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Cycles of University Reform : Japan and Finland Compared

EDITED BY

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Introduction

University Reform: different paths to the same goal

Ian R Dobson & Fumihiro Maruyama

The papers in this volume were presented at a seminar held in Tokyo in February, 2011. This was the second *Seminar on University Reform* in Finland and Japan, an earlier session having been held at the University of Tampere, Finland in October, 2007.

University systems present an international enigma. In many ways, systems around the world are similar, but in other ways, they are also very different. Universities share common goals of being institutions of learning, institutions that undertake both disinterested basic research and highly focussed applied research, and institutions that engage with the societies in which they are situated. However, how universities tread the path towards achieving their goals varies considerably.

Higher education systems are by nature different from each other, having evolved to meet domestic needs, and each having unique origins and influences. It is possible to identify myriad similarities and differences between systems, and a number of binary or even dichotomous pairings that separate otherwise similar systems from each other. In introducing this volume, we will consider just two examples that set the university systems in Japan and Finland apart:

- unitary or binary systems;
- public or private systems.

The papers in this volume bring out these differences, and others.

Japan has a unitary system as far as the language is concerned; university, college and junior college are expressed by the same Japanese word, university or daigaku. On the other hand Finland has a binary system, based on 'equal but different' universities and polytechnics. The Finnish development of a binary system is interesting, because in is a

recent innovation (1991), and even though the role and expectations of the polytechnics was different from that of the universities, polytechnics now refer to themselves in English-language material as 'universities of applied sciences'. This terminology does not appear in documents produced by the Ministry of Education and Culture, nor on its website. It is a nomenclature practice that has occurred elsewhere in Europe (such as in Germany and the Netherlands).

Finnish higher education, on both sides of its binary divide, is tuition-fee-free. In the Nordic welfare tradition, education is perceived as a public good, and one that ought to be funded from public sources. Until the start of 2010, Finnish higher education was free to domestic and international students alike, but the new Universities Act (2009) now permits fees to be charged under limited circumstances to students from outside the European Union and the European Education Area. This is in contrast with the Japanese case, where more than 70 per cent of students pay higher tuition fees at private universities where average charge is 10,000 euro per year.

These two system-related matters spell out the differences between Japan and Finland, and these differences are made plain by the authors of the respective papers. Teiichi Sato, Former Permanent Delegate of Japan to UNESCO, simultaneously presents a history of Japanese higher education in his chapter entitled *Problems and Perspectives of Japanese Universities.* The chapter brings out the fact that societies value education and higher education, and discussions about the best ways forward are never far from governmental agendas. Such discussions and ruminations are part of public discourse in all countries.

Fumihiro Maruyama is a professor at the Center for National University Finance and Management, and is an well-qualified to describe the system of higher education funding that pertains in Japan. He describes the growth of funding, and provides evidence of the trends in investment and public support of higher education, and expenditure to cover university operations, research and infrastructure.

Evanthia Kalpazidou Schmidt is an associate professor and research director at the Danish Centre for Studies in Research and Research Policy, Aarhus University. In her chapter, she looks at Finland and beyond, by providing a summary of university governance and policies in the Nordic countries, particularly recent funding reforms and their effects on universities. A common theme has been a shift from centralised, highly regulated to decentralised, less regulated approaches, with changes towards formula and output based funding, based on performance indicators and increased competitive funding. The reforms, are intended to improve quality, productivity, efficiency and accountability, but they might also lead to institutions having an excessive focus on outputs, quantity instead of quality, politically prioritised areas and mainstream, low-risk research.

Motohisa Kaneko is a professor at the Center for National University Finance and Management, Tokyo. In his chapter, he examines the reform that led to Japanese national universities becoming incorporated entities in 2004. As he states, 'One of the key elements of the new scheme was the 'mid-term targets' to be achieved in the subsequent six years, which functions in effect as an contract between the government and each university.… As of 2010, the first cycle of this process has been completed'. He examines the intended effects in the original design, and compares 'the intended' with 'the actual'.

Finally, Timo Aarrevaara, Acting Professor at the University of Helsinki's centre for higher education governance and management (HEGOM), outlines the major reforms that have occurred in recent years in Finland. His chapter, *Oh Happy Days! - University reforms in Finland,* provides a description of both sides of Finland's binary system of higher education, including the current university reforms and polytechnic reforms that are proposed for the next few years.

We would like to thank all who participated in the seminar, including speakers Jari Gustafsson Finnish Ambassador to Japan, Dr Turo Virtanen (University of Helsinki), Professor Seppo Hölttä (University of Tampere) and Kensuke Mizuta(Tohoku Koueki Bunnka University), and all who attended. This second seminar will not be the last. Discussions on where and when to hold the third seminar are already being held.

Chapter One

Problems and Perspectives of Japanese Universities

Teiichi Sato

As many of us know well, the Japanese university system was dramatically reformed in 1947. Our system switched from the Humboldtian-type research oriented arrangement, which still attracts many researchers, to one structured on the American model. We know that European universities are also going to follow the American model through the Bologna Process, at least on its structure of three-cycle system, but I should mention that our immediate post-war change had not been well understood for at least 20 years.

Today, I will not refer to the discussions of the immediate post-war period, but I want to draw your attention to the many cabinet–level discussions that were held. These include the Ad Hoc Education Reform Council, which worked actively and intensively from 1984 to 1987; the National Conference on Education Reform in 2000; The Conference on the Rebirth of Education from 2006 to 2007; and the subsequent Meeting on the Rebirth of Education from 2008 to 2009. Through these efforts, many reforms were instigated. The revision of the Fundamental Education Act in 2006 was one of the most notable outcomes which was the first amendment after the original enforcement of the Act 60 years before. The new Act reflects the recent situation on the need for lifelong learning, confirms the aims and goals of university education, etc., and the most notably, it stipulates the government's obligation to set up the Basic Plan for the Promotion of Education.

Nowadays, universities are required to educate students with high-level knowledge and skills, and this expectation covers not only high-level knowledge of the specified subjects, but also generic skills such as problem-solving ability, critical thinking attitudes, and communication ability. These are traditional Anglo-Saxon views on competency, but I feel something is still missing. One of the typical elements desired is the ability to harmonise. We

need to take the opinions of others seriously, and after a thorough exchange of ideas, we might finally work out the best solution. That is our idea and belief.

It is very interesting that in 2009, on the occasion of the General Conference of UNESCO, Mr. Gurrìa, the Secretary-General of the OECD, made a speech on the importance of harmonising ability. I understood the context of his speech to be that in times of seeking innovation, we cannot break through using existing ideas by merely repeating what we have learned, and we need to interact with people from different fields to find new ideas that will lead to innovation. Thus, he claimed that we should be equipped with harmonising ability. This is not exactly the idea I had expected, but still, I am happy that this virtue, which has not necessarily been recognised as part of general competence, is now going to be emphasised.

1. Efforts to diversify the university

The expansion of the number of students who attend higher education institutions results in the diversification of higher education. The suppliers, namely universities, have not been sufficiently responsive to the diversified demands. Many countries tried to reform their education systems in 1980s and 1990s, and I gather these movements were preceded by a similar situation.

After these drives, in 1998, the UNESCO organised a 'World Conference on Higher Education'. This was a kind of consolidation work on the situation at that time, and led to a communiqué on the vision of higher education in the 21st century. This paper referred to some fundamental issues, for example, quality evaluation, challenges of science and technologies, management and financing, cross border supply, knowledge sharing, and other issues with which we are still coping. In 2009, the UNESCO organised a follow up meeting on higher education, and after summing up the progress in this 10-year period, proposed some ideas on the future of higher education, including the measures for reacting to the needs of innovation. These reports suggest to us the agenda we should tackle, and you might find it interesting to look at them, but at this moment, I would like to touch upon several issues that the Japanese universities are now facing.

2. Appeal for more sophistication

There are two aspects to the issue of sophistication. One is the request for maintaining high research standards, and the other is to aspire to cultivate high-level professionals. This is not a world of sports where the peak will become higher with more players and supporters. However, in our society, the peak does not become higher automatically, so, first of all, we

should cope with the issue of improving the quality of institutions, and then we need to endeavour to maintain the new levels.

As for the sophistication of the research standards, governments and universities have traditionally combined their efforts. In Japan, we are fortunate that we have a special act of parliament for the promotion of science and technology, and by this Act, the government plans five-year schemes for the promotion of them. The Cabinet-based Council for Science and Technology Policy decided on the next five-year scheme last December, in which the Council has requested that the government provide an investment of 25 trillion yen for science and technology within the next five years.

Activities for educating professionals are not yet well developed in this country, and this issue should be enriched further despite the relatively poor experience in our university system. We have started American style professional schools in some fields, but the reality is, they need to struggle against many difficulties. I strongly believe one of the crucial issues for the betterment of our higher education system is how we can implement this professional school mechanism in our society efficiently.

At the same time, we need to turn our attention to the progress of qualification systems in the labour world. The European Qualification Framework, together with the ongoing experience of the National Vocational Qualification awards in England, such are the cases we need to watch carefully, to see how they will be developed in the near future.

In addition, we should pay attention to the OECD's report of the country review of the Japanese higher education system. The review was conducted in 2006, and the report was released in 2009. They observed that our system is still deeply dyed with the traditional Continental European colour.

3. Ageing society

I think one of the big advantages that the higher education sector has, is the opportunities that arise from an ageing society. It is well known that Japan's rapid progress in ageing is one of the 'oldest' in the world. However, many European countries as well as some Asian countries, notably Korea, are in a similar situation. Perhaps many countries around the world will share this issue.

Under these circumstances, it is extremely important to make the utmost use of the advantages of the ageing society. We have finished providing our initial investment in their education. We need not construct new elementary schools, nor hire additional teachers for the newcomers. We have many human resources who completed their basic education, accumulated wisdom, and enriched their practice through experience. So, with a relatively

small investment, by utilising the lifelong learning system, we can refresh these people, who will have many chances of working in many of society's productive activities, bring us economic growth, and more over, in many cases, achieve individual satisfaction in their lives.

Now it is a time for higher education to move on to responding to these demands. With this advantageous situation, I would like to emphasise the importance of enriching the lifelong learning system at the higher education level. Besides, it is far more desirable to establish a holistic policy through the fields concerned, such as education, economic activities, labour issues, social security system, and preferably medical affairs.

4. Career education and liberal arts education

As we have seen, especially from the aspect of levelling up the quality of education, career education has become one of the crucial issues in education. Many countries have already endeavoured to enrich their education from this perspective. This is also the case in Japan, and the Ministry has set necessary revisions of the 'National Curriculum Standards' for elementary and secondary school education. Moreover, last year, the Ministry revised the 'University Education Standards', by which universities are now required to prepare adequate curriculum and necessary arrangements on this issue.

Nevertheless, the problem is that the common understanding on the contents and useful measures for career education is not still well matured. We are struggling to find out what should be taught and how it can be taught effectively. The general sense of career education could be said 'to cultivate students with the ability to find and decide on the course of their lives by themselves, together with the ability to cope with various problems with a flexible and strong will ', or something like that. However, we also need to maintain our efforts to deepen our understanding of this issue, and to find the best ways to enlighten it.

Connected with this agenda, we should pay attention to the OECD's 'AHELO' project. In particular, I am personally interested in how they can evaluate the outcome of generic ability. For the first point, what should be included in 'generic ability'? As I mentioned before, traditionally three elements, namely problem solving ability, critical thinking attitudes, and communication ability are understood to be the main constituents of competence, but I want to reiterate my belief that harmonising ability can be one of the important necessary ingredients for bettering our lives. Second, how should we evaluate this competence is another issue. In planning this project, we still need serious consideration of these issues. Having said this, I advocate the legitimacy of this project, because of the merits of developing this valuable attempt. This trial can be said to be a highly valuable effort to secure a better higher education system throughout the world.

I want to note that one of the difficult university-related questions in Japan is how to select the applicants suitable for their education. The point is that there exists a discrepancy between the expectations of applicants for university places and the services provided by institutions. Of course, one of the serious reasons for this phenomenon is that, in many cases, at the time of application, students cannot decide about their explicit will for their future lives. So they tend to choose their institutions according to their academic scores. On the other hand, universities also tend to choose their students mainly according to their academic scores at the time of their entrance examination. In our society, equity is highly respected, and at the same time, the academic score is perceived as being the best way of ensuring equity in entrance examinations. This belief is so strong that universities almost abandon their attempts to discover better measures for selection. I think we should try to find a way to narrow the expectations gap between applicants and universities. The enrichment of career education could be one of the useful contributions to this issue.

The other item that I want to mention here is the issue of liberal arts education. When we changed our university system after the World War 2, we merged the study of professional subjects of the old university system and liberal arts-related education at the stage of the old high school system, into four-year undergraduate courses. Since then, how to keep liberal arts education has been one of the issues in our university system. In particular, in recent years, to cope with the needs of professional education which have become more and more complicated, liberal arts curricula have been obliged to shrink their school hours. Of course, what should be included in liberal arts in the present university education is not an easy question to answer, nevertheless, it is also clear that we need to prepare for these diversified and complicated issues; hence we need to be equipped with wide and basic knowledge and ideas to tackle the divergent professional requirements. As was demonstrated in the aforementioned Mr. Gurrìa's words, this is also the problem of the coming of the innovation society. In that sense, I am eager to know what European universities, where the students are supposed to finish their liberal arts education during secondary education, think about this issue.

5. Cross-border provision of university education

The progress of globalisation has had a significant impact on education. The educational reforms of the 1980s, which occurred simultaneously throughout the world, came from a common situation: the expansion of educational activities. Nevertheless, they were not associated with the others' reforms; they were reforms based on their internal requirements and for their own countries' sake. However, as we can see in the case of the UNESCO world conferences, the Cologne G8 summit in 1999, and Saint Petersburg G8 summit in 2006,

education matters have become deeply entwined with the international framework. The establishment of the World Trade Organisation is one of the reasons that led to this situation. This new framework on trade included 'service trade' in their activities. Unlike cultural trade, for which France made a strong claim to set a cultural exception, but failed to do so, there was no discussion on the education trade issue. But in around 2002 when the USA and Australia began to insist strongly on the free trade principle, many countries recognised this issue for the first time.

There could be an argument that education services should be treated differently from trade in material, but it was too late to claim so, because we have been sitting around the free trade table since 1995. Hence, we started seeking measures to protect learners from low quality education services, which resulted in setting up the guidelines for the protection of the quality of cross-border provisions of higher education, by the UNESCO and by the OECD. The UNESCO also started to establish a worldwide clearing house to find out the status of the providers and the kind of services they provide to learners. Of course, the guidelines are not a treaty, and have no compulsory nature, but as a kind of soft law, it provides us with good practices to keep up the quality of the cross-border education services.

The issue of cross-border provision of higher education comes up with how to settle the systems on quality assurance, mutual recognition of the credit or degree. America's accreditation system is well known to us, but in Japan's case, we establish an assurance system at the time the institution is opened, and an evaluation system after the establishment of the institution is still developing. As early as 1946, a foundation for university education standards was established, and one of the objects of which was to act like US accreditation bodies. However, the intention was hard to accomplish, and we needed an additional 50 years for the prevalence of understanding on the importance of evaluation of the outcomes.

In that sense, I am watching carefully how the Bologna Process will lead the environment of evaluation among European universities. They have a long history of establishing various systems such as ERASMUS, ECTS (European Credit Transfer System), ENQA (European Association of Quality Assurance) and so on.

I said watch carefully, because, by my humble observation, the Bologna Process seems to be a kind of political process, and maybe Europe needs substantial unification between the higher education institutions themselves. Anyway, the establishment of the European Higher education Area was officially declared, and we look forward to seeing its progress toward the 2020 target year which accords with the Lisbon Declaration.

Looking at the Asian situation, we are far from the establishment of such a unified foundation. We have a credit transfer system called UMAP, but it is not yet so popular, and we have an Asian area treaty on the mutual recognition of degrees, instructed by the UNESCO

treaty, but Japan is not a member. We have just established common a evaluation system for the Asian universities, but it has just begun its activities. Nevertheless, establishing a holistic system for better cooperation between Asian universities has been becoming a high hope. This year, our government made a budget plan for the promotion of interchanges of university-level activities within our region.

But here, I would like to express my concern about the tendency of running into regionalism. The world of universities should be a worldwide one, as the word university tells us well. To strengthen the cooperation within the region is important, but it should never mean locking ourselves in the region. The advantage of cross-border exchanges, both by research and education activities, should be widely shared throughout world.

6. Knowledge management

Here, I just wanted to draw your attention on the necessity of knowledge management at universities. The word ‘knowledge society’ or ‘knowledge based society’ has been discussed for a long time. Beginning from the wording of Economist Peter Drucker in his book titled ‘The Age of Discontinuity’, the word itself has become so popular. But as was concluded in the World Communication Summit in 2005 organised by the UNESCO and the ITU, the appropriateness of the word has been widely accepted, but the understanding of the contents of the word has never be commonly recognised. However, we all know the importance of knowledge based activities. What I want to emphasise here is, while the notion of knowledge management is studied quite well by the business world, this action scarcely happened in universities, which is the place for the production of knowledge. I look forward to universities developing such endeavour further.

Chapter Two

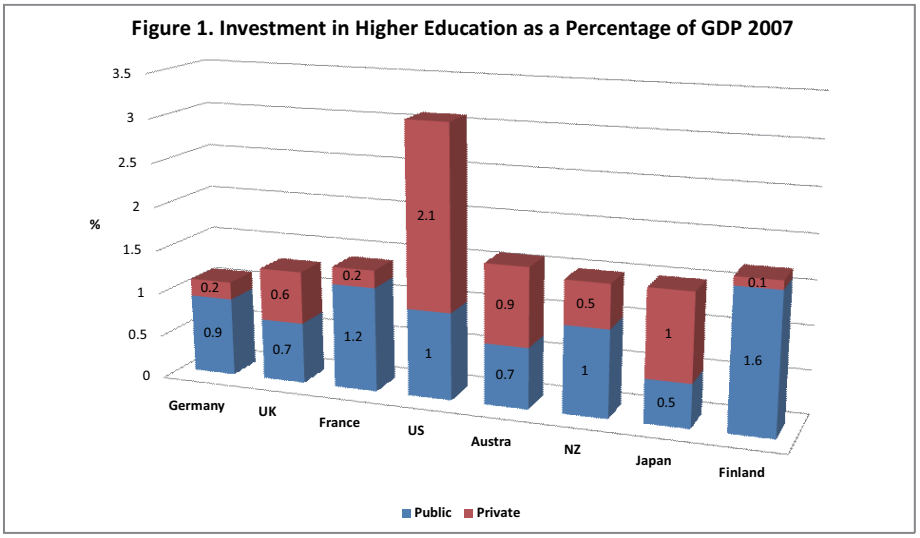
Financing Universities in Japan

Fumihiro Maruyama

1. The Extent of Public Expenditure on Higher Education

In Japan, more than 50 per cent of 18 year olds advance from high school to college or university and more than 75 per cent of those young people attend some type of higher education institution. There are 2.8 million students enrolled in the 86 national universities, 89 other public universities and 580 four-year private universities. These figures are not necessarily small relative to the higher education populations of other developed nations, and total expenditure on higher education as a percentage of GDP is 1.4 per cent, which is about the average of OECD countries (Figure 1). However, public expenditure on higher education relative to GDP is only 0.5 per cent, which is the lowest among OECD countries (OECD, 2008). It is private expenditure that pushes total expenditure on higher education up to the OECD average. This distribution of higher educational expenditure is different from that of

Figure 1. Investment in Higher Education as a Percentage of GDP 2007



other countries, especially Europe where most of the cost of higher education has traditionally been taken from the public purse. The percentage of total expenditure in the cases of the UK, France and Germany is almost the same as that of Japan, but public expenditure in these countries is about twice that of Japan (UK 0.9 per cent, France 1.1 per cent, Germany 0.9 per cent).

Although public expenditure is the lowest among the OECD countries, annual expenditure per student is essentially above average. As shown in Figure 2, the annual cost of higher education per student in Japan is US$12,326, which is almost the same as in the UK (US$13,506), Germany (US$12,446) and France (US$10,995). Likewise, the cumulative expenditure per student over the average duration of higher education is the same among the four countries. In Japan, students continue to stay at college for 4.07 years on average, with expenditure for the duration costing US$50,167, compared to US$66,758 in Germany (average duration 5.36 years), US$58,654 in the UK (4.34 years) and US$44,202 in France (4.02 years). Thus, compared with these countries with a similar level of total expenditure on higher education per student, students in Japan are uniquely supported by private contributions to higher education spending rather than public ones.

Figure 3 shows the longitudinal change in public expenditure on higher education as a percentage of GDP since 1960. Public spending was recorded at lower than 40 per cent on three occasions: in the early 60s, early 90s, and at present. After a rather stagnant early 70s, it reached a peak—at over 57 per cent—in 1979 before returning to under 40 per cent in the early 90s and remaining stable thereafter. The lack of growth in government revenue due to the economic slump experienced since the early 90s and the government's priority shift towards social security expenditure such as medi-care and pensions might be serving to maintain public expenditure on higher education at the present level. This is in contrast with the increase in public expenditure to social security as a percentage of GDP, which has risen from 17 per cent in 1995 to 27 per cent in 2009.

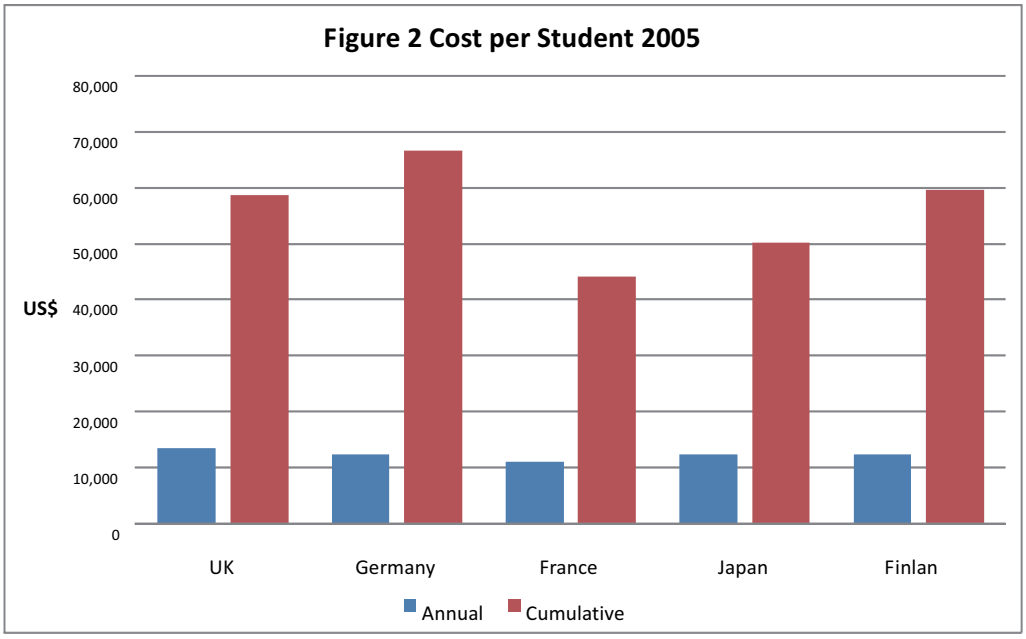
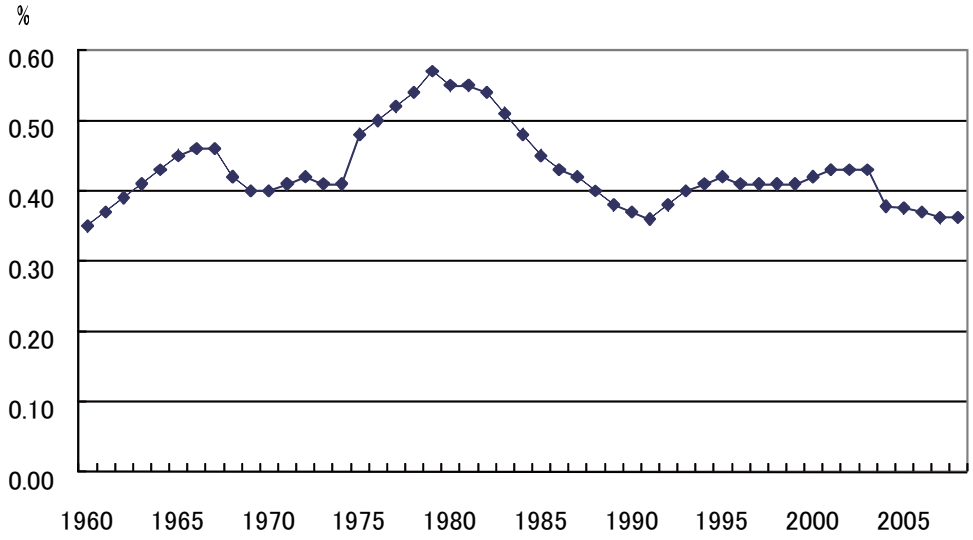


Figure 3 Public Support as a Percentage of GDP



There are five types of government expenditure on higher education in Japan;

- the operational grant to national universities, which is directly granted to institutions by the Ministry of Education, Culture, Sports, and Technology (hereafter MEXT);
- a subsidy for capital investment in the national universities which is provided by both MEXT and the Center for National University Finance and Management

(CNUFM), a semi-governmental organisation;

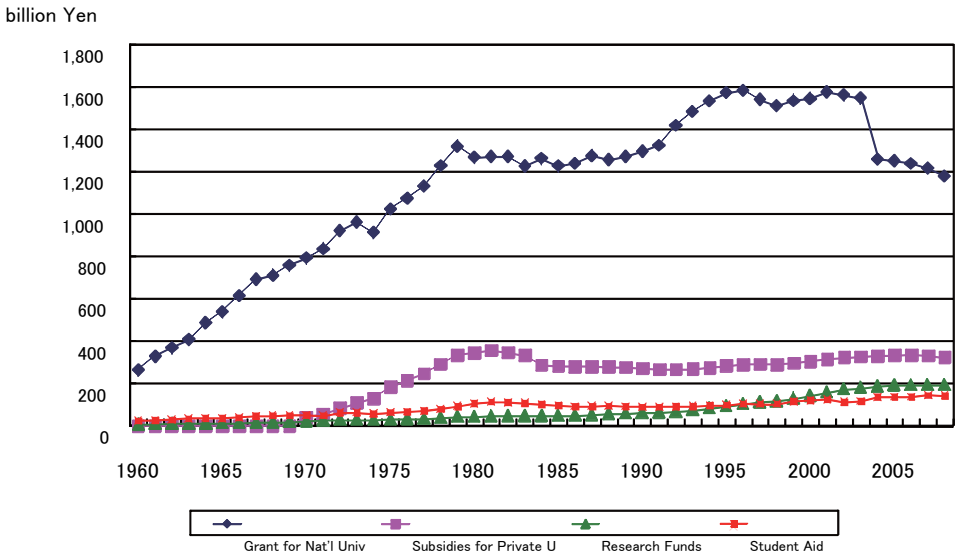
- research funds provided through the Japan Society for the Promotion of Science (JSPS; this is also an independent administrative corporation) and MEXT;
- the Subsidies for Current Expenses for Private Universities which are allocated by the intermediate body, the Promotion and Mutual Aid Corporation for Private Schools in Japan; and
- student aid provided by the Japan Student Service Organization, which is also an independent administrative institution.

Figure 4 shows the longitudinal trends in these expenditures since 1960 except capital investment for national universities. As can be seen, the operational grant to national universities accounts for the largest part of public spending, more than 60 per cent of the total expenditure. While this percentage increased in the 1960s and 1970s when higher education as a whole was continuously expanded, it has not grown further except in the late 1990s and early 2000s. The second largest part of public spending is the subsidy to private universities, which grew rapidly in the late 1970s but has been stable since the 1980s. Over this 50-year period, the number of private universities has grown, as have the number of students they accept. As a result, public support per student at private institutions has decreased even though total public spending to private universities has been stable. Both research funds and student aid have shown a constant increase over the 50-year period.

2. Operational Grant to National Universities

The largest part of public expenditure to higher education is the operational grant to national universities, which also covers personnel costs and facilities maintenance. It accounted for US$12.3 billion and comprised around 56 per cent of total revenue of the 86 national universities in 2005. This operational grant can be categorised as a ‘formula-based’ budget allocation since it is allocated to institutions according to the government’s calculation which includes objective indicators such as number of students, number of faculty members and square metres of campus (for details of the calculation, see Mizuta, 2008).

Figure 4 Public Expenditure on Higher Education: 2008 Price



The operational grant as a method to allocate budget to national universities was introduced in 2004 as part of the reform of national universities known as the 'Corporatisation of National Universities'. Prior to the system reform, the national universities were one of many government agencies and whose regulations and other legal constraints were often pointed out in order to prevent the universities from behaving autonomously. Upon corporatisation, each national university was given independent corporate status, empowering it to act more autonomously and manage its operations more efficiently and with the aim of the reform of activating research and teaching.

Since this reform, which instilled the concept of a contract between the government and university, the Minister of Education mandates and prescribes the different mid-term targets put forward by individual institutions across the country, and all universities must report and make public their strategic plans and targets. The term lasts for six years. The first mid-term began in 2004 and ended in 2009. The second mid-term then began in 2010. The most controversial issue for the national universities is the reflection of institutional performance for the first mid-term in the grant allocation for the subsequent mid-term. In other words, a certain amount of block grant for the second term will be determined taking into account the evaluation result of the university's performance in the first term in the areas of teaching, research and management. The National University Corporation Evaluation Committee, whose members are mainly academics, is engaged in the evaluation. Thus, from the second term, the 'formula-based' block grant also has the nature of performance-based funding.

The national universities have been able to retain revenue from tuition charges since 2004; under the former system the tuition fees paid by students and other miscellaneous revenue collected by the university went directly to the government's Special Account of National Schools. The national universities can also make a surplus and carry it over into subsequent years. Each of 86 national universities can make a decision on internal allocation of the grant after MEXT calculates and delivers the grant to each institution. This is now, therefore, a discretionary fund for individual institutions, whereas before corporatisation it was an itemised budget in which money was earmarked for spending, all of which should be spent within a single fiscal year. Once the university receives the grant, it can use its own discretion as to how the monies are spent within its mid-term plan on teaching, research, social services and management including campus maintenance.

This operational grant appears to be positively evaluated by campus leaders. CNUFM conducted a questionnaire survey of university presidents and administrators in 2009 and the result suggests that presidents of the national universities tend to find that block grant funding with discretion positively influences the efficiency of university management, teaching and research activities, and provision of university social services. The vice presidents of finance also tend to prefer the present block grant system owing to the discretionary freedom permitted and the ability to carry over surplus into following years, helping them use their budgets more efficiently and effectively (CNUFM, 2009).

Although the universities indicated their preference for the discretionary grants under the new system, central government has been decreasing the total grant amount by one per cent annually since 2004 due to the financial difficulties it faces; its government bond liabilities exceed 170 per cent of GDP, the highest among developed countries. Moreover, the Ministry of Finance, which has cut budgets in every sector, naturally desires budgets to be used efficiently and effectively, and prefers competitive and project-based funding to the basic grant system such as the operational grant to national universities, which is allocated annually based on formula calculations without application or request. The relevant committees of both the Ministry of Finance and central government tend toward competitive and project-based funds as stimulators of teaching and research activities at the national universities.

3. Research Funds

In most national universities, faculty members are apportioned research funds from the operational grant through university administration. Around 16 per cent of the operational grant is reported to be spent on research, not including the personnel costs for faculty members and researchers. In addition to the grant from the university, faculty members can

apply for and secure research funds from several sources. The largest amount of research funding is available from the Grant-in-Aid for Scientific Research Programme, which has a 90-year history. MEXT and the JSPS provide these grants-in-aid, which cover a wide range of research forms. They cover studies in the humanities by a single researcher, through small research studies which will be completed within one year, to large-scale studies in natural or medical sciences conducted by international research teams which often continue for a number of years and require huge amounts of funding. Not only national university faculty members but also researchers in private universities, non-profit organisations, public institutions and even researchers in private industry can apply for these grants-in-aid. The success rate for receiving research funding is not necessarily high, at less than 20 per cent of all applications made. The applications are screened and 'winners' selected through peer review, and then granted. Therefore, more than 80 per cent of the grants are distributed to faculty members and researchers in national universities, which focus more on natural sciences, engineering and health sciences and are research oriented.

As Figure 4 shows, the total amount available for these grants-in-aid has substantially increased over the last decade; US$1.4 billion in 2000 to US$1.9 billion in 2008. The total amount of research funds available, including monies from other competitive project-based funds, exceeded US$3.5 billion in 2006. As remarked earlier, the share of these funds to the basic operational grant in public funding to both public and private institutions has grown, from 14 per cent in 2001 to 27 per cent in 2007. Given the fact that the operational grant is decreasing while the grants-in-aid are increasing, some university leaders are strongly encouraging their faculty members to acquire grants-in-aid and sometimes provide awards to grant recipients by offering additional research funds from the university's discretionary funds. University administration also benefits from the grant-in-aid awards since 30 per cent of the grant as indirect costs are automatically attached. In 2007, 612 universities earned US$250 million as indirect costs allocated to the grant-in-aid programme.

The governments of European countries implement policies to enhance the international competitiveness of universities (Amaral, 2009) or to strengthen economies through university research. In the UK, research funds are concentrated within a small number of universities. In Germany, the government passed the bill, 'Excellence Initiative', in 2005 to establish up to ten selected universities as competitive research and training institutions. Japan's MEXT has also provided similar project-based funds to both research and teaching activities. The Centers of Excellence programme (COE programme), which was implemented in 2002, provides research funds to reward and foster world-class research universities in Japan. In 2005, this programme supported 273 research bases at 91 universities. The programme fund has been increasing year on year and amounted to US$615 million in 2007. The outcome of research

funded by the COE programme is subject to third-party evaluation and its results are disclosed. The fund is partially curtailed or even nullified in the subsequent research term by unsatisfactory results. In the area of teaching, MEXT started several Good Practice programmes to improve teaching practice in universities (GP programme) in 2003.

4. Capital Funds for National Institutions

During the expansion era of the 1960s and 1970s, new campuses were opened and new campus buildings and other facilities were constructed across the country. Almost 40 years later, most of these buildings and facilities have become decrepit and obsolete, and require rebuilding or renovation. Both public and private universities are now facing the problem of how to secure capital funds for such work. This can be viewed as a legacy cost of the rapid economic growth and the same is true about infrastructure, highways, bridges, large comprehensive hospitals, the high-speed train system and public housing facilities in metropolitan areas.

Private universities receive public subsidies to fund their capital development, although the amount is quite small relative to the subsidies received for current expenditure. They manage to build new campus buildings and renovate others through use of savings, loans and donations. Private universities mainly concentrate their activities on teaching in the humanities and social sciences rather than in the natural sciences, engineering and health sciences, on undergraduate rather than graduate education, and on teaching rather than research, and thus need fewer capital funds for large-scale and high-cost facilities and equipment than the national universities. In addition, most private universities have reserved funds for the depreciation of their own buildings and other facilities. Specifically for campus renovation, private institutions can make use of lower interest loans from the Promotion and Mutual Aid Corporation for Private Schools of Japan, a semi-governmental agency, as well as loans from commercial banks.

The depreciation of national university facilities is recognised and registered in the financial statement of each university. However, none of the universities hold back funds for facilities development since it is still considered to be the government's responsibility even after the universities acquired autonomous and independent corporate status (Shibata, 2008). The sources of capital expenditure for the national universities are mainly Capital Development Funds from MEXT and loans from CNUFM. Capital Development Funds are financed from national construction bonds, which are issued in a somewhat haphazard manner every year. The CNUFM provides a loan programme for constructing university hospitals through use of the government's Fiscal Investment and Loan Programme.

Based on the national universities' budget request applications, MEXT determines the priorities for allocation of the Capital Development Funds in consultation with a third party. In 2008, only 12 per cent of the total requests for funding of construction and renovation projects — amounting to US$0.4 billion — were selected to receive funding for refurbishment and construction of new facilities. This is around one-quarter of the total value of the annual depreciation of all facilities owned by national universities (Shibata, 2008). Since the universities are not sure whether their applications will be accepted and fully funded, their strategic plans are sometimes delayed or unachieved.

National universities receive their operational grant for current expenditure on the one hand and capital funds for capital expenditure on the other. They can forecast the approximate amount of operational grant to be received and take this amount into consideration when implementing their goals and plans. However, it is more difficult for them to predict the amount of capital funds that can be acquired because the source of these funds is unstable. This dual funding system causes annoyance to national university management. National universities must make their mid-term goals and plans for teaching and research, but in the case that rebuilding or renovation work is a necessary condition to achieving these goals and plans, they might fall short on the planned achievements unless the university is fully funded by the Capital Development Funds. Alternatively, the national universities must unwillingly provide ambiguous statements of their goals and plans, which need financial backing. This need for obfuscation is one of shortcomings of the present funding system for national universities.

5. Public Subsidies for Private Universities

Before the 1970s, private universities received no government subsidies, and their main sources of revenue, even to the present day, are the tuition and other fees received from students. In the 1960s and early 70s, private universities increased their revenue by raising tuition on an annual basis and accepting more students than their registered capacity permitted by the Ministry of Education. However, student unrest which was spreading across the country at that time prevented the private universities from raising tuition fees since student political groups were typically opposed to the tuition hike. However, many private institutions were struggling with financial deficits caused by soaring personnel costs and large debts incurred from rapid and huge capital investments. Private universities also faced the problem of quality of teaching resulting from their acceptance of a greater number of students in excess of the standard teacher-student ratio prescribed by the Ministry of Education. Private universities, often through the associations of private universities, asked for public institutional aid from

the government in order to mitigate their financial difficulties and to halt the student movement opposed to increased educational fees, based on the argument that private higher education contributes to the public good.

In 1975, in the face of such requests from the private university associations and considering the issues of a tuition hike, financial struggles and teaching quality, central government decided to subsidise private universities for the first time in Japan's history of higher education. The legislation, 'Promotion and Subsidization for Private Schools' (The Private School Promotion and Assistance Law), stipulated that the government could subsidise up to 50 per cent of the current expenditure of private universities through the Promotion and Mutual Aid Corporation, a quasi-public body. However, the level of subsidy has never reached 50 per cent even in the peak year of 1980 when subsidies reached 30 per cent of current expenditure. At present, private universities receive about 12 per cent of expenditure, a figure which has changed little in the last decade.

Public subsidies for private universities are supposed to have three purposes: to improve the quality of education in private institutions; to reduce household burden in relation to higher education costs; and to improve the financial management of private universities. There is consensus for the first two purposes but not for the last, which remains controversial. In addition, some argue that public support for private institutions violates Article 89 of the Constitution of Japan, which prohibits public spending on religious, charitable and educational organisations not under public control. Following policy implementation, subsidies for private universities have been shown to have improved educational conditions (the student-teacher ratio gradually decreased from 31.5 to 1 in 1975 to 24.6 to 1 in 1985) and financial management of the institutions (staff salaries have been improved). Despite private universities receiving public subsidies from the government, tuition fees have never been cut.

There are several possible explanations for the tuition fee hike that occurred at private institutions, which will be discussed elsewhere in more detail. However, briefly, the Accounting Standard for School Juridical Persons Japan (the Accounting Standard for Private Schools) might be one such cause. The special accounting system, the Accounting Standard for Private Schools, was introduced in 1971 at the initiative of the Ministry of Education and has been adopted only for private institutions. This accounting standard, while unique, remains controversial. It is designed to improve the financial independence of those private institutions that consistently experience financial difficulties. In this system, the concept of transferring the Basic Fund, which functions as an augmentation of endowment, is somewhat peculiar and rarely seen in other accounting systems. There are four types of Basic Fund: fixed assets for academic activities already purchased; fund reserves for future acquisition of fixed assets for education facilities; fund reserves for scholarship and research; and preserved assets

for operation (one-twelfth of annual current expenditure) in certain periods.

The accounting system encourages the reservation of funds that are expected to contribute to the financial strength of the private universities so that they can continue to provide higher educational opportunities to the population at large. Private institutions can transfer a portion of revenue to the Basic Fund before finalising the balance. The amount transferred is completely at the discretion of the institution. In 1980, the ratio of transfer from revenue to the Basic Fund rose to a staggering 25 per cent, but recently decreased to less than 15 per cent (Morozumi, 2005). After deductions from the Basic Fund, institutions can finalize their balance and determine whether they are in the black or red in a certain fiscal year. Institutions can have no net surplus because total income is computed after deducting the transfer from the total revenue. When revenue exceeds costs, private universities initially make a transfer to the Basic Fund so that they can finalise their balance while reserving profits in the Basic Fund. Accordingly, the net surplus or deficits in the statements of income and expenditure of private institutions should be interpreted with caution. The accounting system allows this manipulation of the accounts to help institutions have appropriate reasons for raising tuition fees and suppressing wage increases, enabling the private universities to insist that they are not in a satisfactory financial situation even if, in reality, they are. Private universities are classed as non-profit organisations but reserve their ‘profits’ in the Basic Fund.

Although the teaching and research performance of private universities are never evaluated, they are financially audited and the financial statements must be submitted to MEXT. If the financial conditions are judged to be not viable, the subsidies will cease or be reduced.

The population of 18-year olds has declined by 40 per cent over the past decade or so, from more than 2 million in 1992 to 1.2 million in 2009. Private universities that cannot successfully attract a sufficient number of students are facing financial difficulties. This has placed MEXT in a difficult position implementing private higher education policy: should subsidies be kept from institutions with fewer students than the capacity, when they are clearly not fulfilling their social function properly by failing to meet current student needs? Or should subsidies be offered to financially weak institutions with fewer students in order that they can continue to provide higher education opportunities? As it stands now, the Mutual Aid Corporation does not offer subsidies when the number of enrolees is less than 50 per cent of the designated student capacity, and it provides a special subsidy programme to revitalize financially weak private universities with fewer enrolees.

6. Student Aid

Until the mid 1970s, tuition fees for the national universities were kept low, at US$120 a year, in order to attract academically outstanding students who were expected to become future national and local leaders in various fields. This policy contributed, therefore, to the provision of higher education opportunities for bright students from less affluent families. However, this social contribution was limited by the national universities recruiting only a restricted number of such students. In fact, it has mainly been the private universities that have provided higher education opportunities to students from various family backgrounds, through use of the grant-type scholarship programme of a non-profit foundation. However, the amount granted has been quite small. Thus, there is a structural contradiction in that private universities charging higher tuition fees have been functioning to provide higher education opportunities for the masses while a smaller number of students learn at the less expensive national universities. In this contradictory situation, reducing the difference in tuition fees between national and private institutions (estimated to be a ratio of 1 to 6 in the 1960s) has been a political issue for a long time.

To close this gap in tuition fees between the two sectors, the first policy the Ministry of Education adopted in 1975 was the provision of institutional aid to private universities instead of individual aid through scholarships. This policy did not work well however, partly because the private universities chose to spend the subsidy on improving teaching quality rather than lowering tuition fees and partly because the amount of subsidy was too small to decrease the tuition fees. This meant that the tuition fee gap continued to exist.

From the late 1970s, the policy of low tuition fees for national universities changed to a more equal charge between the national and private universities, and the government adopted a policy of raising tuition fees for the national universities. Tuition fees have risen substantially from US$360 in 1975 to over US$5,000 in 2008. Thus, the tuition fee gap has been successfully reduced. The difference in the ratio of tuition fees between the national and private universities has improved from 1 to 5 in 1975 to 1 to 1.6 in 2008. Although the gap has clearly been reduced, the raising of national university tuition fees has been criticised because it impinges on the opportunities for higher education and, more importantly, it has affected the tuition fees private universities which determine their own tuition fees by taking into account the tuition fees of national universities.

At the same time, the government started a student aid programme in order to compensate for the higher educational burden on households. Thus, the previous policy of ‘‘lower tuition fees and less student aid’’ has changed to one of ‘‘higher tuition fees and greater student aid’’. Student aid is made available mainly by the student loan programme provided by Japan

Student Services Organization (JASSO). There has been strong criticism of JASSO's policy of expanding the student loan programme while abolishing the ex-existed grant scholarship programme which is considered to have more robustly promoted college education for students from less affluent families. In 2008, approximately 1.2 million students—or 40 per cent of all students—are using the programme and the loan amounts to a total of 982 billion yen or 9.5 billion US dollars. There are two types of loans available under this programme: one is an interest-free loan and the other is an interest loan whose rate is dependent on market conditions and is set at less than three per cent at maximum. Students who wish to apply for the former loan must achieve a certain GPA standard at high school and there is income contingency in both types of programme. The student loan programme is sourced from Governmental General Account expenses, credited repayments from student borrowers, Fiscal Loan Funds and Fiscal Investment and Loan Programme Agency Bonds.

7. Intended and Unintended Consequences of the Shift in Funding Allocation

Public expenditure on higher education cannot be expected to increase easily due to the nation's protracted economic slump and the shift toward an aging society. Higher education is no longer a political priority ahead of economic recovery, employment, medical/nursing care and pension plans. Therefore, securing the amount of as well as inventing new the method of allocation for public funds to higher education remains an important and critical policy issue to pursue.

The recent trend in public funding can be described as ''from institutional to individual aid'' and/or ''from basic grants to competitive and project-based grants''. The government seems now to be shifting the methods of public funding toward individual aid by providing funding directly to researchers, research teams and students and away from institutional aid such as operational grants for national universities and subsidies for private universities. The basic funds that institutions are automatically given have been decreasing and institutions now have to make clear compensatory efforts by acquiring other external funds, most of which are acquired competitively. The government also emphasizes 'selection and concentration' in its allocation of budget, selecting and concentrating on specific institutions, research teams, researchers and study fields.

This shift in funding allocation intentionally creates winners. Those who benefit most are the research-oriented universities which have a long tradition and reputation in outstanding research and study fields and which can attract bright young scholars and catch the attention of industry and both central and local governments. Following the shift in allocation, it is these institutions and study fields that can receive more funds. Unintentionally however, this

shift in funding also differentiates the losers from the winners. Local universities—either national or private—which tend to lack sufficient human as well as physical capital suffer most and are more likely to lose basic funds for teaching and research. Some study fields such as philosophy, history, archaeology and other humanities suffer from keeping research funds, and non-money-making study fields experience difficulties obtaining administrative and other support.

This change in the funding system also creates winners and losers on campuses themselves. Professors in revenue-making study fields are winners and earn more research money from campus funds. But, at the same time, they might be losers: they lose more research time than before because they must spend more time preparing applications for research funds, being involved in the peer review process of judging research applications and expending energy on preparing reports on research evaluation for not only academic but also administrative purposes. In the good old days when professors were provided with sufficient basic funds, they could be less involved in such activities.

Another shift in public funding is 'from lower tuition fees and fewer scholarships' to 'higher tuition fees and more scholarships'. Heavy household burden with respect to the costs of higher education has been a critical issue over the long term, especially for families with students enrolled at private universities. This shift will serve to impinge still further on equal educational opportunities for higher education in the future. Opportunities for higher education have historically extended from students from richer families to poorer families. Now, more than 50 per cent of youngsters attend colleges and universities, which means that higher education institutions are accepting more and more students from less affluent backgrounds. It is doubtful, therefore, that the present policy of 'higher tuition fees and more loan-type scholarship' will be effective for promoting equal opportunities for higher education. Indeed, one study suggests that as lower income families are more likely to avoid future debt, the availability of loan-type scholarships will not improve the possibilities for students from such families to attend college or complete their college education.

Finally, it should be pointed out that the amount and methods of allocating capital budget for national universities are hot political issues. Although national universities have been given autonomous status, they cannot develop their own campus planning as far as building construction is concerned. National universities by themselves cannot reserve capital investment sources that are totally under the control of MEXT. Even if MEXT were to undertake campus planning for all of the national universities, the amount of capital funds needed would hardly be enough to renovate or create campus facilities with advanced earthquake-proof construction.

Glossary

Accounting Standard for School Juridical Person Japan (the Accounting Standard for Private Schools) was stipulated by the Ministry of Education in 1971. The School Juridical Person who receives Subsidies for Current Expenses for Private Universities must prepare the statement of income and expenditure, the cash flow statement, and the balance sheet according to the Accounting Standard for School Juridical Person.

Capacity of student number or **capacity of enrolment** in both national and private institutions is stipulated by MEXT. The Operational grant to a National University is calculated on the basis of the capacity number; thus, accepting students over the capacity has no benefit as far as the grant is concerned. Acceptance over the capacity at private institutions is subject to a curtailment in subsidy for the purpose of inducing better teaching quality.

Center for National University Finance and Management (CNUFM) is an independent administrative institution, which provides loans to national universities to support them in the construction of university hospitals. The Fiscal Loan Fund is a source from which the CNUFM draws the loans.

The Centers of Excellence Programme (The 21st Century COE Programme) started in 2002 as part of the reform of university education. The goal of the programme is the establishment of world-class research and education bases in the national, public and private universities. The programme assists research groups by subsidizing the expenses for developing centres of academic and scientific excellence. The budget was 380 million US dollars in 2008.

Fiscal Investment and Loan Programme is one of the major services provided by the Ministry of Finance and can be seen as 'secondary governmental budgeting'. The Programme raises funds by issuing government bonds and through their use provides loans to local governments and independent administrative institutions for the support and financing of public projects.

Fiscal Investment and Loan Programme Agency Bonds are issued by local government and independent administrative institutions which are funded by the Ministry of Finance's Fiscal Investment and Loan Programme and are used to develop projects and services which are less likely to be advanced by private enterprises.

Fiscal Loan Funds are raised by the issuing of governmental bonds through the financial market. Fiscal Loans, one of the sources of funding provided by the Fiscal Investment and Loan Programme, are available with long-term, fixed, low interest rates since the Fiscal Loan Fund is guaranteed by the Government.

Japan Student Services Organization (JASSO) is a semi-governmental institution that was

established in 2004 as a Ministry of Education initiative for merging ex-existed five organisations. It is engaged in operating student loan programmes and providing various forms of support to overseas and Japanese students.

The Legislation, 'Promotion and Subsidization for Private Schools' (The Private Schools Promotion and Assistance Law) was established in 1975 at the strong request of private colleges and universities. The Legislation stipulates that the State may subsidise the school juridical person (the founding body of a private university) up to 50 per cent of current expenditure including personnel and teaching and research costs.

Promotion and Mutual Aid Corporation for Private Schools of Japan was originally established in 1970 and assumed the role of a third party organization allocating government subsidies to private institutions. It also provides a loan programme for campus development, a training programme for administrative staff, management consultation for private schools, and a mutual aid programme for employees of private schools, among other services.

School Juridical Person is one of the school founding bodies other than the state, local government, and recently admitted for-profit corporations. It must have its own endowment and operating funds for purchasing land, teaching facilities, and equipment in order to establish and operate a school(s). The School Juridical Person can establish one or all of an elementary school, junior high school, senior high school, college and university. It is exempted from property tax, corporation tax, and other taxes due to its nature of providing public benefit.

Special Account for National Schools was one of the government's accounts and existed until 2004 when the reform of national universities was completed. A Special Account could be established and separated from the General Account if there were special revenue sources. In the case of national schools, revenue such as tuition fees from students and hospital income went directly into the Special Account. The total budget for the national universities was provided from the reserves of the Special Account, and deficits of the Special Account were compensated by a transfer from the General Account.

Subsidies for Current Expenses for Private Universities consist of ordinary subsidies and special subsidies. The former is a formula-based grant basically related to staff and student numbers and the latter is allocated based on the university's performance in teaching and research. Since the formula includes various coefficients such as inducement of better quality of teaching, the more students the institution has over the designated capacity, the fewer subsidies would be granted.

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Chapter Three

University funding reforms in the Nordic countries

Evanthia Kalpazidou Schmidt

Abstract

This article focuses on university governance and policies in the Nordic countries and discusses recent funding reforms and their effects on universities. Common trends are identified, namely a move from centralised, highly regulated to decentralised, less regulated approaches, changes towards formula and output based funding, increased linking of basic funding to performance indicators and a growing amount of competitive funding. The reforms, which intend to bring results as regards quality, productivity, efficiency and accountability, might however generate unintended negative effects such as institutions excessive focus on outputs, quantity instead of quality, politically prioritised areas and mainstream, low-risk research.

Introduction

The Nordic countries comprise Denmark, Finland, Iceland, Norway and Sweden, and although not homogeneous, are characterised as welfare states with similarities as to history, social values, culture, political and socio-economic conditions. Consequently common features exist in the case of higher education. Iceland has a very small higher education system and is not discussed in this article.

Higher education has traditionally been government controlled and recognised as a key national asset, funded mainly by the state or other public authorities. It is perceived as a means for the state to address socio-economic challenges and globalisation, and a way to deal

with increased international competitiveness to secure a leading place in the knowledge-based society.

Compared to other European countries, spending is high on higher education and research in all Nordic countries. Public expenditure on higher education is among the highest in the world (Denmark and Sweden spent respectively 2.7 and 2.3 per cent of GDP in higher education while Finland and Norway spent 2.3 and 2.1 per cent in 2006). The share of R&D spending is the highest in Europe (Sweden and Finland spend 3.8 respectively 3.5, Denmark and Norway 2.6 respectively 1, 8 per cent of GDP). With a few exceptions, higher education is in principle tuition-fee free and the participation rates are high.

Nordic higher education funding systems are in transition, just as systems are in other parts of the world. Universities are increasingly governed by results and funding allocated on a competitive basis. The changes show similarities but also differences due to national strategies and priorities. The key questions addressed in this chapter are: What are the main features of university funding systems in the Nordic countries? Is it possible to identify common trends in Nordic higher education reforms? Which mechanisms are used for allocation of public funds to universities? What are the effects of funding reforms on the universities, intended and unintended?

Funding as a policy and governance instrument

As the main funding source for higher education in the Nordic countries is the state, the relationship between the state and the universities is characterised by control, mainly through the funding system. This implies that a great part of the reforms addresses the principles and mechanisms of allocation of public funds (cf. Strehl et al. 2007). Hence, university funding is the principal governance and policy instrument. The policy aims of funding reforms are to improve quality, increase productivity and enhance efficiency and accountability.

As the traditional concept of 'steering' by controlling has proved ineffective and was gradually abolished by the state, it has been replaced by the governance concept with increased university autonomy. Governance involves both the institutional and the system level structures and procedures of higher education institutions. Institutional governance refers to decision-making, lines of authority, financing, staffing etc, i.e. processes within the institutions. System governance refers to macro-level arrangements such as funding, university acts, laws, evaluations etc. The coordination of the two level arrangements constitutes the governance of higher education (De Boer et al. 2009).

The governance concept incorporates several elements of the New Public Management (NPM) model (Pollitt and Bouckaert 2004) namely decentralisation of decision making, steering by outcomes and contracts, introduction of market type mechanisms and private

sector management instruments such as human resource management and strategic management (Hood 1991). NPM in higher education is based on the principle of 'value for money' and 'management by objectives', in particular through the use of contracts and linking performance to funding (Jongbloed 2008). In accordance with the governance concept, new steering mechanisms have been employed providing universities higher autonomy, strengthening the management of institutions and increasing the amount of competitive funding. According to File and Luijten-Lub (2006), NPM steering instruments in higher education comprise centralisation of the organisational structure, contracts with the management, regulation of outcomes and funding that provides market like incentives.

According to Jongbloed (2004), funding is one of the key instruments used by governments (ministries, public funding agents and research councils) and university leadership (boards, deans, department heads) as part of the governance instruments employed. Funding is hence more than a mechanism to allocate resources to institutions. It is a set of instruments to achieve the goals of higher education and - in an increasingly number of countries – national objectives. Funding allocations are seen as the most effective science policy instruments available (Nieminen 2005). 'It is often the foundation of other governance instruments that enforce common goals set for higher education (e.g. access, efficiency), set incentives for certain behaviour (e.g. competitive research grants), and attempt to maximise the desired output with limited resources. Governance issues and funding systems are therefore often two sides of the same coin' (Enders 2009, 3).

Whitley and Gläser (2007) state that funding mechanisms are among the most powerful instruments used in higher education policy, affecting not only the allocation of funds but probably also the nature and direction of both research and education, as well as the university management and the working conditions of researchers.

In accordance with the NPM model, university reforms have been strongly oriented towards efficiency (Ferlie et al. 2008), even though it has never been obvious what efficiency implies for an organisation like the university. According to Amaral (2008), the overall argument of efficiency is related to the notions of responsibility and accountability. Universities are accountable not only to the funding body (mainly a ministry) but also to other stakeholders in society, including the private sector (cf. Christensen 2010). This also has to be seen in relation to the changing notion of the social function of higher education in the knowledge economy as driver of economic growth and an increased attention to the needs of the labour market (cf. Godin 2003).

While it is obvious that NPM is in decline, losing its appeal in a number of European countries, the Nordic countries - emphasising the significance of higher education for the knowledge economy - keep up the pace of reforming higher education based on its principles.

1. University funding systems in the Nordic countries

Denmark

The Danish higher education system comprises the university (the largest higher education sector) and the university college sector, which is professionally- oriented. There are eight universities of different sizes conducting research and offering research-based undergraduate and graduate education.

University governance and funding reforms in Denmark go hand in hand. In recent years, Denmark implemented far-reaching reforms in terms of governance and autonomy. A first major step was the implementation of the 2003 University Act. A significant merging process between universities and government research institutes was carried out in 2007 reducing the number of universities from 12 to eight. Recently, allocation of university research funding has also been changed by increasing the link between funding and performance. The later reforms were part of an overall government strategy for Denmark in the global economy that was formulated in the Danish Globalisation Strategy, launched in 2006 and which aimed, among others, at improving quality and stimulating internationalisation and competitiveness of higher education. It also aimed at making more efficient use of public spending on education and research by allocating more funds in competition and linking performance to funding and to university development contracts. For a detailed description of the Danish Globalisation Strategy see Danish Prime Minister's Office (2006*)*.

University development contracts were introduced as early as 1999 as a planning tool for the universities and a management tool for the Ministry of Science, Technology and Innovation. Yet, there was no automatic relationship between research achievements and funding. The aim of recent policies, however, has been to use contracts as an efficient management and control mechanism by linking funding to research outcomes. Contracts since 2010 have a direct impact on the funding and probably on the activities of the universities. New university development contracts take account of indicators for education and research (including number and level of publications, number of international publications, PhD activity and amount of external funds), dissemination of knowledge and public service provided (Kalpazidou Schmidt 2010).

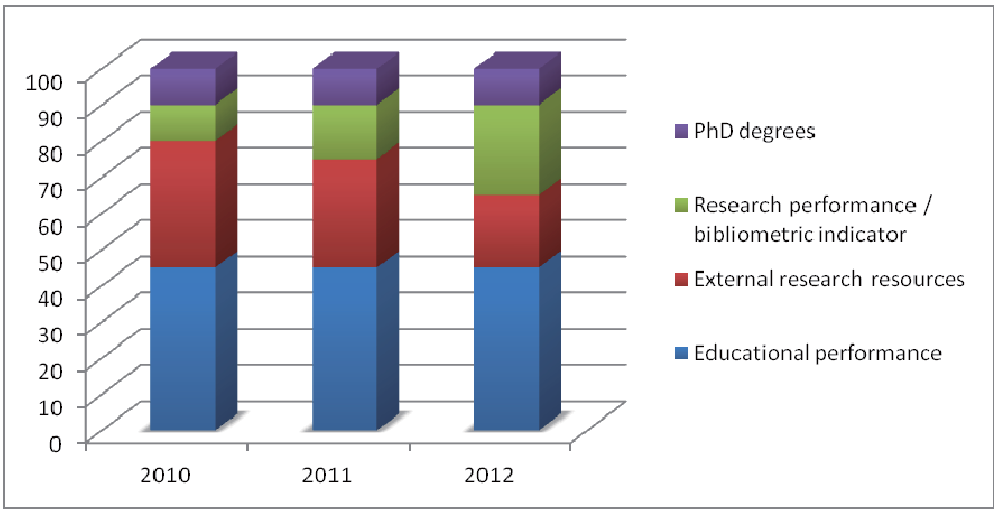
In Denmark, funding of teaching and research is separate. Funds are allocated on the basis of contracts, negotiations, formulae and performance indicators. Education is funded through the 'taximeter system' i.e. funding based on exams passed (output-based system). Research is funded through basic and external funds. Basic research grants are allocated to institutions as a lump sum and the level of the basic grant is to some extent calculated on an incremental basis. A portion of the grants has been made activity-dependent and additional

grants have been distributed based on performance parameters. As a follow-up to the Globalisation Strategy it was decided to take a number of indicators into account in the allocation of research funds to the universities, linking funding to performance. The expectation is that encouraging a more competitive environment will lead to improved quality and productivity.

In accordance with earlier reforms, basic research funding was distributed according to the 50-40-10-model, where universities were rewarded for earned educational funds, external funded research activities and number of PhD degrees awarded. The share of basic funding of the overall research funding has decreased from 64 per cent in 2003 to 56 per cent in 2009. A political agreement among the parties in the Parliament in 2009 (targeting the distribution model) incorporated bibliometric research indicators as an additional performance parameter. These indicators were integrated into the allocation mechanism based on Norwegian experience. Studies of the Norwegian funding system reveal that the number of publications has increased, both as regards research published in low impact journals and in high impact journals (Sivertsen 2010).

The model will be implemented in 2010-2012 and will be evaluated in 2013 with the bibliometric indicator gradually weighting more, as illustrated in Figure 1. In 2012, 45 per cent of the funds will be distributed according to earned education appropriations, 20 per cent will be distributed according to research activity financed by external funds, 25 per cent will be distributed based on bibliometric indicators, while 10 per cent will be based on the number of PhD graduates.

Figure 1. The weight of different indicators (per cent) in the new Danish university research funding model 2010-2012.



It is however of significance to point out that since the 1980s, Denmark demonstrated high levels of research productivity and impact even though the university environment has not been the most competitive; performance-based parameters were only taken into account to a limited degree in the research funding system (with the exception of recent years).

Finland

Education and research are perceived as major resources of the Finnish society and has been the driving force for regional development (since 1960s) and for the national innovation system (since the early 1990s). Finland responded to the economic crisis that followed the collapse of the Soviet Union in the 1990s by investing heavily in research and development: the share of R&D is 3.5 per cent of GDP, the second highest in Europe after Sweden. The Finnish government has the ambition to develop the best innovation system in the world and higher education is seen as the most important driving force in public innovation systems (Ministry of Education 2007).

The Finnish higher education system comprises a binary system of two sectors with different missions, namely the universities (16 in total, including creative and performing arts universities) with an academic and theoretical orientation and the polytechnics (26 in total) with a more practice oriented education. The polytechnics were established in 1991 on a trial basis and became permanent in 1996. This article focuses on the funding of the universities.

The funding model was changed at the beginning of the 1990s from a line item to a lump sum system, introducing the principle of management by results through performance contracts. Finland was the first Nordic country to implement management by results in the mid 1990s, whereby contracts that were legally binding and directly linked to funding were used. The underlying principle for the adoption of the management by results budgeting was that the objectives set for institutional activities and the required funding were determined in negotiations between the ministry and the individual institution. This arrangement has proved effective with high publication rates.

Funding for research and teaching is not separate in Finland. The key components of the system comprise core funding, including the extent factor (19 per cent, counting the basic component, new students, facilities), education appropriation (44 per cent), research appropriation (30 per cent, including graduate schools, number of PhD degrees and number of completed PhD degrees) and societal services appropriation (7 per cent), project funding and performance based funding (based on number of Centres of excellence, funded from the Academy of Finland, amount of external resources) (Auranen & Nieminen 2010).

It has been possible for universities since 2006 to establish university companies in order to intensify interaction with society and generate private funding. With reforms in 2010, the

autonomy of the universities was further increased and institutions became independent legal entities, functioning as public corporations or as foundations under private law. The reform aim was strengthening the role of the institutions in the innovation system and supporting their development in a competitive international environment by diversifying funding, intensifying competition for research funds, allocating resources to strategic areas and ensuring the quality and effectiveness of research and teaching (Aarrevaara et al. 2009).

The universities decision-making system was reformed at the same time. The composition of university boards has been changed in line with the strategic management responsibility; at least 40 per cent of the members of the boards are external to the university community with an external chairman. Universities are free to decide on capital income and manage their assets. University staff are no longer government employees and universities are free to implement their own staffing policies.

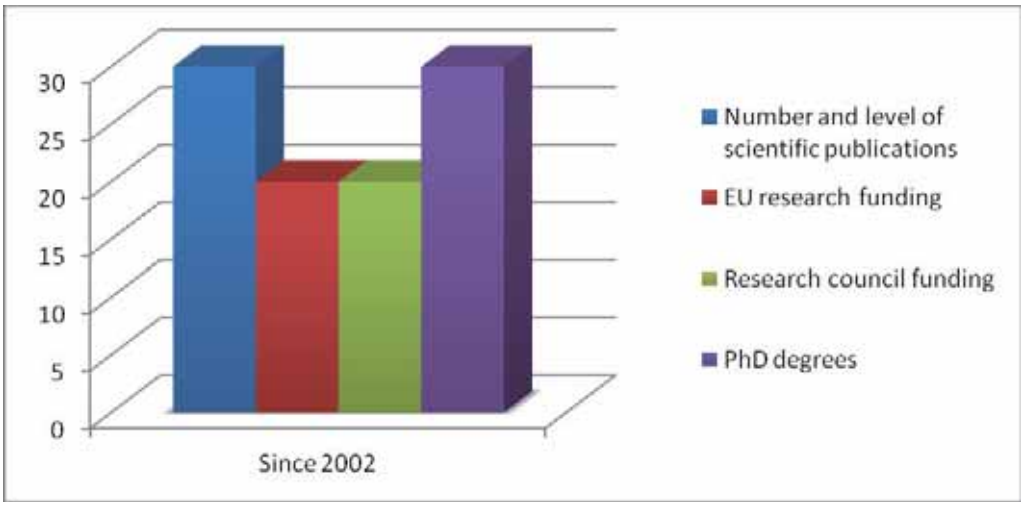
Likewise, mergers and alliances have been initiated between universities and polytechnics with a view to increasing efficiency and to consolidate the Finnish higher education system. The aim is to reduce the current number of universities to 15 and polytechnics to 18 and to establish four alliances between universities and polytechnics by 2020. In 2010, Aalto University, the University of Eastern Finland and the (new) University of Turku were established as a result of mergers (Virtanen 2011).

Norway

The Norwegian higher education system consists of six universities, six specialised university colleges, 31 university colleges and two art colleges.

In recent years, Norwegian higher education policy has focused on internationalisation, globalisation and the contribution of higher education and research to innovation and competitiveness. In 2002, Norway implemented a performance and formula-based funding system for both education and research as part of a comprehensive reform of higher education, the Quality Reform. It aimed to improve education, boost research production by allocating funds on the basis of publications and to augment relevance, measured in terms of external funds received. According to the Quality Reform, 60 per cent of the funding is allocated as basic grant, 25 per cent allocated based on education outcome and 15 per cent based on research performance (Frølich et al. 2010). The performance based research funding comprises the following components: completed PhD degrees (30 per cent), amount of EU research funds (20 per cent), amount of research council research funds (20 per cent) and number and level of scientific publications (30 per cent) (see Figure 2). (There are two levels of journals: level 2 refers to high impact journals) . Approximately 17 per cent of the research funds are allocated through the Research Councils.

Figure 2. The weight of different indicators (per cent) in the performance based research funding



The Quality Reform involved changes to governance structures at the institutional level, granting higher education institutions greater management, organisational and financial autonomy and provided some types of colleges the possibility to become universities. A new degree structure in accordance with the Bologna process and new forms of student guidance and evaluation were introduced. The Bologna Process was initiated in 1999, when 29 European ministers in charge of higher education met in Bologna to lay the basis for establishing a European Higher Education Area by 2010 and promoting the European system of higher education worldwide. 10 years later, the total number of signatory countries in the Bologna Process is forty-five. In the Bologna Declaration, the ministers affirmed their intention to: (a) adopt comparable degrees; (b) implement a system with two main cycles (undergraduate/graduate); (c) establish a common system of credits, encourage mobility, and promote European cooperation in quality assurance; (f) promote European dimensions in higher education.

Other innovations were increases in the number of external members of university boards and the strengthening of academic management (basic units and departments) by appointing the heads of the institutes instead of electing them.

An evaluation of the Quality Reform conducted in 2006 showed an increase in competition between institutions, increase in operational efficiency (as a result of professional and strategic management of institutions) and research performance both in terms of quality and quantity as well as considerable growth in number of applicants and improvement of student performance. However, the system resulted in a series of unintended

effects as well, such as less time being devoted to research activities as a result of concentration of resources on education and the students (Michelsen & Aamodt 2006). Despite these unintended effects, the research performance both in terms of quality and productivity improved (Sivertsen 2010).

Sweden

The Swedish higher education system comprises 14 public universities and 20 university colleges. There are also 10 private higher education institutions. Sweden was in the 1970s one of the first countries to introduce a unified national higher education system, by integrating all post-secondary education to a single system.

Reforms started in the 1990s. Key components of the reforms were decentralisation, management by objectives, quality assurance, increased demands for accountability and performance-based funding. The system was essentially transformed starting with the 1993 reform and the introduction of a performance based system where 60 per cent of undergraduate funding was based on enrolments while 40 per cent was a reward for completion of an individual course (not degree). Funds were distributed through an institution-based allocation system that gave a maximum amount of funds to each institution. The transformation of the higher education system was influenced by the NPM concept and aimed to make public spending more cost efficient (Sörlin 2007).

Recently, a new higher education structure came into effect in accordance with the Bologna process aiming to introduce three level study programmes and a new credit system, and increase student mobility. A new quality assurance system, placing greater responsibility for quality assurance on the institutions was also established in 2007 (Kalpazidou Schmidt 2009).

Budget allocation is in form of a lump sum, which implies that the universities decide on distribution of funds among faculties and other units. The criteria are calculated in terms of full time equivalents for students and study achievements (estimated in terms of annual performance equivalents for the students, which varies between 35-55 per cent of total). 60 per cent of the government's investments in R&D are allocated to universities, of which 43 per cent are directly distributed. The remainder is managed by the research councils.

A new quality-based funding system with increased autonomy will be introduced, building on the academic community's own criteria of what is good education (based on completion of studies within normal study period) and research (based on number of articles and field-normalised citations). Allocation of one block grant consisting of resources for both education and research will be implemented. Through the new system, funds are to be tied to quality. Research quality will be measured by publications, competence of staff (including

proportion of female professors) and proportion of external funding. A model that contains specific indicators and evaluations (carried out every four years) will be introduced. The funding model will be managed and quality assured by an academic intermediary body, the Higher Education Funding Council for Sweden (HEFCSwe).

2. A comparison of the Nordic university funding systems

Common trends

From the above it is evident that funding arrangements vary among the Nordic countries. Accordingly, there are differences in universities funding systems and the mechanisms utilised to allocate funds. One categorisation is based on the principle of actual results and/or projected results in the budget. Another categorisation makes a distinction between four different approaches, namely (i) funding through negotiations between the ministry and the individual university; (ii) incremental funding i.e. allocation based on historical criteria; (iii) funding based on a formula i.e. an algorithm based on standard criteria that include input components and/or performance indicators; and (iv) contract funding.

Leszczensky et al. (2004) make use of another categorisation involving three types of public funding steering instruments for higher education, namely (i) formula based instruments (divided in a fixed amount that increases incrementally, formula based on inputs and formula based on output indicators); (ii) project based funding (divided in projects awarded competitively and in non-competitive projects); and (iii) contract based funding (divided into contracts formulated as framework agreements and contracts in which activities and performance are specified in detail).

The most common funding approach is a combination of several of the mentioned mechanisms. Funding systems in the Nordic countries utilise a combination of different instruments for allocation of resources. Public funding (in terms of core funding) as the dominant source of university income is allocated mainly through contracts, formulae, negotiations and incremental allocations. Table 1 illustrates the development in funding mechanisms determining the amount of public funding distributed to public universities.

Table 1. Funding mechanisms determining the amount of public funding for public universities in the Nordic countries

Country	Negotiation		Incremental all.		Formula		Contracts	
	1995	current	1995	current	1995	current	1995	current
Denmark	X	X	XX	X	XX	XXX	0	XXX
Finland (univ)	X	XX	XXX	X	X	XXX	X	XXX
Norway	X	XX	XXX	XX	X	XX	X	X
Sweden	XX	XX	XXX	XXX	0	X	XX	XX

Developed from European Commission 2009.

Nordic countries make use of a formula based budget – Sweden to a lesser degree – which is perceived as a more transparent and consistent mechanism. In addition, all countries employ instruments for specific research project allocation of funds based on competitive procedures. A dual model of formula based and competitive funding is the most usual approach, which implies that next to core funding there is a parallel competitive funding stream, usually awarded by the research councils or other public bodies such as regional authorities.

There is a general trend towards decreasing core funding (incremental allocation) with an increase in employing competitive grants and at the same time linking of research performance to funding (cf. Kalpazidou Schmidt 2009; Salerno et al. 2005). Targeted funds are used as well, both for education and research to encourage universities to take into account national strategies and priorities (cf. European Commission 2008).

Finland, Denmark and Sweden demonstrate a long tradition of performance contracts use. However, as pointed out earlier, such contracts in Denmark had not - until very recently - been linked directly to funding and had no legally binding character, as was the case in

Finland.

The following most important *common trends* emerge from the mapping of the characteristics of the funding systems of Nordic universities:

(i) a trend towards greater transparency, and simplification and straightforwardness of the mechanisms through use of formula based funding,
(ii) increasing linking of basic funding to performance indicators and contracts,
(iii) a change from input to output based funding,
(iv) an increase of funding based on competitive procedures
(v) encouraging of diversification of funding sources, and finally
(vi) a move from centralised, regulated approaches to decentralised, less regulated, market approaches.

Considering the *indicators* used in the allocation of funds, the comparison reveals some variations among the Nordic countries. While the tendency is clearly towards an increased used of performance parameters, there is no uniformity in the selection of indicators (with the exception of Denmark and Norway as the first country implements a similar system as the later with some modifications), which may vary from number of master and PhD degrees, to success in external grants, number and level of publications and research evaluation outcomes (cf. Jongbloed 2008). The weighting of the different measures varies as well, depending on national priorities and needs. An illustrative example is the high weighting of the number of completed PhD degrees as a research performance parameter in Norway, which is an instrument in achieving the strategic target to increase the number of doctors in the country.

Funding reforms go hand in hand with other reforms

The trends discussed above are the outcome of a range of changes in the systems and mechanisms for university funding. Reforms of funding mechanisms for research are only one element in the overall higher education policy and reforms in the studied countries. The reforms of funding systems go hand in hand with other changes: increased institutional autonomy, structural reforms, modernisation of university management and governance structures, introduction of quality assurance and accreditation mechanisms, mergers to strengthen the strategic profile of universities and intensification of internationalisation policies. Studies reveal though that when governments change the principle of core funding allocation to universities, this usually takes place gradually, i.e. not by reforming the whole system but by progressively changing some key elements of the existing system (cf. Auranen & Nieminen 2010).

The Nordic university reforms have to be seen in the context of international

developments (widening access and expanding higher education without additional funding, governance and funding reforms) and European higher education trends. In addition, there is close cooperation between the Nordic countries based on the Helsinki Agreement signed in 1962, which among others involves educational and research issues.

The key drivers of developments in Europe, the Bologna Process and the Lisbon Strategy, have reshaped the higher education landscape. The Bologna Process is an intergovernmental initiative aiming at higher education convergence in the European Higher Education Area while the Lisbon Strategy aims at transforming the European Union (EU) to the most dynamic and competitive knowledge-based economy in the world through the establishment of a European Research Area. The EU is a player in the European policy on reforming the universities mainly through EU programmes promoting mobility and proposals on the modernisation agenda for universities (European Commission 2008). Because of these drivers, comprehensive reforms are being carried out in many European countries.

It is nevertheless evident that despite international and European trends and policy influences, funding reforms are not being carried out in a uniform way (cf. Geuna & Martin 2003, Jongbloed & Vossensteyn 2001). The pace, intensity and range of reforms vary. Several features are of importance in this connection, including socio-economic and cultural factors, adaptation and implementation of new ideas over time, lack of political will to introduce quick system changes, a wait-and-see policy in order to learn from the experience and mistakes of frontrunner countries, waiting for stakeholders' reactions, and path dependencies that hamper policy actions (Auranen & Nieminen 2010).

From one perspective, it looks like the Nordic university systems, influenced by European developments, are converging. Despite the fact that there are similar trends, namely increased autonomy, stronger governance and management by results, the timing, the pace of the changes and the intensity of the implementations differ among the Nordic countries (see Table 2). Finland, hit by an economic crisis at the beginning of the 1990s, implemented management by results at higher education institutions from the mid 1990s. Norway carried out a comprehensive reform in 2002, while Sweden introduced contracts in the mid 1990s. Denmark only recently established a link between performance and allocation of research funds while having practiced for many years performance based funding for education through the 'taximeter' system.

Table 2. An overview of the Nordic Higher Education reforms

	-1995	1995-1999	2000-2004	2004-2011
DK		1999: University Development contracts	2003: University Act Public, self-governing institutions Boards with external majority (chairman external) appointed by the Minister	2006: Globalisation Strategy 2007: Mergers of HEIs (including government research institutes New independent quality assurance agency 2010: Performance based funding of research
FI	1994: Budgeting based on operational expenditures and performance agreements 1991: Introduction of Polytechnics	1997: University Act HEIs responsible for quality assessment National coordination of quality assurance by Finnish Education Evaluation Council	2003: Polytechnics Act	2006: New salary system based on work load and performance Universities establish companies Introduction of National and Regional Innovation systems 2010: New Universities Act; Mergers and alliances. Over the last decade a shift from line item budgeting to lump sum funding and from incremental to formula based funding
NO			2002/2004: Implementation of Quality Reform with more output based funding New quality assurance agency 2003: Colleges may apply for university status Introduction of Bologna principles with new degree structures and performance based student support system	
SE	1993: Higher Education Act Decentralisation, management by objectives, quality assurance, accountability and performance based funding	1997: More detailed result specification funding. All HEIs granted funding for research 1999: New rules for HR based on merits and research production	1999/2000: HEIs may apply for changed status – colleges becoming universities 2000/2001: Establishment of four research funding bodies. Increased focus on strategic management	2006: Globalisation Council Implementation of Bologna principles 2009: New public funding system – gradually more research performance based funding 2007/2012: Development of new quality assurance systems 2011: Changing legal status, universities as autonomous organisations with special public law status – staff no longer governmental employees, more entrepreneurialism, more institutional strategic profiling, multi annual contracts

Developed from European Commission 2009

In conclusion, the organisation and governance of universities has been transformed in all Nordic countries. The main objectives of the reforms have been to decrease the direct state control and improve the quality, attractiveness and competitiveness of higher education. The reforms are thus largely following the same pattern: increasing autonomy, changes in governance, strengthening of management, growing involvement of external stakeholders, diversifying funding resources, increasing competitive funding, establishing new accountability and evaluation procedures (Kalpazidou Schmidt 2010).

3. Effects of funding reforms

As shown in the previous section, mapping of the Nordic funding systems revealed – important trends, namely a move towards formula based funding; an increase in linking of basic funding to performance indicators and contracts; a change from input to output based funding; and an increase of funding based on competitive procedures.

Increasing funding based on formula

Formula based allocation implies the use of mathematical formulae to calculate funds more or less automatically. The formulae can be based on inputs or outputs (Lepori et al. 2007). Formula funding stands for increased freedom for institutions to decide on their internal re-allocation of funds between teaching, research and other expenditure, a development that is based on the growing university autonomy and the lump sum granting of funds. This type of funding is perceived as providing greater transparency, simplification, straightforwardness of the mechanisms and a uniform approach. The key advantage of formula funding is to provide transparency to the distribution of funds among universities and thus facilitate comparisons, reducing lobbying by institutions, by using objective criteria.

Formula funding is also perceived as an asset for universities and their efforts to achieve long term planning as well as for their ability to adapt to changing environmental conditions. The effects of formula-based funding depend on whether input or output indicators dominate, and likewise whether a formula is based on an open-end or a closed budget (cf. Gines-Mora et al. 2007, Kalpazidou Schmidt et al. 2007, Strehl et al. 2007).

On the other hand as universities are assessed according to quantitative grounds while qualitative criteria are difficult to establish in formulae, formula funding might lead to mediocrity, reinforcing the established order and mainstreaming research. According to Leifner (2003) researchers will tend to stay away from high-risk projects, concentrating on activities where success can be expected in order to meet funding formula criteria.

The task of developing quality measures for incorporation into formulas and calculations

is a key issue that is exceptionally complex (Salmi and Hauptman 2006). The combination of a formula for parts of allocations and other allocation approaches might provide the 'best of two worlds' (Jongbloed 2001).

Linking basic funding to objectives through performance indicators and contracts

Performance based allocation schemes reward institutions for actual, rather than promised or expected performance. The use of performance indicators should reflect public policy objectives rather than institutions needs and at the same time encompass incentives for institutional improvement (Salmi & Hauptman 2006). In a performance based funding scheme, attention is given to university production in terms of students and research.

Linking funding to objectives through performance indicators is designed to increase quality, productivity and efficiency, and sharpen the international profile of universities. However, the challenge is to formulate accurate key objectives for this instrument to become effective. Studies reveal that even a relatively small proportion of funding linked to modest numbers of objectives improves efficiency, while linking funding to a complex set of objectives results in difficulties defining appropriate indicators. This could ultimately lead to efficiency problems.

According to Salmi and Hauptman (2006), performance based funding does enhance efficiency but its ability to improve quality is less convincing as the task of developing measures of quality to be incorporated into formula and calculations is very difficult. Performance based funding requires assessments of quality that are valid, reliable and generally accepted by the higher education system.

The identification of appropriate indicators has been the focus in the literature. The contractual and competitive oriented approach to allocation of funds for university research is based on the assumption that it is possible to evaluate the quality of the research output accurately and identify promising research avenues (Geuna 2001). The success of implementations of funding reforms linking funding to performance is closely related to establishing reliable and uncontested indicators that accurately measure education and research performance (cf. Enders 2009, Jongbloed & Vosssensteyn 2001). In funding systems where indicators are used as parameters in resource allocations, validity and reliability should be high and side-effects should be avoided, which is a highly complex task (cf. Sizer et al. 1992). A significant limitation that has an impact on the implementation of performance indicators is the availability of data (Layzell 1999).

Other risks associated with increasing demands on performance include decreasing standards and manipulation of outcomes in order to achieve expected performance. Use of

indicators may promote a 'more is better' attitude, where research quality issues could be neglected (cf. Gines-Mora et al. 2007). Taylor and Taylor (2003) emphasise that performance indicators may encourage standardisation and discourage diversity and innovation in terms of operations and outcomes. Moreover, expectations on institutional and individual performance can be unrealistically high, compelling universities and individuals to manipulate behaviour.

Moving from input based towards output based funding

There is general consent that input funding based on reimbursement, with no possibility for the institutions to reallocate funds, provides few incentives to increasing efficiency (Kaiser et al. 1992). On the other hand, output based funding (funding based on the number of graduates and/or research performance) implies changes in the universities' focus, i.e. it signals the importance of shifting focus from input to output. Paying attention to outputs and improving efficiency may generate additional resources and provide tangible feedback to productive institutions and researchers (cf. Jongbloed 2008).

However, output based funding involves the risk that universities focus more on quantity instead of quality, lowering the standards and/or manipulating the indicators when output systems are linked to rewards or penalties and/or prioritising by concentrating resources to profitable research areas. There is thus a high risk of marginalising small and/or interdisciplinary areas that find it difficult to publish in established journals and generate the expected output.

Another issue is the often criticised comparison of outputs from different types of universities, different disciplines, faculties and research areas. 'One size fits all' cannot be applied to all types of institutions effectively without diminishing diverse missions (Layzell 1999). Field-normalised output must be taken into account in order to address this assessment problem.

Among the most criticised elements of output based funding are: incomplete measures, which obscure more than reveal; over-complex systems that are expensive and unusable; high transaction costs attached to running systems; the linkage between outputs and outcomes issue; the quantity versus quality issue. Other unintended effects consist of political processes undermining output-based systems by changing the indicators and not allowing for sufficient historical data, and a more general critique of rational planning versus politics as a muddling through process (Talbot 2005).

Increasing the share of funds allocated through competition

Higher competition for funds provides incentives to acquire additional resources and may stimulate more dynamic research agendas by promoting quality and societal relevance of

research. Competition among researchers and institutions may enhance creativity, originality and innovation, raising the benefit of research outcomes.

On the other hand, growing competitive funding involves risks if competition is ill-targeted. First, it might limit the possibility of long-term planning for the universities due to decreasing amount of core funding. Second, competition may force the universities to focus on areas, where funding is available rather than on areas where they have high competence and competitive advantages. Third, it might lead to cut in resources within areas where competitive funding is difficult to obtain (mainly within the humanities and basic research) and threaten the existence of fields of science that lack competitive advantage but are of value to society. Finally, it might generate a move as regards strategic management of universities towards the research funding agencies, giving thus agencies the opportunity to dominate the research agenda by priority setting (cf. Gines-Mora et al. 2007, Kalpazidou Schmidt 2007, Strehl et al. 2007).

An international comparison of the university research funding and publication performance in eight countries concludes that the notion of competition for funding as a promoter of productivity is not clear-cut. The results question whether financial incentives boost performance in terms of publications or whether policy makers should put greater emphasis on other factors related to productivity (Auranen and Nieminen 2010).

Moreover, there is no empirical evidence on what the right mix or balance is between core funding allocated at the institutional level, which allows the universities to set priorities, versus risk-based competitive funding. While it is obvious that there are benefits to be derived from the move towards competitive funding, university research cannot be fully dependent on such funding. Development of institutions strategic activities can be restricted by an over-reliance on competitive funding. In order for institutions to maintain a degree of flexibility that enables them to make long-term strategic planning and successfully target competitive research funding, it is important that they retain a noteworthy part of core funding from the state (Kalpazidou Schmidt et al. 2007, Kalpazidou Schmidt 2009).

Wrapping up, the trends discussed hereby are not characterising only Nordic higher education. An OECD (Strehl et al. 2007) study of funding systems in ten countries reveals that the trends are similar in almost all the studied countries. Despite this development, there is little empirical evidence on which model is the most productive and effective. An Expert Group Report from the European Commission (2008) revealed that many OECD countries have extended their competitive research funding with the aim of improving the effectiveness and efficiency of scientific research through increased focus on performance and competition. Nonetheless, the report concludes that there appears that no specific type of funding is fundamentally superior to any other.

Effects of funding reforms on the universities

The higher degree of institutional autonomy has been followed by higher accountability levels and demands on quality assurance and evaluations. The growing use of formulae, performance-based funding, contracts and project funding are attempts to copy markets by introducing competition and management by results (cf. Pollitt & Bouckaert 2000). The key question is the effects of funding reforms have on the universities and their behaviour as institutions.

According to Leifner (2003), changes in funding systems will likely have a major impact on the behaviour of universities, also as to their internal processes of allocation of funds. Studies show that when the context and framework conditions are changed through increased competition and marketisation, universities employ strategies to meet new challenges and try to position themselves in the higher education landscape (cf. Bonaccorsi and Dario 2007, Strehl et al. 2007). In order to benefit from the changes, universities respond by concentrating and focusing their research activities, and strengthening their profiles in an attempt to maintain and enhance activities by broadening and diversifying their funding basis (cf. Geuna 2001, Jongbloed & Vossensteyn 2001, Kaiser et al. 2001, Strehl et al. 2007).

An OECD study of ten funding systems and their effects on higher education systems concludes that funding systems are major influencing factors for institutional strategies and restructuring (Strehl et al. 2007). The study concludes that there is a strong response to changing funding systems i.e. a general tendency among universities to increasingly use various strategies to address the changes, including restructuring, formulating explicit goals and objectives, using monitoring and strengthening their leadership and management. Strategies target the basic core tasks teaching and research on the one hand and organisation structures and processes on the other.

The fact that changes in funding systems increasingly reflect decreasing resources raises the institutions' awareness as to efficiency, performance and effectiveness. Universities thus strive, in the frame of a growing competitive environment, to behave as 'strategic actors' and distinguish themselves from other institutions by identifying their particular areas of strength and by further building their research profile (Bonaccorsi et al. 2007).

A study of 100 European universities (see CHINC), summarises the main strategies employed by universities as:

(i) creating centres of excellence through selectivity, critical mass and profiling,
(ii) strengthening steering capacity through managerialism and devolving responsibility to departments,
(iii) reforming financial instruments as well as supporting researchers in revenue generation and research commercialisation,

(iv) collecting information on performance and environment,
(v) emphasising flexibility and performance orientation in human resources management, and finally
(vi) engaging with the outside world and building alliances.

For more details on the CHINC project see Salerno, C., Jongbloed, B., Slipsaeter, S. & Lepori, B. (2005). Changes in European higher education institutions' research income, structures and strategies. Interim report for the project changes in university incomes: their impact on university based research and innovation (CHINC).

Concluding remarks

Implementation of performance, output and competitive funding systems to promote quality, productivity and efficiency is a complex issue as the relationship between funding and outcome, both in terms of quantity and quality, is not straightforward.

The use of strong funding incentives may boost productivity, efficiency and accountability but may also lead to unintended, negative effects. Value may be attached narrowly to what is measurable instead of rewarding quality. It may also lead to a lowering of standards and manipulation of outcomes, mainstreaming of research (impeding creativity, originality and innovation), marginalisation of small science fields and loosing of the research agenda to other stakeholders (cf. Butler 2003, Laudel 2006, Ziman 2000).

Wrapping up, funding of universities cannot be seen isolated from the wider policy context of higher education. Although similar trends have been identified in the Nordic countries and the systems are tending to converge, the analysis reveals that changes do not take place in a uniform manner or at the same time, and/or with the same pace and intensity; changes are rather dependent on national strategies and priorities. Country-specific and comparative studies on the relation between funding systems and their effects on universities performance require hence linking funding systems objectives and their implementations to overall higher education policies.

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Chapter Four

Evaluating Incorporation of National Universities in Japan

Motohisa KANEKO

In the wave of reforms in the relationship between governments and higher education institutions in many OECD countries, Japanese national universities were incorporated in 2004. One of the key elements of the new scheme was the 'mid-term targets' to be achieved in the subsequent six years, which functions in effect as a contract between the government and each university. The levels of achievement are to be evaluated in the sixth year, and the results would be reflected in the next mid-term targets and corresponding government funding. As of 2010, the first cycle of this process has been completed. What were the intended effects in the original design? How did it work in reality? Why are the consequences different from the expectation? These are the questions that addressed in this paper.

1. Incorporation of National Universities – Background, Design and Expected Consequences

Japanese National University as a State Facility Model

At the outset of this analysis, it will be useful to set forward a simple classification of the relationship between the government and universities. I argue that there are three major types of university, based on their historical backgrounds.

1) The State Facility Model, which comprises German universities and most of the university system in continental Europe. Taking after the Humboldtian ideal, the universities of this type are a part of governmental organisation with respect to the organisation and physical infrastructure. At the same time, these universities are conceived as a guild of academic members, who participate in a wide range of decision making.

2) The Private University Model, which comprises private institutions of higher education in the U.S. and in some other countries. Its origins were the endowed colleges in Oxford and Cambridge, which were introduced to the U.S. It evolved to a unique model of governance found typically in the Yale Corporation, where a Board of Trustees with a trusted fund owns and manages the university (Durea 2000). Subsequently, this scheme was given legal recognition through the Dartmouth Case.

3) The Government-Commissioned Model, which comprises the American State Universities and the British universities. They are legally separated from government, but are still dependent heavily on government subsidies.

The national universities in Japan, together with the German and other universities in the Continent, constitute what I called the State Facility Model. Universities of the State Facility Model are established by the state as a facility of the government – even though the universities are not exactly one of the arms of the government bureaucracy, they are in fact a part of the government organisation. Their activities are therefore defined as a function of the government, and have to be fully supported by the government. On the other hand, the academics in these universities are highly autonomous in their decision-making, with respect to not only academic matters but also pervasive areas. The heavy involvement of the academics in the process of decision-making and its execution inherits the tradition of medieval Guild.

Almost from its beginning, the construct of national universities in the mold of the State Facility Model involved various problems. The issues raised in the criticisms can be summarised in the following three points.

First was the internal conflict between state control and academic autonomy. Before the Second World War, there were some cases where the government forced the resignation of a few professors for their political opinions, and this case created a backdrop for strong sentiment against any sign of government control on national universities in the post-war period. In subsequent years, the focus of the conflict became not only political but also financial issues. The academics in the national universities were highly frustrated by the tight regulations on the finances forced by the Ministry of Education. These factors created a sentiment that favoured independence from government control.

Second, there had been a strong resentment about the disparity between the national and the private institutions. Provided with the heavy government funding, the national universities enjoyed much better infrastructure for education and research. At the same time, the national universities charged tuitions at the level about half of that in the private institutions. From the perspective of private institutions, there was little justification for the differentiated treatment.

Third, there have been claims that the national universities are managed inefficiently. It

has been argued that while they are protected by state support, the universities are exposed with little competition. Moreover, since the internal control of the national university has been given to the professors, there have been few mechanisms to ensure accountability.

Against this background, the pressure for fundamental reform mounted in the 1990s.

These factors collaborated to bring about the decline of the role of the State in higher education. In response to the difficulties, various countries instituted reforms, which can be generalised under the concept of marketisation. Marketisation in higher education refers to the introduction of various market forces to higher education. A concept used in close relation to this concept is 'Quasi-Marketisation,' which refers to the schemes where the government acts as one of the consumers of the services that higher education institutions provide. In the discussion below, I will use the term marketisation to imply both the marketisation in the narrower sense and quasi-marketisation.

It was proposed in these circumstances that national universities should be transformed into independent entities. In the State Facility Model, the national university has two sides. On one hand, it is a part of the government organisation. Its budget is specified in the national budget, and the purpose of the expenditure is specified in detail in the lines of budget. The faculty members and administrators are government employees. The facilities are properties owned by the government. On the other hand, the faculty members govern the academic side of operations.

In the new model, the government and the university are two separate legal entities. This raises two questions. First, how should the national universities be governed as an independent entity? Second, how should the relationship between the government and the universities be regulated? Obviously, the government loses its direct power to control the university, and yet the government provides support to the university. The support and the performance of the university have to be balanced, and proper incentives for efficient use of resources should be built in this regulation. In a way, it is a contract between the government and the university.

These questions show that incorporation of national universities is critically dependent upon the design of governance of the institutions and the device of latent or overt contract between the government and the universities.

Design and Expected Consequences

While the creation of the national university corporations (NUC) scheme was a direct product of many political and economic factors, the design of the scheme was based on a body of logic. It was influenced by the precepts of New Public Management or Institutional Economics that gained momentum in last two decades. At the core of the thought are the relationship between the 'principal' and the 'agent' and the explicit contract between the two.

The scheme of the Independent Administrative Agency is built on this concept: the government as the principal commissions an Independent Administrative Agency to achieve a public purpose. The terms are specified in the mid-term goals and plan; subsequently the level of achievement will be evaluated, and the result of which will lead to consequences including financial rewards or punishment, or even discontinuation of the contract.

It is argued that by separating the principal and agent, the agent will gain efficiency. The agent, free from strict and minute control by the government and having to face competition from other agents, is able to exploit local knowledge and initiate innovations. Moreover, it is given an incentive to gain efficiency through explicit goals. Provided with these mechanisms, the government is able to gain efficiency in provision of its services and become more accountable.

In order to realise the assumed function, it is imperative that the contract should be clearly stated with an instrument to measure the level of achievement. It is also necessary that the chief executive of the agent should be designated as personally responsible for the contract, although the institution as a whole functions as an agent for the government. The chief executive then directs the whole organisation towards achievement of the set goal, and the members of the executive board assist the chief executive.

Being one of the variations of the Independent Administrative Agency, the same argument should be applied as the justification of the construct of the NUCs. From this perspective, it is natural that the mid-term goals and plan, and the corresponding evaluation, should assume the core of the new relation between the government and the NUC. It is also understandable that the president of NUC has to be given unusually strong powers.

The underlying logic of incorporation of national universities can be summarised in a diagram presented as Figure/Table 1, where incorporation induces changes at each institution to produce desired effects.

The core of incorporation lies in three factors. First, the relationship between the government and the national universities are regulated by the mid-term goals and plans that are agreed upon by both parties. The government acts as the principal, and each university as agent, to produce services in education and research. Provided with those goals and plans, the government give subsidies to the institutions. In this sense, the relationship is regulated by an implicit contract. The level of achievement of the goals is evaluated at the end of the mid-term period, and the results are used to set the next mid-term goals and corresponding government subsidies. Meanwhile, institutions are given basic autonomy in both governance and funding. Each institution is presided over by the president as the chief executive officer, and the council appointed by the president makes basic decisions on management.

These reforms at the system level are expected to induce significant changes in each

national university. In particular, the changes in the following three aspects are important.

First, each institution is given specific goals to achieve. Rewards and penalty contingent upon achievement of the goals create strong financial incentives for the entire institution.

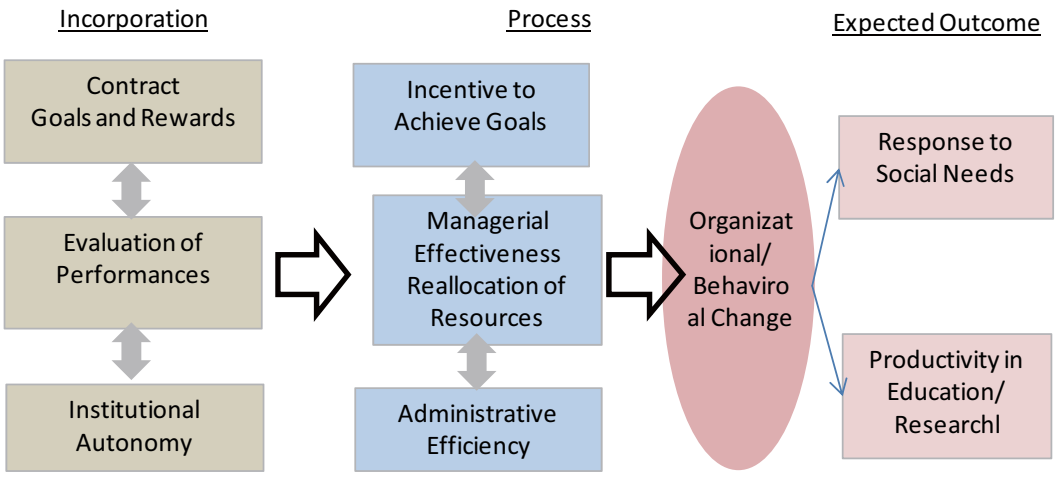
Second, the president and his/her council are provided with considerable power in the governance structure. They reallocate resources in terms of both faculty and administrative staff to achieve the goals.

Third, the administrative processes are liberated from minute bureaucratic control by the government. It will free administrators and faculty members from procedural works to invest a greater portion of their time on works directly related to education, research and community service.

These would affect not only the behaviour of faculty members and administrators, but also the behaviour and culture of the organisation. In the end, these factors would result in enhanced productivity in research, education, and other areas. Moreover, these changes will be achieved in the direction that society expects from the national universities.

In this way, incorporation would bring about better national universities. To what extent, was it realised in the subsequent years?

Figure 1 Design and Expected Consequences of Incorporation



2. Implementation

As of 1 April, 2004, the NUC Law was enacted whereupon all the eighty national

universities were registered as National University Corporations. The change can be summarised from three aspects: the contractual relation between the government and the NUCs, evaluation of performance, and enhanced institutional autonomy and power given to the management.

Relationship between Government and National Universities

Under the NUC Law, each NUC constitutes a legal entity under Civil Law. As a legal entity, it is able to sue other legal entities and can possibly be sued by others. It owns its own assets, which are called the capital of the corporation, consisting mainly of the buildings and land that were contributed by the government at the time of incorporation. In principle, it is supposed to be able to borrow funds, issue bonds or invest in other entities, but the government maintains strict conditions and restrictions. NUCs are legally independent of the government, and the relationship between them is regulated mainly by mid-term (six-year) Goals and the corresponding mid-term plan. The goals and plan in effect function as a contract between the two.

As the Law stipulates, the Ministry of Education assigns each NUC with mid-term goals that specify the goals to be achieved within the six-year period in enhancing the level of education and research, in improving efficiency in management of the institution, and in other areas. Based on this goal, the university should prepare a mid-term plan to achieve the specified goals, which should be approved by the government. Reflecting the criticism that this clause will give the government an overwhelming power over the NUCs, both Houses passed attached resolutions that required the government to respect autonomy of NUCs. In practice, the Ministry of Education asked each NUC to draft its mid-term goals, and then approved them without substantive changes.

Towards the end of the six-year period, the newly established Council for Evaluation of National University Corporations (‘NUC Evaluation Council’ hereafter) will evaluate the levels of achievement of the goals with the assistance of National Institute for Academic Degrees. The law states that, depending on the results of the evaluation, the government will examine the needs for continuation of the institution and necessary actions to be taken to the institutions. The last clause implies that the results may be related to the size of government subsidies to the institution. The resolutions of both Houses again draw attention to the possibility that this mechanism could lead to encroachment of academic freedom, and require request the government to take cautions. Further details in either the method of evaluation or the consequences of evaluation have not yet been worked out.

In the old system, the funds distributed to national universities were constituted as part of the government budget; they were classified into separate lines, and expenditure had to be

made for the designated purposed of each line. Tuition fees collected at the national universities were treated as the revenue for the national treasury. On the expenditure side, the national universities had to follow the budget and various government regulations in spending the funds. Moreover, the number of university personnel was kept under strict control by the government. On the other hand, necessary costs for operation of the university were in principle assumed to be borne by the government.

The NUC Law stipulates that the NUCs are financially autonomous entities with their own budgets. After incorporation, the government subsidy was given to each university in lump sum, without any division by line item. In principle, the NUC was given basic autonomy in the expenditure of the budget.

With the enactment of the NUC Law, the government handed over most of the facilities, land and buildings to the NUCs. The evaluated prices of those facilities constituted the capital fund of each NUC. In contrast with the old system, in which the budget for a fiscal year had to be executed in the designated year and accounted for within the fiscal year, the NUCs were now permitted to carry the balance over to the next accounting period. Within limits, each university is free to make investments: it can borrow money either from the government or from commercial banks. It also can issue a bond, with the government's .

At the same time, the NUC Law stipulates that the finances of NUCs will be accounted for according to the NUC Accounting Standards, which are similar to the accounting standards required for business corporations. In the old system, the budget was divided into line-items, and the accounting procedure simply implied executing the budget according to the budget without any infringement of governmental regulations. In the new system, accounting takes the form of double-entry bookkeeping. The financial report has to include the balance sheet, profit and loss statement, cash flow statement and other necessary statements.

One of the critical issues in this reform was the level of government contributions to the NUCs. While the Law does not provide for specific mechanisms to determine the level of government contribution to the NUCs, the 2003 Report of the Experts Committee for Incorporation of National Universities outlined the basic principle. First, the necessary amount of total cost was calculated for individual areas of study employing a formula that involves such indices as the number of students, that of teachers and other expenses and their corresponding unit costs. From the required amount, the institution's own revenue is subtracted to derive the necessary amount of government subsidy. In other words, this method assumed the basic principle that the government had the responsibility to secure the necessary level of funding for each institution.

Evaluation and Incentives

The above discussion indicates that the backbone of the NUC scheme lies in the cycle encompassing Goal-Evaluation-Reward. That is, the success of the scheme is critically dependent on the power of the evaluation methods as the key of the cycle.

The Independent Administration Agency Law stipulates that the government can take a range of actions, including discontinuation, on the institution after deliberation on the results of evaluation. This principle applies to NUCs.

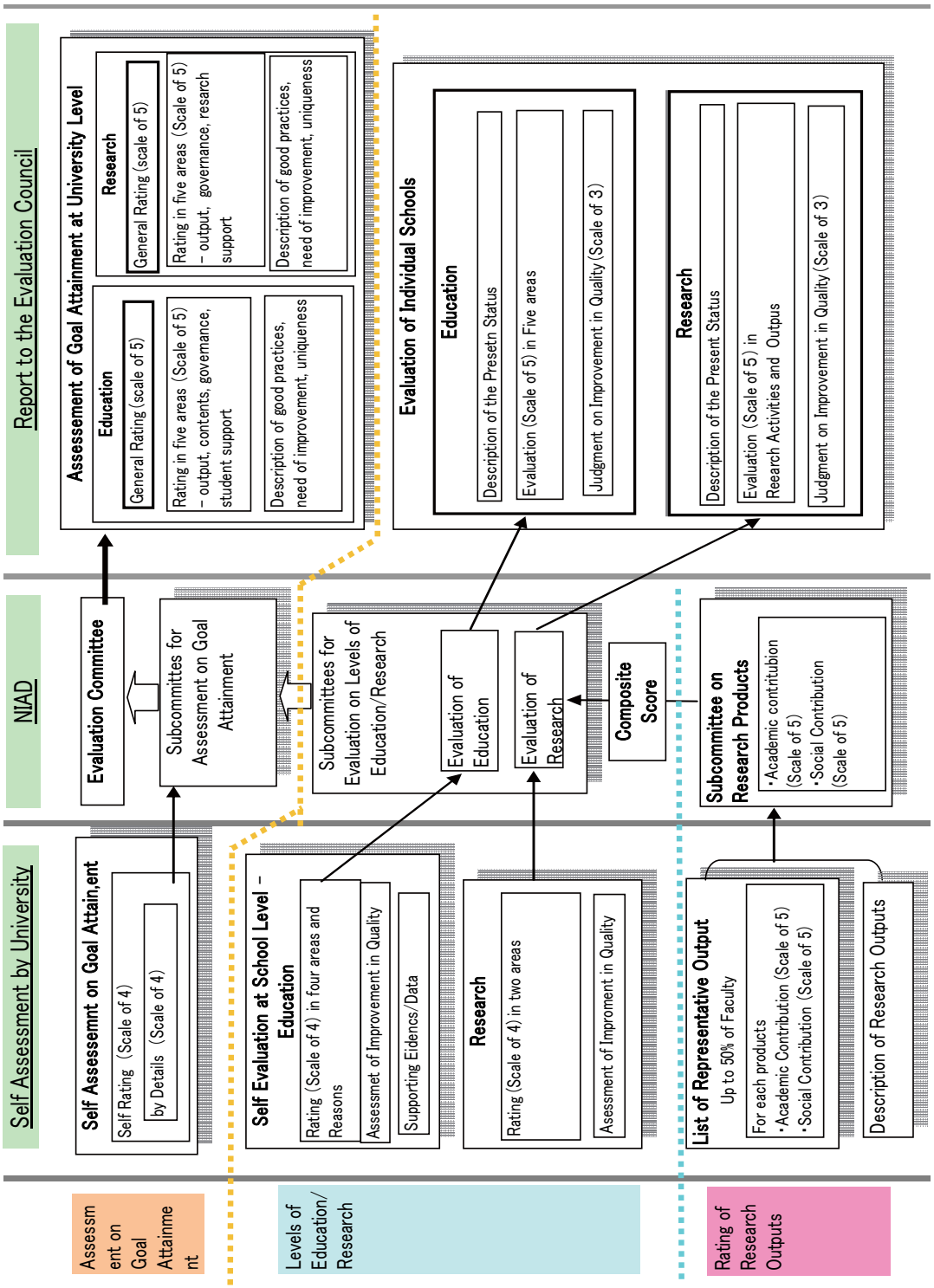
The process involves a wide range of practical questions. The central issue is that the mid-term goals, and accordingly the corresponding process of evaluation, have to cover the whole activity of a university. At the same time, the results of evaluation should be given a reasonable level of reliability. Since the results entail significant consequences for the NUCs including budget allocation, the lack of reliability should lead to a number of problems including the credibility of the scheme as a whole and the collapse of the incentive system that the scheme was supposed to create.

The NUC Law stipulates that the evaluation of performance in achieving the mid-term goals is to be undertaken by the NUC Evaluation Council under the Minister of Education, with technical assistance from the National Institute for University Evaluation and Academic Degrees (NIAD). The NUC Evaluation Council was established at the same time as the universities were incorporated, and discussions were held about the detailed procedures for evaluation. Through this process, the Council encountered a number of difficult issues.

Because the mid-term goals encompass the whole area of university activities, and the government subsidy is given in a lump sum, the evaluation exercise needs to cover the whole area of activities. That implies that the Evaluation Council and National Institute for Academic Degrees (NIAD) have to evaluate the levels of research and education in every field of academic specialty, in addition to considering various service activities and the efficiency of institutional management. Moreover, it has to be completed for every NUC at the end of the six-year term. This will be a formidable task.

Because of its pivotal role in the construction of the NUC, the scheme of evaluation will need to be comprehensive and the most ambitious in the world. It needs to be comprehensive in three ways.

Figure 2. Scheme of Evaluation



First, it involves both the judgment on achieving the goals specified in the mid-term plan on one hand, and evaluation of the absolute levels of education and research on the other. While the logical construct of incorporation requires only the judgment on whether the mid-term goals has been achieved, it does not necessarily demands judgment on the absolute levels of academic abilities. The government and NIAD argued, however, that in order to make judgments on goal-attainment, one needs the basis of evaluation at every level.

Second, it requires both self-evaluation by the university and objective evaluation by NIAD. The Incorporation Law requires that the incorporated universities not be subject to arbitrary control by the Ministry of Education. In other words, the mid-term goals are set as an agreement by both the Ministry and individual universities. This principle applies to the evaluation procedure. Self-evaluation is also indispensable for practical reasons. Since the evaluation has to be undertaken for all eighty national university corporations at the same time, NIAD is not able to start gathering information by itself.

Third, its scope covers both education and research, at the institutional as well as the school level. While it is feasible to provide enough time and resources for evaluation of research, judgment on education could face serious difficulties. One should remember that in UK, where the Research Assessment Exercise has been undertaken for a number of years, assessment of teaching and education has not been fully implemented fully.

It is evident that such a comprehensive evaluation entails an enormous amount of cost if it is feasible at all. A more serious problem is how the results will be connected to the next mid-term goals. This critical point is still unclear.

Probably the most significant aspect is the relationship of evaluation to the government subsidy. While the NUC Law stipulates the framework of the NUCs and their relationship with the government, it does not specify the financial obligation on the part of government to support the NUCs. As a result, there is a substantial range of alternatives in the level and methods of financial support by the government. That, however, will be a decisive factor for the nature of the NUC in significant aspects.

There are three sets of important issues revealed in the process of implementation. The original design laid out in the 2003 Report of the Expert Committee for Incorporation of National Universities assumed that the government would remain responsible for securing the necessary level of revenue, calculated on a formula, for each institution. In other words, the government would maintain the ‘Compensation Principle,’ implying that the government would fully compensate for the gap between the calculated cost and the income earned by each university. This principle had to undergo a series of significant alterations in the following periods.

In the autumn of 2003, when the NUC Law had been enacted and the national universities

started preparation for incorporation, the Ministry of Finance released its own plan for funding the NUCs. This plan did not follow the Expert Committee that proposed a set of formulae to derive the amount of government contribution to each institution. Instead, the Ministry of Finance indicated that each NUC would be given the amount that the institution received in the previous year irrespective any change in the numbers of students and faculty members. A fixed rate of across-the-board reductions in government expenditure would apply to the allocated amount. In the case of NUCs, the rate will be 1 or 2 per cent. The Ministry of Education, under the political climate of government restructuring had no other way than to oblige.

In the short run, this may not be very different from the original design with respect to the amount of subsidy, but it implied a significant shift in the principle of government contribution - not only were any prospects for increasing the allocated budget closed, but also the compensation principle was abandoned.

Prior to the reform, each national university was given its budget separated into line items. Because the formula to calculate the allocated budget was known, it was clear how much each faculty would receive in the budget. Under this circumstance, the faculties had a strong basis for demanding allocation. On the other hand, the university administration was given very little room to manoeuvre.

With the transformation into NUCs, which receive government subsidy as a lump sum, the university administrators are given a considerable degree of arbitration. In distributing the fund to faculties and other constituent units, most universities set the basis at the previous year and then deduce institutional funding by applying the same rate across-the-board. Through this measure, most institutions increased the discretionary resources at the institutional level. Some institutions introduced redistribution schemes to provide incentives related to achievements in research. These reforms appear to indicate that the management at the institutional level is increasing resources at their own discretion.

Meanwhile, the disappearance of line items implies that each institution has to have sufficient ability in financial management in order to gain efficiency on the one hand and to avoid risks on the other. The Accounting Standards for National University Corporations was designated exactly for that purpose. For most of the administrative sections, however, it was difficult enough to introduce the new bookkeeping system. Moreover, the organisation of universities is extremely complex, with numerous sub-units cutting across each other. It is, in a sense, a nightmare for cost accounting. Moreover, each unit has its own source of income through research funding.

Legal Status and Governance

By stipulations of the Law, each national university corporation has a President, an Executive Board, an Academic Senate, a Management Council and Auditors. In this scheme, the President assumes the ultimate power and responsibility for decision-making and execution, while important decisions have to go through deliberation of the Executive Board. The Academic Council, upon request by the President, deliberates on academic matters and reports to the Executive Council and the President. Meanwhile, the Management Council, more than half of the member of which should be selected from outside the university, advises the President. The auditors are selected by the university, but are appointed by the Minister of Education and report to the Minister directly.

The president used to be elected by the Academic Senate under the old system, but is now appointed by the Committee for Selection of President. The committee consists of the same numbers of representatives from the Management Council and the Academic Senate; the President and the members of the Executive Board may join as the member. The presidential appointment is made by the Minister of Education, but the length of term and the exact procedure taken for the selection process are decided by each university. The Committee also has the power to relieve the president of duty through a similar procedure.

The scheme of incorporation does not necessarily require a change in the status of the workers from being government employees. However, the cabinet, which was politically committed to the restructuring plan of the government organisations, pushed forcefully the change in employment status. Meanwhile, resistance from the national universities failed to gain momentum. Consequently all the academic and administrative members of the NUCs changed their status from government employees to employees belonging to one of the NUCs. The pension and health-care funds, however, remain a part of that for government employees.

For each NUC, the first task for transition was to organise the basic governance structure. According to the NUC Law described above, each NUC established an Executive Board, Academic Council and Management Council.

The number of members of Executive Boards is stipulated by an Ordinance issued by the government, based on the size of the institution. Various surveys showed that by far the majority of the board members were recruited from the professoriate, most of them being former vice presidents and faculty deans. In many NUCs, particularly the large ones, the Boards included a non-academic member assigned to oversee managerial and financial matters. Many Board members carried the title of Vice President.

The Academic Board, as the NUC Law stipulates, consists mainly of faculty members. In most universities, its size, while not stipulated by any ordinance, tended to be smaller than the former University Council that it replaced. In most universities, the members were elected at

the faculty meetings. The new Council retained the conventions and procedures taken in the old Council.

The size of the Management Council was the subject of discretion of each NUC. In most cases, they included executives from local business firms. It was common to include a member from local mass media. Some NUC appointed former government officials.

Associated with these changes was the transformation of the faculty administrative committees. Under the old system, various administrative committees were organised under the University Council. These committees, consisting of only faculty members, were given the power and responsibility in execution of various functions such as entrance examination, coordination of curriculums and academic calendars, distribution scholarships. Under the new system, many of these committees were moved under the Executive Board and chaired by the assigned Board member. Also, some administrative staff became the members of these committees. This represents the shift from the old practices of participatory administration to a system where the Executive Council exerts stronger powers in decision-making and execution.

Because of the strong power given to the president, the selection process bears not only symbolic but also practical significance to the governance of the NUC. While the NUC Law required that the President should be selected by a president Selection Committee consisting of equal numbers of representatives from the Academic and Management Councils, it does not stipulate the details of the procedure. Depending on the design of the procedure, it may as well lead to a significant departure from the tradition of participatory governance.

As it turned out, most NUCs bypassed this problem by implanting the participation of faculty members in the new selection process. In most cases, the President Selection Committee decided to include a step of 'reference ballot,' in which individual faculty members cast a vote for a preferred candidate. The details of selection of the candidates and the specific rules for reference ballot differed substantially between institutions.

Closely associated with this is the procedure for dismissal of the president. The Law stipulates that, in the extreme case of loss of confidence in the president, the Committee can initiate the process of dismissal of the president. As described above, the president of an NUC is given an unusually strong power –s/he does not have any supervising body comparable to Board of Governors or Board of Trustees consisting of either perpetual or externally selected members. Even though the Ministery of Education, who appoints the President upon request by the Selection Committee, can be legally designated as the supervising body, it is unlikely that the Minister would dismiss a President except in extreme cases of infringement of legal requirements.

Since the NUC Law again leaves the details to the institutions, each individual institution

established its own procedures. If a significant number of the faculty members started demanding the dismissal of a president, however, the procedure may not able to provide a firm base for satisfactory solution. This issue boils down to the rather unusual design of governance of NUCs in the sense that the president exerts a strong power in both decision-making and execution, without any effective supervising body above him/her. This arrangement derives from that of the Independent Administrative Agency (IAA), which is meant to achieve gains in efficiency to achieve a goal set by the government.

This logic may be difficult to apply to higher education institutions which pursue a wide range of goals in the long run. Moreover, under the framework of mid-term goals and evaluation, it is likely that a president, who agreed on mid-term goals leaves the position after the mid-term period. He/she then will not receive any punishment or reward resulting from the evaluation of the achievements of that period. In this sense, the contract does not provide correct incentive.

The third issue is the relationship between the governance at the university level and that at the faculty level. While the National University Corporation law specifies the governance structure for the whole university, the relationship between the university-level decision-making and that at the faculty level is left to the discretion of individual universities.

Most of the NUCs left the arrangements basically unchanged. It is the faculty meeting, usually attended by all the academic members, that makes basic decisions at the faculty level. The dean of each faculty is elected from among the professoriate. Under this construct, it is logically possible that a faculty makes a decision that contradicts that of the whole university. Moreover, the deans work as the representative of their faculty and not as members of university-level administration. In effect, almost all NUCs maintain a meeting of deans, which, while lacking clear status in formal organisation, works as an important vehicle for managing the entire university.

3. Evaluation

It should be evident from the discussion above that incorporation in fact introduced a range of radical changes in the ways that the national universities operate. How were they received by the universities, and what are the problems? There are three major issues.

Instruments for Evaluation and the Link to Rewards

The first instrument is the effectiveness of the evaluation-reward scheme. It should be clear from the discussion above that the whole construct of the incorporated university is critically dependent on the evaluation and achievement of the goals specified at the beginning

of the term. The first mid-term period ended in March 2010, and the second mid-term goals and plans had to be specified before the before the end of the term, and the evaluation of the present cycle will had to take place in 2009 financial year.

As stated above, the evaluation system is indeed very comprehensive and thorough. Through the evaluation exercise, a composite index was derived for each NUC. The composite index was then translated into a reward/penalty through a formula determined by the Ministry of Education.

As it turned out, the Ministry chose not to make the reward/penalty too large. Table/Figure 1 shows the NUCs that were ranked best ten and worst ten, according to values of the composite index and the amount of the reward or penalty as percentage of total subsidy from the government. It shows that the Nara Institute of Science and Technology had a composite index value of 70.00, and that gave them an additional subsidy representing 0.419 per cent of the total government subsidy. On the other hand, Hirosaki University was lowest ranked, and their government subsidy will be reduced by 0.417 per cent.

On the whole, however, the table shows that the financial consequences of evaluation were relatively minor. The reward or penalty was at most about 0.5 per cent, or one-two hundredth of the government subsidy. In absolute terms, the largest change for any university was about ¥20 million, or about US$250,000. Moreover, for about the half of the NUC ranked somewhere in between, the proportion was about 0.1 per cent. The reward/penalty regime turned out to be a benign one. Considering the enormous cost, direct and indirect, evaluation incurred at the individual university level and at the National Institute for University Evaluation and Academic Degrees, the level actual financial consequences was disproportionately small. One may argue that the efficiency of the evaluation exercise was very low.

Since the power to stipulate the method for deriving the amount of reward/penalty is vested in the Ministry of Education, and the Ministry does not reveal the rationale for the specific form of the formula, it is difficult to analyse the reason behind this formula. One can imagine, however, that there are a few good reasons for it.

Table1. Composite Index and Financial Reward/Penalty as a percentage of Total Subsidy

	Rank	Name	Composite Index	Reward/ Penalty
Gain	1	Nara Institute of Science and Technology	70.00	0.419
↑	2	Shiga Medical College	63.75	0.335
	3	Hamamatsu Medical College	60.64	0.291
	4	Tokyo Institute of Technology	60.17	0.444
	5	Ochanomizu Women's University	59.93	0.429
	6	University of Tokyo	56.87	0.193
	7	University of Fukui	54.50	0.198
	8	Tokyo University of Medicine	53.26	0.168
	9	Tokyo University of Foreign Studies	52.89	0.211
	10	Kyoto University	51.30	0.146
	77	Yamanashi University	38.18	-0.286
	78	Naruto Normal University	38.00	-0.252
	79	Asahikawa Medical College	37.75	-0.299
	80	Utsunomiya University	37.57	-0.385
	81	Kagawa University	37.20	-0.325
	82	Hokkaido Normal University	37.00	-0.313
	83	Kanoya University of Sports Sciences	37.00	-0.632
	84	Ryukyu University	36.40	-0.403
↓	85	Wakayama University	35.50	-0.559
Loss	86	Hirosaki University	35.39	-0.417

First, even though the evaluation was undertaken under a very comprehensive and thorough system, one could argue that there are numerous points where the validity of evaluation could be challenged. If the financial consequences were too large, the evaluation scheme itself would have been faced with serious problems. Then the integrity of the whole scheme may collapse.

Second, even though the composite index was derived as weighted sum of evaluation results in research, education and other areas, the effective weights were different from the designated one. It is because the effective weight is determined not only by the formal weight but also by variances of the ratings at each area. If the variance is large, then the effective rate should be large. This is particularly important when one considers education relative to

research. Since research is relatively easy to rate on a firm basis, the rating of research has large variance. With education, the variance is small because of the lack of a definite basis for evaluation. Altogether, the composite index favours research. It runs counter to the original purpose of the evaluation scheme.

The third point is a fundamental one. Even though the evaluation scheme is designated to measure the degree of improvement rather than the absolute level of achievement, the results show that in general the large and prestigious institutions are rated higher. One could argue that those institutions had been in a favourable position in resource allocation for a long time. On the other hand, small local institutions have been left with limited resources. If the results are related to large amounts of resources, those institutions are likely to be the subjects of significant amounts of penalty. This may result in serious consequences for those institutions.

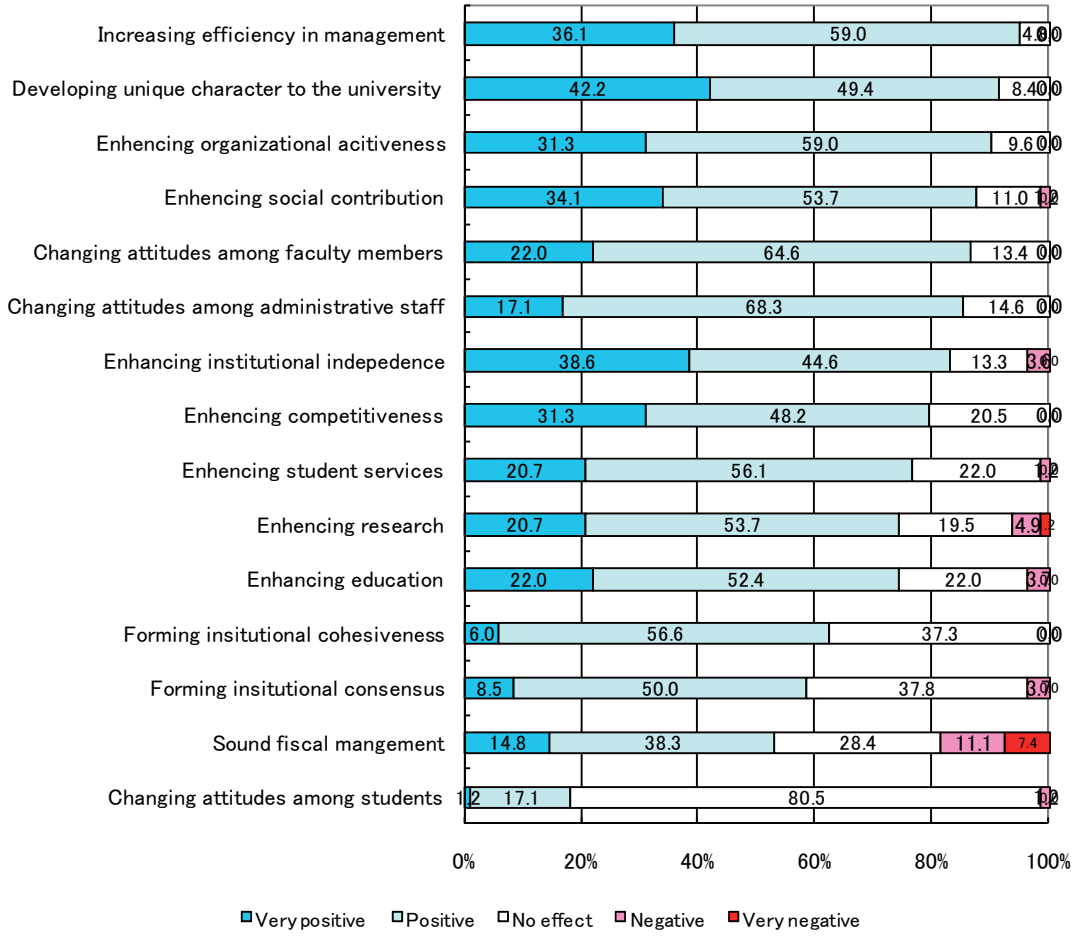
Managerial Effectiveness

The second viewpoint is the improvement in the effectiveness of institutional management. It was stated above that by introducing the Incorporation Law, the governance structure was drastically changed to enhance the power given to the top administrators, particularly the president and the board members.

In 2006, two years after incorporation, an survey sought the opinions of the presidents of national university corporations as to the consequences of incorporation. The results showed that, so far, overall, the presidents regarded incorporation had produced positive effects. In particular, they thought the reform made management easier and activities more efficient. It is in a way, this was a reflection of the frustration that they harboured under the old system of national universities (Figure 3).

In fact, as many as 95 per cent of the top officials think that incorporation has produced positive effects in enhancing efficiency in management. In addition, they found it to have had positive effects on enhancing uniqueness of each institution's organisational vitality.

Figure 3. Observations of Presidents on the Consequences of Incorporation



Source: Center for National University Finance and Management

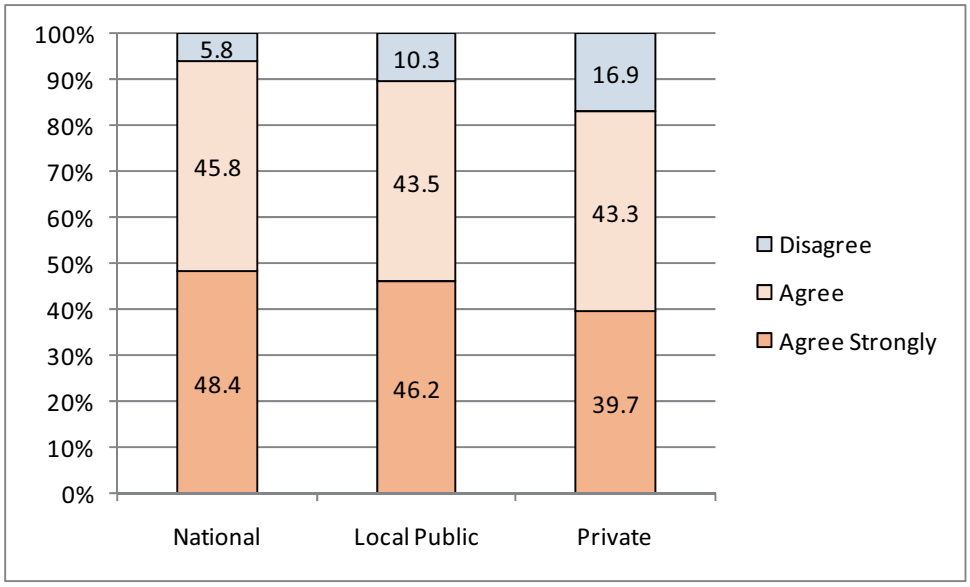
It should be noted however, they are less sanguine as to the effects on the level of research or education. In fact, the actual effects of increasing the power of the top administrators are not clear. A survey by the Center for National University Finance and Management showed that in general, the amount of the budget reserved by the central administration increased substantially. It is not clear how much they spent to redistribute the money to shift the pattern of internal allocation of resources. From the NUCs' annual reports it is difficult to imagine that internal incentives were increased to enhance prioritised goals.

The lack of radical change in resource allocation is closely related to the making of power in the universities. The Incorporation Law stipulates that the president to be elected by the election committee should be composed of representatives of faculty members and lay

members. The Board of Directors of Tohoku University, one of the Seven former Imperial Universities, decided in early 2005 that the next president would be elected by the President Selection Committee itself, not allowing direct involvement of the faculty members. Still, most NUCs selected presidents by popular election by faculty members but occasionally administrative staff also.

It reflects a strong belief among faculty members that they should be involved in selecting the president. One can argue that as long as faculty members select the president, it will be difficult for the president to initiate changes that run against the interests of faculty members.

Figure 4. Faculty Members' Opinion - Response to "Faculty Members Should Participate in Selection of President



Source: '2010 Survey on University Faculty Members'
Center for Research in University Management, The University of Tokyo

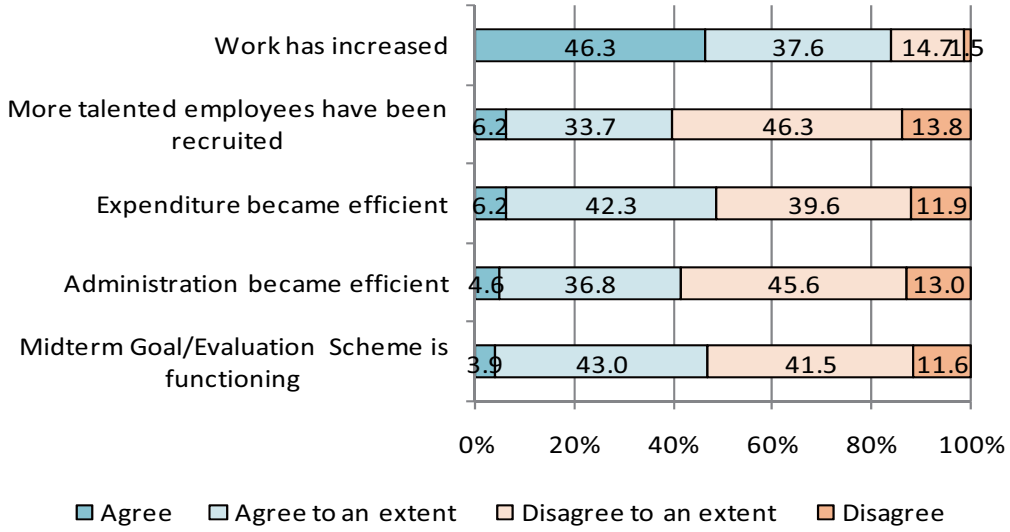
Administrative Efficiency

The third point of consideration is administrative efficiency. It was expected that by removing minute government regulations, administration would become more efficient in various ways.

From this point of view, incorporation seems not only to have failed to produce the expected effects, but also resulted in rather negative consequences. A survey of administrators in Spring 2001 (Figure/Table 6) found that administrators are at best neutral in their evaluation of the consequences on efficiency of administration and resource uses. More than

half of the respondents disagreed with the statement that incorporation made administration more efficient. About half of the respondents did not consider that the scheme with specified goals and evaluation of achievement is functioning.

Figure 5. Consequences of Incorporation on Administration
- Administrators' Assessment



Source: '2010 Survey on University Administrators'
Center for Research in University Management,
The University of Tokyo

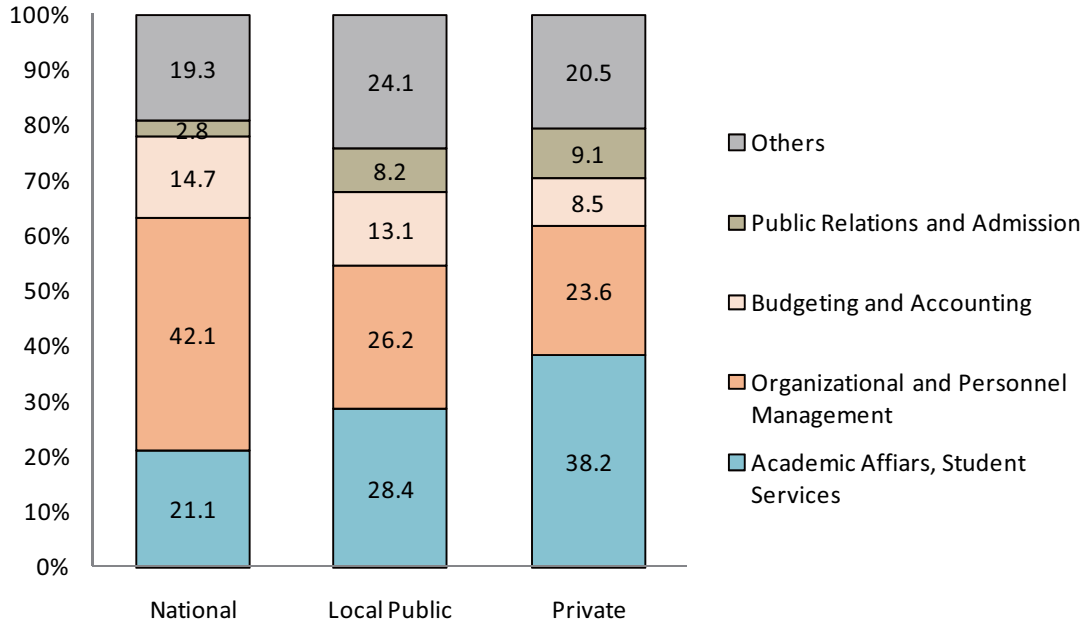
On the other hand, they felt that incorporation actually increased their workloads significantly. An overwhelming majority of the administrators agreed with the statement that workloads increased after incorporation.

It is true that the process of organisational transformation accompanying incorporation was considerable. But considering that this survey was conducted six years after incorporation, the response cannot be considered to reflect temporary problems. One could suspect that the results show that while new schemes for managerial control were introduced, various practices and regulations from the pre-incorporation period are still alive. Under these circumstances, administrators have to work according to two principles at the same time.

As a consequence, the administrative works is heavily inclined towards meeting various types of regulatory and administrative requirements. Figure/Table 7 shows the distribution of administrative work by their major assignment. It is apparent that 42 per cent of

administrators in national institutions are assigned to ‘organisational and personnel management’ as compared to 26 per cent in local public and 24 per cent in private institutions.

Figure 6. Distribution of Administrators by Major Assignment



Source: ‘2010 Survey on University Administrators’
Center for Research in University Management,
The University of Tokyo

On the other hand, the proportion of those assigned to ‘academic affairs and student services’ was only half of the corresponding figure for private institutions. It is apparent that incorporation has not succeeded in enhancing administrative support for education and research.

4. Conclusions

The uniqueness of the NUC model of Japan is that it was designed to follow closely the theoretical models of new public management. The actual implementation, however, was influenced by political factors and the internal inertia at the institutional level. Such a construct engendered a number of contradiction and ambiguities.

One can attribute the problems to the gaps between design and implementation. It is also possible that there were significant problems in the original design itself. It is at least clear that there are significant contradictions and ambiguities in the details of the incorporation scheme. As a result, the reform has not yet achieved what it was originally expected to achieve.

Moreover, the current political climate moving towards radical restructuring of government organisations and reduction of government outlays has started to threaten the basis on which the original design of NUC scheme was built. If things move further in that direction, the NUC scheme may lose its original characteristics and shift to a different entity.

Despite all these problems, I argue that incorporation should not be considered to be a failure. In various ways, the changes were necessary, even though the design of the change was obviously immature.

The issue for the future lies in how the scheme of incorporation can be linked with behavioural changes of both academic and administrative members to bring about higher levels in education, research and other activities. The linkage mechanism is much more complex and difficult to achieve than assumed before. Here lies a new frontier for higher education studies.

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Chapter Five

Oh Happy Days! - University Reforms in Finland

Timo Aarrevaara

Finnish higher education is a binary system comprising universities and polytechnics (also referred to as *universities of applied sciences*), all of which are engaged in both teaching and research. The higher education system provides a link between the national innovation system and regional development programmes. Government influence over policy programmes and initiatives is ensured because it is the predominant source of funding. The higher education system is characterised by a multi-level governance model, complexity in national decision-making and the need to serve a wide group of interests.

1. A long chain of reforms

It is characteristic of European higher education reforms that attention has focused on higher education structures. In the 2010s, however, it appears that the focus on higher education institutions has become more robust. It means that attention is paid more to the objectives and key impacts, as well as performance information and evaluation. This can be seen as part of a broader trend of society in which consumers and users of public funded services are exerting more and more influence. In this article I will examine how the University Act which came into force from the beginning of 2010 has changed the university system in Finland and how the reform seems to have affected the universities.

According to Finland's Ministry of Education and Culture, the goal for higher education reform is that universities should improve their capacity. This improvement is directed at capacity to react to changes in the operational environment, to diversify their funding base, to become competitive in seeking international research funding, to engage in international

co-operation, to undertake top-level research and define their strategic focus areas, and to promote quality and effectiveness as well as a stronger role within the innovation system (MinEdu 2011). These goals are broad, and the intention is to provide the universities with the concept to succeed in the coming decades. As no-one knows exactly what those conditions are, the Finnish response has been to increase the universities' administrative and financial autonomy, These are considered to be one way to solve basic problems inherent in Finnish university system, such as lack of dynamics and inefficiency.

The Finnish university reforms are results of a continuous trend, as universities have slowly evolved into their current independent status from 2010. From the 1970s up until 2009, all Finnish universities had been a part of the state administration, and their administrative status was as accounting units within the state administration. In the early 1990s, universities began to highlight performance management and performance information among their objectives, which has been one of the more visible means of creating their independent status. Nearly two years after the University Act came into force, it has already become evident at least in a limited way, how structural reforms have been realised in the universities. There were budget reforms (Higher Education Development Act 1987–1996), which transferred from line item budgeting to lump sum budgeting and from history-based to formula-based funding. Quality assurance had been a responsibility of higher education institutions, and the emergence of a national council responsible for quality assurance (FINHEEC – the Finnish Higher Education Evaluation Council) has increased transparency and accountability since the mid-1990s.

Change in the Finnish higher education system was realised quite quickly at this point. The higher education policy objectives were amended and implemented between 2008 and 2010, since the documentation on structural developments to define universities' financial autonomy and administrative status after the reform had been prepared. This was based partly on the 2005 resolution on the structural development of the public research system as well as the 2006 Country Report by the OECD and its recommendations for the development of the Finnish higher education system (OECD, 2006; Aarrevaara, 2007). Finland's reactions represent a European way of carrying out higher education reforms, which highlights increased emphasis on performance and outputs, and the introduction of systematic quality assurance activities and greater formalisation of roles and responsibilities. This concerns leadership in particular, giving more power to consumers and users of public goods, decentralisation of responsibilities from the central level, combined with increased institutional autonomy. These are the four basic dilemmas of European university reforms (Larsen et. al. 2009, 44-45).

The aim of the resolution on the structural development of the public research system was

to demand that the higher education institutions aggregate their resources into larger entities and boost networking, management and impact analysis. A goal relating to reform of state sectoral research institutes was established. It also demanded that the intermediaries such as technology and knowledge centres, development companies, science parks and business incubators, should intensify the cooperation between each other and boost networking with public research organisations. Strategic Centres for Science, Technology and Innovation were established as new public-private partnerships for speeding up innovation processes. The establishment of the national and regional innovation systems in the form of policies, organisation structures and funding programmes is increasingly creating infrastructure for partnerships. Key players in the innovation system are the Ministry of Education and Culture, the Ministry of Employment and the Economy, the Science and Technology Policy Council of Finland, the Academy of Finland, the Finnish Funding Agency for Technology and Innovation (TEKES) and the Technical Research Centre of Finland (VTT).

The innovation system is the essential starting point of the Finnish university reform. Universities are part of the innovation system, in which case they are dependent on diverse funding, research networks, co-operation with other higher education institutions as well as industry and public research organisations. They share research infrastructure with all key players of the innovation system.

Universities now need to adopt a 'management by information' approach, and in particular, they need to develop better quality assurance systems. These requirements present a challenge to universities. An important part of the quality assurance issue is the responsibility of the academic profession, particularly because of major governance changes effected by the new Act. Since the start of 2010, there has been an increase in the presence and role of external stakeholders on universities' governing boards, and university staff ceased to be civil servants. This new situation in decision-making has not gained wide approval from the academic profession. Rather, first experiences of new University Act of 2009 brings evidence that regulatory and rule-setting stakeholders indirectly influence the science system and the conditions under which stakeholders become salient (Benneworth & Jongbloed, 2009).

2. What is happening to the university community?

For the academic profession in Finland, the most important change during recent decades has been that universities became independent legal entities, separate from the state administration since January 2010. Prior to this, change had been a long-standing debate on the role of the universities in the education system and its relevance in society. The

government has persistently called for universities to develop discipline-based activities, so that universities will be better able to respond to a changing environment. Universities are asked to define their public role and in this sense, and to improve their strategic focus areas. The Ministry has also encouraged universities to diversify their funding base. In addition, universities as organisations funded predominantly from the public purse, have been directed to increase the role of stakeholders within decision-making processes. All this should be reflected in the quality and effectiveness of research and teaching as well as in the dynamics of the higher education system and institutions' performance. Expectations are placed on the strengthened universities role within the innovation system.

It is expected as a result of these reforms, Finnish universities would act as a stronger player in the European and global education and research market, and that would also affect the academic profession as a key player within these structures. Among the other reasons behind Finnish higher education reforms are improved rates of access to higher education available to newer generations, higher demands for openness and transparency on the part of publicly funded operations, as well as the modernisation of the operating models of higher education institutions. The need for higher education reform is also in the substance of academic work. The reasons for these reforms are partly domestic. In addition, there has been a saturation of rigid structures and too high a proportion of shared decision-making. The same phenomena have been verified in some other European countries, such as in Austria (Pechar 2010, 15-16).

The government now encourages stronger profiling so that each university emphasises its activities in research, teaching, commitment to 'working life' and regional development.

The University Act of 2009 can be seen as a response to these demands imposed on universities. From the beginning of 2010, Finnish universities became autonomous bodies governed either by public law or as foundations subject to private law. This has ushered in a new era in which universities are responsible for their actions, including the possibility of responding to a changing environment and modifying their activities. To this end, the Ministry of Education and Culture now requires universities to profile focus areas in research, teaching, commitment to work life and regional development.

There is clear evidence of the trends in higher education reform in Finland. Change in the governance model is taking place, moving it from the collegial to the professional form, at least to a limited extent. Governance arrangements changed in several ways, and there are now two university models, because independent legal entities can be either institutions subject to public law or foundations subject to private law. Their governance arrangements include smaller university boards with a mandated minimum number of external members. Since 2010, at least 40 per cent of the members of the university boards are required to be

external, and university boards are built more in the managerial direction than under the previous University Act. The ownership and management of university buildings changed to a system whereby universities hold majority ownership rights, compared with the former government 100 per cent ownership by the state (Aarrevaara, Dobson & Elander 2009). These new arrangements for managing real estate policy in the university sector are related to accounting structures, and not discussed in this paper.

Academic leadership still has a strong impact in Finnish university governance. University governance has changed in such a way that the traditional tripartite system in decision-making is compensated for by stakeholders' growing role. These reforms are also changing the status of academics in universities. The 2009 University Act transferred changed the position of members of the academic profession from being civil servant status to the general form of the employment. At the same time, the incentive system has changed, and is now a reward-based system. This shift of authority to approve staff appointments has been taking place since the late 1990s as appointment of permanent professors in Finnish universities, which earlier was carried out by the head of the state, the President of Republic (Act 648/1997, 27.6.1997).

Higher Education reforms can be seen as part of the first phase in the reform of governance structures, but the effects are broader. It is important to see the effects of academic work in a context wider than governance structures. In fact, structural reforms can be seen as a result of a long-term trend, as the work of universities has changed significantly. Establishment of the Finnish polytechnic sector in the early 1990s significantly increased the responsibilities of teaching, and also the university sector grew. Therefore, academic work is still largely subject to the same expectations as in the past, even if there is need for change in the mode of operation.

The most difficult changes for the University community have probably been the internal structures and decision-making. When a strong idea of the university based on the Humboltian model is compensated for by a modern organisation, it has reduced the importance of collegial decision-making. With at least 40 per cent of the university board members now being appointed from outside the university community, the increasing role of external stakeholders is clear (Aarrevaara et. al. 2010).

The universities have been modifying internal structures since the 1990s, but the tripartiate decision-making model no longer exists in the way it used to before January 2010. Until then, professors, other staff and students had their representatives on all major decision-making bodies. The university community is represented by the University Collegium, which decides on the number board members and elects the external as well as university community board members and also approves the annual accounts. However, the University

Collegium's role is much less active than the Board's. Compared with the previous legislation, the new Act allows external stakeholders to have a stronger voice and has made their formal opportunities to participate in decision-making for internal stakeholders weaker than before.

In Finland, the Academic community is still strong, and expectations of collegial decision-making are high in public debate. In practice, the universities have formed governance models in a way that they are bottom-heavy with strong academic units. It does not leave room for tripartite decision-making the same way as before. The formal decision-making seems to have changed to the opportunities affecting the strategy, the close involvement in the quality system as well as the ability to formulate research and teaching content as a part of academic freedom. These opportunities differ much from what the previous state bureaucracy model guaranteed.

3. Finland will continue to have a binary system of higher education

By the end of the 1980s, universities in Finland were mapped as a part of university system and all the universities were enacted by separate Acts. Later, by 1997, the universities were named under a general University Act (§ 1997/646). It was clear that massification could not take place in traditional universities with strong emphasis on research. Establishing the polytechnic sector from 1991 in Finland has meant a major diversification of the academic profession by creating a binary system based on both universities and polytechnics. The trend for diversification in the Finnish binary system is stratified with institutional diversity rather than programme diversity (Teichler, 2008). The Finnish system is not formally but rather informally stratified. There is no formal stratification between universities and polytechnics, but they have a different role. Universities offer similar content in educational programmes in different parts of Finland. It is clear, that there are differences in practice, because educational programmes are implemented in very different environments and in different capacities. Stratification is evident in disciplines with strong demands being placed on the research infrastructure, in cases in which research infrastructure determines the direction of research. Universities in Finland have not necessarily taken this reality into account. The main research funding body, the Academy of Finland emphasises that infrastructure should be incorporated as an integral part of universities' and research institutes' development strategies (AKA, 2009).

The differences between the two sectors are clear in terms of their different identities. The division of labour between universities and polytechnics is clear in the innovation system, for example. Polytechnic R&D and university research infrastructure are important

for small and middle-sized enterprises that have marginal industrial research structures and capacity. Universities' research responsibilities are extensive, and the polytechnics on the other hand have a clearer duty to respond to the needs of 'working life'. This is also reflected in research that is carried out in both sectors. Universities' first cycle degrees (the bachelor level) do not guarantee access to the labour market, and almost all university students must complete a second cycle master's degree programme. The corresponding first level of a polytechnic degree has high status and acceptance in the labour market, and only a minority of polytechnic students continue to second cycle degrees. Finland is one of the OECD countries seena rapid increase in graduate rates due to harmonisation of higher education in European countries (OECD, 2011). A peak of amount of second cycle degrees was seen in 2008 with almost 22 000 graduations at the master's level.

European higher education is changing, and the pressure for this change is also reflected in the development of Finnish higher education. The trend from the Nordic perspective is also reflected elsewhere in this book concerning the European Higher Education Area's (EHEA) expectations. European national higher education systems are undergoing a process of integration, which is visible in the elements of harmonisation of degree structures of the Bologna Process as well as operating to harmonise degrees. Although before the 1990s higher education was not at the heart of European integration, it is now the leading themes of integration and at the same time an important part of the European knowledge society development. The European Union relies on higher education and research relevance to promote the development of society, which is also reflected in significant investment in the sector's development.

This development is also seen as leading to reduced state control and a shift towards market control. The new context of European higher education requires improved competitiveness between the universities, and they have to compete for students and staff. Universities may not be effective actors in this environment, because the rigid office structures and the strong legislative basis have restricted universities' abilities to change rapidly. Rapid changes would require professional management and leadership, but European universities also have strong collegial traditions of governance. In Finland for example, academic leaders spend time with their colleagues, share common values and reinforce those values in loops of interaction in collegial systems (Aarrevaara 2010). At the same time, promoting the dynamics of the university institution would require extensive freedom of operation for the different actors applying the means of entrepreneurial and accountable operating culture.

It is quite reasonable to say that European universities have changed the traditional functions of the above-mentioned factors. A task for university in the European knowledge

society framework consists of not only of knowledge production, knowledge dissemination, and knowledge transmission in the technical and social innovations. These tasks are also reflected in the higher education governance models. For Finnish higher education, European integration has been seen as a natural step towards a more accountable and transparent mode of higher education. In Finland, it means that the higher education system in the 2000s consists of several actors with innovation systems, funding, and national policies. Compared with the situation 30 years ago, it is now characterised by multi-levels of administration, as the national decision-making is complex and there are strong networks linked with the academic community.

Under current governance arrangements, polytechnics fall under the auspices of *licence holders* that are local government municipalities or federations of municipalities. Higher education institution licences in the polytechnic sector have so far been based on authorisation by the government, but in the new system the aim is to define the role of all these institutions in the Polytechnics Act. In the subsequent funding system, there will be a stronger element of quality. As a result, the polytechnic sector's financial and administrative autonomy will be analogous to that enjoyed by the universities. The establishment of a polytechnic sector has realised the massification of Finnish access to higher education and therefore been closely related to social equity (see. Brennan & Teichler, YYYY). Higher education in Finland will continue be divided into two sectors in the future, but conditions that will lead to future mergers between proximate universities and polytechnics seem to be increasing.

4. Differences within the university sector are significant

In the end, it is difficult for higher education institutions to keep a high level of performance and to meet a wide range of responsibilities if new resources are not made available. There are no guarantees that universities can rely on the stability of public funding. This concerns both multi-faculty research universities as the small and specialised universities.

Figure 1 indicates that the University of Helsinki has a central role to play in the entire Finnish university sector's development. It accounts for the largest portion of overall funding, drawing about €221 million of the share of state budget funding and building investments. The next largest is Aalto University, whose accounts had not been published at the time this text was written. As Table 1 shows, the University of Helsinki represents about one-quarter of the funding of the whole Finnish university sector.

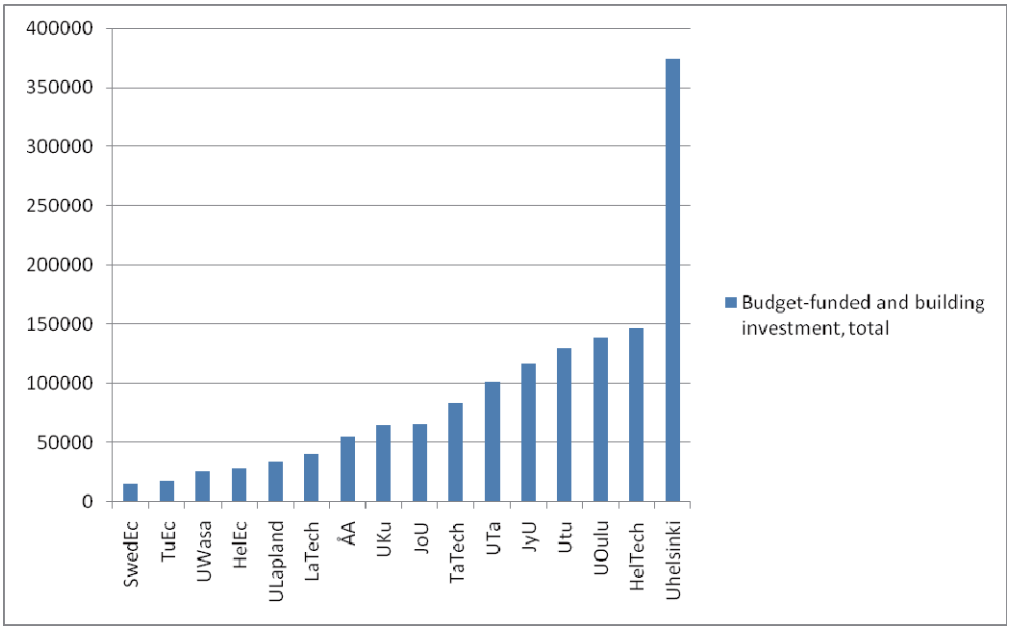

Figure 1: Annual budget funding and building investments of Finnish Universities in 2009 (1000 €, MinEdu 2010)

Table 1: The share of University of Helsinki in salaries, premises expenditure and other operational expenditure, 2009.

	Salaries	Premises expenditure	Other operating expenditure	Total
All Universities	970,764	315,378	224,374	1,510,516
University of Helsinki	236,414	82 655	55 277	374,346
University of Helsinki %	24.4	26.2	24.6	24.8

(Source: KOTA)

The above information on the potential of the university education and research is also reflected in Table 2, which show the share of external funding. Again, the University of Helsinki is responsible for about a quarter of the Finnish university sector. It is clear that research universities are successful in obtaining external funding, or at least rather better than the creative arts and others than multi-disciplinary research universities.

Considering public benefaction and private support of universities, the most generous donations are targeted at the large, multi-faculty universities and to small specialised universities. Of the universities organised as institutions subject to public law, the most

successful is Hanken, the Swedish School of Economics, with donations of over €12 million. The universities as foundations subject to private law, however, are in a different league. The two universities in this category attracted about three quarters of the university-targeted donations in 2010.

However, it is worth noting that the donations received by public universities have been built into the capital of universities rather than to cover operating expenditure. Eventually profits from these capital funds will be transferred to operating expenditure but activity is not yet very high. It will take several years before the funds have accumulated in such a way that they have a real significance and become sufficient for universities to use them to support their strategies.

Table 2: External financing in annual accounts (1000 €) of Universities in 2009#.

University	**External financing, total**	**Academy of Finland, total**	**Tekes, total**	**Domestic companies, total**	**Other Finnish, total**	**EU financing, total**	**Foreign companies, total**	**Other Foreign financing, total**
Helsinki	220572	55570	9887	23668	106933	17262	716	6536
Jyvaskyla	46857	15243	4601	2175	18451	5552	448	387
Oulu	64578	14612	11522	6131	13450	16466	1163	1234
Joensuu	23705	6259	1373	650	8530	6588	19	286
Kuopio	55241	8012	3670	3338	28943	9435	1201	642
Turku	65137	20512	4130	3035	28149	7123	1179	1009
Tampere	59852	12229	4740	8233	21668	4630	7154	1198
Åbo Akademi	36180	7470	5402	3865	16684	1052	483	1224
Vaasa	5433	540	781	947	2189	946	0	30
Lapland	10233	767	463	113	4113	4514	0	263
Helsinki U Tech.	113165	19904	31424	25588	25650	8442	1309	848
TampereTech.	50329	7110	16370	11698	10077	3916	292	866
LapentantaTech	26177	2039	4993	8295	7536	3083	124	107
Helsinki Economics	18833	1347	2920	1692	10556	2203	4	111
Hanken	7418	677	951	2180	3459	61	0	90
Turku Economics	8380	1166	1155	1615	3175	1187	1	81
Sibelius Academy	3264	406	51	0	2484	323	0	0
Theatre Academy	1212	154	46	241	729	20	0	22
Industrial Arts	8062	663	1156	1241	4174	794	0	34
Academy Arts	138	68	0	4	40	7	0	19
Total	824766	174748	105635	104709	316990	93604	14093	14987

Source: KOTA database 2011

#Note: there have been institutional mergers that have reduced the number of universities from those shown: From 1 January 2010: Helsinki University of Technology, Helsinki School of Economics and the University of Industrial Arts merged to become Aalto University; The Universities of Joensuu and Juopio merged to become the University of Eastern Finland. Additional mergers are scheduled for 1 January 2013: Sibelius Academy, Theatre Academy and the Academy of Arts.

The Finnish university reform is still with the four basic dilemmas of European university reforms (Larsen & al. 2009). The current financing system in 2011 emphasises the degree objective, which is justified from the societal impact of universities point of view. This objective, however, creates an interest for universities to maintain the current objectives and structures. The current funding system does not fully support the Ministry of Education and Culture's desired state for 2020 for university reform, which demands a better, more efficient and international university system with a stronger impact on society and a better defined profile (MinEdu 2011). It is quite clear that this desired state and these objectives for the university financing model from 2013 are being criticised by universities' scholarly community and non-academic staff. One of the arguments in this criticism is that the indicators are unclear, and that they do not take into account the Finnish research focus. This is seen as a threat to basic research and working conditions of scholars focusing this field.

The key means for the Ministry to enhance university reform is through the financial system, in which objectives such as quality, performance, and internationalism are emphasised. This is a clear change to the current system, which emphasises the number of degrees awarded. The Ministry's working group (MinEdu 2011) has proposed a new model under which education and research will constitute three-quarters of the basic funding of universities. Education and science policy objectives, in turn, will form one-quarter of the basic funding. The number of degrees awarded would still among the criteria, but for example, academic publications would be afforded a clearly more prominent role.

The new system would take into account the sector-specific costs for the arts, science, technology and medicine. This does not, however, exercise in full, but the number of staff targeted to these disciplines will be received as a staffing factor rather than results. This is due to the fact that the financial system in the future negotiation process between the university and the ministry will focus more on strategic issues. Thus, the detailed objectives of the number of staff is not set for any discipline by negotiations between the Ministry and universities, unless there is a professional sectors on the specific need.

Ministry is also emphasizing the profiling of universities, and the implementation of strategies based on the funding proposals are coming into a new actor of financial system. Unlike in the case of research, the implementation of the strategy indicators are not, at least initially to be produced as part of a new financial system. Universities will be still integrated national tasks as a part of financial system. The reforms will extend to more strongly with academic departments, the new funding will come into force in 2013.

The target for the Ministry is year 2020, when the changes in financial system are verifiable. Overall, the financial system should take into account the greater university-specific strategic objectives, factors in the quality and effectiveness. The view is is not a

contract for certain year, but the long-term effort to create a university results, the following support systems. For this purpose, for example, has built a Finnish Publication Forum, a quality classification of scientific publication channels, as well as graduate students in the feedback system. the results of FPF will be published in February 2012.

The new funding system will affect the contracts between the universities and the Ministry, and define the way the current system of performance negotiations. Internal allocation of funding will remain a model of based on University autonomy. However, it is likely that universities have a greater interest in monitoring the financial elements of external funding to internal funding systems. Currently, universities have a wide range of practices in this regards.

Conclusions

As is the case in all countries, systems of higher education are subject to change by evolution and through legislative reforms. In Finland's case, 2010 was the first year of operation of a new Universities Act, enacted by the parliament in mid-2009. In the interests of improved transparency, participation, accountability, effectiveness, relevance and congruence with government policy, the new Act has strengthened the universities' financial and administrative autonomy and brought to an end the long era in which universities were treated as government accounting units within the national administration (Aarrevaara, Dobson & Elander, 2009). The government will monitor the implementation of the University Act by 2012. In addition, the government resolution on the structural development of the public research system has not been implemented completely. Thus, it is likely that reforms will continue through the 2010s.

Finnish university reforms are an example of political and collective action as well as evidence based solutions and survived in the political arena (Ferlie et. al., 2008).The restructuring of Finnish universities is ongoing, and this is necessary in particular because of the global economic downturn. The current recession has cut state funding for universities for 2012 and ended a period of financial growth following the introduction of the new University Act. First, however, much more has to happen at the practical level in universities. Higher education institution-level reforms have to be displayed in such a way that the leadership roles and responsibilities become clearer and the result is a specialisation, focus and division of labour between individuals and institutions.

Over the next four years, reform of the polytechnic sector will be removed from the local government umbrella and will become independent legal entities - the same way that the new Universities Act formally removed universities from the state administration from 2010. This

particular higher education reform is necessary as the government plans to reduce the number of municipalities in next three years. Some polytechnics have been outside the municipal sector since their establishment, but the new polytechnic reform will move all polytecnics to having a common governance status. As a result of these reforms, the polytechnic sector will change structurally, but still remain as a broad system.

Cultural change can take a surprisingly long time, even perhaps generations. Relationships between the state and the academic profession have not been major research topics, and this may be a key role in the realisation of the reforms. How quickly will these changes be reflected in the academic profession's ability to accept reform? Will universities be able to build management systems and incentive systems to achieve the objectives by the end of 2012 or, realistically, by the 2020's? The acid test for the academic profession's ability to act to broaden the funding base of universities. In the current implementation stage, it would require a credible ability to create a broader, more international and more interdisciplinary research and education. In this respect, the challenges for Finnish universities are global.

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The 2nd Finnish and Japanese Higher Education Seminar
Feb.4 2011, Tokyo

Preamble

The second seminar on Finnish and Japanese Higher Education Seminar is hosted by Center for National University Finance and the University of Helsinki. The theme is University Reform in Finland and Japan. This is the second seminar and the first seminar was held at University Tampere in 2007. We discussed university reform in each country and the result of discussion was summarized into a book "University Reform in Finland and Japan" which is favorably reviewed by some European journals on higher education.

At the first seminar Japanese national university system has finished incorporation reform but Finnish system has not adopted the corporation system yet. But now Japanese system is in the second cycle of the six year mid-term goals and plans. And Finland has just begun new system of higher education in 2010. In this situation we will discuss the current both institutional and system reform and the consequences of the reform in finance and management of university, funding and evaluation for universities in order to hopefully get some perspectives and ideas of possible university reform in the future.

Finnish Speakers

Jari Gustafsson, the Ambassador of Finland in Japan
Timo Aarrevaara, the University of Helsinki
Evanthia Kalpazidou Schmid, Aarhus University, Denmark
Seppo Holtta, the University of Tampere
Turo Virtanen, the University of Helsinki

Ian R Dobson, the University of Helsinki

Japanese Speakers

Teiich Sato, Former Permanent Delegate of Japan to UNESCO, Former Vice Administrative Minister of Education

Yasunaga Toyoda, President of Center for National University Finance and Management

Motohisa Kaneko, Director of Research Division, Center for National University Finance and Management

Fumihiro Maruyama, Professor, Center for National University Finance and Management

Kensuke Mizuta, Professor, Center for National University Finance and Management

Japanese Participants Selected

Naoki Murata, Director of Press and Culture Exchange, the Ministry of Foreign Affairs

Takashi Goda, Director of Science and Technology Policy Bureau, the Ministry of Education.

Eiji Watanabe, Research Promotion Division, the Ministry of Education.

Masayuki Shibata, Director General, Agency for Cultural Affairs

Junnko Kawamura, Director of Private School Education, the Ministry of Education

Masayuki Matsuda, President of Aichi University of Education

Sei Kagawa, President of Tokoshima University

Shinnich Yamamoto, Director of Research Center for Higher Education, Hiroshima University

Akira Tachi, Professor, Obirin University

Aya Yoshida, Professor, Waseda University

Kiyoshi Yamamoto, Professor, the University of Tokyo

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