

OECD review of the Danish university system

1. The societal role of universities, the third mission “services to the economy and society”

Research collaboration between universities and business

There stands a need for a general improvement of the opportunities for collaboration between universities and business sector, but the issue should be viewed in a broad context.

One perspective is how the different scientific research areas can best contribute to knowledge sharing in an interplay with the outside world, e.g. via study projects, internships, network centres, researcher mobility projects, etc. It is too restrictive to consider an increased application of research results as a question of patenting access alone.

In that context it is therefore also expedient to look at how collective structures for university interplay with the outside world can be established, so that this task can be elevated to a prioritised and organised area of effort at institutional level, and not as it currently is today, often being something individual researchers have to take the initiative to do themselves.

Interaction with labour market in terms of education

High-skilled labour is the most important factor for disseminating knowledge to business and society. The link between the policies of research and education to the policy of employment need to be further developed, also in respect to safeguard that the students are not trained for unemployment.

There need to be more focus on developing collective structures at the universities that can provide support to collaboration with society, for instance setting up network, traineeship, study- and career-counselling, study projects, advisory boards, new incentive models for SME's, etc.

Research-based continuing education

In a knowledge driven society as Denmark training and education do not necessarily end when leaving the formal educational system and entering the labour market.

The market of masters for adults is limited – the few numbers speak for themselves. Participant-funded university Master-programmes are currently at such a high price level that many adults are effectively precluded from using an Master as a choice of further education. Therefore, a need emerges for a more flexible use of Master-programmes in modules. In this way, universities will be able to reach a greater target audience and a subsequently greater source of income because the funding momentum, all things being equal, will be equivalently manageable.

Incentives for private sector investment in university research

With reference to research services there may be a need to look closer at how university income from business sector can be stimulated.

Within the last couple of years a tax allowance of 150% has been introduced in Denmark for enterprise investments in research. Expanding the scheme to include enterprise donations to universities and other public sector research institutions might be worth considering, e.g. that enterprises providing no-obligation resources for university disposal, i.e. free funding, receive a tax allowance of 150%, while resources provided with obligation for specific objectives receive a reduced tax allowance of 125%.



Having said this, the degree of private funded research activities at universities must not reach such an extent that university free-choice fundamental research is allocated lower priority because universities have to 'chase the money'. Likewise, it is decisive that commercialisation of research, e.g. via extensive patenting, does not lead to broad limitation of the sharing of knowledge from research results.

It is the responsibility of the public sector to safeguard resources for free-choice fundamental research, which everybody has equal access to and benefit from in a knowledge society.

2. Structural barriers in terms of interaction between universities and society

Critical mass

The universities have a vital role in the development of the knowledge society. Therefore the new mission of universities "services to the economy and society" is an important element in the new University Act. Having said that, the question of critical mass, arise.

With the new University Act, the new IT University of Copenhagen has been established. The scientific staff at the IT University of Copenhagen amount to 53 (including part-time staff). In other words the IT University has the size of a larger university institute.

A principal question should be raised as to where the critical mass for a university should be set. How large must a university be in order to be competitive in relation to attracting national and foreign students, national and foreign researchers and partners, providing a sufficiently broad educational portfolio, providing a broad research portfolio, etc?

As the ministry it-self points out in the background report: "As part of ensuring a sustainable academic research environment it is a condition that the education is expected to attract a minimum number of students. Very small classes mean poor economy and often unsatisfactory study environments".

University governance

The new University Act will have a major impact on the future governing structure of universities. It is vital that a university reform respect autonomy of universities as well as multiplicity of universities. In that respect it will be interesting to learn how much diversity the ministry will allow in the different university statutes (the recruitment procedure of management staff from rectors to institute managers, procedures for appointment to and the composition of boards and contact bodies, distribution of work between the different organisational levels, etc.).

Another vital criterion for the success of university reform is in AC's opinion to secure freedom for universities to be able to react quickly and expediently to shifting conditions in the outside world. Therefore, an important element has been the examination of how managerial and decision-making competencies can be transferred from central administration decentrally to individual universities.

In line with this, AC has proposed that after a 3-year period the new university reform be assessed, e.g. with regards to evaluating whether the political intentions concerning increased freedom for universities have been realised, and whether the need for additional initiatives and adjustments potentially exist.

Structural barriers in business sector in terms of receiving scientific knowledge

A significant obstacle to the creation of increased interplay between universities and business is that a great many enterprises lack academic employees and as such lack the proper channels for receiving and exploiting research-based knowledge. This relationship demands special effort, yet cannot be solved by effort directed at universities alone. In a time of rising unemployment for new graduates it would appear to be only natural to launch initiatives aimed at drawing the attention of enterprises to the knowledge resource that new graduates represent.

With reference to the role of universities supplying graduates for business and society in general, potential is far from exploited. In Denmark, latest figures from the Danish government show that 2/3 of all academics employed in the private sector are employed in 3% of Danish enterprises with 5 or more employees. Therefore, a challenge continues to exist in supporting an important flow of knowledge to enterprises. Thus, AC proposes the establishment of special initiatives that can support a flow of academic competence to such enterprises.

3. The national research and educational profile in the main academic areas

Education funding is below international average

Denmark spends more resources on education than most other countries, but this is on lower levels of education with a bias in educational expenses away from university educations.

In the knowledge society, private and public sector enterprises and organisations demand a broad supply of knowledge and graduates from universities, including the humanities and the sciences. This should also be reflected in university research and education efforts and the financing hereof.

The Danish taximeter system contains a number of inherent problems in relation to safeguarding the development of the quality of study programmes, creating study mobility and reducing the dropout rate.

The low taximeter rate, which often is historically determined, freezes the educational form, as only limited economic reserves exist for the development of new pedagogic tools, integrating IT in classes, internationalising the programmes, allocating higher priority to teaching to class groups, etc. Hence incentives for reducing drop-out rates are poor, while incentives toward given access for (too many) new students to university programmes are profound.

Also, it is most problematic that insufficient taximeter rates cause in a negative diverted consequence for research efforts, as universities are forced to fund teaching with research resources. This erosion of research resources weakens the institution's ability to further strong research environments and, consequently, the quality of the study programmes.

The close financial link between research and education may be inappropriate, because incentives to a more restricted admission policy for students are very limited compared to the universities incentives to securing funding of the research.

A new educational funding structure must take into consideration how incentives to at more responsible admission policy can come into operation without jeopardising sound research environments.

4. Enrolment of foreign students to Danish universities

Fee structure for foreign students

Internationalisation of educations has in recent years seen a steady increase in both import and export of students. Exchange opportunities for students, and educations with an international perspective is a relevant parameter for the quality of the educations.

The globalisation of the university educational market, require an open discussion of fee structure for foreign students primarily outside the Nordic countries and the EU, but on the longer run, also within those regions.

The universities are bound to attract funding from non-governmental funds. The ability to attract foreign students at a market price will be a significant benchmarking tool and hence a parameter of the quality of the educations.

Another question to be raised is where the balance between the portfolio of courses in respectively Danish and English should be set?

Flexibility vs. academic progression

The Bologna declaration creates a basis for mutual recognition of educational levels and thereby increasing mobility of students, national as well as internationally.

With a structuring of university educations in 3+2+3-structure, it will be increasingly possible for students with an academic bachelor education to choose between several, interdisciplinary post-graduate disciplines. The educational reform has an important aim of creating flexibility, thereby making it possible for the students to navigate in line with job opportunities before deciding for a master programme.

Having said this, it is important to stress that the implementation of a flexible educational structure should not jeopardize the academic progression, thus jeopardizing the quality of the master. Also it is important for a successful educational reform that the universities collaborate in terms of creating a certain degree of comparability in contents, profile, structures of related study programmes.

For such great freedom of choice for students to be sound, the need for improved study- and career guidance exists. An improved interplay would create the opportunity for external players, including academic organisations, to be included in vocational guidance efforts and thus provide students a clearer picture of their employment opportunities.

5. Recruitment of talented Danish and foreign researchers to universities

Research funding is limited

Denmark's investments in research and development (R&D) relative to GDP are considerably lower compared to Finland, Germany, Sweden and the USA.

The worsening funding of Danish universities bears with it the consequence that the ability of the universities to retain and attract the best research talent is undermined, and with it university ability to establish high-quality research environments.

The Barcelona 3pct-objective is an important and necessary political recognition that research investments are a decisive precondition for future prosperity and development of research and research-based educations.

There is at need for a profound effort concerning the recruitment of Ph.d.-students and ensure attractive career opportunities for the scientific staff. The additional investment in research must be supported by a responsible, long-term research strategy, in order to establish research environments that have the capacity to exploit research grants.

Despite the political recognition, research policy in recent years has pulled in the opposite direction. The Danish state research grants shows a decrease from 1999 to 2001 from 0,74 pct. of GNP to 0,68 pct.

Research environments have been abolished because of cuts, and it is obvious that it takes considerably shorter time to abolish research environments than it does to establish them.

At the same time we know the current deficit will be further compounded when universities undergo a generation change among researchers within the timeframe of but a few years. The consequence of this deficit, of course, is that growth potentials cannot be exploited.

The precondition for building internationally strong research environments is access to qualified researchers, and it takes time to train them. Currently, with graduate unemployment in Denmark is rapidly increasing, it would seem only natural to exploit the large resource that new graduates represent by increasing the number of PhD's at universities.