to retain the entitlement to award degrees and to receive public funding for courses and programmes (Högskoleverket 2010).

At national level, the responsibility for higher education and research is divided between several ministries and several state agencies. As compared to other countries, the ministries in Sweden are fairly small and state agencies carry out many of the tasks that ministries do in other countries. The Ministry of Education and Research has the overall responsibility, but there are four state agencies that also have responsibility for higher education: The National Agency for Higher Education (*Högskoleverket*), the National Admissions Office for Higher Education (VHS) and the National Board of Student Aid (CSN) (Deen, 2007; Högskoleverket, 2008). The National Agency for Higher Education is the central agency for higher education in Sweden and is responsible for quality assurance, accreditation, recognition of international qualifications and providing analysis and statistics concerning higher education in Sweden. The International Programme Office and the Swedish Agency of Advanced Vocational Education are other state agencies with relevance for higher education, and there is currently four public research funding bodies (the Swedish Research Council, Swedish Research Council for Working Life and Social Research, the Swedish Research Council for Environment, Agricultural Science and Spatial Planning and the Swedish Agency for Innovation Systems).

The operational expenditure of higher education totalled 54 billion SEK in 2009 or 1.6 percent of Sweden's GDP (*Högskoleverket*, 2010). Higher education is mainly publicly funded as 88 percent of revenues to higher education come from the public purse (Högskoleverket, 2010; De Boer *et al*., 2010a). 65% of revenues come from direct government funding to the institutions. Direct government funding takes the form of state grants distributed on a triannual basis, and allocations are based on per capita amounts per student (full time equivalents) and full-time performance for the different disciplines. Private funding has been around 11%-12% in recent years. Tuition fees for individual students are currently not permitted, but will be introduced from the autumn term of 2011 for citizens outside EU/EEA and Switzerland.

About 40%-50% of university income is for research and third level programmes, of which about 45% comes from direct governmental allocations and 55% comes from external funding including other public and private sources (Högskoleverket, 2010). Since 2009, direct research funding contains a performance-related component, where 10 percent of direct government allocations are distributed based on performance criteria.

10.2 Governance reforms – greater autonomy for higher education institutions

In 2007, a number of reforms were conducted in the Swedish higher education sector. First of all, Sweden implemented the three-cycle structure (bachelor, master and doctoral levels) in 2007 and a new higher education credit system, in accordance with the Bologna process. Also in 2007, the national quality assurance system was modified. A revised and "simplified" model of quality assurance was implemented in line with the European Standards and Guidelines for Quality Assurance – adopted as part of the Bologna process.

In 2007, law amendments to the Higher Education Act concerning the composition of Boards of Governance are made. Higher education institutions are given the responsibility to decide upon the size and composition of the board. The government no longer appoints the majority of the board members. But most importantly, in November 2007, the Swedish Government decided to appoint an Inquiry to make proposals for one or more organisational forms for state higher education institutions.

10.2.1 The Swedish Autonomy Inquiry

In 2007 a process of inquiry began to investigate further development in governance of higher education, further extending the autonomy of public higher education institutions in Sweden. The main reason for this was the Government's consideration that political control should be reduced and that HEIs should have greater autonomy to determine their activities because of the changing context of HEIs, among other things globalisation (Committee terms of reference, 2007). The Inquiry's report "Inquiry of independent institutions of higher education" (SOU 2008:104) proposed that all public HEIs shall be transformed from state organizations to autonomous organizations with a special public law status. This will entail that the institutions can engage in activities they before were not permitted to, such as receiving donations, own properties, set up enterprises and cooperate with other public and private institutions. Staff would no longer be governmental employees and the reform envisages an "energetic" and strategic role for the institutional leadership as the institutions themselves will decide upon their own strategic programme and academic profile. Public funding would continue, but gradually be based on multi-annual contracts. The new model would probably replace the existing Higher Education Act in 2011.

In February-May 2009, there was a consultation on the Inquiry's proposals. The consultation responses were divided – most importantly, there was no consensus among HEI to transform into the proposed new organisational form. There were quite sceptical voices as to whether this reform would become implemented in the proposed form (De Boer *et al*., 2010b). Many HEIs were hesitant in the consultation process regarding the envisaged new legal status for HEIs. They felt that the state in many cases had proven to be a good support for the HEIs. In addition, the Swedish Association of University Teachers (*Sveriges Universitetslärarförbund*, SULF, www.sulf.se) was hesitant about the deregulation of teacher positions. They argued that it could be an obstacle to national mobility. It was also feared to result in less transparent employment processes, as these would no longer be nationally

regulated in detail. They also feared less academic influence as the faculty boards would no longer be nationally regulated.

In March 2010, the Swedish Government presented a bill – the Swedish Autonomy Bill – aiming to increase the freedom of state HEIs. But instead of a whole new legal position, HEIs would gain greater autonomy within the framework of the current government agency format. There were three main reasons for giving greater freedom to state HEI:

- it was regarded as an important matter of principle,
- it would benefit the quality of the HEIs' activities, and
- it would be a prerequisite for being an actor in a competitive international environment.

In essence, the 2010 bill proposes greater freedom through extensive deregulation in two areas, internal organisation and the positions of staff. Though the previous higher education reform of 1993 also aimed at deregulation, it only focused on increased academic freedom. Detailed rules about the organisation of undergraduate education programmes were replaced by the Degree Ordinance with degree requirements containing objectives for general and professional degrees. This new governance model allows HEI to shape the structure and content of their study programmes themselves and to easily up-date and adapt them to scientific progress.

The 2010 Bill is just in operation as of 1 January 2011. So there are no experiences yet but HEIs are expected to actively use their freedom to shape the internal organisation and to take a more active responsibility as an employer. This can support their own situation and needs. The Association of Swedish Higher Education appointed a working-group which read the Autonomy Bill and prepared a discussion about which proposals should be dealt with by each HEI and which proposals should be dealt with by common guidelines set up by the Association on a voluntary basis. The outcome was, generally speaking, that teacher positions could be an area for common guidelines, whereas issues related to the internal organisation could be dealt with by each HEI. Some HEI have prepared for a change in the internal organisation, others have decided to keep the existing organisation or introduce a new one in a later stage.

In terms of profiling this greater autonomy given to HEIs is not expected to give a further boost to the profiling of HEIs. Profiling has been an ever-present issue for the past decade and the political message to HEI about the importance of stronger profiling is clear. Most actions that are launched support it in one way or another in the sense that stronger profiling can be a consequence even if the action in itself has a different objective.

10.3 Funding in Swedish higher education

Public higher education in Sweden is grant-aided and free of charge. However, from the autumn semester of 2011, fees will be introduced for non-EU/EEA and Swiss students

(Högskoleverket, 2010). HEIs will be free to set their own cost covering tuition rates which they can spend according to their own priorities.

The system of funding higher education was reshaped by two reforms in 1977 and 1993. In 1977 all post upper secondary education was brought together under the overall concept of higher education. Decentralisation of responsibility and "management by objectives" were central to the changes, which occurred in 1993. The state appropriations allocated directly to state universities and institutions of higher education for undergraduate education and for research and postgraduate studies represent about 65 percent of the resources of these institutions (Högskoleverket, 2010). The remainder consists of external funding for research and commissioned assignments. The major external sources of funding are public authorities such as research councils, sectoral bodies and local authorities.

As a result of the 1993 higher education reform, a new budgeting process was introduced for resource allocation for undergraduate education. Universities and university colleges are allocated grants on the basis of the number of enrolled students and what they have achieved, rather than on the basis of plans and forecasts, as what used to be the case until 1993. There are varying amounts of remuneration for the various educational areas. In the original system there were six unit revenue levels, but during the years the system has been refined and today there are 15 such funding levels, of which some comprise two or more subject areas. The humanities and social sciences have the lowest revenue levels, while the fine arts have the highest (media studies having a 15 times higher weight than humanities).

The annual budget is decided by Parliament (Riksdag) following a proposal from the Government. All HE institutions and the Ministry of Education and Research engage in a dialogue on their annual budget allocation.

The criteria, the same for all HEIs, are calculated in terms of full time equivalents (FTE) and study achievements (calculated in terms of annual performance equivalents for the students). One student enrolled on full time studies for one academic year equals one FTE student. One FTE study result is equal to one FTE student acquiring all the credits required during one year (60). Originally it was intended to allocate 60% of the total revenue for a specific field on the basis of FTE study results. Due to increases in the proportion based on the number of FTE students, the share based on FTE study results has decreased and nowadays varies between 30% and 55%.

The university and university college annual funding amount includes all costs, including capital funding.[35] There is a ceiling sum (maximum funding) which constitutes the highest aggregate compensation for FTE students and annual performance equivalents permitted for the fiscal year. For some HE institutions it may also be special assignments that may lead to specific, additional remuneration. The HEI itself decides on the distribution of funds among faculties and other units. The budget allocation is a lump sum. The institution can use this for whatever it has set as its priorities for premises, teaching staff etc. Universities and university colleges receive provisional funds at the beginning of each budget year and the

[35] Some HEIs own their buildings and premises and some rent from the National Property Board.

finalised amount is determined at the end of the year taking into account student numbers and accomplishments presented in the annual report for that budget year.

If an institution does not reach its agreed performance or enrolment ceiling, it does not receive the full funding. If an institution enrols more students than is allowed for by the ceiling amount, no additional compensation is paid. Thus fluctuations in the number of students directly affect the funding of the institution, even in the same year. In order to mitigate these effects, institutions are allowed to carry over 10% of the ceiling amount to the following years, for use in case it then attains less than the ceiling amount.

10.3.1 quality-related funding as a new financing mechanism

In the Government Bill 2009/10:139 (Focus on knowledge – quality in higher education; Ministry of Education and Research, 2010a), the government proposes a new quality assurance system to strengthen the incentives to achieve high standards regarding learning outcomes of study programmes. HEIs that have high quality study programmes should be rewarded through increased state appropriations. These proposals are a follow-up on the Dan Brändström's report entitled "*Resurser för kvalitet*" (Resources for Quality), which was published in the beginning of 2008. This report included proposals for a new funding mechanism that would be partially based on qualitative measurements.

The 2010 model of quality-based extra funding

In the new quality assurance model, HEIs that offer study programmes at first and second level that receive the quality assurance appraisal "very high quality" (the best out of the three-level-scale) will get extra funding, but only for the study programmes ranked as "very high quality". However, the funding is always allocated to the university/university college who then decides on its own priorities and how to allocate the money within the institution. The evaluations should primarily cover assessments of whether the different study programmes meet the learning outcome requirements stipulated in the Higher Education Ordinance. The Government considers that three assessment criteria should be included when evaluating study programme outcomes (Ministry of Education and Research, 2010a):

- The students' degree projects (theses)
- The self-evaluations of higher education institutions and programmes, combined with site visits, and
- Questionnaires among alumni.

In total there will be approximately €30 million available for quality-based extra funding when the reform has been fully implemented (in 2015). This will be around 1,5 % of the total governmental funding for higher education (research excluded). This money will be reduced from the current operational resources of the HEIs as a result of the introduction of tuition fees for non-EU/EEA-students the autumn term 2011. Therefore the proportion of quality-based extra funding is kept relatively low (Ministry of Education and Research, 2010a). The amount of quality-based funds a study programme will be awarded depends on the number of programmes that are decided to be of "very high quality" by the HSV in the programme

evaluations. In addition, the amounts awarded will depend on the number of full-time students in the ”very high quality” programmes at each HEI. If two universities have “very high quality” rating for a similar programme, the institution with the most full-time students in the evaluated programme will be allocated more resources accordingly.

The available quality-based funds are distributed annually (starting in 2013) but will be calculated on the basis of the last four years of quality evaluation and the number of full-time students in the evaluated programmes. By calculating a mean value based on the last four years, will lead to a chilling effect and that the funding to the HE institutions with “very high quality” not may vary very much between the years. In contrast with the regular 15 funding tariffs, the quality-based funding will not discriminate between different kinds of courses/programmes. The same amount of money will be available per full-time student. One of the intended consequences is to generate a greater impact on HEIs with humanities and social science programs that achieve “very high quality”.

Quality-based funding was already a political issue in 1993 when the present funding system was decided. Even tough the parliament had decided that quality-based funding should be a part of the system, the new elected government and parliament later that year decided that there should not be any quality-based funding when they implemented the new funding mechanism. Then in 2006, the then new conservative government raised the issue again. The 2008 Resources Inquiry entitled “*Resurser för kvalitet*” (Resources for Quality) includes a proposal that part of the funding should be based on cyclical quality reviews. The inquiry was also distributed for consultation and the HE reactions were overall positive to a quality-based system.

As the system just started, it is not yet known how institutions will behave in response to the quality-based extra funding mechanism. In addition, the current quality evaluations for excellence and institutional audits are being abolished and replaced with the new programme evaluations. The first results from these will become available from HSV in June 2012. Only from then onwards, when institutions get to know their quality scores, more serious responses from institutions are expected. Because the new quality evaluations will use totally different criteria, the outcomes of previous quality evaluations are not a good predictor for future results.

10.3.2 Funding of research

In 2009, a new system for state funding of research has been implemented, gradually introducing performance-based funding for research. In 2009, 10 percent of new state funds for research is allocated based on quality indicators. Quality will be measured by means of two criteria – bibliometric statistics (publications/and citations) and level of external research funds (http://www.sweden.gov.se/sb/d/10086/a/114033). Several of the informants are highly critical to this system in its present form. Therefore the government is currently working on a modified funding reform.

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The Group of Eight (G08) (Mike Teece).
Universities Australia (Angela Magarry, Head of Policy Division).
The National Tertiary Education Industry Union (NTEU) (Paul Kniest).

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Prof. Hanne Foss Jansen, University of Kopenhagen
Prof. Evanthia Kalpazidou Schmidt, Aarhus University, HE funding expert

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Alan Palmer, Policy Officer, Teaching & Learning HEFCE
Dr. Rachel Segal, Assistant Director, Teaching and Learning Higher Education Academy

Finland

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Victor Lau – Assistant Secretary-General (Policy), UGC Hong Kong
Frans van Vught – former member of the UGC and chair of the PRFS Assessment Panel

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Ole-Jacob Skodvin, NOKUT (Norwegian Research council)
Nicoline Frolich, NIFU STEP

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Ingrid Edmar, Division for Higher Education, Ministry of Education and Research
Sara Bringle, Division for Higher Education, Ministry of Education and Research
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Representative of the Swedish National Agency for Higher Education (Högskoleverket)

Appendix 1: More detail on the English CETL case study

In the mid-1980s, the United Kingdom introduced the Research Assessment Exercise (the RAE) as a way of raising the quality of university research in the UK. The first RAE was held in 1989, and was a relatively cautious affair, without substantially distortive affects, as it attempted primarily to measure quality of existing outcomes rather than incentivise future behaviour. Further RAEs were to follow, in 1992, 1996, 2001 and 2008. The same cannot be said of these exercises. As universities became aware of the substantial sums of funding, as well as the prestige that came with good grades in the RAE, so departments and institutions increasingly began opportunistic behaviour to maximise their results at whatever cost. One of these costs was teaching – from the mid-1990s, research active staff were increasingly encouraged to maximise their research output, and teaching was passed from professors to teaching fellows and graduate teaching assistants.

Even before the 1997 Dearing Review into the future of Higher Education in the UK, political dissatisfaction was growing in some quarters that increasing pressure on universities to stimulate their research activities, as well as the abolition of the division between universities and polytechnics, was having an adverse affect on the quality of teaching in UK universities. HEFCE, the funding body in England, established the Fund for the Development of Teaching and Learning (FDTL) in 1995 "to support projects aimed at stimulating developments in teaching and learning in higher education and to encourage the dissemination of good teaching and learning practice across the higher education sector" (HEA, 2010). The worry driving these initiatives was not specifically that the RAE was having a distortive effect, but rather that the abolition of the binary divide and the imposition of fees was creating a tension in the idea of a unitary system. Students were to be asked to pay fees for the first time for a 'university education', premised upon the idea of research-based learning. But the RAE demonstrated that research was concentrated in primarily institutions which had been universities before 1992. This raised the question that what was it about these other institutions in the absence of research strength that validated them as universities – and thereby justified their charging students fees at the same level as pre-1992 universities.

The answer emerged through the idea of enrichment, whereby the pedagogy of universities would extend beyond that of school and FE-based didactics; Dearing summarised it so (5.23) "Research and scholarship, which extend and re-interpret knowledge, and the transmission and dissemination of that knowledge, are not exclusively the province of higher education institutions, but they are features which distinguish higher education institutions from other parts of the education and training system". This meant that universities would provide education oriented towards autonomous student study involving teachers with an understanding of real-world situations and problems, and the applications of the theory to those situations. In some institutions, that enrichment would come through – as had always

historically been the case – through research, but other institutions could focus on providing that through scholarship (teachers that understand but do not do research), or pedagogic research (reflective practice).

The process of profiling in UK higher education has therefore been primarily concerned with attempting to provide a kind of 'unity through diversity' in the sector (HEFCE 2005/21), maintaining the comparability of the UK degree standard recognising that the research bases of universities were so varied that university teaching excellence could not be purely based on the 'gold-standard' idea of research-based teaching. Making teaching dependent on something which governments had decided should be concentrated (research) would in turn undermine that idea of a university education. But much less was known about other kinds of excellent university teaching, in particular based on other kinds of knowledge creation, extension, transmission, reinterpretation and dissemination. Therefore, the idea of teaching profiling in the UK needs to be understood as an effort to preserve the unity of the system whilst at the same time not inhibiting other government moves to reward excellence in other areas, notably research.

This appendix provides a detailed analysis of how the teaching and learning agenda developed in one part of the UK, England, by far the largest element of the UK's nationally-segmented higher education system (*cf.* phase 1 report). The activity went through three phases, a progression which might be used to infer that there has been a rational evolution of the system. There were a number of early experiments in non-research based teaching excellence, there was a large-scale (€400m, 5 year) programme, Centres of Excellence in Teaching and Learning (CETL), and finally, teaching funding was mainstreamed into core institutional teaching grants. However, two notes of caution must be sounded about reading into this a narrative of progression. Firstly, the consensus is that the CETL programme did not against any objective measure achieve what might be expected from that level of resourcing. Secondly, teaching funding in England is about to face a massive cut (80%) with the shortfall being made up from student fees, so it is not evident that in the future any measures teaching excellence will be identifiable in the income mix which English HEIs receive.

The experimental phase (1995-2003)

In order to understand the CETLs it is necessary to understand the rapidly evolving institutional environment in English higher education in the latter half of the 1990s. The backdrop to this was that funding for English higher education had been gradually squeezed since 1981, with unit funding per student falling, and universities compensating by cutting all but their core –salary – costs with the now well-understood consequences for campus underinvestment . This funding situation was not reversed until the 2000 White Paper, so in the late 1990s there was a culture of relatively small experiments with limited funding to achieve incremental change. At the same time, there was an emerging sense in and around the academic stakeholders (funders and institutions) that something needed to be done to address the issue of the monopoly of research-based teaching.

The importance of the idea of augmented pedagogy can be seen in the late 1990s and early 2000s, when there was a move to restrict access to the title 'University' for those institutions which had a broad curricular spread, and offered a curriculum informed by both research and scholarship'. Institutions applying for taught degree awarding powers and university title were at this time placing significant efforts into demonstrating their involvement in these kinds of schemes as evidence of the enriched curriculum they provided. There were a number of moves to create a series of activities to improve the excellence and enrichment of teaching in higher education. All of these were characterised by the fact that they were relatively experimental, relatively low-cost, and applicable across the sector primarily in the UK. They were therefore funded by all the research councils and sought to ensure the provision of equality in the sector, to ensure that all HEIs developed an augmented pedagogy approach. It is worth here highlighting three, the Institute for Learning and Teaching in Higher Education (ILTHE), the Learning and Teaching Support Network (LTSN), and the Teaching Quality Enhancement Fund National Co-ordination Team (TQEF-NCT).

The first of these the Institute for Learning and Teaching in Higher Education, was created in 2000 in response to Recommendation 14 of the Dearing Inquiry. "We recommend that the representative bodies, in consultation with the Funding Bodies, should immediately establish a professional Institute for Learning and Teaching in Higher Education. The functions of the Institute would be to accredit programmes of training for higher education teachers; to commission research and development in learning and teaching practices; and to stimulate innovation". The idea behind ILTHE was to raise standards for teaching by ensuring a minimum standard of teacher training for university teachers which was based on reflection and research. As part of that, an additional function for the ILTHE was therefore to develop the research base for good practice in higher education, and stimulate an ongoing pedagogic discussion developing the principles of good pedagogic practice. ILTHE was also responsible in the first instance for administering the Teaching Quality Enhancement Fund (*qv*) National Teaching Fellowship Scheme, which provided funds for excellent teachers to reflect on their practice and help contribute to the evidence base around quality in teaching. ILTHE can be regarded as a the 'top-down' element of the 2000 reform, creating a national body with responsibility for teaching excellence.

The second of these was the Learning and Teaching Support Network which provided a disciplinary network of support centres which sought to draw together and stimulate good practice in teaching practice in the UK. The Network involved what developed into a network of 24 subject centres, located around the UK, which aimed to cover all disciplines taught in UK universities. LTSN subject centres offered a mixture of events, resources, and funding for the development of resources, which aimed to enable all university teachers to offer an advanced curriculum. LTSN subject networks were funded out of the Teaching Quality Enhancement Fund (*qv*). The LTSN can be thought of as the 'connecting' element of the reforms, bringing together subject experts to help to map out and capture excellence in teaching in the discipline, and transform the way that particular subjects were taught across UK universities as a whole.

The Teaching Quality Enhancement Fund National Co-ordination Team (TQEF-NCT) was based at the Open University, and facilitated contacts between projects which were funded under TQEF. All HEIs were eligible to receive TQEF funding subject to the submission of satisfactory proposals; these proposals had to do two things; firstly, they had to be linked to teaching and learning, but they also had to be developmental, in that they had to drive forward strategic change in institutions. The role of the National Co-ordination Team was in overseeing and advising the HEIs on how to maximise the results which emerged from the TQEF funding, which was provided by HEFCE. This strand can be considered as the bottom-up element of the reforms, providing institutions with the resources to pursue excellence in teaching and learning, in a step-wise process in which relatively short-term planning horizons were set and institutions evaluated quite closely against well-specified proposals for relatively small sums of money.

The experimental phase established a number of landscapes of the English teaching environment which became important following 2003 and the establishment of the CETLs. The clearest effect is a separation of the idea of teaching excellence from quality. Around the time as the creation of the three bodies mentioned above, the Quality Assurance Agency (QAA) was created to enforce quality assurance in teaching departments. However, the QAA did not have a remit to define excellence – their role was limited to process evaluation, ensuring that universities set goals and objectives for their learning trajectories, and could be confident that students passing through those trajectories would have indeed learned what was specified in the objectives.

In conjunction with HEFCE's position, the position clearly emerged that given the reality of a diverse higher education system and the need for some kind of parity between institutions, universities should be free to define excellence in their own terms, and should be held accountable through peer review rather than external direct accountability. This position around the distinction of quality and excellence has persisted to the present day, and helps in part to explain the evolution and the outcomes of the CETLs. The model was based on the idea of minimum standards plus supporting excellence; all institutions were eligible for TQEF subject to submitting satisfactory institutional plans, and could benefit from the LTSNs, whilst National Teaching Fellowships and some LTSN funding was made conditional on competitive bidding. This had the effect of creating an integrated system focused on trying to drive forward a system-wide change in the delivery of teaching and learning, providing training for staff, rewarding the best, encourage and strengthening the weakest, and keeping close links between the various elements of the system.

The rewarding excellence phase (2003-08)

A sea change in this approach came in 2003 with the publication of the Department for Education and Skills White Paper *The Future of Higher Education*. This was the White Paper that tripled the level of student fees from around £1000 to £3000 per annum. Just as Dearing had tried to offset the introduction of fees with an acknowledgement of the need for better teaching in universities, so this White Paper made teaching excellence an important

condition of the additional fee element. Two important sections from the White Paper are reproduced below.

> "All students are entitled to be taught well, and to be given the support they need to learn effectively. … There must also be clear and visible rewards for the best, to spread good practice in the system, as well as sending important signals both to students and to institutions about the value of teaching in its own right."

And

> "Centres of Excellence in teaching will be established to reward good teaching at departmental level and to promote best practice, with each Centre getting £500,000 a year for five years, and the chance to bid for capital funding." (p. 47).

The status of a White Paper in the UK is that where further legislation is not required, that it becomes an official statement of government policy. The publication of *The Future of Higher Education* therefore had the effect of committing the government, and those bodies which it funded (in this case HEFCE and DELNI) to establishing "centres of excellence in teaching". The White Paper further constrained the process by noting that "These Centres will be identified through a process of peer review managed by HEFCE and drawing wherever possible on existing information." (p. 54). This was funded through new funds provided from the Treasury, to be provided to HEFCE in return for their successful administration of the scheme. They were also clearly one-off funding, for five years, although the aspiration was set out that they would become a recurrent counterweight for the resource bias provided by the RAE.

The government had effectively committed HEFCE to a competition to identify 70 Centres of Excellence in teaching, with each receiving £500,000 funding annually, as well as £2m capital spend (for buildings or ICT infrastructure). HEFCE launched a sector-wide consultation in early 2003 in order to inform the development of the programme, and decided on a two-stage competitive round. In the first round, institutions submitted 25 page Expressions of Interest covering four sections, as given below.

> 4. Bids must be submitted in typed form with a minimum font size of 10 point. Each bid should be a maximum of 6,000 words or 12 sides of A4 paper, whichever is the shorter, structured as shown in the following table. Any material submitted that exceeds the permitted maximum length will not be considered.
>
> Part A Description of provision covered by the CETL and definition of proposed focus maximum 1,000 words
> Part B The case for excellence maximum 2,000 words
> Part C The scope for further development and impact maximum 2,000 words
> Part D The outline business case maximum 1,000 words

No more than two appendices for each of the four parts of the bid will be accepted. Appendices will not be counted in the word limit but should be concise and relevant and their purpose in supporting the bid should be made clear.

Source: HEFCE Circular 2004/05, p. 21.

First round bids were evaluated using a mix of subject specialist markers scoring them against a criteria set, with a National Assessment Panel, chaired by Professor Madeleine Atkins (Vice Chancellor, Coventry University) taking the final decision on which of those outling bids would be invited to the second stage. In April 2004, 259 bids were received from 126 eligible institutions, and the Panel decided to invite 106 of them to submit full bids.
In the second round, institutions were invited to submit more detailed plans explaining how their Centres would actually work in practice. At both stages, institutions had to demonstrate a strong institutional commitment to the proposal at the highest level, demonstrating how the planned development project would contribute to a wider institutional transformation and assist with the CETL in driving through wider changes to teaching excellence across the UK higher education system.

Stage two bids should be submitted in typed form with a minimum font size of 10pt. Single institution bids must not exceed 12,000 words, or 24 pages of A4 paper whichever is the shorter. Collaborative bids must not exceed 15,000 words or 30 sides of A4 paper, whichever is the shorter. By collaborative bids, we mean bids that involve two or more HEI partners. Collaborative bids may have been submitted as the additional collaborative bid that all institutions were permitted to submit or as one of the bids within an individual institution's permitted quota of bids.

Source: http://www.hefce.ac.uk/learning/tinits/cetl/guide/guide1.pdf (p. 3)

The plan and funding allowed HEFCE to support initially 70 CETLs, but not all institutions had bid for the full available amount, meaning that in January 2005, HEFCE was able to announce that funding was provided for 74 CETLs. The funding was provided over five years; in the first two years, institutions received £500k annually plus a capital allocation of £2m which had to be spent in this period, or returned to HEFCE, a condition of the grant from the Treasury. For the remainder of the period, £500k was provided to institutions each year for three years, with the CETLs running from April 2005 until April 2010.

The CETL approach marked a very different approach to promoting excellence in teaching and excellence across the sector. This approach was driven by a philosophy of rewarding excellence, which was strongly at odds with the dominant idea in the sector of providing resources to all to ensure unity through diversity. Through the consultation process, the idea emerged that the CETLs would not just be a reward for past excellence, but would also be an additional vehicle for sector-wide transformation. The bidding process therefore favoured institutions that were those that could both demonstrate past excellence, but also those that were prepared to commit themselves to future transformative teaching excellence. In practice, this meant that those institutions which benefited most from the CETLs were those

which had also taken seriously the bidding process around the TQEFs, because the requirements for evidence of excellence in teaching that the CETL bidding proposals demanded were present as the output from past TQEF projects; at the same time, because TQEF was contingent on proposals having a developmental element, changing practice, those institutions that had already understood how to write proposals for developmental projects were those that benefited most from the CETLs.

HEFCE reserved through the bidding process the right to balance proposals to ensure a fair balance geographically, by disciplinary area, by institutional profile and also by theme. This meant that there were CETLs which were awarded to institutions which traditionally are regarded as offering research led teaching, such as Imperial College, Oxford, Nottingham and Manchester Universities. Two universities also received four centres, Plymouth and the Open University. It is therefore clear in the results, and also the way that those results were arrived at, that the CETLs were used more to stimulate this idea of unity in diversity rather than profiling institutions as being teaching- or research-led. There was also a broad disciplinary coverage, although not all the centres were specifically disciplinary, with a number being based on themes such as Employability, Leadership, Creativity, and also using new information and communications technologies (ICTs).

It is worth putting the CETLs into the wider context of shifts in higher education and its administration in England and the UK. In 2001, the UK Government launched its Science White Paper *Excellence and Opportunity: A Science and Innovation Policy for the 21st Century*. This effectively launched a massive influx of resources into science and innovation, and with it, into research and the university sector more generally. Whilst before 2001 HEFCE had had only very limited amounts of resources to distribute, there was suddenly the possibility to allocate substantial sums of money. This created clear problems for HEFCE in terms of administering this increase in resource, and therefore the decision was taken to simplify wherever possible. Whilst there had been a proliferation of funding streams before 2003, the decision was taken to try to reduce these, and their attendant administrative through the increased use of the formula method for funding.

Another area where simplification was attempted was in the creation of the Higher Education Academy (HEA) as a single unified body to support universities to deliver excellence in teaching and learning. The HEA was formed from the three bodies outlined above, ILTHE, the LTSNs and the National Co-ordinating Team for HQEF. The LTSNs became 24 subject centres, the ILTHE became the Professional Recognition Scheme, the National Teaching Fellowships were moved to the Academy, and the NCT role for TQEF was moved across to HEA. This had the effect of creating a kind of dissociation in the sector, because HEA was clearly a support body with no formal mechanisms for compulsion (unlike HEFCE, which expresses a judgement in the financial soundness of its institution and can accept or reject institutional plans, and withhold elements of the formula funding.

HEFCE expected HEA to take responsibility for supporting teaching and learning in the sector whilst lacking those powers of compulsion, which meant that its role in the CETL scheme was limited to voluntary support activities with the agreement of participants. Secondly, HEA as constituted was a pan-UK body covering Scotland, Wales and Northern

Ireland as well as England, and funded by all four funding councils, whilst the CETLs were quite clearly an English activity funded by HEFCE; HEA therefore faced the challenge that by far the largest single fund for driving teaching excellence was not aligned with its myriad other activities, hindering therefore HEA taking any kind of systematic ownership of what emerged from the CETLs and helping therefore to deliver the desired 'system transformation' effect. Added to this, HEA was created in 2004, and thus was in the process of being created at the same time as the CETLs were starting up, which reduced the attention it was able to give to the CETLs as they established themselves.

The approach to monitoring in the CETLs had been deliberately envisaged as light touch. As a reward for excellence, universities were left to decide for themselves on how to spend the funding available. HEFCE's main concern was on whether the institutions could absorb the funding, and in particular whether the capital funding could be spent within the first two years, after which it would revert back to the Treasury. The effect of this was to place a great emphasis on dealing with issues that arose in the immediate rush to disburse the funding rather than from establishing from the outset a detailed monitoring and progress framework against which the universities would be held accountable. At the same time, the institution that might have otherwise been able to monitor progress, the HEA, did not have the powers of compulsion and was therefore forced into a reactive and supportive role. The aggregate effect of this was that the there was almost no monitoring of the CETLs, and no treatment of the Centres of Excellence as a programme requiring steering, for example through bringing together the directors or chairs of CETLs on national steering groups.

The Mainstreaming phase (2008-date)

As noted above, the CETL programme was initially envisaged as something to drive up teaching standards through a competitive process rewarding excellence in an ongoing funding stream. As the idea became an instrument through its implementation, it became clear that there was little appetite in the sector for anything as divisive as differential teaching function. At the same time, the CETL programme remained a substantial investment in teaching and learning excellence in England, and from early 2007, signals emerged that the process would not be repeated, there would be no further funding, and that the environment for future funding was likely to me much bleaker than at that time. A number of elements came together to undercut interest in the programme's continuation, and this meant that there was a lack of interest in driving the CETLs forward after the capital building phase was completed.

From around 2007, at the general level, it was clear that the growth in public expenditure across government generally since 2002 was unsustainable, and public bodies needed to focus more clearly on their core tasks, simplify administration and reduce the numbers of funding schemes. From HEFCE's perspective, this added further impetus to their desire to simplify and formularise, and at the same time, ain the absence of further hypothecated funding from the Treasury, the decision was effectively taken to discontinue the CETLs. With such a large investment, it might be expected that a funding body would seek to

understand future lessons to develop a future iteration of the process. Once the desire for a future iteration had been ruled out, the emphasis in HEFCE shifted to the smooth running and eventual wind-down of the project.

In 2007, HEFCE commissioned a formative evaluation of the CETLs; this had been planned at the outset in order to give the process an additional steer once the early stage of the start-up had successfully been accomplished. The contract was allocated to a consortium drawn from the Open University and Lancaster University, and each of the 74 CETLs were asked to complete a lengthy self-evaluation form on the basis of their own reflections on their performance. This imposed a substantive burden on many of the CETLs, and expectations were high that in late 2007 or early 2008 that there would be a strong set of directions and responses coming out from HEFCE identifying how the CETLs should refine their work programmes across the rest of their life. Given the decision by HEFCE to terminate the CETL programme after its expiry, there was very little capacity on HEFCE to respond in a very detailed way to these self-evaluation reports, and this contributed in part to the drift of the programme, as throughout the five year period, CETLs did not receive a strong steer from HEFCE as to what were their targets that they had to hit in the course of the research.

The formative evaluation was published in September 2008, long after the financial situation had made it clear that there would be no repeat of the CETL process. The evaluation attempted to make sense of the idea of system level change and understand the extent to which these centres of excellence had been able to drive through change in their institutions, and also across the sector as a whole. The evaluation made it clear that as an interim formative evaluation of a period where many CETLs were preoccupied with the delivery of their capital project (which would otherwise be lost), that the content-based outcomes at that time were expected to be delivered later. Nevertheless, the evaluation did not mince its words when it pointed out that at that point, three and a half years after the creation of the CETLs, and five and a half years after the policy was trailed, there was no recognisable effect on the higher education system, either through the increased incentives for teaching and learning, nor the impacts of investing in facilities for teaching and learning across English campuses.

n) At this stage, many CETLs have had little or no effect on institutional practice outside the immediate CETL beneficiaries.

http://www.hefce.ac.uk/pubs/rdreports/2008/rd08_08/rd08_08.pdf

The capacity of the Higher Education Academy to act as a co-ordinator between HEFCE and the CETLs, and to deliver these system shifting effects was called into question at this point. The HEA had also faced some questions about its own future as part of the deeper cuts facing the UK in the wake of the financial crisis. HEFCE decided in 2009 to abandon the long-running TQEF, which had funded much of the HEA activity, and to replace it with a teaching enhancement and student success quantum, allocated formulaically via the HEFCE block grant. This meant that HEA lost its funding for the Subject Centres, and therefore chose to abandon those in November 2010, and scaled back its support for the other directly funded programmes. Although there had been some aspiration that the HEA might be the

institution that could help to network and promote the sustainability of the CETLs after the expiration of their funding, it is clear that given the financial environment that they operate under, they are in no position to use the findings and materials generated through the programme to hit the policy's ultimate goal of system-wide change.

In December 2010, HEFCE appointed a set of consultants to undertake the final formative evaluation of the CETL programme. To date, there is no comprehensive data on what happened to the CETLs, and the materials and resources they produced. Most universities ensured that the CETLs at least survived until June 2010, the end of that academic year. But many have subsequently been closed, and indeed many started to experience staff departures from 2008 when it became clear that there was no long-term future for the CETLs. Notionally, in 2010-11, funding for CETLs has been mainstreamed into the HEFCE block grant, which meant that those universities that found it valuable to retain these centres would have the resources so to do. A recent survey of 15 CETLs found that half had completely disappeared, and half were being preserved in some modified, and potentially downscaled form (Turner & Gosling, 2010). What has emerged unscathed through that process are those CETLs which developed buildings which have now simply been integrated into the university estate. The extent to which they contribute to enhancing the student experience, and promoting excellence in teaching and learning, is extremely difficult to judge.

Lessons from CETLs on profiling around teaching

Seven years, and £350m (€400m) later, it is hard to conclusively point to evidence that demonstrates that they have created alternative forms of teaching excellence besides the research-led teaching model dominant in the UK before the amalgamation of universities and polytechnics. Regardless of their outcomes, CETLs offer an interesting experiment through which to understand a 'big bang' approach to stimulating profiling – the CETLs were 'too big to steer', and ended up being forced into an HE system that rearranged the CETLs to their own needs rather than *vice versa*. The most important elements of this case are:-

- The competitive model was chosen for purely political reasons without consideration of how the higher education system would react to it.
- The competitive model was seen as using competition to raise standards, which was necessary to justify a tripling of the student fee
- The need for a competitive model that the sector would accept led to the acceptance of the idea of 'research pedagogy' as an alternative to research-led teaching.
- The novelty of the idea of 'research pedagogy' made it impossible to set realistic targets for these centres without constraining the innovation they would need to survive.
- The first two years of the programme was dominated by a need to spend some time-limited capital funding which crowded out the time to develop content-based plans.
- Any possibility for the CETLs to achieve system-benefits disappeared when it was clear from 2008 that CETLs would not be continued or repeated.

- CETLs did not achieve a system-wide transformation effect but clearly had more nebulous benefits difficult to balance against the vast amount of committed resources.
- The most obvious remaining benefits of the programme are the buildings which were developed from the capital stream

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 A1: 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

The summative evaluation of CETLs is not due until late 2011, eighteen months after they formally ceased to be funded, and until that evaluation reports, it is perhaps premature to pass judgement on the success or otherwise from the CETL policy. What is clear is that given the sums of money that were involved in the policy, far more could have been delivered in terms of system transformation that was achieved in the period. An interesting example of this is given in looking at the number of institutions who have developed alternative career pathways for staff to become Associate and Full Professors based on pedagogic research and teaching excellence rather than teaching excellence. A paper from HEA & GENIE (a CETL at Leicester University) highlighted that reward and recognition policies which recognised alternatives career pathways to research-based teaching in allowing promotions had not changed sufficiently to be worthy of describing as a system shift, and certainly not one of the order of magnitude envisaged in the 2003 White Paper.

Table A2: Inclusion of teaching and learning activities in promotion policies

University group	Number of institutions providing data on promotion policies	Number of institutions with teaching criteria in promotions	Policies for lecturer/senior lecturer level posts	Policies for promotion to professor
Pre-92	25	22	22	9
Post-92	43	34	34	32
Russell Group	19	11	11	9
1994 Group	17	6	5	6

Table A3: Implementation of Policies

University group	Number of institutions with available data	Promotions at lecturer/ senior lecturer level with significant teaching and learning component	Promotions to reader/ professor level with significant teaching and learning component
Pre-92	11	32%	13%
Post-92	26	49%	41%
Russell Group	5	26%	8%
1994 Group	4	24%	9%

Source: HEA/ GENIE (2010)

It is possible to point to a number of critical decisions that were made throughout the process which led to a situation where it was not possible for HEFCE to use the CETLs to drive through a system shift in higher education, creating widespread acceptance and recognition for other kinds of excellence in teaching model:-

- The decision to use a competitive model for allocating funds rather than allocating them to all institutions with which the sector was more comfortable,
- Allowing CETLs a set of freedoms from monitoring to encourage flexibility rather than learning lessons of previous FDTL and TQEF funding rounds,
- Focusing the development of the CETLs in the first two years entirely on drawing down and using up the capital spending,
- A mismatch in expectations and powers between HEFCE and HEA around who was going to pull the CETLs together into a coherent element of the UK HE system.

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

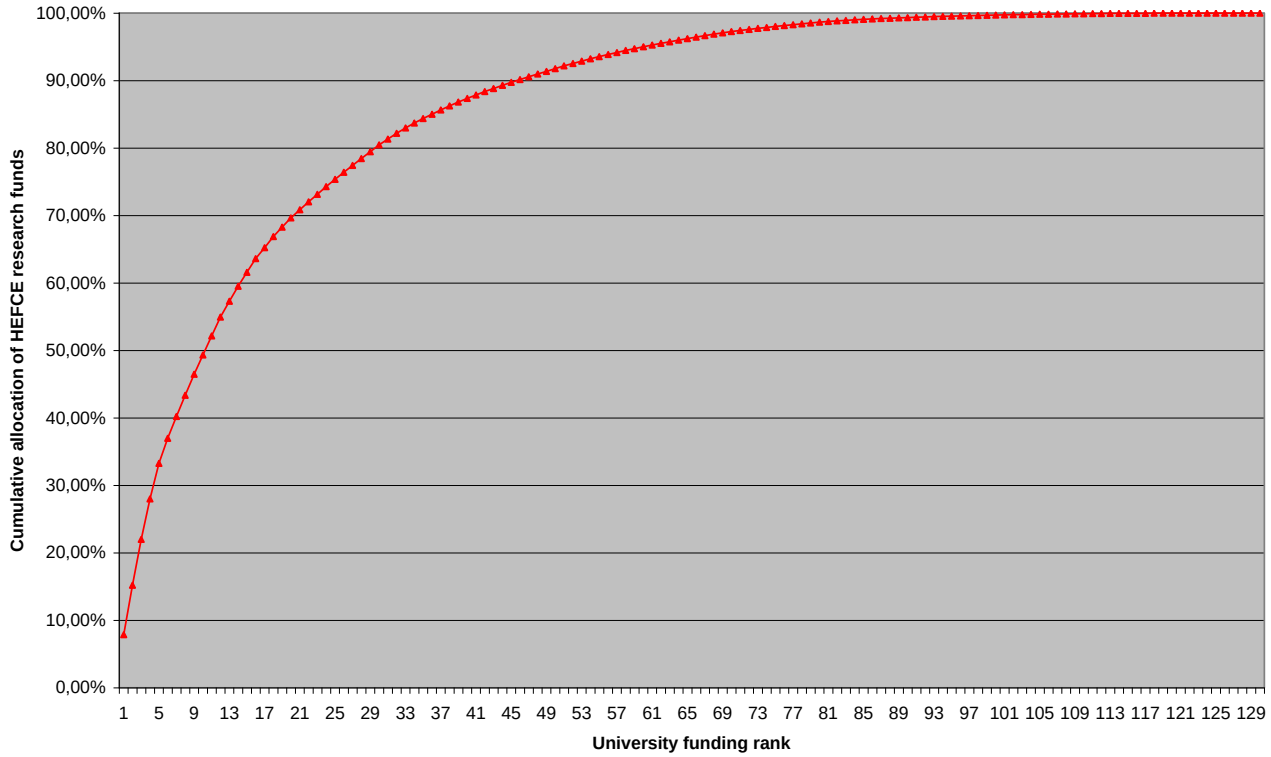
10% paid towards part-time FTEs by HEFCE, but this applies to all institutions rather than being targeted. UHI Millennium Institute has been established in Scotland to provide access to HE in remote rural areas, universities in Cornwall, Cumbria and Ipswich were created with the same rationale in England, 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.

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).

The distribution of HEFCE's QR funding to universities in England, 2010-11, by rank of QR funding



Area of profiling Dimensions of profile/ Institutional Category	Title University/ University College Title	Teaching Teaching informed by scholarship	Awarding Powers Research Degree Awarding Powers	 Taught degree awarding powers	Enrols Students 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	✓	✓	✗	✗	✓	✓	✓	✓
Colleges of Collegiate University	(✓)[1]	✓	✗	✗	✓	✓	✓	✓
Listed bodies: full degrees	✗	✗	✗	✗	✗	✗	✓	✓
Listed bodies, foundation degrees	✗	✗	✗	✗	✗	✗	✗	✓
Recognised bodies	✗	✗	(✗)[3]	✓	✗	✓	✓	✓
The Archbishop of Canterbury	✗	✗	✓	✓	✗	✗	✗	✗

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.