Denmark – Creating university centres of excellence: the UNIK-initiative

One of twelve case studies produced as part of the project on Structural Reform in Higher Education (EAC-2014-0474)

April 2016
Europe Direct is a service to help you find answers to your questions about the European Union.

Freephone number (*):

00 8006 7 89 10 11

(*) The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).


doi: 10.2766/699081

© European Union, 2016

Reproduction is authorised provided the source is acknowledged.
# Table of contents

Introduction ........................................................................................................................................ 4
Denmark – Creating university centres of excellence: the UNIK-Initiative .................. 5
  Introduction to the structural reform and its main goals ........................................................ 5
  Context and background to the reform ...................................................................................... 6
  Design process for the reform ..................................................................................................... 7
  Policy instruments used ............................................................................................................... 9
  Implementation of the reform ...................................................................................................... 9
  Monitoring, evaluation and feedback ......................................................................................... 10
  Important changes in context for the reform ............................................................................. 10
  Achievements and effects .......................................................................................................... 11
  Summary ...................................................................................................................................... 12
  Interviewees ................................................................................................................................. 13
  References .................................................................................................................................... 13
**Introduction**

This case study is part of the “Structural Higher Education Reform – Design and Evaluation” project, commissioned by the European Commission (EAC/31/2014). The main objective of this project – carried out by the Center for Higher Education Policy Studies (CHEPS), University of Twente, the Netherlands, and the Centre for Higher Education Governance Ghent (CHEGG), Ghent University, Belgium - is to investigate policy processes related to the design, implementation, and evaluation of structural reforms of higher education systems. The focus is on government-initiated reform processes that were intended to change the higher education landscape, with the following questions foremost: What kind of goals were envisaged with the structural reform? How was the structural reform planned and implemented? What have been the achievements of the structural reforms? How can these achievements be explained in terms of policy process factors?

Three types of reform were distinguished: reforms designed to increase horizontal differentiation (developing or strengthening new types of higher education institutions such as the creation of a professional higher education sector), reforms designed to increase vertical differentiation (bringing about quality or prestige differences between higher education institutions, e.g. by creating centres of excellence) and reforms designed to increase interrelationships between institutions (supporting cooperation and coordination among institutions, forming alliances or mergers). In total, structural reforms in twelve different countries (eleven in Europe, one in Canada) were investigated: Austria, Belgium (Flanders), Canada (Alberta), Croatia, Denmark, Finland, France, the Netherlands, Norway, Poland, Spain, United Kingdom (Wales). The twelve case studies – for ease of reference published as separate documents - all follow the same logic and are presented in a similar format, with sections relating to the reform and its context, policy goals, policy design, policy instruments, policy implementation, policy evaluation and goal achievement.
Denmark – Creating university centres of excellence: the UNIK-Initiative
Kaare Aagaard & Harry de Boer

Introduction to the structural reform and its main goals

The structural reform in Denmark presented in this chapter relates to a government initiative to strengthen the central steering capacity of Danish universities by funding research centres of excellence selected by university management. This Danish reform is known as the UNIK-initiative: Investment Capital for University Research ('Universitetsforskningens Investeringskapital'). It was established in 2007 and implemented from 2009 to 2013. It emerged from the Danish Globalisation Strategy of 2006 (Danish Government, 2006a), which focused on strategies for research and innovation and provided a pool of funding of no less than DKK 21 billion (€2.8 billion). Accompanying the outline of the UNIK initiative formulated in the globalisation strategy, the political agreements establishing the UNIK initiative are found in the subsequent Danish Finance Act 2007. These agreements, as well as the call for proposals, state that:

‘Each university’s management should be required to take part in a competitive bidding process in which they submit proposals for large-scale, long-term research projects. The proposals should be evaluated on the basis of their quality and relevance’ (Danish Agency for Science, Technology and Innovation, 2007a).

UNIK funding could be awarded to basic as well as applied research and to all thematic areas. The funding was intended to award excellent, dynamic and closely coordinated research frameworks that involve interrelated research activities or sub-themes in prospective fields of research.

To secure reasonable success rates and to force the universities to make strategic selections of the potential projects the ministry restricted the number of proposals, based on the size of each individual university. The eight universities were allowed to submit 31 proposals in total. Specific funding for the UNIK initiative was provided through the Danish Finance Acts of 2008 and 2009 (OECD, 2014). It was expected that five to eight large projects would be funded. In reality, only four five-year projects from three different universities were selected (involving DKK 480 million - €64 million).

With regard to the UNIK-initiative a number of goals were formulated at both strategic and operational levels (Danish Government, 2006; Danish Agency for Science, Technology and Innovation, 2007a; 2007b). The overall goal of the UNIK-initiative was to promote world class research in Danish universities (Danish Agency for Science, Technology and Innovation, 2007a). According to the Globalisation Strategy there was a need to further develop quality and relevance as the key principles for university research. Research should be innovative and its quality comparable to global top performers. Denmark should be a top performer in turning research results into new technologies, processes, goods and services. The country should have top level universities with strong academic environments that can attract and retain talented students and researchers, and which provide the foundation for a dynamic society. Regarding the overall strategic goals it is

---

1 This summary was drafted by Harry de Boer, Center for Higher Education Policy Studies, University of Twente, on the basis of the (longer) case study report written by Kaare Aagaard, Aarhus University, Denmark.
important to emphasize that the UNIK-initiative was just one element in the comprehensive 2006 Globalisation Strategy (Danish Government, 2006a; 2006b). By establishing the UNIK-initiative the Danish Government first of all aimed to strengthen the strategic capacity of university management. The initiative offered substantial competitive funding to encourage Danish universities, as institutions, to strengthen their strategic efforts to prioritise research and to create a distinctive research profile. Two other main targets of the UNIK-initiative were to further international interaction and cooperation and to train and support young researchers (Danish Agency for Science, Technology and Innovation, 2007b). In addition to these official operational goals defined at the outset of the initiative, other goals have since been put forward. One such goal stated in relation to the UNIK-initiative was to have at least one Danish university among the ten best in Europe (OECD, 2014). Another was to support and bridge the different research environments of the universities restructured as a result of the merger process (OECD, 2014, p.137). A goal that gained attention, particularly from the expert panel (see below), during the implementation process was the stimulation of cross-disciplinary research (Danish Agency for Science, Technology and Innovation, 2015). Finally, a potential goal is the engendering of vertical differentiation in the Danish university system by the UNIK-initiative. Because of strong egalitarian traditions, this was not an explicitly stated goal but the design of the initiative and final allocation of funding suggest that this goal has been an influence.

Context and background to the reform
Denmark has four types of higher education institution: University Colleges (‘Professionshøjskole’, offering professionally oriented first cycle degree programmes), Research Universities (‘Universitet’, offering first, second and third cycle degree programmes in all academic disciplines), Academies of Professional Higher Education (‘Erhvervsakademi’, offering professionally oriented first cycle degree programmes), and University level institutions (offering first, second and third cycle degree programmes in subject fields such as architecture, design, music and fine and performing arts).

Denmark has been a frontrunner with regard to research excellence initiatives for more than two decades. Apart from these initiatives, the Danish university sector has undergone a number of far-reaching changes since the turn of the millennium. The first Rasmussen Government, taking office in 2001, started a sweeping reform process that aimed to transform Danish universities into key players in the global knowledge economy (Aagaard & Mejlggaard, 2012). Increased competition, accountability, strategic capacity, responsiveness and social responsibility were seen as essential means to reach this objective. Three elements of these waves of reform can be seen as constituting the basis of the UNIK-initiative.

Firstly, the funding system was changed substantially by various measures and developments. One of the Government’s contentions was that there was too little competition for research funding, and that this funding was spread too thinly (Danish Government, 2006a, 2006b). In response to this a performance-based research funding model, among other things, was introduced. Furthermore, the Danish Council for Strategic Research began funding for so-called Strategic Research Centres and also initiated Strategic Platforms for Innovation and Research (SPIR), funded jointly with the Danish Council for Technology and Innovation. At least two private foundations started to fund Centres of Excellence at universities.
Finally, the universities themselves began distributing part of their block funding on the basis of criteria linked to research excellence (OECD, 2014, p.138). Generally, the overall changes in the funding system in this period were characterised by three shifts: from stable basic funding towards competitive research funding, from curiosity-driven research towards strategic research, and from the funding of many small projects towards fewer and larger projects (Aagaard, 2011). Particularly since 2006, these changes were accompanied by a significant increase in total public R&D investments.

Secondly, the 2003 University Act substantially changed the governance structure of universities. It introduced governing boards with a majority of external members as the university’s superior authority and at all levels university leaders were appointed instead of elected. The objective was to accentuate the profiles of the individual institutions, to professionalise and empower managerial structures, and to increase collaboration between research and innovation activities. The Act also emphasized that the new management units of the universities should make strategic choices of research areas (Aagaard & Mejlggaard, 2012).

Thirdly, the new governance system created a “window of opportunity” for the next major reform (Aagaard, Hansen & Rasmussen, forthcoming). In 2007, the Government launched a far-reaching merger process, which reduced the number of universities from twelve to eight and transferred twelve out of fifteen Government Research Institutes (GRIs) to the eight remaining universities. The result was a large concentration of resources in a limited number of institutions (today the three largest universities - University of Copenhagen, Aarhus University and the Technical University of Denmark - account for two-thirds of public research), as well as a clear break with the former division of labour between academic research and the more applied GRI research (Aagaard, 2011).

These waves of reform have created a new tension, or at least amplified a prior existing one. The university act and the mergers aimed to strengthen the universities’ autonomy and their strategic capacities, while at the same time increased reliance on external funding threatens to undermine the possibilities for universities to actually act strategically. When more funding is allocated under competition, strategic decisions on where to spend the research money are taken, or at least influenced, by politicians and research councils; this limits the space for university management in research priority setting. The UNIK-initiative may be seen as an attempt to address this tension.

**Design process for the reform**

The agenda-setting phase leading to the UNIK-initiative was initiated when the Danish Academy of the Technical Sciences (ATV) presented a proposal for a new funding mechanism in June 2005. The proposal had three main aims: to strengthen the ability of university management to make strategic choices regarding research within the institutions; to allocate funding between the universities based exclusively on quality (disregarding thematic and regional considerations); and to strengthen the collaboration and division of labour between the universities (ATV, 2005, p.32). These aims were to be attained by allocating funding directly to universities rather than to individual researchers. ATV proposed that the funding should be allocated for at least five years with possibilities of continuation.

---

2 In the Danish context 'external funding' includes public funding allocated under competition (in contrast to the basic operational lump sum grant).
In parallel with this proposal, the Danish Council for Research Policy initiated a project aiming to identify core fields in Danish research to provide a sound foundation for future research agendas at both the national and institutional level. The council initiated a hearing in May 2005 where all Danish research institutions financed by public funding were asked to report current, as well as developing core research areas (Danmarks Forskningsråd, 2006). These proposals were picked up by the Government and put forward to the newly established Globalisation Council. In one of the background reports to a key meeting in December 2005, a proposal from the Government³ with clear similarities to the ATV-model was outlined (Danish Government, 2005b). Under the heading ‘A New Model for Competition between Universities’ the report stated that:

‘Today, virtually all research funds that are distributed according to an open competitive process are awarded to individual researchers and research groups. As a consequence, research risks becoming dispersed and disconnected from the universities’ strategy for their research. Therefore, a proportion of the funds available in the future should be allocated in competition between universities. Each university’s management should be required to take part in a competitive bidding process in which they submit proposals for large-scale, long-term research projects. The proposals should be evaluated on the basis of their quality and relevance’.

This formulation went directly into the final Globalisation Strategy document. As the discussions in the Globalisation Council accordingly did not lead to any changes, they most likely provided legitimacy to the initiative, something which became important for the subsequent process.

In general, the first decision-making phases can be seen as an example of a rather strong Danish tradition in higher education of consensual decision-making, involving both political parties and stakeholders.

The Danish Ministry of Science, Technology and Innovation was tasked with transforming the overall description of the UNIK-initiative into an operative funding mechanism. Inspired by the ATV-model, and also the Swedish Linnaeus Environments and the German Excellence initiative, the ministry started to negotiate with key stakeholders, including the Confederation of Danish Universities. The Confederation endorsed the need for a new funding model, but at the start it was not in favour of the model outlined in the Globalisation Strategy. The Confederation proposed two alternatives, but did not convince the Ministry to change the initiative (Rektorkollegiet, 2006a; 2006b). As a collective, the universities argued for a permanent pool of funding for strategic initiatives available for all the institutions instead of the more selective UNIK-funding. The Confederation of the Danish Universities is, however, seldom a strong and united voice in research policy discussions and also in this case there were differences in the interests and perceptions of the individual universities which weakened the overall position of the Confederation. Generally speaking, the larger and more research intensive universities were more welcoming of this model than smaller universities for the simple reason that they would be in a better position to receive funding. The Ministry also consulted the Danish National Research Foundation (DNRF), the Danish Council of Independent Research (DFF) and the Coordination Committee for Research. The latter were in particular involved in formulating

³ Actually the proposal was prepared by a special ministerial secretariat in charge of preparing the background report to the Globalization Council
evaluation criteria and the appointment of an international expert group (Danish Agency for Science, Technology and Innovation, 2007b).

The resulting model was presented in the summer of 2007. It retained the principles outlined in the Globalisation Strategy, but was different in two ways from the initial ATV-model: the ambition of strengthening collaboration between Danish institutions had disappeared and the duration of the initiative was limited to five years.

Put succinctly, the design process was characterised by the inclusion of a large number of actors associated with the Globalisation Council. Different ministries, stakeholders, and a majority of the political parties, participating in one way or another in the Globalisation Strategy process, endorsed the goals of the Globalisation Strategy, and by implication the notions on which the UNIK-initiative was based. This contributed to the legitimacy of and commitment to the UNIK-initiative. However, this broad consensus hindered the opportunities to change the initiative and prevented change at later stages of the policy process. It is important to note that the UNIK decision making process took place alongside the design of a number of other, larger and more controversial and conflictual initiatives, and that the process was taking place in a context in which the HE sector would receive a substantial increase in overall funding.

Policy instruments used
The instrument can be described as a rather simple funding mechanism with few strings attached for the institutions once the funding is allocated. It concerns an additional budget; no single university would lose any funding – although in relative terms there would be winners and losers. The project funding is assigned to the university, and not to the individual researchers or departments. The initiative allowed for locally adapted implementation.

Implementation of the reform
The call for proposals was announced on October 15th, 2007. The submission date was no later than April 1st, 2008. The Danish universities submitted 28 proposals (out of a maximum of 31). These proposals were assessed by an independent international expert panel, consisting of eleven international professors with no direct relations to Danish universities. This expert panel would play a key role in the implementation of the UNIK-initiative – not only in selecting proposals for funding, but throughout the entire project period.

The expert panel subsequently appointed four reviewers for each proposal after consultation with the universities (April/May 2008). The 28 proposals were reviewed and prioritised (June/July) and then again in November 2008; this happened in consultation with the applicants (OECD, 2014). The DNRF supervised the peer review process on behalf of the Danish Agency for Science, Technology and Innovation. On the basis of the reviews the expert panel classified the proposals in five categories. Next, the minister decided to give full funding to four proposals in the best category. Proposals from the three most research-intensive Danish universities were eventually funded (two UNIK-centres at Copenhagen University, one at Aarhus University and one at the Technical University of Denmark). These universities received approximately DKK 120 million (€16m) for each centre between 2009 and 2013.
The number of prescriptive elements in the call for proposals and the funding agreements was kept to a minimum. It allowed each UNIK variety in design regarding organisation, embeddedness and strategic targets (Danish Agency for Science, Technology and Innovation, 2015). Accordingly the coordinating efforts during the project period were limited; a high degree of local variation was allowed.

**Monitoring, evaluation and feedback**

Although the strings attached to the funding were kept to a minimum, there has been an ongoing evaluation and monitoring process throughout the project period. The Danish Agency for Science, Technology and Innovation has had the formal legal responsibility for supervising the correct use of the funding based upon yearly cost statements and progress reports.

In addition, the expert panel has carried out annual site visits. In 2011, the expert panel’s annual report also constituted a formative mid-term evaluation as foreseen in the UNIK-initiative. The mid-term evaluation highlighted the following main points:

- All four UNIKs were progressing well. Apart from a few minor concerns, they all had good structures and dedicated management.
- The grants had allowed the universities to address research questions they would not have touched upon otherwise. They have helped to break down barriers to intra-university cooperation and have established vital networks for researchers.
- Great scientific breakthroughs as a direct result of the UNIK-grant at this early point in the process could not be expected and should be assessed at a later stage.
- Regarding international cooperation, the panel was expecting to see increasing activity in the following years.
- The impression was that the UNIK-initiative has had an effect on university culture and organisation, as well as inspiring new forms of organisation with a focus on cross-disciplinary cooperation.
- There were concerns about embeddedness, important for sustainability after the five year period. The panel intended to raise this issue in coming site visits with increased concern expecting to see progress.

The general impression is that the three universities have responded to the recommendations of the expert panel – not only in relation to the mid-term evaluation but throughout the project period. The panel’s engagement has been beneficial to the whole process (Danish Agency for Science, Technology and Innovation, 2015). A final evaluation is currently being prepared and will be presented in October 2015.

**Important changes in context for the reform**

The UNIK-initiative has not been affected to any substantial degree by events or developments outside the HE sector in the project period from 2009 to 2013. There have, however, been many changes within the HE sector (see introduction). The UNIK-initiative constitutes a minor element in a comprehensive set of reforms of which the effects are hard to disentangle, but it seems fair to suggest that they,
including the UNIK-initiative, have pursued the same operational and strategic goals.

**Achievements and effects**

The expert panel final evaluation (which will be part of the formal evaluation later this year) reports that the four UNIK-initiatives have excelled in both quantity and quality in a wide range of parameters (novel approaches, high quality research, internationalisation and promotion of cross-disciplinary work). The UNIK-grants have underpinned excellent research activities, new cross-departmental synergies and have played a marked role in profiling and promoting research agendas. The report also highlights that the UNIK-initiative has:

- Furthered the host institutions’ internationalisation.
- Boosted the growth layer of young researchers within the initiative’s research areas.
- Encouraged the professionalisation and advancement of the research administrations.
- Provided trust and instrumental flexibility to allow for individual initiatives to adapt and structure the organisation to their ambitious strategies and the main principles of UNIK.
- Had a substantial organisational impact on the host institutions and contributed to research agenda priority setting.
- Secured continuity and progress in the initiatives by tying the funding to the initiative instead of the researcher.

In summary, the short term operational goals of the initiative appear to have been achieved to quite a large extent, at least for the universities involved. With regard to the strategic goals of the initiative the assessment is also largely positive. The initiative has contributed to reaching the 1 per cent of GDP research funding goal and most likely to enhancing research quality and universities’ international competitiveness. However, whether the initiative will have lasting effects remains an open question. Moreover, the initiative itself has played only a minor role in the overall development due to its marginal size.

The call for proposals did not require cross-disciplinary collaboration. However, many of UNIK’s research goals required co-operation with other disciplines (OECD, 2014, p.141). This characteristic has been highlighted as a clear positive side effect. The expert panel for instance states that:

‘The UNIK grants have laid the ground for many multifaceted and holistic research projects with participation of researchers from various scientific backgrounds. This has been the rule rather than the exception across the UNIKs’.

The UNIKs have deployed cross-departmental initiatives generating new synergies, for example through shared research facilities and networks of young investigators.

This emphasis on cross-disciplinarity does not appear to have had a negative effect on research output. All of the four initiatives have been able to present several excellent new findings and have been highly productive in terms of scientific publications. According to the panel many of these scientific achievements would not have been made without the economic and cross-disciplinary support from the UNIKs.
Partly associated with the cross-disciplinary aspect it has contributed to the inter-institutional integration, following the mergers of 2007. The UNIKs has been a bridging factor, bringing departments and faculties together around a common quest (Danish Agency for Science, Technology and Innovation, 2015).

A number of critical points have been recurrently put forward. Firstly, the relatively short duration of five years and the associated sustainability problems has led to the argument, by the expert panel, that there would have been more gains had there been a longer funding period. Establishing new collaborations across disciplines is a time-consuming process, fragile without economic certainty (Danish Agency for Science, Technology and Innovation, 2015). The UNIK-agreements between the Government and the three universities stipulated that universities would have to continue successful UNIK funded research. The panel doubts whether all initiatives will sustain themselves as top research environments without UNIK-funding, risking long term failure (Danish Agency for Science, Technology and Innovation, 2015).

Secondly, the UNIK-initiative created a disincentive for Danish universities to join forces in an attempt to strengthen research quality and internationalisation. It has been argued that the initiative furthered an undesirable ego-centric institutional approach and hampered collaboration between the strongest environments across the universities.

Thirdly, the panel argued that the initiative’s design has favoured the natural, technical and medical sciences at the expense of the humanities and the social sciences; a concern mainly due to the size of the grants (Danish Agency for Science, Technology and Innovation, 2010). By the same token it has been argued that the large, research-intensive universities were better positioned than the smaller universities. Although this was not explicitly stated as a goal it may still have been an intended effect of the initiative.

Summary
This case study described and analysed the establishment and implementation of the Danish UNIK-initiative, which funded four large-scale Centres of Excellence at selected Danish universities in the period 2009-2013. Overall, the initiative aimed to strengthen the strategic capacity of the universities by offering relatively long term competitive funding to encourage Danish universities, as institutions, to strengthen their strategic efforts to prioritise research and to create a distinctive research profile. Two other main operational targets of the UNIK-initiative were to further international interaction and cooperation, and to train and support young researchers. The funding was provided from the comprehensive Globalisation Strategy launched in 2007 with broad political support. Paradoxically, the initiative can both be seen as a success and a failure. Viewed in isolation the initiative has reached most of its short-term operational objectives and it has most likely also contributed, albeit marginally, to the set of overall strategic goals formulated in the Globalisation Strategy. On the other hand, the initiative will probably not be continued due to lack of new funding and due to limited support from central stakeholders. As a consequence of this one-off character of the initiative it will most likely not leave substantial long term traces in the structure and functioning of the Danish university system.
Interviewees
Professor Jens Oddershede, former vice-chancellor of University of Southern Denmark and chairman of the Confederation of Danish Universities. Current chairman of the Danish Council for Research and Innovation Policy
Professor Thomas Bjørnholm, current Prorector for Research and Innovation, University of Copenhagen, former PI of one of the UNIK-projects.
Johnny Mogensen, Head of division, The Danish Ministry of Higher Education and Science
Karin Kjær Madsen, Senior Consultant, The Danish Ministry of Higher Education and Science

References


HOW TO OBTAIN EU PUBLICATIONS

Free publications:

• one copy:
  via EU Bookshop (http://bookshop.europa.eu);

• more than one copy or posters/maps:
  from the European Union’s representations (http://ec.europa.eu/represent_en.htm);
  from the delegations in non-EU countries (http://eeas.europa.eu/delegations/index_en.htm);
  by contacting the Europe Direct service (http://europa.eu/europedirect/index_en.htm) or calling 00 800 6 7 8 9 10 11 (free phone number from anywhere in the EU) (*).

(*) The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

Priced publications:

• via EU Bookshop (http://bookshop.europa.eu).
