



## Danish universities – a sector in change

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In the past ten years Danish universities have undergone a series of significant reforms, which have not just changed the management of the universities and the managers' everyday life, but have at the same time been of great importance for employees and students. There is a tendency towards similar reforms in a series of other European countries, but the practical implementation of these changes varies greatly from country to country.

Recent years have seen an increasing political focus on research and education. Politicians often view the university sector from the perspective of globalisation, in which the education of a highly qualified workforce and the production of new knowledge takes a central place for Danish competitiveness in the future. You don't have to look back many years for a time when education was low on the agenda of most of the political parties – but today the situation looks completely different. For example, the present government has set as target that 95% of the youth generation of 2010 should go on to further education. Today this is the case for only 80% of the school leavers.

The need for international competitiveness is particularly evident when it comes to policy on research. Here most of the politicians agree that the European Barcelona target should be met. According to the Barcelona target, 3% of GNP in Europe should be devoted to research, of which the public sector should invest one third. Besides such concrete political targets, the great focus on research and education has also sharpened the interest of the politicians in reforming the university sector.

### **The starting point**

It is important to note that the Danish university system, as it was before the reforms, was neither functioning badly nor in crisis. So it was not a need for great changes in the sector's basic structure that caused the university reforms. Based on most parameters, for example academic citations, international cooperation and recognition, Danish universities have delivered outstanding results – and continue to do so. Examples of university results can be seen in Appendix 1.

## **Last year's reforms**

Generally you can divide the Danish reforms into four main initiatives:

1. A management reform
2. An educational reform
3. A financial reform
4. Mergers between universities and the sector's research institutes.

### **1. Management – from staff democracy to professional management**

Two major reforms have been carried out in management structure of Danish universities. Until 1993 the Danish universities had what has been called the most extensive collegial democratic self-management law in the world. The rector was elected from among the academic collegiate, and the individual universities were led by a governing body made up of representatives from employees and students. The faculties and departments were also directed by a collegially elected body.

Changes in the management law in 1993 gave rectors more influence, but many important decisions continued to be made by collegial bodies at all levels, and all managers, including the rector, continued to be elected representatives.

The new university law of 2003 entailed even more fundamental changes. The governing body was replaced by a board which appoints the rector. This board has a majority of external members, who are recruited from outside the University. Up to now these have been people from, for example, industry, cultural institutions, the public sector, the media world etc. At the majority of the universities the board is self-supplying, i.e. the members themselves find new members, who are not allowed to represent organisations or political parties. There are still seats reserved for representatives for both the academic and the non-academic staff, and each board has two representative seats for students.

After the reforms, deans as well as department heads are appointed. The rector appoints the deans, who in turn employ the heads of department. All appointments are made for a number of years which can be between three and nine years.

The rector and other managers must be qualified as researchers, which typically means that they should be qualified for an academic appointment at the university. But in contrast to previous practice it is not necessary to make the appointment from within the university itself. Up until now, most new managers have been recruited internally, but quite a few have also been brought in from outside, both from the university world and from other sectors. In some cases they have been recruited from abroad. But there is nothing to indicate that the new conditions have made management positions more attractive. In spite of a certain increase in salary – which still does not bring salaries anywhere near those for similar jobs in the business world – there have been examples of difficulties in recruitment.

And finally, the new university law entailed a mainly symbolic change to – or a more precise definition of – the purpose of the university. It has been emphasized that the university not only has to communicate knowledge to the surrounding society, but also to *transfer* knowledge. One could maintain that the distinction between these two formulations is limited, but it was a political requirement from the Danish Minister of Science that it should be stressed that the universities should play an important role in supplying knowledge to the surrounding society. From a political perspective it is very important to see this as a chain of supply of knowledge – as far as possible directly – into new products. It is significant for this way of thinking that the Danish Minister of Science issued a publication with the title: 'From Research to Invoice' in 2006. From the universities' perspective there are many reasons as to why this perception of research is problematic. First of all it is not so straightforward to go from research to invoice, as is often maintained by politicians. Furthermore it is an extremely narrow understanding of research and its value. Many research results cannot be directly transferred to a product or service, but they still contribute in one way or another to the development of society.

The Government's and the Ministry of Science's argument for reforming the universities' management structure was that the planned increase in public grants for research demanded a more professional management in the universities. At the same time the universities were to be allowed more independence of action after the reform. The management reform got a mixed reception among university employees. Some universities experienced an element of dissatisfaction with the abolition of collegial/staff democracy, but one cannot talk of a widespread opposition. A more straightforward placing of responsibility with the managers and a more direct and shorter process of decision-making has been welcomed in many quarters.

At the same time, many employees in the universities saw in a changed management structure a possibility of appearing more credible when facing the suppliers of funding. And it was also hoped that the members of the boards could be strong ambassadors for the universities' point of view in public. It can be debated as to whether this created greater trust between the universities and the politicians, but there are many examples of the members of the boards actively safeguarding university interests against the politicians, for instance when it comes to finances or the freedom of action the individual university should have.

#### **The freedom of the staff within a narrow financial framework**

The research staff at the universities is employed by the rector, who can delegate this function to the dean who then again can delegate this to the manager of the faculty. The extent to which this happens varies from university to university. The head of department will, however, always be closely involved in this aspect of employment.

The State or the Ministry are not involved in any individual appointment, but have established an overall framework for how this is to be done. Within this framework it is stated that jobs must be advertised publicly; a professional assessment of all applicants must be carried out, and only applicants who are judged professionally competent can be employed.

In principle decisions about salary are delegated to the university, but within frameworks that are established in a general agreement for academics employed by the State. This agreement is negotiated between the State and professional unions, and the universities have only limited influence in these matters.

The salary for managers has also been established centrally and in this case the Ministry of Finance maintains quite narrow frameworks for the negotiation of salaries, which has caused problems for university management and the board when it came to agreement of a reasonable salary for key employees.

## **2. Education – the politicians will not let go**

Besides the new rules for university management, the university law from 2003 also contained regulations for education. Generally, education obtained a more significant place in the text of the Act and the universities were promised a simplification of the rules. The system of rules for university education was – and still is – very complex and is published in many different regulations and laws. The situation is furthermore complicated by the fact that the Danish higher education sector is divided between two ministries.

The promised simplification of the rules meant in reality that a long series of specific educational rules were brought together in one set of rules and regulations. Unfortunately, a similar simplification has not taken place in other areas where they were needed, for example in the case of rules for exams and assessment/markings, which still are spread over several sets of law.

After the first political enthusiasm over the new university law and the simplified rules had calmed down, things started to slip backwards. The new rules may have been collected in one place, but they were not simpler and they did not provide a lot of space for the universities' own decisions and diversity. It should be said that the universities' own administrations are sometimes sceptical about having fewer rules: rules are fixed points and when they are removed, more responsibility is passed on to the local decision maker. This provides the individual university and its departments with more freedom to act, but at the same time it increases the risk of mistakes and decisions being made that can lead to criticism.

The politicians have also been very keen to cut down on the time the students need to finish their study. It is seen as a major economic problem that most students take longer to finish their degrees than the described period of three years for a Bachelor's degree and two years for a Master's degree. To solve this problem the politicians have resorted to the tools they know – i.e. making new regulations. Contrary to the intention to simplify the rules and to confer greater autonomy, regulations have now been introduced as to when the students must pass their exams, dead-lines, re-examinations etc.

At the same time further grant systems have been introduced into the education area, systems that should act as incitements to ensure that the student finishes at the expected time. It is already a fact that the universities only receive funds when students pass their exams. Compared to other countries, the Danish fund-

ing system is very much aimed at results. The latest reforms mean that the universities get extra 'rewards' if the students finish the complete degree, and if they do it within the fixed time. In the latest Finance Bill, for example, you can see a reduction of the size of the normal 'education taximeter', as well as an addition of various bonus arrangements that the universities get when students finish their degree within a certain time frame.

Finally, there is the introduction of accreditation. Previously it was the Minister of Science who approved the new degrees, but now the responsibility lies with an independent accreditation agency. In addition to accrediting all the new degrees, the agency also has to accredit all existing degrees. The universities have been positive about becoming more independent of the – sometimes arbitrary – approvals by the Ministry. But, in spite of the positive reception, there is an increasing worry over the labour intensive character of accreditation for existing degrees.

The universities fear that a large amount of paperwork will have to be produced, without leading to real improvements, but just to an additional and unnecessary control of the degrees. When 800 degree courses have to be accredited over a few years, it is essential to find a method whereby this accreditation can be done smoothly and without too much bureaucracy.

### **3. Financial reform – more funds put into competition**

Before we move on to the current reforms, here is a short presentation of the financial management of the universities.

According to the legislation the universities receive their grants as a lump sum. This means that eventually it is the university management who makes the decisions on the distribution of the funds for the various purposes – both academic purposes and all other types of expenditure.

The greatest proportion of the universities' grants come from the Danish State. Less than 10% comes from private or foreign sources, and most of the latter come from the EU. The proportion of private funds has increased in recent years.

The universities receive half of their research money as basic funding that is divided amongst the universities according to historical criteria. This means that every university receives the same sum as in the previous year, sometimes with minor changes. Smaller re-distributions and new funds are divided according to the so-called 50/40/10 model, which means distribution according to the universities' educational income, income from external research and production of PhDs.

The other half consists of external funding, which is primarily obtained after applications to the various state research councils. Applications are made for specific projects, and a professional assessment of the applicants is carried out. There are the research councils for so-called free research, i.e. projects that are suggested by the researchers themselves, and then there is the strategic research council that supports various politically research areas, such as nanotechnology,

research into food, energy etcetera. The share of funding for strategic research has increased in recent years. Since basic research has not increased to the same degree, it has been a problem for the universities to find room for the increasing number of external projects. However, it has been decided that from 2009 the projects must increasingly be budgeted according to a 'full cost principle', which means that the demand for co-financing from the universities will decrease.

The universities' rents are regulated according to a system that aims to create conditions similar to those on the free market regarding the usage of the buildings.

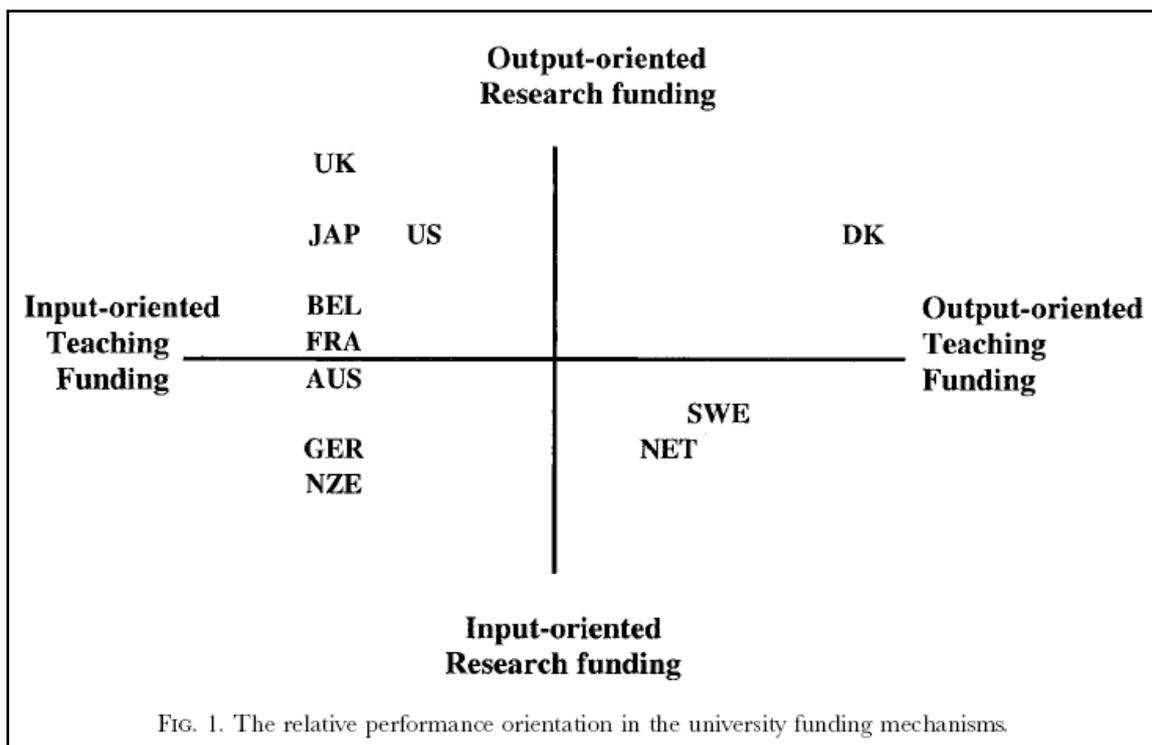
The State owns the buildings and the universities rent these at the same price as on the free market. The universities can decide how many buildings they need and in this way regulate the expenditure in proportion to other purposes. In reality it is not without problems to establish a market price for rentals of, for example, buildings for special purposes and very old buildings. Rental costs must – as a rule – be paid out of the funding for the main purpose, i.e., for example, education.

The Technical University of Denmark has a special deal because the university has had its buildings handed over by the State partly free of any mortgage.

The degrees are financed 100% through a taximeter system. The universities receive funding for each student who passes his/her exams according to the ECTS value of this exam. Students who fail or do not enter the exam do not attract any funding. The degrees are placed in different rate groups.

Laboratory-based degrees, engineering, medicine	96,000 DKK
Theoretical science degrees	65,600 DKK
Humanities and social science degrees	40,400 DKK

Overall, the universities' funding is to a large extent based on output. In a study of the European funding systems in 2001, Jongbloed and Vossenstein conclude that the Danish funding system is far more dependent on output than is the case in any other European country.



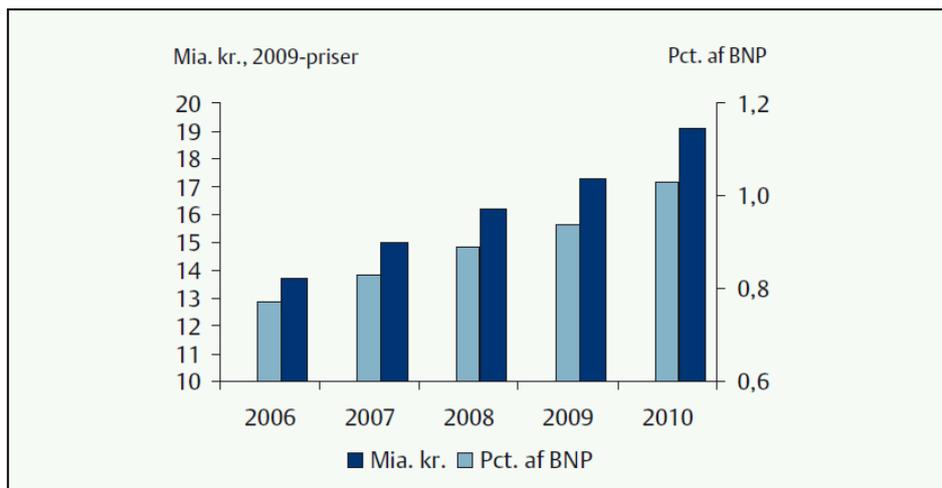
*Fig 1. Relative performance orientation Source: Jongbloed and Vossenstein.<sup>i</sup>*

### **Globalisation agreement – more funds for research**

In 2005, the Prime Minister appointed a globalisation council. This council assembled leading figures from the trade unions, business world, the world of education and research etc. as well as five ministers, including the Prime Minister himself. The task of the council was to come up with a strategy for Denmark in the global competition. Science, research and education became the main areas for the council's work.

On the basis of the council's work, the Government worked out a strategy that led to a major political agreement in 2006. This agreement resulted in significant increases in funds for research in particular. The government and a vast majority in the parliament committed themselves to meeting the requirements in the Barcelona Declaration that the public sector must invest one percent of the GNP into research in 2010. This would imply a 30% increase of the public Danish research investments in the period from 2007 to 2010.

The speed with which this goal was realised has been a problem, though, because there is a tendency to postpone the major part of the funding to the last minute, i.e. close to 2010. This does not change the fact that financing of research is still high on the political agenda, which means that the universities are in an advantageous state of development when it comes to research funding.



*Figure 2: The expected development of research funding. Public research funds in billion DKK and percentage of GNP)*

*Source: The Ministry of Finance*

At the same time as the prospect of increased funds is held out, there is a warning of changes to the funding system. First of all, the government wants a greater part of the funds to be distributed by research councils, i.e. to be put up for competitive bids, and that a smaller part goes to the basic funding.

Furthermore, the government also wishes to introduce a model for the distribution of the basic funding according to results. This model has still not been politically agreed, and apparently it is a problem for the politicians to agree to what a model should look like. In the Minister's suggestion for a model are included, among other things: indicators for productivity in education, the ability to attract external funding, along with some kind of method for measuring research output.

The Ministry has furthermore suggested a series of more or less relevant indicators, e.g. coverage in the media and popular science publications, but it is doubtful if any of these will be included. It is, however, probable that the model will be based on a formula, and thus becomes a measurement, and *not* an assessment of results undertaken by peers or boards. It will thus be productivity by which the universities will be judged. At the moment it seems likely that research results will be assessed by a bibliometrical indicator in the form of a measurement based on the number of publications. The government has initiated a comprehensive project, which takes as its starting point the so-called 'Norwegian model', which is based on counting the articles in an approved list of journals. At the moment 60-70 departmental groups are in the process of working out lists of journals and publishers, which are recognised as good channels for research publications.

For good reason, the universities disagree on who should receive most of the funding, but have, however, suggested that a simple system should be main-

tained which, besides being an indicator of the research production, also retains the indicators that have been in use up to now in Denmark; i.e

- a) teaching ‘taximeter grants’
- b) external funding received and
- c) PhDs produced.

For now, the introduction of a model has been postponed until 2010, and a final political decision will be made during 2009.

#### **4. Mergers – research will be centralised at the universities**

A final set of essential changes which ought to be emphasised are the extensive university mergers that took place in Denmark on January 1, 2007. Already in 2004 an OECD panel noted that the number of single faculty institutions in Denmark was exceptional and changes could be taken into consideration. For historical reasons Denmark has had independent universities for, for example, agriculture, pharmacy, commerce, technology, teachers training and previously also for sport and dentistry.

In 2005 the government presented plans for joining the national research institutes with the universities. This was an idea which had been debated earlier and which the universities also warmly supported. In Denmark there were a series of well established and competent research institutions within various sectors, and the idea was that by merging these with the universities, individual research could be utilized much better, for example for the education of candidates and PhDs. The research institutes’ utilisation-oriented approach to many research assignments could also be an inspiration for the universities. When it came to research in the national research institutes, the possibilities for development would improve by their becoming part of a larger university.

In February 2006 the Minister announced that he wanted suggestions for mergers, and at the same time adding that he could not imagine that there would still be 12 universities in the future, but also that he could not imagine less than five.

In June 2006 the Minister presented a draft for a new ‘map’ of Denmark outlining areas for research and further education. This map was by then nearly finished, and after final negotiations in the autumn, a new structure was decided which was implemented already on January 1, 2007

#### ***The university sector***

- ***12 universities***
- ***13 national research institutes***

#### ***Merged into***

- ***8 universities***
- ***3 national research institutes***

*Figure 3. Before and after university mergers*

It was not only the universities and research institutes within the different sectors that underwent major changes. In addition, the Danish professional bachelor degrees in areas such as teaching, nursing, social education etc. were given a new structure. They were gathered into seven big professional educational colleges. Just as it was for the university sector, the merger has strategic aims and did not include plans for definite closure of institutions. But it remains possible that in the long term you will see the closure of some educational institutions.

The process at the universities has taken less than a year, which is remarkable – not least because the whole time it was emphasised that the mergers were voluntary for the universities. These were not just empty promises, because the Minister did not have a political majority to force anything through. It was only if he could achieve a result through negotiations that the mergers could be carried out.

It has been heavily debated as to whether there were particular advantages in being a big university. There are arguments on both sides. International comparisons do not seem to show that size in itself is essential for quality. Nor is there much to indicate that administrative costs can be reduced once a certain size has been obtained. On the other hand, big universities often have the possibility to achieve greater exposure, and exposure was one of the arguments for university mergers.

Mergers also have the potential to increase the professional synergy if you merge subjects which are closely related. This was for example the idea behind the merger of material research on the National Research Institute Risø and DTU (Technical University of Denmark) and the merger of Life Sciences at the University of Copenhagen and the Royal Veterinary and Agricultural University.

Finally, the fact that an increased size gives the university management more room for manoeuvre should not be ignored. If university budgets increase significantly, the possibilities of prioritising the funding and the usage of resources for strategic purposes increase, purposes that would perhaps normally lie outside the possibilities of a smaller university.

The economic base for the universities has not only increased with the mergers, but has also become more diversified. Universities are no longer exclusively financed by the Ministry of Science, but also by other ministries. This renders the universities a little freer when they prioritise and it makes them less dependent of the decisions of the Ministry of Science, Technology and Innovation relating to the research budgets. Of course, there is still a big gap between the conditions of the Danish universities and those in for instance the USA, but we have got a more "diversified funding base", as recommended for modern universities by people such as Burton R. Clark and Michael Shattock<sup>ii</sup>.

## 5. Conclusion

The Danish university sector has occupied a central position when it comes to several political agendas regarding globalisation: the universities educate the desired highly-skilled workforce and produce the know-how that is a factor in ensuring Denmark's competitiveness in the global market. Therefore it is a natural desire of the politicians that this sector should work as efficiently as possible. The political project to make Denmark 'globalisation-ready' has led to great reforms of the university sector – sometimes with the support of the universities and sometimes without.

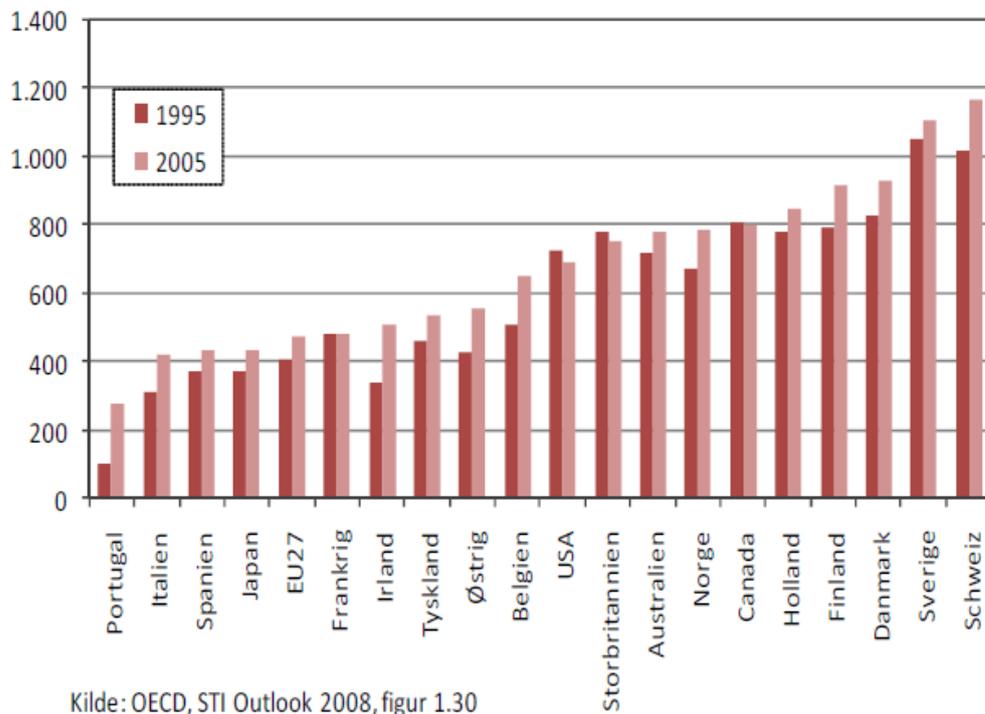
On the positive side the reforms have ensured the universities greater funding for research – there is a major political goodwill towards investing in research. Moreover, the mergers have gathered most of the public research and concentrated it in the universities and provided the university managers with larger funds to manage and thus better possibilities to make strategic, long-term decisions.

On the negative side, the reforms have not led to greater freedom of action for the universities – the educational area is still marked by micro management control and a complex set of rules. That creates a difficult situation for the universities when the politicians try to legislate themselves out of situations that are hard to control, for example regarding the behaviour of the young people and their choice of educational programmes. More freedom and simpler rules are needed, if the universities are to get a serious chance of developing educational opportunities.

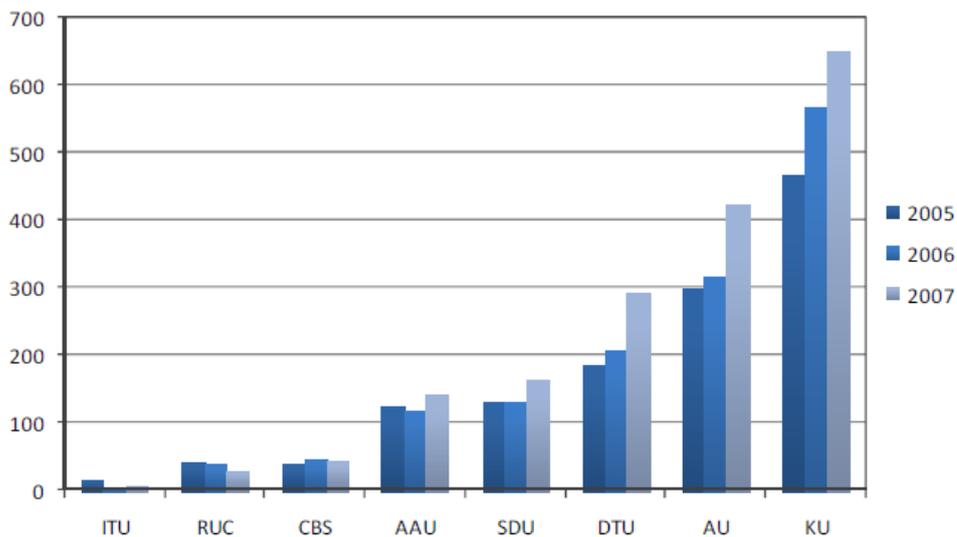
The management reform still causes debate within the Danish university environment. Many see 'appointed' rectors and boards with a majority of external members as a strengthening of the management, while others express concern over the lack of employee democracy and the limitation of the academic freedom. It is clearly a reform that has changed the management structure and employee culture of the universities significantly. The great challenge is to continue to combine a stronger management with the continuation of a creative scientific environment that can deliver long-term and useful results.

## Appendix 1

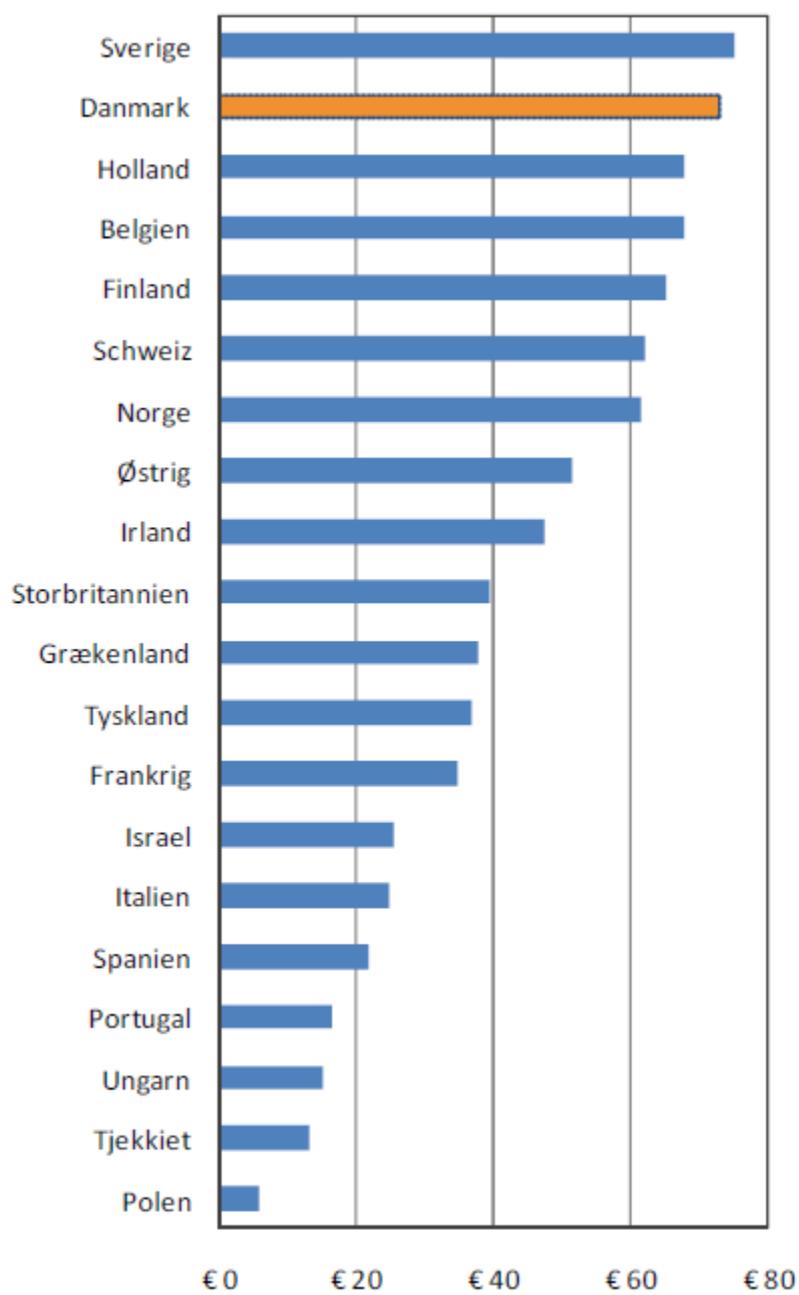
### Academic articles per million citizens



### Number of Ph.D students

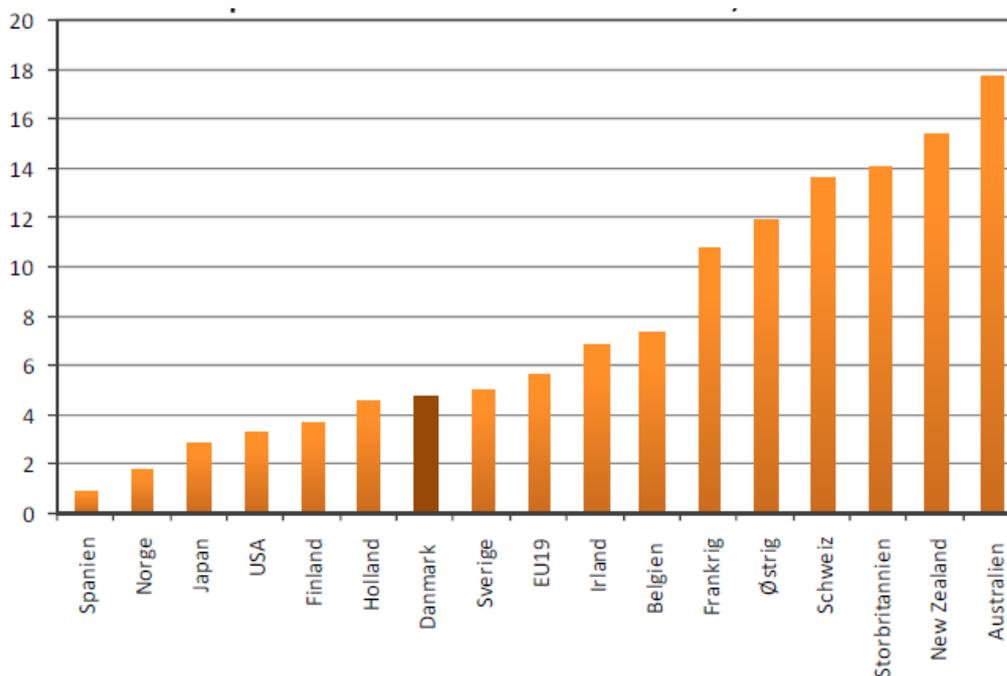


## EU funding per citizen (FP6 2003-2006)



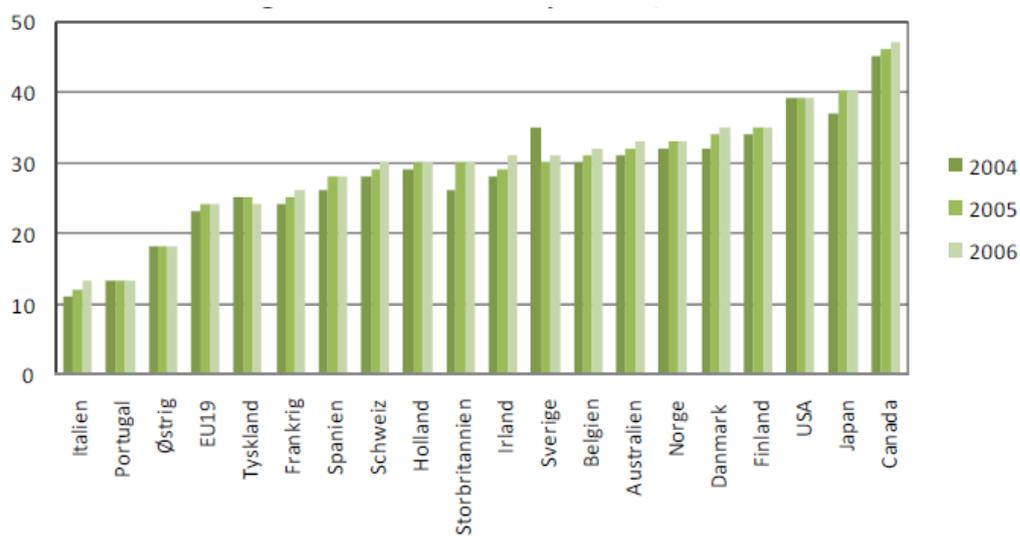
Kilde: Tal om Danmarks deltagelse i EU's 6. rammeprogram for forskning og teknologisk udvikling, august 2008, Forsknings- og Innovationsstyrelsen

## International students in Denmark as a percentage of all students



Kilde: OECD, Education at a Glance 2008, tabel C3.1

## Percentage of the adult population with an HE degree



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<sup>i</sup> B Jongbloed and Vossensteyn, Keeping up Performances: An International Survey of Performance-based Funding in Higher Education”, *Journal of Higher Education Policy and Management* 23 (2001).

<sup>ii</sup> See for example M. Shattock (2003): *Managing Successful Universities* (Open University Press) or B.R. Clark (1998): *Creating Entrepreneurial Universities* (Pergamon).