

**University Merger Reforms: Rational, political, institutional or incidental processes?
The case of Denmark**

Paper prepared for the panel "Mergers in Higher education: Lessons from the Nordic Countries" at CHER 28th Annual Conference, Lisbon, Portugal, 7-9 September 2015

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University Merger reforms: Rational, political, institutional or incidental processes? The case of Denmark

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Abstract

Mergers have for some years been popular within the public sector in many countries this includes mergers between higher education institutions. In the Danish university and Government Research Institutions sector a process of merger took place in 2006. ‘University merger reforms’ is an analysis of this process and not at least the post-merger processes from the actual merger and up to 2015. Empirically the paper focuses on three of the Danish universities: Copenhagen, Aarhus and Aalborg. Theoretically the analysis is based on a combination of four models for understanding such reforms within the HE-sector and some of the conclusions made from other kinds of merger studies. Important conclusions of the study of the three universities are that mergers and especially post-mergers processes are much more than linear, straight forward rational processes and that understanding merger processes on an organizational level demands the use of more than one conceptual model for agenda-setting - decision making and institutional restructuring,

1. Introduction

The idea of merger reforms has become popular in many policy fields including higher education and research. Merger reforms are complex and controversial processes as they involve many stakeholders, are dynamic and most often develop over long periods of time. Although there is a growing interest for studying merger reforms, there is still scarce knowledge on and understanding of the complexity of such reforms. This paper intends to fill some of this research gap. In order to do so we analyse a major merger reform launched in 2006¹ in the field of higher education and research in Denmark. In order to grasp the complexity we apply a theoretical framework based on four perspectives.

The paper investigates the policy process leading to the reform as well as the post-merger-restructuring processes. The analysis focuses on both university-to-university mergers and Governmental Research Institutes (GRI)-to-university mergers. The following research questions are addressed: How did the reform develop and how did the universities cope with the post-merger restructuring challenges? At the organisational level three cases are analysed. The cases are the University of Copenhagen, Aarhus University and Aalborg University.

The paper is structured as follows: Section two presents the theoretical framework and method. Section three investigates the policy process analysing the agenda setting and decision-making phases including the strategies of the three case universities. Section four discusses the short-term reform results by presenting the overall changes at the case universities. Section five proceeds by discussing the challenges related to the merger configurations at the case universities and analyse the post-merger restructuring processes. Section six holds a discussion on how the reform and post-merger re-structuring processes can be interpreted according to the theoretical framework and some conclusions.

2. Theoretical framework and methods

Analysis of governmental reform processes can be anchored in different conceptual models. Four models are archetypes: Reforms may be understood as rational, instrumental change processes; as political negotiations processes; as institutional, cultural change processes or as ambiguous, incidental processes.

The rational, instrumental model understands reforms as goals-means rational decision-making- and implementation processes in which solutions matching specified goals are decided on (Scott & Davis, 2007, chapter 2). Goal-means rational reforms are expected to be implemented top-down in linear processes at the national level as well as at organizational levels.

¹ This paper constitutes a re-written, slimmed, updated and theoretically re-framed version of three book chapters by the same authors in Pinheiro, R.; Geschwind, L. & Aarrevaara, T. (eds.): *Mergers in Higher Education. The Experience from Northern Europe*. Springer, in press.

The political, negotiation model understands reforms as arenas where decision-making and implementation processes are shaped by negotiations in which stakeholders pursue their own goals and where negotiations result in compromises (Scott & Davis, 2007: 94). At both the national and the organizational level negotiated reforms may be expected to be decided on and implemented in mixtures of top-down and bottom-up processes as the character of the process depends on the power constellations between the actors.

The institutional, cultural model understands reforms as processes where ideas are launched and spread and where the implementation of ideas evolve as translation processes where actors adapt the reform ideas to local institutional, cultural contexts (Røvik, 2007).

Finally, the ambiguous, incidental model understands reforms as arenas where streams of problems and streams of solutions are floating around. Entrepreneurial actors may be able to couple streams into decision-making and change by succeeding in opening “windows of opportunities” (Cohen, March & Olsen, 1976; Kingdon, 1995). In ambiguous contexts reform processes are emergent and interactions between different agendas as well as timing are important aspects.

The analysis will investigate to which extent each of these different models are useful interpretations of the 2006 merger reform at the national level as well as of the post-merger restructuring processes at the three case universities. In the analysis the models are supplementing each other as they to different degrees may contribute to the understanding of the reform processes as well as to the understanding of different aspects of the processes. The idea of using different models is that this enable us grasp the complexity of the reform processes. The analytical strategy followed is thus a ‘filling-strategy’ (Grøn, Hansen & Kristiansen, 2014; Roness, 1997), sometimes also referred to as a complementary strategy.

In the analyses the four models will be combined with distinctions characterizing different types of organizational mergers (Harman and Harman 2003; 2008). One distinction concerns the compulsiveness of merger reforms. Merger processes may be involuntary, initiated from external pressures, or voluntary initiated by the participating institutions themselves. Governmental reforms most often are involuntary but they may be open for institutional influence and negotiations. Another distinction is the characteristics of the new structures developed. These may be unitary where a single set of overall structures for governance is introduced or they may be federal where specified responsibilities usually remain with the participating institutions. In the literature, there is considerable discussion about the strengths and weaknesses of different structures.

By combining the theoretical, conceptual models with the distinctions from the merger literature a typology of different understandings of governmental merger reforms and the resulting merger structures is developed. Table 1 gives an overview of this typology including different understandings of both merger processes and the resulting structural configurations.

Table 1: Four perspectives on governmental merger reform processes and resulting structures.

Dimensions	Rational, instrumental model	Political, negotiation model	Institutional, cultural model	Ambiguous, incidental model
Merger reform processes are	Involuntary and linear top-down implemented processes.	Launched as involuntary but become arenas where stakeholders pursue own interests in negotiation processes.	Launched as involuntary but become arenas where local actors adapt reform ideas to local cultural contexts.	Launched as involuntary but become emergent due to entrepreneurs able to couple streams of problems and solutions.
Merger structures	Unitary structures are developed to gain synergies and assure effects of economies of scale.	Powerful actors are able to refuse merger potentials. Structures may be unitary or federal as they are compromises reflecting the interests of the most powerful actors.	Federal structures are developed as actors try to protect institutional identities and brands.	Structures may be unitary or federal as they emerge in unpredictable processes.

The four models will be used in the analysis of the agenda setting- and decision-making processes, the university strategies as well as the post-merger restructuring processes. The analysis is based on the study of documentary material covering the period before and after the mergers. In addition, we have interviewed a number of key actors involved in the actual merger processes and in the integration and change processes from 2007 and onwards. The interviews conducted have been semi-structured concentrating on two main subjects: The interviews gave the informants the opportunity to present their version of the sequence of events in the merger process. And the interviews helped us understand specific events documented in the written material. All interviews were made in 2014.ⁱ

3. Agenda setting, decision making and strategies

Having presented the theoretical framework and methods we now turn to the analysis. First the focus is on the agenda setting and the decision-making at the overall national

level. Secondly, we turn to the analysis of the organizational processes at the case universities.

3.1. Agenda setting

Discussions about mergers were on the policy agenda for several years before the reform was launched. Two different types of mergers were discussed. One type concerned inter-university mergers, the other amalgamations between the GRIs and the universities. Both topics came on the agenda in 2001 as part of the work of the Research Commission established by government. The overall arguments were that more comprehensive institutions would be a mean to gain synergy effects in relation to both education and research, to enhance the international competitiveness and to use resources more efficient. More specific arguments in favour of GRI-to-university mergers were that the GRI staff should participate more in teaching activities (Research Commission 2001, reviewed in Hansen 2001).

The merger agenda was followed-up by carrying out analyses. The Danish Research Council (2002) analysed all GRI's and concluded that only some of the GRIs should be merged into universities. An inter-ministerial working group argued that mergers were not necessary as co-operation could be organised in different ways and a survey showed that widespread educational collaboration between GRIs and universities was already taking place (Ministry of Science, Technology and Innovation 2003). In spite of the critical voices the government decided to merge four GRIs into three universities in 2003. Action was thus added to a process hitherto involving only the articulation of solutions and (non)problems. Two of the merged GRIs had been under the auspices of the Ministry of Science. If a merger policy was to be considered credible by other ministries, the Ministry of Science had to lead the way. OECD was asked to conduct a study of the Danish university system. One of the recommendations was that 'mono-faculty universities', defined as universities with one or two faculties, should be integrated into multi-faculty universities (OECD 2004). This gained support by the Danish Council for Research Policy (2006).

Meanwhile the government had published a programme titled "New Goals" outlining ambitious targets. Denmark was to be a "leading knowledge society" and have "world-class education" (Danish Government 2005). To achieve this, a Globalisation Council was established and asked to work out a strategy. The council headed by the prime minister discussed issues related to research and education, thus contributing to a ripening of the proposed reforms.

Concrete proposals for mergers were also launched during this phase: A committee proposed a 'Food University' (Committee to Evaluate Options for Improving Research at the Royal Veterinary and Agricultural University of Copenhagen and the Danish Institute of Agricultural Sciences 2005). The proposal was well received by institutions to be merged in their entirety, but criticised by those who were to cede parts of their organisations. Another group proposed a Danish MIT-like university by

merging several universities and GRIs. The two proposals were incompatible and made differences of opinion clear. The merger agenda was boosted, but it also became obvious that decisions on mergers were conflictual.

Two other incidents were important preconditions for the later launch of the merger reform. Firstly, merger reforms were spreading as popular solutions in the public sector as a whole. Secondly, a new University Act was passed in 2003 transforming the universities to a company like model with a hierarchical management structure, boards with a majority of external members and appointed leaders (Hansen 2004). By end of 2005, the new boards and all but one vice-chancellor were in place. The new decision-making structure contributed to opening a window of opportunity for the merger reform. The newly hired managers could hardly duck their responsibilities with regard to mergers. At the same time, institutions were tempted to merge by the broader political agenda outlined by the Globalisation Council promising additional resources to be provided for the universities in the future.

3.2. Decision-making at the system level

In February 2006, the government launched the merger reform. The minister of science aimed for a solution that involved the entire institutional field, defined as the 12 universities and 13 GRIs. The minister invited all universities to “engage in a dialogue with all potential partners in advance of a process towards integration” and on the basis of this to draw up expressions of interest (Sander 2006). At the same time, the GRIs were asked to draw up expressions of interest for possible integration with universities and other GRIs as well.

The expressions of interest were to be submitted two months later. The agenda was clear: mergers were involuntary, but it was also an open process. All input from the institutions would be evaluated, they were told, before decisions on how to organize the rest of the process were made.

The process went through several phases during 2006. The first phase provided the ministry with a collection of expressions of interests. The reform idea as such was welcomed, but with scepticism. Whereas the GRIs argued that there was no need for integration as the two sectors did fundamentally different work, the universities argued that large units are bureaucratic and slow, and mergers long drawn and expensive. Reading between the lines, the common denominator was that the institutions perceived a risk that mergers would lead to a breakdown of academic identities.

In the input from the institutions many possible integration combinations were identified. But some patterns did emerge. Eight universities and eight GRIs were mainly positive towards mergers, while four universities and five GRIs were rather sceptical. One response tried to maintain awareness about the proposed food

university. Several GRIs identified University of Copenhagen and the Technical University (DTU) as the most attractive “dance partners”.

The expressions of interests also showed that the universities were adopting quite different strategies. The University of Copenhagen was open to the integration of GRIs solely in the health and natural science fields, while both the Roskilde University and Aalborg University were open to integration over a broader academic spectrum. Finally, the expressions of interest showed that the mono-faculty universities were identified as interesting partners. At the same time, two of these – the IT-University and Copenhagen Business School - clearly sent the message that “they did not want to dance”.

The expressions of interest returned the ball to the minister's court and started the second phase. Two-and-a-half months later, the government announced the main outlines of a new map for Danish higher education and research. In the intervening period, a number of bilateral meetings had been held. The government's solution consisted of three enlarged universities, University of Copenhagen, Aarhus University and the Technical University, and some smaller additions to Aalborg University and the University of Southern Denmark. The proposal tried to balance different interests and can be interpreted as a compromise meeting the needs of the majority.

The idea of strengthening the field of life science at University of Copenhagen was supported; so was the desire for growth of the Technical University and Aarhus University. Roskilde University which no one “wanted to dance with” was allowed to continue unchanged. The package was presented as a *fait accompli*. The role of the boards was to continue to work on integration plans.

However, problems remained. In the university sector, the government's objective still was that two or three more universities should be merged into the University of Copenhagen and one more into Aarhus University. In relation to the GRIs, further negotiations remained with four institutes. 15 September 2006 was set as deadline for new responses from the institutions. By the time these were submitted, the institutions had largely accepted the government's proposal. However, voices were still arguing for the food university and most of those who initially were negative about the merger solutions remained so. In addition, this phase was characterised by a growth-competition dynamic where several universities expressed interest in two of the GRIs still in contention. These feelings were not reciprocated.

In October 2006, the government announced the new university landscape. There were few changes. The government took what it could get, but did not exert further pressure. Two mono-faculty universities retained their independence. The same applied to two GRIs which however were forced to change their names. Only one problem remained: The University of Education (DPU) which could not accept the conditions for a merger with the University of Copenhagen. In February 2007, it was

instead announced that the DPU had agreed on a merger with the University of Aarhus. The decision-making process was brought to end.

3.3. Case institutions strategies

Having analysed the overall decision process we now turn to the analysis of the strategies of the case universities. These strategies were not in place when the reform was launched but were developed along the decision-making process in internal and external negotiation processes.

University of Copenhagen

The University of Copenhagen is the oldest and largest university in Denmark more than 530 years old. Before the mergers it was well consolidated. Due to this the merger initiative did not pose a direct threat. As a consequence, the university at first signalled that its main priority was to continue untouched in order to remain a traditional basic research oriented institution. If this wasn't possible, it suggested merging with the Danish University of Pharmaceutical Sciences, the Royal Veterinary and Agricultural University and the IT-University, all institutions with a clear fit.

As mentioned the political system wished to merge the University of Copenhagen with a number of other institutions. However, neither the university nor the institutions were willing to enter such a partnership and, after negotiations, the political pressure was rejected and the university opted to merge only with two 'mono-faculty' universities, the Danish University of Pharmaceutical Sciences and the Royal Veterinary and Agricultural University both located in the Copenhagen area. The IT-University decided to remain independent, despite its very small size.

The Danish University of Pharmaceutical Sciences and the Royal Veterinary and Agricultural University were both interested in merging with either The Danish Technical University or the University of Copenhagen - and for a time it was uncertain in which direction they would prefer to move. Eventually The University of Copenhagen was chosen primarily due to the argument that a city centre location would make it easier to recruit students. The formal merger agreement and the merger processes were accordingly fairly straightforward, although not fully in accordance with the political wishes. However, an acceptable solution was found quite fast.

Seen from the perspective of the university the merger idea was to some degree translated into a "business as usual" strategy. However, seen from the perspective of the integrated institutions the picture was quite different. For these institutions the main issue was how to retain as much independence as possible. For the two universities integrated this was solved by given them status as faculties, but this solution was not feasible for all institutions. For the Copenhagen Business School and the IT-University this led to a rejection of the overall merger plans, while the University of Education had to look for other partners willing to offer more attractive conditions.

Aarhus University

Before the mergers Aarhus University, established in 1928, could be characterised as a fairly strong and well consolidated comprehensive university. However, at least two factors made the situation of Aarhus University quite different from the situation of that in Copenhagen. First of all the university management saw some of the proposals published early on in the process - in particular the food university and the 'MIT-light' proposal - as clear threats to the national position of the university. The university feared losing important research environments and was afraid of becoming marginalised.

Secondly, a new vice chancellor, and former member of the Research Commission, had been appointed shortly before the launch of the reform. He expressed a clear ambition to make Aarhus University a strong international university able to compete with the University of Copenhagen as well as abroad. The vice chancellor saw the merger process both as a threat and as a strategic opportunity (Information 2012). As a result the university entered the merger process with a strong willingness to attract potential merger partners. A broad variety of other universities and GRIs were seen as interesting partners – even in situations where they were located geographically far from Aarhus and/or where potential synergies were less obvious.

The first part of the process did not pose major problems. It was decided quite early that two large GRIs were to be merged into the university, The Danish Institute of Agricultural Sciences and The National Environmental Research Institute, as two new independent faculties (DMU 2006). The process cannot be described as fully voluntary as the management within both GRIs felt strong political pressure to enter the merger process. Staying outside was not seen as an option, but who to merge with was an open question. Negotiations were started with a number of institutions, but in both cases the GRIs saw Aarhus University as the university offering the best conditions. In particular the possibility of remaining independent units within the new university was a factor in the decisions.

The part of the merger process involving the two mono-faculty universities, the Aarhus School of Business and The Danish University of Education, was more challenging. At first neither of the institutions were interested in merging with Aarhus University. The Aarhus School of Business preferred to remain independent and the Danish University of Education wanted to either remain independent or become an independent faculty at the University of Copenhagen (DPU 2006). However, as other possibilities seemed to be difficult to realise and the political pressure increased, the two institutions accepted the idea of merging into Aarhus University and were able to negotiate agreements which allowed them to become independent faculties with their brands protected.

In this case one specific element of the overall national objectives, being able to compete at the top end of the market for students, resources and prestige, was heavily prioritised, while other objectives such as synergies and economies of scale played minor roles in the first phase of the mergers. But also here the picture looked different from the perspectives of the other institutions involved. Again, the objective of retaining as much independence as possible was given much more attention than the overall national objectives.

Aalborg University

The pre-merger situation for Aalborg University was different from that of the universities in both Aarhus and Copenhagen. Aalborg University is the youngest comprehensive university in Denmark, established in 1974 to increase the level of competence in the region. The university has developed a distinct problem-based teaching profile and its main resources are attached to the engineering field. The university has had an important role in the development of the North Jutland region and at the same time the university has developed extensive international cooperation. It has grown from an institution with quite modest numbers of students to more than 20.000 today.

Throughout the merger process the university management was strongly in favour of a policy of globalisation and having several national campuses. The vice-chancellor expressed an ambition to build a strong Copenhagen campus with the aim of using the capital city as a hub between the university and global firms. An important precondition for the expansion, both nationally and internationally, was the idea that the region where the main campus is located is too small both for a university with strong ambitions to play a global role within selected research areas and to provide the university with an increasing number of students.

As a result the merger reform was seen as a strategic opportunity for Aalborg University rather than a threat. Aalborg University went into the process with an ambition to attract interested merger partners². In particular, the university signalled that it was open to a number of merger possibilities with GRIs. As it turned out, however, only one GRI saw Aalborg University as an attractive partner. This GRI, The Danish Building Research Institute, worked within one of the university's original research and education areas and clear potential synergies were easy to spot. Building is an area where the university has a strong position nationally and this position was recognised by the GRI. This led to the board of the GRI identifying Aalborg University as its partner of preference, in spite of the geographical distance to the GRI, which was located in the Copenhagen area. Seen from the perspective of the university, this location only added to the attractiveness of the partnership as it could strengthen Aalborg University's Copenhagen platform.

²http://www.nyhedsarkiv.aau.dk/digitalAssets/29/29289_fra-aau-til-videnskabsministeriet.pdf

Seen from the GRI, the main aim identified was to increase research cooperation with outside partners through the merger. The GRI made contact with all relevant universities, but only Aalborg University was able to meet all its wishes, as it had a problem-based learning style and was able to get research out into practice. So even though some staff had closer relations to their neighbour, the mono-faculty Danish Technical University, Aalborg became the choice.

It was promised early on that a large degree of autonomy could be maintained and that the institution should stay in Copenhagen, close to the main group of customers in the building industry. The result was a merger of limited scope with in-built geographical challenges but also clear potential synergies.

Comparing the cases

Comparing the three cases a pattern appears, with the three case universities developing a goals-means strategy acting on the opportunities for improving or maintaining their positions in the national and international landscape, while the universities and GRI's which were to be integrated into larger organisations developed an institutional, cultural strategy aiming at maintaining their identity by limiting the consequences of the implementation of the reform as much as possible.

But the individual universities also differed. This was seen most clearly in the differences between the University of Copenhagen and Aarhus University, where the former saw no urgent need for increased competitiveness through mergers, while the latter saw the process as a clear strategic opportunity and perhaps also as a necessity. The same might be seen in the Aalborg case, where the increased activity in the Copenhagen area was a specific strategic target.

As a consequence, the way in which the process was carried out turned out to be a double-edged sword for the creation of increased international competitiveness and increased efficiency. Both the University of Copenhagen and the Aarhus University stretched their range of governance to a broader and (especially for Aarhus University) a much more diverse organisational structure, and Aalborg University increased its activities in the Copenhagen area, far away from its main campus. As a consequence, only very limited economies of scale could be achieved in this phase due to the lack of real integration. In most cases the administrative expenditure probably increased over the first couple of years as a result of the merger processes.

4. Reform results: Short term

In this section the landscape resulting from the merger reform is presented. All in all the merger reform reduced the number of universities from 12 to 8 and led to the integration of most of the GRI's into the university sector. The objectives for the reform was only partly carried out successfully. In relation to the "big is beautiful" objective three universities were able to stay out of the process. Another important benefit was realized in a number of cases, namely; increased co-operation between

university researchers and teachers and former GRI researchers in the realms of both research and teaching as to create more international competitiveness and enhance the development of new ideas, concepts, processes and patents.

Zooming in on the case universities, table 2 shows their development in size since the merger reform. The figures concerns 2014, the figures in brackets show the development from the “old” universities 2006 to the “new” universities 2007.

Table2: The development of the case universities: Key figures

University	Revenue in 1.000 EUR nominal terms	Number of students enrolled	No. of staff full time equivalents	No. of institutions taken-over
University of Copenhagen	1.107.442 (556.335- 809.567)	40.882 (33.359-37.796)	10.058 (5.530-7.836)	2
Aarhus University	834.165 (345.655-587.276)	38.120 (19.607-29.550)	8.028 (3.851-6.216)	4 (hereby 2 GRI's)
Aalborg University	361.536 (189.192-205.790)	20.411 (10.877-10.972)	3.325 (2.152-2.204)	1 GRI

Sources: Statistics available from Universities Denmark:
<http://www.dkuni.dk/Statistik/Universiteternes-statistiske-beredskab> (only in Danish).

The table shows the significant increase in revenue, students and staff at Aarhus University from 2006 to 2007 clearly reflecting the growth strategy of the university. It also shows the increase in especially revenue and staff at University of Copenhagen from 2006 to 2007 reflecting that the institutions taken-over in Copenhagen were less teaching intensive than some of the institutions taken-over in Aarhus. At Aalborg University the immediate changes were more limited whereas there has been a considerable growth in the years after the merger reform.

5. Post-merger re-structuring

This section looks deeper into the post-merger activities of the three case universities. But before this is done the merger configurations and the challenges expected from these are discussed.

5.1. Merger configurations at the case universities

Besides the distinctions mentioned in section two the merger literature offer other dimensions for describing mergers. As shown in table 3 mergers may be two- or multi-partner; single sector involving institutions from only one higher education sector or cross-sectorial involving institutions from different sectors; and they may involve similar or different academic profiles. Finally distance/geography is also of importance. It is argued that the more mergers involve multiple partners, are cross-sectorial, include different academic profiles as well as geographic distance, the larger the post-merger challenges will be (Harman & Robertson-Cunninghame 1995, Norgaard and Skodvin 2002). On these dimensions the mergers at the three universities differed substantially.

Table 3: Comparing merger configurations

Merger types: University:	Number of partners	Single-/cross- sector	Similar/different academic profiles	Distance/geography
University of Copenhagen	3	Single-sector	Rather similar, complimentary	Short distance
Aarhus University	5	Both single- and cross-sector	Both rather similar, complimentary and dissimilar partners	Widespread throughout the country
Aalborg University	2	Cross-sector	Rather similar, complimentary	Long distance but only two locations

The University of Copenhagen was a single-sector merger with three rather similar, complimentary partners located within a short distance. The merger meant that the number of faculties increased from 6 to 8. The Aarhus University merger had both single-sector (university-university) and cross-sector (university-GRI) elements. There were several partners some with rather similar and complementary profiles, but others with dissimilar academic profiles and most of the partners were furthermore located quite far from each other. The university experienced an increase in the number of faculties from 5 to 9. At Aalborg University the merger was a cross-sector merger characterised by long distance. There were only two partners and the GRI involved was fairly small compared to the university.

5.2. Post-merger re-structuring

The merger configurations outlined above have implications for how challenging post-merger restructuring aiming at developing unitary structures is expected to be. At one end of a continuum an eventual aim of developing a unitary structure at Aarhus University would be expected to be a considerable managerial challenge. At the other end an eventual aim of this at University of Copenhagen would be expected to be a more limited managerial challenge while the challenge at Aalborg University would be expected to be in-between. The following investigates what happened.

University of Copenhagen

At the time of the merger, University of Copenhagen chose to organize the incoming universities in a federal structure. Although a fairly manageable post-merger process could be expected a number of factors indicated challenges. The merger process had been a fast and closed top down process with limited involvement of staff and the long-term plans were unclear.

From a management perspective it was soon seen as a problem that only limited synergies were created. Increased collaboration across the faculties was seen as a

solution to gain synergy. The idea was to initiate a one-by-one analysis of disciplines present at several faculties, starting with the field of chemistry. In 2011 an international committee published a report on chemistry suggesting that the existing four chemistry departments located at three faculties should merge into one department located at the faculty of natural science. This proposal was controversial. Especially FARMA, the former Danish University of Pharmaceutical Sciences, argued that if it was implemented it would drain their research environment (Zieler 2011). Also LIFE, the former Royal Veterinary and Agricultural University, was sceptical.

Realizing that the one-discipline-at-a-time strategy was not feasible, other strategies were discussed. One issue was an increasing awareness about a possible future threat from Aarhus University, if they should decide to develop the field of natural science at their campus in Copenhagen. It was proposed to merge FARMA and the veterinarian part of LIFE into the medical faculty and the agricultural part of LIFE into the faculty for natural sciences. In addition to these post-merger restructuring ideas, it was proposed to reduce the number of departments considerable. The so-called “dry” faculties (social science, humanities, law and theology) would not be affected.

The board asked the vice-chancellor to work out a concrete and motivated proposal in a process involving staff. This resulted in a slightly revised proposal. The idea of faculty mergers was unchanged, but the plan for a new department structure revised. Some departments wished to keep their identity and a few of them succeeded. The proposal passed the board with one vote. The new structure took effect from January 2012.

As a result the former Pharmaceutical University, for a while three departments at FARMA, is now two departments at Health. The academic identity is more or less maintained, and there is still a strong brand vis-à-vis the medical industry. The former Royal Veterinary and Agricultural University, for a while the LIFE faculty, has been split up. The veterinarian part is localized in Health, while the agricultural part has been integrated within SCIENCE. In general, scientific staff is mostly localized in the laboratories and offices at the same campus environments as before, but the administrative staff has been heavily reorganized in a process challenged by large cultural differences across the former independent institutions.

Above it was expected that the post-merger process should be fairly manageable as there were clear potential synergies and as the three institutions had nearby locations. As the analysis has shown this expectation was not met. The first step in the post-merger process, the one-discipline-at-a-time-strategy, was not a success. The second step, the merger of FARMA and LIFE into the medical and natural science faculties was a process showing a number of conflicts and highlighting large cultural differences at the former independent institutions. In particular, we observe that

changes of the overall structures are manageable, but as soon as we touch the departmental levels conflicts arise.

Aarhus University

At Aarhus University the picture was even more complex and challenging. Due to the merger configuration a highly challenging post-merger re-structuring process could be expected. Some of the institutions taken-over had been quite reluctant and the process had been top down driven with low staff involvement. In addition, the differences between the involved institutions with different sector backgrounds, different missions and different cultures posed further challenges. And finally, also the geographical distance between the institutions, the limited time for analysis and planning and the unclear long-term goals of the merger would be expected to add to the challenges of the post-merger process.

A central precondition for the Aarhus University merger was as mentioned that in order to attract partners the university had offered large degrees of autonomy to the new units. This meant that they were merged into the university as independent faculties in a federal structure. Besides being a precondition for the merger decision, this structure soon was seen by management as a barrier for attempts to create real integration. The central university management identified a number of challenges including: an increased demand for efficiency, an increased demand for concrete synergy effects, a need to break down "silos" to increase collaboration, and a need to create greater scope for strategic leadership. But even though the situation called for further restructuring this could not be initiated due to the nature of the agreements. No major changes were thus implemented during the first couple of years.

That further changes could be expected was indicated in 2008 when the university adopted the Aarhus University Strategy 2008-2012. This strategy underlined the need for an academic reorganization. Following this strategy the vice-chancellor initiated the so-called academic development process and in June 2010 the board decided to organize research and teaching activities in four new main academic areas. In March 2011, the board took a final decision after a period of negotiations (Pinheiro & Stensaker 2014).

At this point the number of faculties was reduced to four: Arts; Science and Technology; Health; and Business and Social Sciences. Where there used to be fifty-five departments, there were now twenty-six. At the management level the restructuring led to a change from ten management units to a unified senior leadership team with cross cutting responsibility for strategic management and quality assurance. The former independent GRIs were in many cases split up and integrated within other departments or units.

More or less all initiatives were initiated and implemented by the central institutional leadership with limited input from staff. Not surprisingly this process has been

controversial. Internally as well as externally strong critique has been voiced and the discontent has also been documented in a number of reports. The first documentation of some of the problems came in 2012 when Aarhus University conducted a large-scale study of the psychosocial work environment. Based on an analysis of more than 6,000 completed questionnaires the study provided documentation of high levels of stress, uncertainty, frustration and a very low trust in the central leadership (Aarhus University 2012).

The next piece of evidence of the problems came in a report focusing at the integration of the former GRIs. Based on a large survey it was examined how the former GRI staff had experienced the merger process and how it had affected their working conditions (Bloch; Pedersen & Aagaard 2012). The report drew a remarkably negative image. The survey uncovered a widespread scepticism towards the rationales of the mergers. Many respondents pointed out that the level of information and the degree of involvement had been scarce due to the speed of the process. Secondly, a large majority of the respondents also indicated that the conditions for carrying out consultancy and applied research had been impaired as a result of the mergers. In relation to these issues the survey also pointed towards difficulties associated with a shift in identity and culture.

Finally, also an analysis from a so-called internal expert group within Aarhus University established by the central management documents widespread problems (The Expert Group 2014). The report argues that there has been a too extensive centralization, and too great emphasis has been placed on standardization and the presentation of the university as a unified whole. The survey carried out by the expert group shows widespread scepticism from the employees with regard to university strategy and the initiatives derived from it.

According to the analysis, the change process is perceived as the management's project, and the university's employees feel very little ownership over it. As a consequence it is argued that it has been difficult to derive the benefit from the diversity and that insufficient space has been allowed for the development of professional and academic differences. The report shows that the change process has underestimated the significance of professional identity and inner motivation for both academic and technical/administrative staff members. A large proportion of the academic staff members at the departments do not regard the current structure as appropriate.

Increasingly, the central university management has acknowledged these problems. In particular after a new vice-chancellor took office in August 2013 the management has shown willingness to address the challenges, and most recently this has led to a decision based on the problem analysis to roll back some of the most radical elements of the 2011 reorganization (The Senior Management Team 2014). These decisions are in particular targeting the issues of centralization and standardization and aim to

decentralize the administration to create more room for diversity, a greater proximity to users and more flexibility in relation to the local needs of the academic organization. In addition, the management team has decided that a review of the structure of the departments at all faculties must be carried out in order to ensure that the organization of the departments provides appropriate support for the academic disciplines and for cooperation.

In relation to this it is specifically mentioned that special attention shall be paid to the needs of the former University of Education and the former Aarhus Business School in order to secure more room for independent visibility and branding. The needs of the former GRIs are not mentioned in relation to potential restructuring at the departmental level.

The decisions put forward do, however, not affect the university's overall structure consisting of four faculties and a unified administration, as the senior management team holds that this organization ensures the university's resilience in the face of increasing external demands.

Aalborg University

Finally, the case of Aalborg University was characterized by a much smaller merger with only one GRI (the Danish Building Research Institute) where most factors pointed in the direction of a manageable post-merger process with the geographical distance between the partners as the most challenging aspect. The GRI located in the metropolitan area had at the time of the merger a staff of approximately 100 which was 5 % of the entire staff at the university.

As mentioned the reason for the mutual interest in the merger was first and foremost that the competencies of the two institutions were seen as complementary with the potential of achieving an advantage by combining their individual efforts within the areas of research in building activities. This mutual interest was present from the beginning and has been maintained through the entire process. The two partners already before the merger cooperated on several research activities. The ideas behind an increased integration were both to create a strong international research profile, to be in front in Denmark on building research, and to increase the education activities with both partners involved.

This led to one of the first decisions: That the GRI staff should remain in the metropolitan area. This was backed up through calculations showing that to move the staff to Aalborg would be expensive. Coupled to that were plans of the university to increase its activities in the Copenhagen area. This should be done through offering educations not previously offered in that area. In addition to this the university also wanted an increased presence in the metropolitan area in research.

All in all, the merger process went rather smooth with large autonomy and close cooperation between the two partners. This can also be seen when the results of the workplace environment assessment of 2009 and 2012 are studied. The former staff of the GRI reports the following: Satisfied or strongly satisfied with the working conditions: 80% in 2009 and 73% in 2012, and satisfied with the expectations for the future: 47% in 2009 and 45% in 2012. The uncertainty with regard to the future and the general decrease might be a result of the long-drawn process of finding a new location. The rather low result on expectations for the future might be coupled with a very low percentage of satisfaction among the administrative staff.

The process since the merger involved a large number of changes in rules and regulations. Although some of the formal structures are different, the main goal has been to create the same conditions for all staff at the university. At the same time the culture of the former GRI has changed and parts of these changes have been difficult for some. GRI staff still has their team-management and other special features, but converge gradually toward the university structures and processes. New educational programmes have been developed and are run by the staff, and more than the planned 10% of the income is today coming from teaching activities. Research co-operation with the rest of the university has increased.

Comparing the cases

The analyses have shown that the post-merger re-structuring processes at the three case universities developed differently. The complexity of merger configurations influenced post-merger re-structuring challenges but other factors such as how radical the post-merger reforms were and the degree to which staff became involved also contributed to explain how the processes developed.

As expected the post-merger re-structuring was most challenging at Aarhus University where the post-merger reform also was most radical. But also the University of Copenhagen experienced significant difficulties as attempts were made to move from the initial federal structure towards a more unitary structure and as the reforms started to target the department level. At Aalborg University the post-merger process has in most respects been unproblematic but here the federal structure has been maintained and most parts of the "old" Aalborg University have only been marginally affected.

6. Theoretical discussion and conclusion

On the basis of the analysis it is discussed below how the reform process and the post-merger re-structuring processes can be interpreted according to the four theoretical perspectives. Table 4 sums up the contributions of the four models to the interpretation of the overall reform process.

Table 4: Comparison of the agenda setting and decision-making phases based on four theoretical perspectives

Phase: Perspective:	Agenda setting	Decision-making including university strategies
Rational, instrumental model	Limited contribution to understanding. Though attempts to include goal-means based analytical reflections in the process.	Contributes to understanding actor strategies based in goals concerned with growth and strengthening of positions.
Political, negotiation model	Contributes to understanding the overall process including the conflicts made visible in the process.	Contributes to understanding how the open space in an involuntary reform was used by stakeholders to gain influence.
Institutional, cultural model	Limited contribution. Though some contribution to the understanding of the length of this phase – a Danish administrative culture for dialogue.	Contributes to understanding actor strategies for maintaining identities and brands.
Ambiguous, incidental model	Contributes to understanding the emergent character of the process and the entrepreneurial innovative solutions proposed.	Contributes to understanding the overall emergent character of the process.

Overall the agenda setting phase was emergent rather than linear and it was a process characterized by ambiguity. The ambiguity was targeted by carrying out reviews and analysis in an attempt to transform the process to a goals-means rational process. However, the analytical activities became platforms for stakeholders pursuing their own goals more than overall goals-means rational analyses of problems and solutions. This turned the agenda setting phase into a negotiation process. Overall, the political, negotiation model is thus the theoretical model contributing the most to understanding this phase. To some extent the ambiguous, incidental model also contributes to understanding the phase of agenda-setting as there were entrepreneurial actors able to couple streams of solutions and problems into innovative merger proposals. However these were not realized but contained by institutional resistance. The political, negotiation model so to speak encircled the ambiguous, incidental model.

Also the decision making process was emergent rather than linear and characterized by ambiguity as well. The ambiguity was profound although reduced along the emergent process. The merger reform was involuntary but at the same time the process gave considerable room for the institutions to decide on whom to merge with turning the process into a negotiation process. Also in this phase the political negotiation model is the theoretical model contributing the most to understanding the reform process as it became an arena for stakeholders pursuing their own interests. Time was a scarce good limiting the possibilities for carrying out goal-means rational analyses.

Maybe the speed in the decision-making process also was a governmental strategy to limit resistance. Both the rational, instrumental and the institutional, cultural model contribute to our understanding of how institutions defined their interests. In the rational, instrumental perspective institutional strategies were means to fulfil goals concerned with improving positions through growth. In the institutional, cultural perspective they were means to maintain identity and brands. For some institutions, the process led to the maintenance of the status quo, but for most it resulted in significant mergers, typified by federal structures. None of the existing institutions were physically relocated or broken up in the first place, but embedded in their existing form.

Finally, the post-merger re-structuring processes were characterized by considerable ambiguity, although less at Aalborg University than at Aarhus University and the University of Copenhagen. Whereas the rational, instrumental model contributes to understanding how the management of the universities worked out formal strategies and acted in the post-merger processes in attempts to harvest synergy, the institutional, cultural model contributes to understand the resistance experienced towards strategies turning federal structures into unitary. Whereas the rational, instrumental and the institutional, cultural models contribute to understanding the positions, arguments and actions of the different actors, the political, negotiation and the ambiguous, incidental models contribute to the understanding of the post-merger processes overall. As especially the case of Aarhus University but also the case of University of Copenhagen show post-merger re-structuring processes are emergent and not linear due to both negotiations between stakeholders and unpredictable incidents.

In the introduction two research questions were posed. We now return to these and sum up the answers. The first question concerned how the overall reform developed. Both the agenda setting phase and the decision-making phase were characterized by ambiguity. The agenda setting phase was ongoing for several years. Both inter-university and GRI-to-university mergers were discussed and analysed. The process resulted in exposure of conflicts rather than agreement on solutions. The decision-making phase, on the contrary, was rather short. The merger reform was initiated by government in an involuntary top-down manner, but also with possibilities for (some) institutions to influence solutions.

In relation to the four theoretical conceptual models discussed in section two, the rational, instrumental model to some extent contribute to the interpretation of the agenda setting phase, but rationality was all along encircled by negotiation. In the decision-making phase the political negotiation model seems very important in order to understand the overall process. However in order to understand the positions of the institutions both the rational, instrumental and the institutional, cultural model are important. Whereas the case universities taking-over institutions developed goal-

means rational strategies the institutions expecting a take-over sought solutions expected to retain their institutional identity.

Finally, the second research question concerned how universities coped with post-merger re-structuring challenges. This part of the analysis showed that post-mergers challenges were different across the case universities partly due to differences in merger configurations. In Aarhus where the post-merger reforms towards developing a unitary structure were most radical the challenges were profound. But also in Copenhagen difficulties arose as soon as reform processes reached the department level. In Aalborg post-merger restructuring was marginal as the federal structure was maintained. Within the institutions the rational, instrumental model contributes to our understanding of how the university managements developed post-merger reform strategies whereas the institutional, cultural model contribute to explain how resistance towards these developed.

Looking at the process overall at the national level it is clear that the reform process in no way was a linear process with predictable results. Rather it was an emergent process where streams of solutions and streams of problems steadily floated around, were re-framed and in some points of time became coupled in decisions on concrete mergers. Both institutions and the government played a role in the coupling of streams. Applying a theoretical framework based on four perspectives has accordingly enabled us to better understand the complexity of merger reform and re-structuring processes which are dynamic, in flux and characterized by ambiguous and ambitious aims.

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ⁱIn the Aalborg case three of the main managerial and administrative actors deeply involved in the merger-process were interviewed, two face-to-face and one by telephone and notes were taken. In the Aarhus case three of the top managers from the integrated institutions were interviewed, one face-to-face and two by telephone, and notes were taken. In the Copenhagen case one interview was conducted face-to-face. In addition board meetings with discussions on post-merger restructuring processes were attended.