



Who is setting the agenda for Danish Research Policy?

Public debate about research policy in selected Danish newspapers from 1998 - 2007

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Table of contents

1. Intro	2
2. Public debate on research policy.....	4
3. What caused the debate in the newspapers?	5
4. Political initiatives setting the agenda.....	6
5. Who was setting the agenda in the newspaper debate?.....	8
6. Which scientific field has been dominant on the agenda?.....	11
7. What type of research was in focus?.....	12
8. What was the time perspective in the debate?	15
9. What were the values on the agenda?	16
10. Themes and issues on the agenda in the public debate 1998-2007	17
11. Summary of what was on the agenda	27
12. Literature	28

1. Intro

Who is setting the agenda for Danish research policy? A systematic attempt to give an answer to this question is presented in this report where it is possible due to a systematic content analysis to respond to a more narrow, but at the same time broader, question: Who has been setting the agenda in the public debate about research policy during the ten year long period from 1998 to 2007.

The period 1998 to 2007 is interesting to study in Denmark because it covers a period starting five years after the establishment of a Danish Ministry for Research and Technology, when science policy has become a policy area in itself with growing public debate. The period covers a change in government 2001 from a Social Democratic government under Prime Minister Poul Nyrup Rasmussen to a Bourgeois coalition government consisting of Liberals and Conservatives lead by Prime Minister Anders Fogh Rasmussen from the Liberals.

Under Social Democratic governments, which lasted from 1994 to 2001 there were several ministers responsible for research, actually four different within the period 1997 to 2001. All these ministers also had responsibility for it and telecommunication. The rapid change of ministers responsible for research could indicate that each of these ministers didn't have sufficient time to leave a fingerprint on the structure of Danish research. That is nevertheless not the situation!

Frank Jensen, Minister for Research 1994-96, was responsible for reorganization of the Danish research political advisory system with the intention to coordinate the many advisory bodies, among these the research funding organizations. The new law regarding the reorganization was published in 1997 and had effect from 1998 (Bekendtgørelse af Lov om forskningsrådgivning, 1997).

Minister for Research 1996-1998 Jytte Hilden will be remembered especially for her focus on female researchers and in particular for the FREJA initiative (see AFSK report about FREJA, 1999).

Minister for Research from 1998 to 1999 Jan Trøjborg became responsible not only for public research activities but also responsible for universities as such. Jan Trøjborg, who before this task had been minister of business, took initiative to establish contractual relations between the ministry and the Danish universities. (Forskningsministeriet, 1999: Udviklingskontrakter for universiteter; For a qualitative analysis of the debate around such contracts, see Erik Ravn; CFA 2009)

Minister for Research from 1999-2001 Birthe Weiss is in the context of research policy especially to be remembered for the establishment of The Research Committee formed 2000; the committee did not present its recommendations until after the change of government in 2001.(Forskningsministeriet, 2000: Kommissorium for Forskningskommissionen om forskningssystemets fremtid, www.fsk.dk)

During the end of the 1990's a number of initiatives came from the responsible research ministers under Social Democratic lead governments. The logic behind many of the initiatives was to reorganize public research and create a greater interplay between public research and private business. In 1998 the government presented a research package with the name "Forskning som Vækstlokomotiv", where there for the period 1998 to 2001 were allocated special means to a number of business oriented initiatives to strengthen applications of research, innovation and technology within the private sector. The prime goal was to create economic growth through stronger public-private cooperation.

In the government's Research Package from 1999 focus was on innovative universities and special funds were allocated to give public research institutions greater incentives to support innovation activities and commercialization including preparations for a more active patent orientation. Again in 2000 the interplay between public and private research was on the agenda when new means were allocated to establish increased contacts between different types of research centres for the period 2000-2003.

After the national election 2001 the new "Bourgeois" government lead by Prime Minister Anders Fogh Rasmussen gave the responsibility for research policy to Helge Sander from the Liberals who got the title: Minister of Science, Technology and Innovation. Sander became at the same time responsible for political initiatives regarding innovation in addition to the basic responsibility for research policy initiatives.

The national election in 2005 was won by the Bourgeois government coalition and there was no change of minister responsible for research. Minister of Science, Technology and Innovation Helge Sander from the Liberals has therefore been the prime figure in Danish science policy debate since 2001, and especially the period since 2001 has been characterized by many political initiatives regarding management of universities. In the same period also the aims for EU to increase investment in research and development to three per cent of GDP, out of which two percent ideally should come from private business, while national governments should strive to invest one percent of GDP in research, came on the agenda after the Barcelona Agreement from March 2002 following the Lisbon Strategy agreed upon in 2000 by the European heads of state.

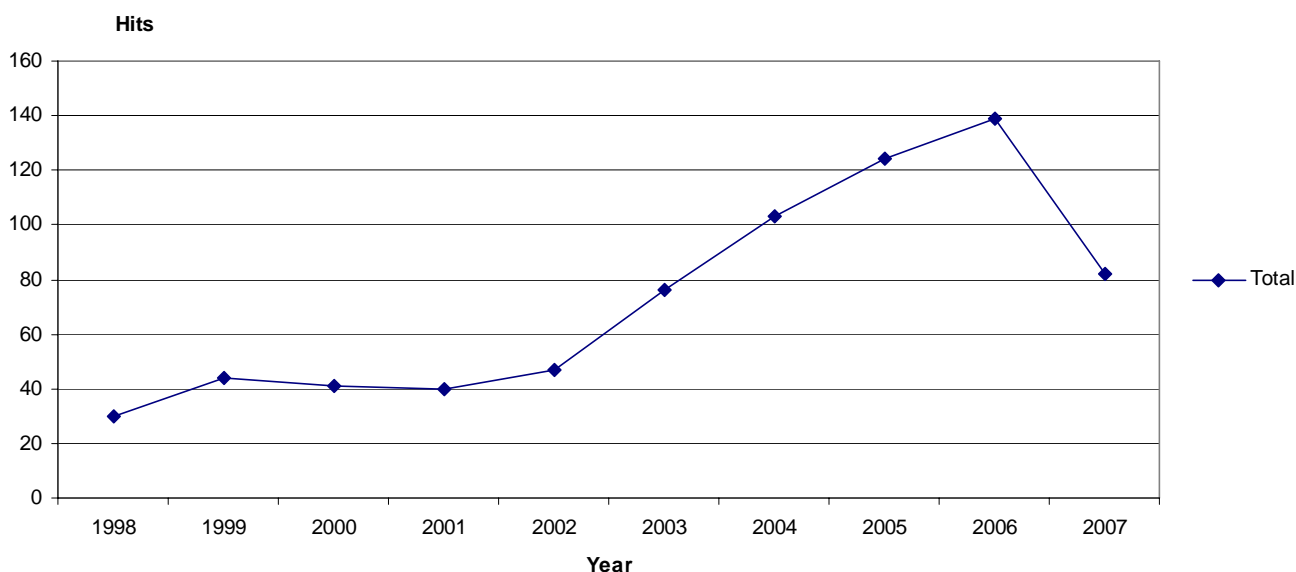
As a follow up on the many initiatives taken during the period 1998 to 2007 an evaluation is going on in 2009 following a decision in parliament from 2006. All the issues discussed in public during the period 1998 to 2007 are therefore still on the public agenda in Denmark. And many of the conclusions provided in the below presented analysis of who was setting the agenda are still so valid that we might generalize and conclude about the issue: Who is setting the agenda for research policy in Denmark?

2. Public debate on research policy

The project presented here covers the public debate in the period from 1998 to 2007, and is based on a systematic content analysis of all articles with reference to research policy in the five biggest Danish newspapers: Berlingske Tidende, Politiken, Information, JyllandsPosten and Børsen in the period 1998 to 2007. The analysis is part of a Nordic project financed by NordForsk, but in this report only the Danish results are shown. Among the many detailed findings one of the expected ones are that there are differences across the five selected newspapers in their coverage of research policy, differences that can be attributed to the different target groups, but in all newspapers we found a tendency towards more coverage of research policy in the period from 1998 to 2006 followed by a drop in 2007. Differences in coverage are listed in special document describing the methodology, the codebook and the guidelines for coding of all variables (Siune 2009: Den offentlige debat i Danmark om forskningspolitik. Indholdsanalyse af fem danske dagblades dækning af forskningspolitisk debat).

Opinions dominated the debate all the years in this ten year long period, while letters to the editor and interviews were relatively few in the Danish newspapers. Editorials were limited in numbers, but during the period from 2003 to 2006 the number increased significantly. In 2007 opinions and columns made one quarter of the total material indicating that research policy had become an issue for that kind of comments as well during the period and especially since 2003.

Figure 1. Development of units of analysis (Total = 726 UOA)



Questions to be answered in this report are the following:

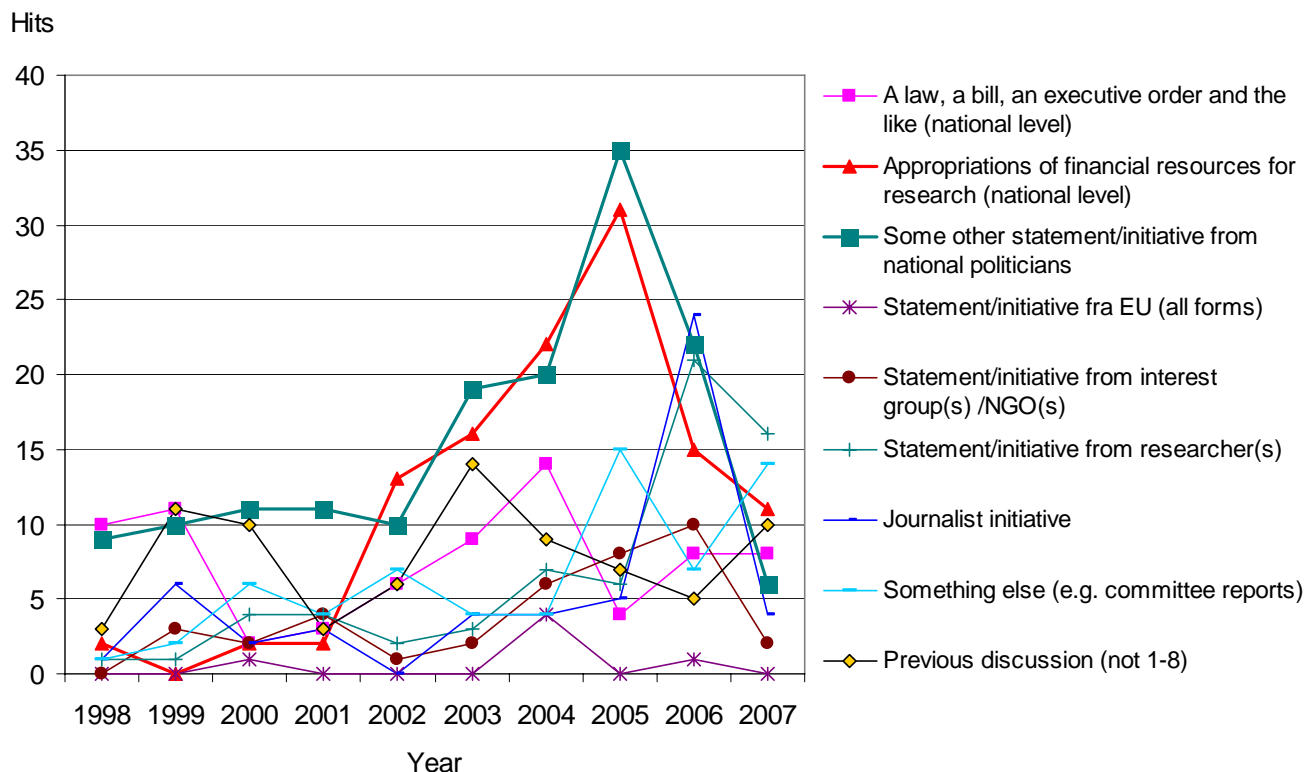
- What caused this development in the coverage of research politics?
- Who was setting the agenda, directly as authors or reference objects?
- What was on the agenda? What type of research? What kind of values?
- And finally: What were the issues in the public debate

This report is input to a comparison with four other Nordic countries being analyzed as part of the project. The comparative report comprising data from Norway, Sweden, Finland and Iceland, will be presented in a joint Nordic report to be published by NordForsk autumn 2009.

3. What caused the debate in the newspapers?

The analysis shows clearly that it was activities among policymakers, which were setting the agenda. And the initiatives were many as listed in the overview of political initiatives.

Figure 2. What caused the unit of analysis?



Close to half the units were caused by bills, laws, economic appropriations or other forms of initiatives or statements from politicians.

Journalists' initiatives were some years more setting the agenda than other years, and especially in 2006 journalists were setting the agenda. Journalists initiatives made up a greater part of the total units in Information and in Politiken, and especially Politiken did in their coverage follow up on "previous discussion" more than any of the other four.

Researchers were generally not very strong in setting the agenda in most of this period, but there is a significant increase in 2006 and 2007, where 15-20 % of the units in the debate were caused by statements from researchers.

The analysis showed that there is a difference among the five newspapers with respect to their coverage of the public debate on research policy, and this difference is significantly related to causes as listed above. Statements from researchers got a much greater space in Information than in any of the other newspapers. Appropriations of funding for research from national sources got more attention in Politiken and JyllandsPosten than in any of the other three. And interest groups got greater access to publicity in Børsen than in the remaining four papers.

Statements from politicians at the national level made up between 22 and 26 per cent of all units in each of the five papers, this being the "cause" they generally agree about.

4. Political initiatives setting the agenda

In Denmark we can find a long list of initiatives within research policy in the period 1998 to 2007. Also prior to 1998 there were research political initiatives (Aagaard, 2000), but the intensity of initiatives increased since the change of government in 2001 from a Social Democratic government to a Bourgeois coalition government. Overlapping the change of government was the establishment of a commission to look at the structure of the Danish research landscape, and The Research Commission presented its report after the change of government in 2001.

Table 1. Initiatives in Danish research policy since 1998

1998-2000	Research package "Forskning som Vækstlokomotiv" allocated means to business oriented initiatives focusing on economic growth through strengthening interplay between public research and private business. Research commission was established (2000) with focus on Danish research landscape.
2001	Innovation politics transferred from Ministry of Business and Economy and integrated in to Ministry of Science, Technology and Innovation. Report with recommendations from Research commission, special focus on governmental research institutes, attached to different ministries.
2003	Law for universities changing management structure and changes into hiring of directors at all levels in contrast to former election of leaders.
2003	Reform of research council structure, resulting in two councils: Free research council and strategic research council.
2003	Initiatives regarding research communication, Dissemination becoming the third leg at universities in addition to the traditional two: research and research based education.
2003	Plan for action: 'fra tanke til faktura'. Universities told to be more open and more fit for cooperation with private enterprises; economic orientation was presented as dominant in this relationship.
2004	Reform of law for governmental research institutions, bringing some of these into universities.
2005	Establishment of special funding for high technology (Højteknologifonden)
2005	Globalization Council established with representatives from a broad spectrum of Danish society (and with participation of 5 ministries) discussing funding of public research and allocations to researchers education (Ph.D.-schools) in the light of increasing globalization.
2006	Government Strategies attached to report from The Globalization Council, presented in the report: "Fremgang, Fornyelse og Tryghed", April 2006. Processes of Fusions among universities announced publicly March 2006
2007	Fusions among universities announced March 2006 to take place from January 2007. Result: reduction in number of universities (from 12 to 8) and integration of research institutes from ministries to universities, all but a few national centres became integrated in universities.
2008-09	Reforms of models for financing universities (indicator-based model) Among indicators are degree of external funding, cooperation with private enterprises and publication activities.
2009	Evaluations of research council structure and of university law, special issue "freedom" or lack of freedom among university researchers.

The political initiatives listed above are numerous.

The general trend in Danish science policy as reflected in initiatives related to research policy is a trend towards more interaction between universities and private business. This is the aim for all Danish ministers having responsibility for research independent of party background.

At the same time there is a trend towards establishing a greater management culture at Danish universities.

During the ten year long period all ministers responsible for research policy has been taking initiatives, and it has been general practice especially after the change of government in 2001 that the Ministry responsible for research announces the new initiatives in the media.

5. Who was setting the agenda in the newspaper debate?

Within a knowledge society all stakeholders, be they private or public are expected to participate in a public debate. In the following table a long list of potential stakeholders are specified. How involved or engaged were they in the public debate?

Table 2. Authors and their input to policy debate 1998-2007

Type of author	Total %	Year of issue										Total*
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Ministry responsible	8,8	1	4	6	2	4	8	10	6	15	8	64
		3,2%	9,1%	13,6%	5,0%	8,2%	10,0%	9,3%	4,6%	10,3%	9,2%	8,5%
Other ministry/government	0,7	0	0	1	0	0	1	1	0	1	1	5
		0,0%	0,0%	2,3%	0,0%	0,0%	1,3%	0,9%	0,0%	0,7%	1,1%	0,7%
MP government parties	5,1	4	5	3	6	2	2	5	4	5	1	37
		12,9%	11,4%	6,8%	15,0%	4,1%	2,5%	4,7%	3,1%	3,4%	1,1%	4,9%
MP not govern. Parties	6,2	6	7	9	2	2	4	3	5	4	3	45
		19,4%	15,9%	20,5%	5,0%	4,1%	5,0%	2,8%	3,8%	2,8%	3,4%	5,9%
Politician subnational	0,6	0	0	0	0	1	1	2	0	0	0	4
		0,0%	0,0%	0,0%	0,0%	2,0%	1,3%	1,9%	0,0%	0,0%	0,0%	0,5%
Res.-/innovation-political body	5,2	1	0	0	3	4	6	7	4	2	11	38
		3,2%	0,0%	0,0%	7,5%	8,2%	7,5%	6,5%	3,1%	1,4%	12,6%	5,0%
Another admin. civil servant	0,7	1	0	0	0	0	0	1	0	2	1	5
		3,2%	0,0%	0,0%	0,0%	0,0%	0,0%	0,9%	0,0%	1,4%	1,1%	0,7%
Management of research inst.	8,7	0	3	3	1	4	7	10	15	16	4	63
		0,0%	6,8%	6,8%	2,5%	8,2%	8,8%	9,3%	11,5%	11,0%	4,6%	8,3%
Organization for researchers	2,3	1	3	0	1	2	1	3	2	0	4	17
		3,2%	6,8%	0,0%	2,5%	4,1%	1,3%	2,8%	1,5%	0,0%	4,6%	2,2%
Industry	5,6	3	1	1	5	6	6	3	7	7	2	41
		9,7%	2,3%	2,3%	12,5%	12,2%	7,5%	2,8%	5,4%	4,8%	2,3%	5,4%
Other parts of/all business	6,1	0	1	1	2	1	4	10	13	5	7	44
		0,0%	2,3%	2,3%	5,0%	2,0%	5,0%	9,3%	10,0%	3,4%	8,0%	5,8%
Another organized interest	4,4	1	1	1	1	6	3	3	6	8	2	32
		3,2%	2,3%	2,3%	2,5%	12,2%	3,8%	2,8%	4,6%	5,5%	2,3%	4,2%
A business enterprise	1,2	0	0	0	1	0	3	1	3	0	1	9
		0,0%	0,0%	0,0%	2,5%	0,0%	3,8%	0,9%	2,3%	0,0%	1,1%	1,2%
Committee/commis./council	0,6	1	0	1	0	0	0	1	1	0	0	4
		3,2%	0,0%	2,3%	0,0%	0,0%	0,0%	0,9%	0,8%	0,0%	0,0%	0,5%
Individual researcher	21,3	9	11	11	6	11	19	12	25	31	20	155
		29,0%	25,0%	25,0%	15,0%	22,4%	23,8%	11,2%	19,2%	21,4%	23,0%	20,5%
Journalist	19,8	2	5	6	6	5	12	25	32	36	14	143
		6,5%	11,4%	13,6%	15,0%	10,2%	15,0%	23,4%	24,6%	24,8%	16,1%	18,9%
Another type	6,6	1	3	1	4	1	3	9	7	12	8	49
		3,2%	6,8%	2,3%	10,0%	2,0%	3,8%	8,4%	5,4%	8,3%	9,2%	6,5%
EU	0,3	0	0	0	0	0	0	1	0	1	0	2
		0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,9%	0,0%	0,7%	0,0%	0,3%
Total	726	31	44	44	40	49	80	107	130	145	87	757
	104	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

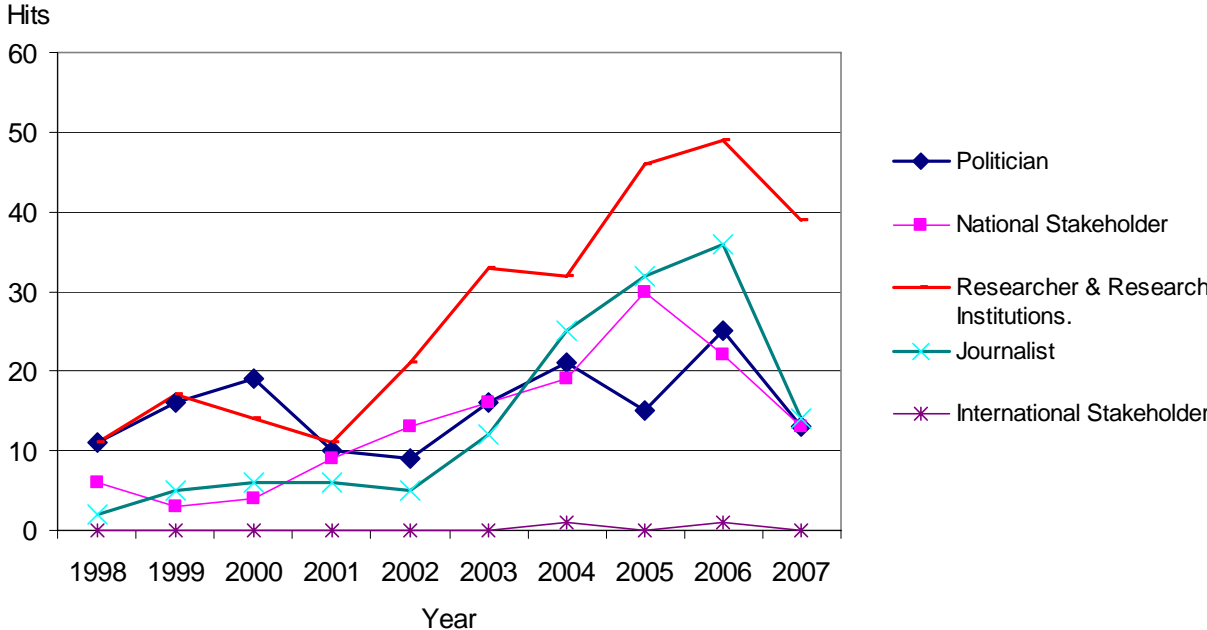
It was as expected the responsible ministers and especially the Minister for Science, Technology and Innovation but also different members of the Danish parliament Folketinget who participated in the debate as authors. In the Danish case it is remarkable to see how active the Liberals, at that time identified as the leading political opposition party, were during the years 1998 until 2001, where they formed a coalition government with the Conservatives; according to the analysis the opposition after 2001 now led by the former government party the Social Democrats reduced their participation in the public debate on research policy.

Over the years politicians from the government or opposition were responsible for app. 25 % of the units counted in the debate as concerning research policy. Interest groups were responsible for 17 %, while researchers and journalists each were responsible for approximately 20 %. In addition to individual researchers their organizations were responsible for another 11 %. Managers from research institutions started rather late to participate in the debate in newspapers, but from 2003 they became very active in the public debate.

Very few units of analysis were written by somebody not included in the above mentioned categories. Citizens' involvement in the public debate has been low; citizens here defined as somebody not being referred to in another capacity, participated very limited in 1998 but their input increased over the years to app. 10 % of all units for a given year.

The following figure represents when in the survey period different groups were active as authors in the debate. It is interesting to notice how the researchers and representatives by fare are the most active group after 2001, as shown in figure 3. This could be caused by the many organizational reforms introduced after the change of government in 2001 which the concerned researchers react upon.

Figure 3. Type of Author



In order to understand who was setting the agenda in the debate, it is also necessary to investigate which actors who were the most referenced. Table 3 provides the survey result on this matter.

Table 3. Actors referred to in the Danish debate, summary for 1998-2007

Actors referred to in the debate	Freq.	Pct. (N=1183)	Pct. (N=726)
Ministry responsible	191	16,1	26,3
Other ministry/government	313	26,5	43,1
MP government parties	31	2,6	4,3
MP not govern. Parties	88	7,4	12,1
Politician subnational	2	0,2	0,3
Res.-/innovation-pol.body	91	7,7	12,5
Another admin. civil servant	5	0,4	0,7
Management of research inst.	144	12,2	19,8
Organization for researchers	12	1	1,7
Industry	26	2,2	3,6
Other parts of/all business	91	7,7	12,5
Another organized interest	8	0,7	1,1
A business enterprise	2	0,2	0,3
Committee/commis./council	24	2	3,3
Individual researcher	78	6,6	10,7
Journalist	14	1,2	1,9
Another type	15	1,3	2
EU	25	2,1	3,4
OECD	23	1,9	3,2
Total (more references than one allowed)	1183	100	162,8

The analysis of those that were referred to in the debate also shows very clearly that it is the government as such and the responsible ministry that are the central references. In this way they are causing and indirectly setting the agenda!

Next come managers of research institutes and business people. Individual researchers are objects of reference but less often than the above mentioned. EU as an actor is not very prominent albeit many research initiatives were presented in different framework packages in this period. OECD plays more or less the same very limited role in the Danish debate as EU.

Stakeholders did not go public in the same newspapers, when they were active in the debate. Only the minister uses all five newspapers in relatively same amount, but although he himself had letters and articles published in all five in almost the same amount, he was not referred to in the same amount in all newspapers. Proportionally Politiken and Information cited the minister responsible for research more often than any other who has been active in the debate. Individual researchers were nevertheless cited more often than any of the responsible ministers in Information.

Representatives of industry and business did write quite a number of debate articles to Børsen and they were also cited in Børsen, the paper being most relevant for business people, but the citations in Børsen were not in numbers more than they were in Information. References to business in a more vague form than citations were significantly higher in Børsen than in any other of the five newspapers. This is partly the reason why Børsen is included among the Danish newspapers included in the project. Besides Børsen JyllandsPosten and Berlingske Tidende were expected to deal with business and industry, but these newspapers gave actually business and industry very little attention.

6. Which scientific field has been dominant on the agenda?

The analysis shows that in most cases it was science in general that was referred to. References to specific sciences varies, in 1999, in 2002 and again in 2006, natural science was the object for more than just one or two articles, but compared over time and field technical sciences and new technology were more prominent on the agenda from 2000 to 2006.

Social science was object for attention in 2002 and especially in 2003, but all other years not very visible. The humanities were increasingly on the agenda from 2003 with a peak of 16 units of analyses in 2005 and albeit less references still fairly high in 2006 with appearance in 8 equal to 7 percent and with appearance in 8 equal to 10 percent in 2007 being this year the scientific field most often referred to.

Table 4. Scientific field referred to in the Danish debate 1998-2007

Scientific field referred to	Year of issue										Total
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Natural science	1 3,3%	6 24,0%	0 0,0%	1 3,2%	4 11,4%	2 3,1%	2 2,1%	4 3,7%	7 6,2%	1 1,2%	28 4,5%
Technical science/ New technology	1 3,3%	1 4,0%	4 11,1%	6 19,4%	5 14,3%	3 4,6%	17 17,9%	8 7,3%	11 9,7%	3 3,7%	59 9,5%
Health science	1 3,3%	1 4,0%	2 5,6%	2 6,5%	1 2,9%	3 4,6%	2 2,1%	6 5,5%	3 2,7%	0 0,0%	21 3,4%
Agricultural, veterinary and fishery science plus forestry	0 0,0%	1 4,0%	1 2,8%	3 9,7%	1 2,9%	2 3,1%	1 1,1%	2 1,8%	6 5,3%	0 0,0%	17 2,7%
Social science	1 3,3%	0 0,0%	0 0,0%	0 0,0%	4 11,4%	10 15,4%	0 0,0%	1 0,9%	1 0,9%	0 0,0%	17 2,7%
Humanities	0 0,0%	0 0,0%	2 5,6%	1 3,2%	0 0,0%	4 6,2%	6 6,3%	16 14,7%	8 7,1%	8 9,9%	45 7,3%
Cross-disciplinary research	1 3,3%	2 8,0%	1 2,8%	3 9,7%	0 0,0%	4 6,2%	2 2,1%	2 1,8%	1 0,9%	1 1,2%	17 2,7%
Research in general (or reference to plurality of fields)	25 83,3%	14 56,0%	26 72,2%	15 48,4%	20 57,1%	37 56,9%	65 68,4%	70 64,2%	76 67,3%	68 84,0%	416 67,1%
Total	30 100,0%	25 100,0%	36 100,0%	31 100,0%	35 100,0%	65 100,0%	95 100,0%	109 100,0%	113 100,0%	81 100,0%	620 100,0%

During the period 1998-2007 Politiken gave more than any other newspaper attention to natural science, while Børsen gave more attention to technical science and new technology in general than any of the other newspapers. Of the five newspapers Information provided the least coverage of technical science.

Humanities got equal coverage in Information, JyllandsPosten, and Politiken, while Berlingske Tidende gave significantly less coverage of the humanities and Børsen gave almost zero coverage of the humanities.

JyllandsPosten gave more coverage to agricultural, veterinary and fishery science than attention to any other scientific field in this way living up to their rural reference group being part of this papers target group.
For all papers "research in general" was the dominant area.

7. What type of research was in focus?

Table 5. References to public and private research in the Danish debate 1998-2007

Year	Public-private sector of research			Total
	Public sector	Private sector	Public&private	
1998	20 74,1%	0 ,0%	7 25,9%	27 100,0%
1999	23 60,5%	0 ,0%	15 39,5%	38 100,0%
2000	22 68,8%	0 ,0%	10 31,3%	32 100,0%
2001	13 36,1%	2 5,6%	21 58,3%	36 100,0%
2002	25 59,5%	0 ,0%	17 40,5%	42 100,0%
2003	31 52,5%	0 ,0%	28 47,5%	59 100,0%
2004	46 59,7%	0 ,0%	31 40,3%	77 100,0%
2005	40 43,5%	2 2,2%	50 54,3%	92 100,0%
2006	97 78,2%	1 ,8%	26 21,0%	124 100,0%
2007	42 84,0%	0 ,0%	8 16,0%	50 100,0%
Total	359 62,2%	5 ,9%	213 36,9%	577 100,0%

The attention was primarily focusing on the public sector, and as shown in the next table especially with focus on universities.

The private sector as such in its own capacity has not been on the agenda, but the interplay between public research and private enterprises has increasingly grown over the years starting in 1998 with increased focus on the interplay between public research and the private sector and some years (2001 and 2005) this interplay dominated the debate even more than the pure public sector. But in 2006 and 2007 it was again the public sector as such that got most of the attention.

Government research institutes did not attract much attention in 1998, but this type of public research institutions came more and more on the Danish agenda reaching a high score of reference to governmental research institutes of 27 % in 2006. In March 2006 the minister of Science announced that he wanted governmental research institutes to merge into a reduced number of universities and at the same time he indicated very strongly that the integration and the mergers should function from January 2007.

Table 6. References to different types of research institutions in the Danish debate 1998-2007

Year	Ref. to type of research institutions							Total
	Universities/ higher education inst.	Hospitals, health services	Governmental research institutes	Other public non-governm./ regional res. inst.	Private non- profit res. inst.	Res. inst. in business sector	Another type	
1998	26 76,5%	1 2,9%	2 5,9%	0 ,0%	0 ,0%	5 14,7%	0 ,0%	34 100,0%
1999	37 77,1%	2 4,2%	5 10,4%	1 2,1%	0 ,0%	2 4,2%	1 2,1%	48 100,0%
2000	34 64,2%	6 11,3%	9 17,0%	0 ,0%	0 ,0%	4 7,5%	0 ,0%	53 100,0%
2001	25 53,2%	4 8,5%	9 19,1%	2 4,3%	1 2,1%	6 12,8%	0 ,0%	47 100,0%
2002	37 63,8%	3 5,2%	13 22,4%	0 ,0%	0 ,0%	5 8,6%	0 ,0%	58 100,0%
2003	35 49,3%	1 1,4%	14 19,7%	10 14,1%	1 1,4%	10 14,1%	0 ,0%	71 100,0%
2004	47 71,2%	1 1,5%	13 19,7%	2 3,0%	0 ,0%	3 4,5%	0 ,0%	66 100,0%
2005	60 58,8%	8 7,8%	13 12,7%	6 5,9%	0 ,0%	15 14,7%	0 ,0%	102 100,0%
2006	87 69,6%	0 ,0%	34 27,2%	4 3,2%	0 ,0%	0 ,0%	0 ,0%	125 100,0%
2007	58 69,9%	3 3,6%	17 20,5%	2 2,4%	1 1,2%	1 1,2%	1 1,2%	83 100,0%
Total	446 64,9%	29 4,2%	129 18,8%	27 3,9%	3 ,4%	51 7,4%	2 ,3%	687 100,0%

Strangely enough the governmental research institutes were only in focus in half as many units in 2007 as they were in 2006. This year is surprisingly low in number of references for all. What is the reason for this? Was 2006 an extreme case of public debate due to the very many reactions to the plans from the Minister of Science?

What we find in the analysis is that the heated discussions taken place in the media in 2006 had stopped; were everybody involved exhausted or just waiting to see what came out of the proposed mergers that were quite exhausting reducing the number of universities down to eight albeit this reduction was not as great as wanted by the Minister? Some, but only very few universities were able to keep their position as single, while others merged with a great number of governmental research institutes (see table 6). The governmental research institutes were awaiting their new role as integrated in universities. Everyone was waiting (defined by not expressing themselves in public debate) either with positive expectations or with fear in relation to their new role.

Another offer of explanation of the reduced intensity in the public debate is that money for public research was expected to come after the political statements in 2006 following the Globalization Councils report from 2005 and their was expressed a political will to reach the Barcelona target of 1 per cent of GDP to go to public research.

Traditionally universities have been focusing on basic research, while governmental research institutes centered round applied research. Strategic research was a relatively new element.

The following table shows the balance between basic and strategic research during the ten year long period. The table also shows the significant increase in references to innovation. Such references did almost not exist in the Danish policy debate 1998 and 1999, but increased from 2000 up till 2005 where references to innovation outnumber references to basic research, strategic research and applied research (counted as isolated activities each of them).

In 2006 when the report from the Globalization Council was published focus is again more on basic research, but strategic research has not been dropped as an issue, the amount of references measured in actual numbers is as high as the number of references to basic research and almost as high as the number in 2004.

The amount of references to strategic research has varied over the years. Compared to the other Nordic countries strategic research has been more on the agenda in Denmark and also came on the agenda earlier here than in the other Nordic countries.

Regional research was only high on the agenda in 2003, but this low attention is partly due to the selection of newspapers; they were all national and not regionally attached nor limited.

Table 7. References to different forms of research 1998-2007

Year	Forms of research							Total
	Basic research	Strategic research	Applied research	Research, in general	Developmental work	R&D	Innovation	
1998	15 41,7%	8 22,2%	4 11,1%	6 16,7%	0 ,0%	2 5,6%	1 2,8%	36 100,0%
1999	13 38,2%	5 14,7%	7 20,6%	7 20,6%	0 ,0%	2 5,9%	0 ,0%	34 100,0%
2000	21 32,8%	14 21,9%	8 12,5%	10 15,6%	1 1,6%	4 6,3%	6 9,4%	64 100,0%
2001	14 40,0%	9 25,7%	6 17,1%	0 ,0%	0 ,0%	3 8,6%	3 8,6%	35 100,0%
2002	9 30,0%	1 3,3%	3 10,0%	4 13,3%	2 6,7%	4 13,3%	7 23,3%	30 100,0%
2003	8 18,6%	5 11,6%	6 14,0%	6 14,0%	2 4,7%	5 11,6%	11 25,6%	43 100,0%
2004	18 14,9%	25 20,7%	6 5,0%	36 29,8%	0 ,0%	11 9,1%	25 20,7%	121 100,0%
2005	25 23,8%	16 15,2%	13 12,4%	4 3,8%	3 2,9%	9 8,6%	35 33,3%	105 100,0%
2006	25 39,1%	6 9,4%	11 17,2%	5 7,8%	0 ,0%	2 3,1%	15 23,4%	64 100,0%
2007	22 21,4%	23 22,3%	6 5,8%	37 35,9%	0 ,0%	5 4,9%	10 9,7%	103 100,0%
Total	170 26,8%	112 17,6%	70 11,0%	115 18,1%	8 1,3%	47 7,4%	113 17,8%	635 100,0%

8. What was the time perspective in the debate?

When looking at the results of the analysis it is obvious that there are many units of analyses having only references to the present situation but when looking at the trends across the time dimensions “future” dominates, illustrated by the fact that references to the future are included in two out of three articles. Focus on the past is not very outspoken. Research policy and the debate around this policy area are forward looking.

Table 8. References to time perspective in the Danish debate 1998-2007

Year	Time perspective						Total
	Present	Past	Future	Present + future	Present + past	Past + present + future	
1998	0 ,0%	0 ,0%	0 ,0%	9 30,0%	1 3,3%	20 66,7%	30 100,0%
1999	13 31,7%	0 ,0%	3 7,3%	17 41,5%	2 4,9%	6 14,6%	41 100,0%
2000	0 ,0%	3 7,3%	0 ,0%	8 19,5%	1 2,4%	29 70,7%	41 100,0%
2001	10 26,3%	0 ,0%	9 23,7%	6 15,8%	0 ,0%	13 34,2%	38 100,0%
2002	23 48,9%	0 ,0%	1 2,1%	13 27,7%	0 ,0%	10 21,3%	47 100,0%
2003	35 52,2%	0 ,0%	1 1,5%	9 13,4%	3 4,5%	19 28,4%	67 100,0%
2004	12 12,0%	0 ,0%	1 1,0%	24 24,0%	7 7,0%	56 56,0%	100 100,0%
2005	44 37,3%	0 ,0%	3 2,5%	33 28,0%	3 2,5%	35 29,7%	118 100,0%
2006	80 61,1%	1 ,8%	3 2,3%	35 26,7%	8 6,1%	4 3,1%	131 100,0%
2007	0 ,0%	0 ,0%	0 ,0%	9 11,0%	5 6,1%	68 82,9%	82 100,0%
Total	217 31,2%	4 ,6%	21 3,0%	163 23,5%	30 4,3%	260 37,4%	695 100,0%

A question to the Nordic project is whether that is the same situation in the other Nordic countries? It could be expected that science policy always would be future oriented, but still there is some interest, and some will argue that this interest is growing not only in the Nordic countries but in Europe in general, in evaluating significant policy initiatives from earlier years. An example right now is the Danish debate in the year 2008 and 2009 concerning the evaluation of initiatives taken by the government in 2002 and 2003 in form of the so called New University Law and new evaluation initiatives regarding the initiatives taken in 2006 and 2007 concerning mergers of governmental research institutes into a reduced number of Danish universities.

9. What were the values on the agenda?

Research is very often discussed as an instrument to help a society to reach an ideologically based goal, simply expressed as a mean to reach a goal. Fundamentally the whole idea around the concept science and research is that it shall ideally result in new knowledge and research activities are therefore naturally future oriented and measured as an ingredient in the “knowledge society”; so it is found also in the Danish debate and generally in positive context.

Economic growth is the second most often referred goal in the Danish debate and in nine out of ten units it is treated as a positive and accepted goal. Surprisingly few refer negatively to research as an instrument for economic growth, although negative attitudes to the growth orientation have been stated by representatives of the humanities. All in all economic growth was mentioned in 121 units out of the total of 627 units in the policy debate and the positive connotation was pronounced in 89 per cent of all units with a reference to economic growth.

Welfare is one of the values associated with science and one of the priority areas on the Danish research agenda after the establishment of the Ministry of Research in 1993. Welfare was albeit less frequently referred to than economic growth in the period from 1998 to 2007. Nevertheless welfare in the Danish debate was referred to as a value in 95 out of the 627 units and in 9 out of ten cases referred to as a positive object for research activities.

Compared to these values set up as goals, research seen as a way to a more ecological society is not so often mentioned in the debate in Denmark.

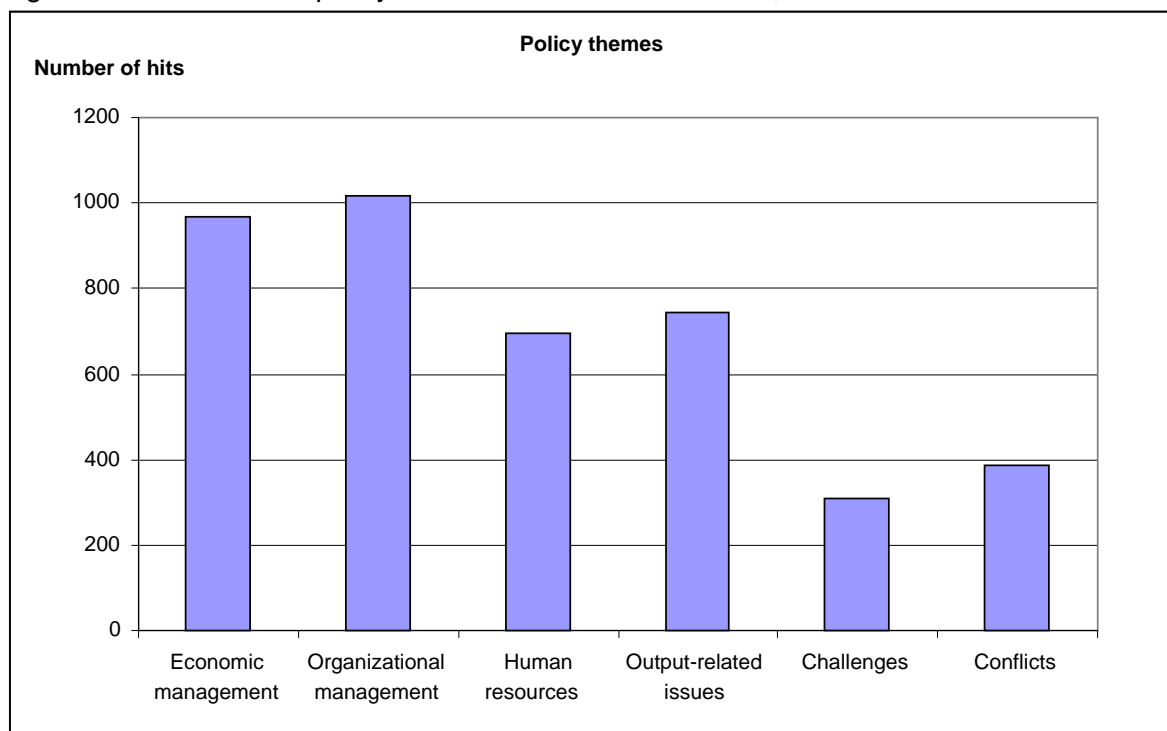
Table 9. Perceptions of research as an instrument to a goal, summary for 1998-2007

Research and growth	Frequency	Percent
Positive	108	89,3
Negative	6	5,0
Neutral	7	5,8
Total	121	100,0
Research and welfare	Frequency	Percent
Positive	85	89,5
Negative	4	4,2
Positive and negative	2	2,1
Neutral	4	4,2
Total	95	100,0
Research and knowledge	Frequency	Percent
Positive	175	96,2
Negative	2	1,1
Positive and negative	1	0,5
Neutral	4	2,2
Total	182	100,0
Research and ecological development	Frequency	Percent
Positive	29	96,7
Negative	1	3,3
Total	30	100,0

It is remarkable that very few input to the debate include positive as well as negative attitudes; this is an indicator of the form of debate applied in Denmark, where the input to the debate is formed as a statement from persons, one or more, who has been in internal agreement about their attitudes. Very few in the Danish public debate confront pros and cons of stated values within the same article!

10. Themes and issues on the agenda in the public debate 1998-2007

Figure 4: References to policy themes in the Danish debate, number of hits 1997-2007



Economy and organizational management are themes that all the years from 1998 to 2007 attract great attention among the participants in the Danish public debate. Economy and especially economic financing of the public sector's research is on the agenda in increasing albeit varying number of articles up to a very high level in 2005.

Figure 5. Development in themes

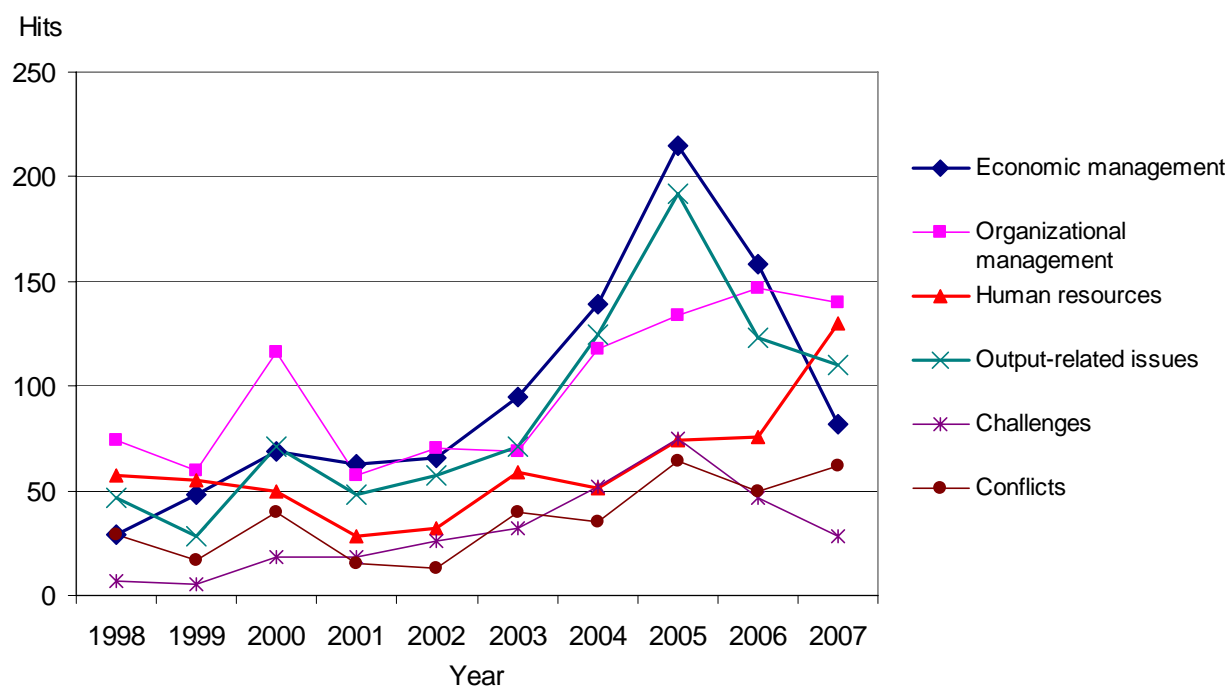
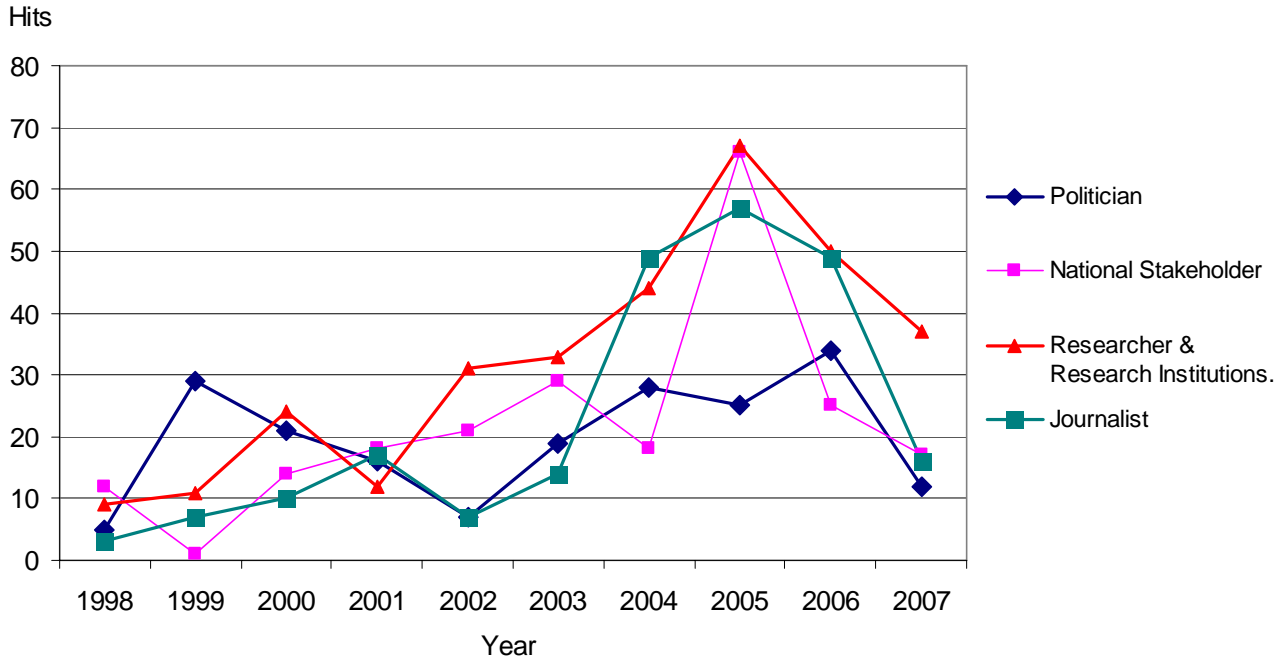
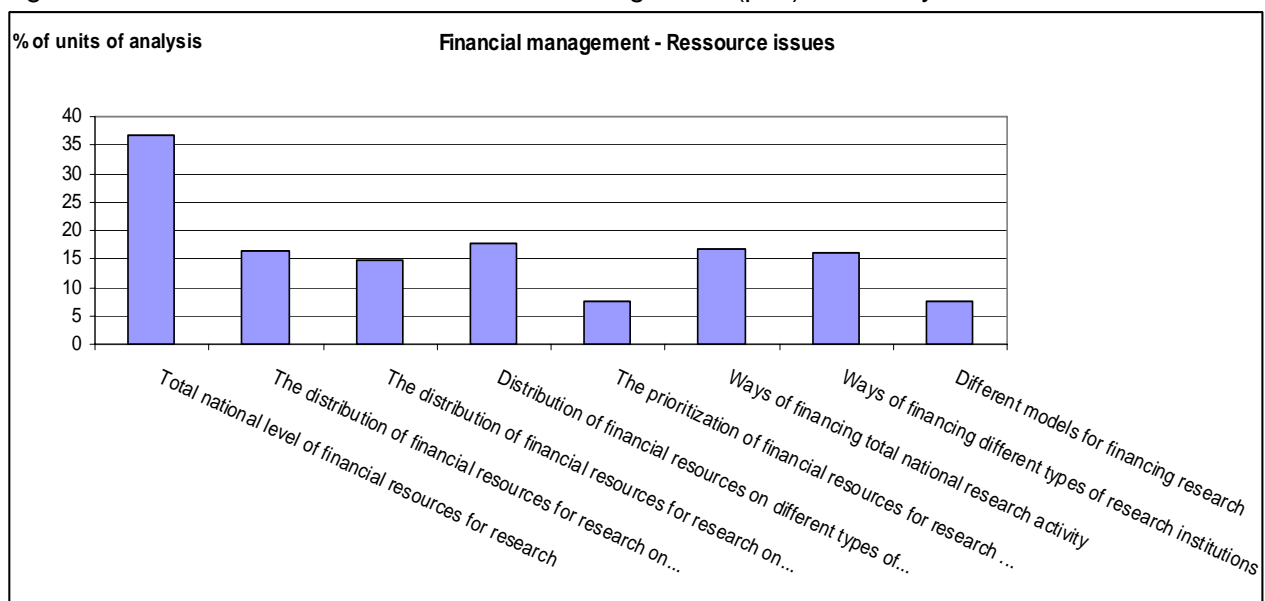


Figure 6. Economic Management



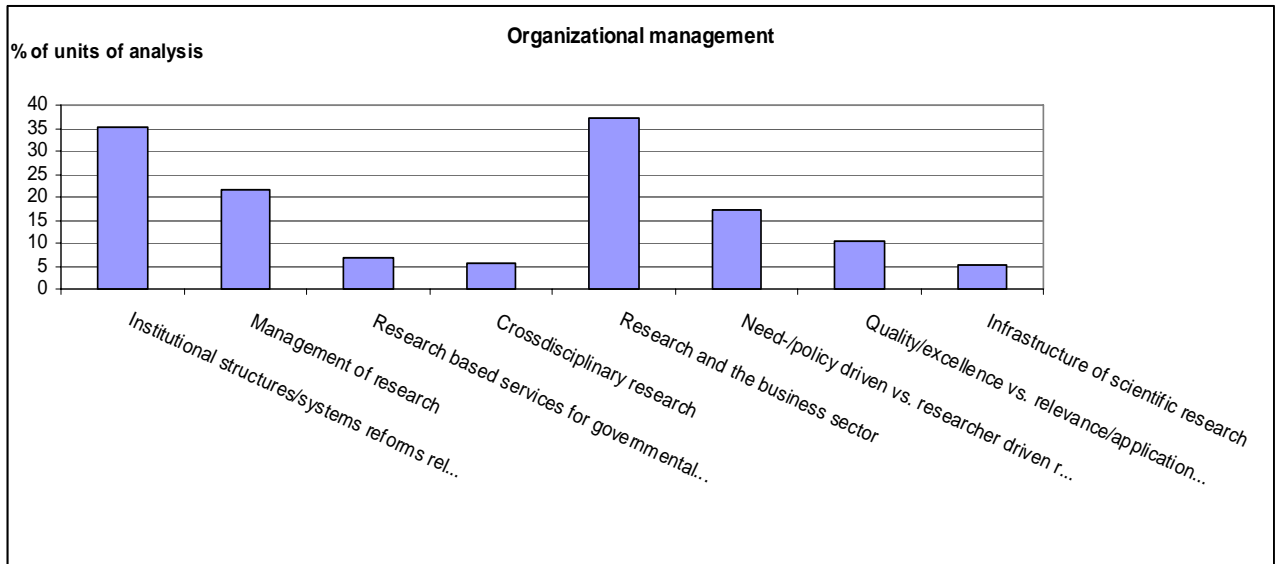
During the period 1999 to 2002 this issue was not an important issue, and again in 2007 the theme was not a top issue among politicians. In Denmark the economic theme has been on the agenda with increasing intensity over the ten years until 2006, where we find a decline. Many actors have been involved in this debate which put the Minister of Science Helge Sander under pressure for finding more money to Danish universities. Regularly the debate about the politically declared goal, stated and repeated by the Minister of Science every year since 2003, of reaching the so called Barcelona target of 1 % of GDP of public money to be invested in research. Much of the debate focused on how far or how close Denmark was to this 1 %; a public debate where also the Minister of Finance participated, and several journalist, universities but also individual researchers participated. In the debate Denmark was very often compared to Sweden and Finland, since both of these countries invest more than one per cent of their GDP in public research. In Denmark it was, as the figure below shows, the total level of financing becoming the most pressing issue in Denmark within financial management, not the model of financing.

Figure 7. Issues within the theme financial management (pct.) Summary for 1998-2007



Not only economic management but also organizational management became increasingly an issue among researchers during the ten years studied. Much of the debate is under this heading, and the majority have been activated by political statements, from commissions or directly from the government or the Minister of Science.

Figure 8. Issues within the theme Organizational management' (pct.) Summary for 1998-2007



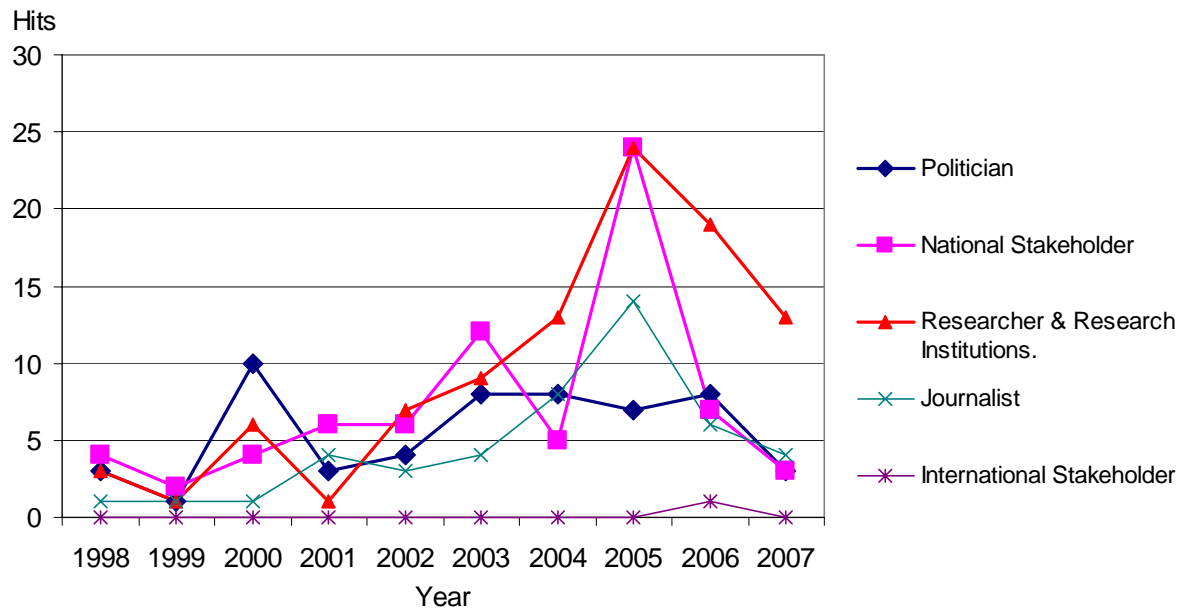
Organizational issues were very high on the agenda with more than 60 input to the public debate every year since 1998. In the beginning of the period the Danish research institutes waited for conclusions and recommendations from the commission organised in 1999 and later the issue reached a top of more 160 opinions etc. in 2007. Especially the political plan originally presented in the media early spring 2006 as an idea by the head of the Technical University Lars Pallesen and the Director from Risø, Jørgen Kjems about mergers of their institutions into one. This announcement activated the Danish debate about mergers in general of Danish universities and fusions of governmental research institutes. Very soon after in March 2006 the Minister of Science announced that the ministry wanted to reduce the total number of Danish universities and the plan was to have a new structure with a reduced number of universities, ideally down to five, into which the governmental research institutes should be merged. The message from the Minister of science was that the new structure should be in place already from January 2007.

With reference to the agenda set by political initiatives in Denmark, starting in this period back in 2001 with special focus on governmental research institutes, 2003 new university law, 2004 reform of the law for governmental research institutes bringing some of these into universities, and 2006 with the political announcement of actual mergers among universities and governmental research institutes, it is not unexpected that organizational issues have been dominant issues on the Danish agenda. The logic presented in the debate in favor of the reorganizations was generally that more efficiency can be reached, and more contact can be established among all parts of public research. Quality of research is also referred to but that is not presented as the main argument in any of these communications. Among researchers almost all the above mentioned initiatives were met by resistance and that is usually with reference to fear of reduced freedom for academics.

Another issue found under organizational management is cooperation between the public research sector and the private business sector and that issue attracted, as shown in figure 8 quite a number of opinions, not the least from Danish Industry and others representing private business, like the organization for trade and service (Handel og Service), an interest

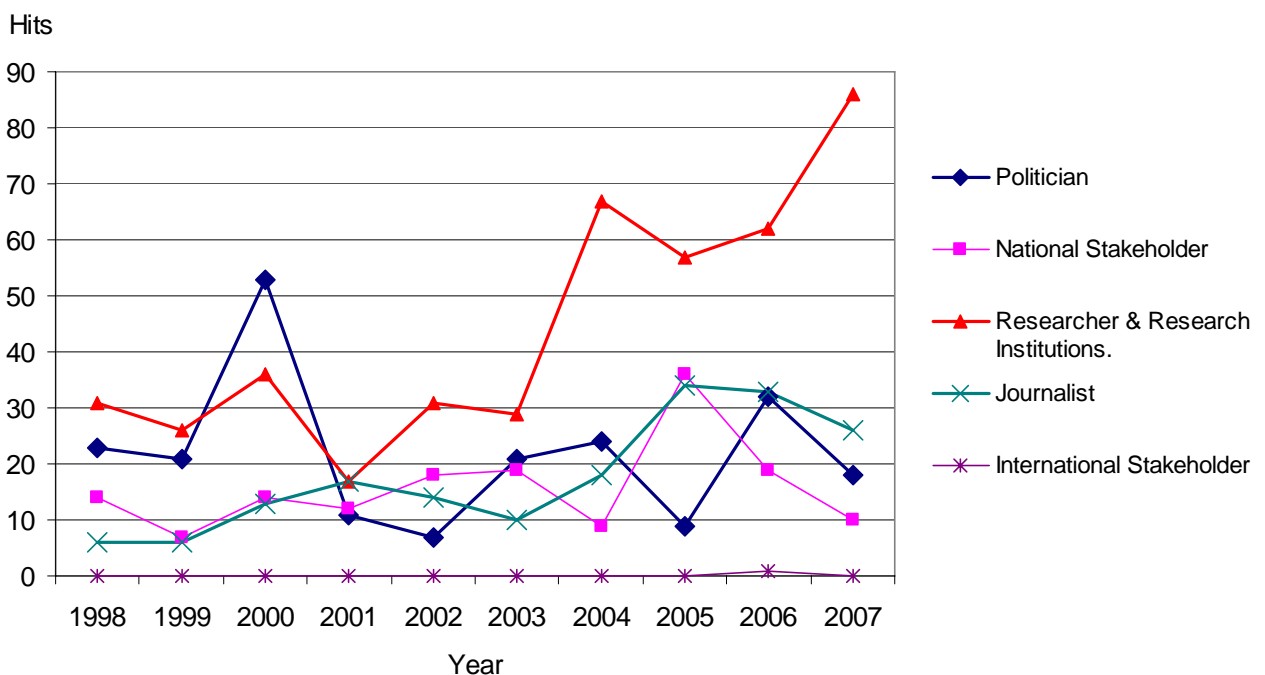
organization joining the Chamber of Commerce from January 2007 into DanskErhverv. This issue was on the agenda during all the years.

Figure 9. Research and the business sector



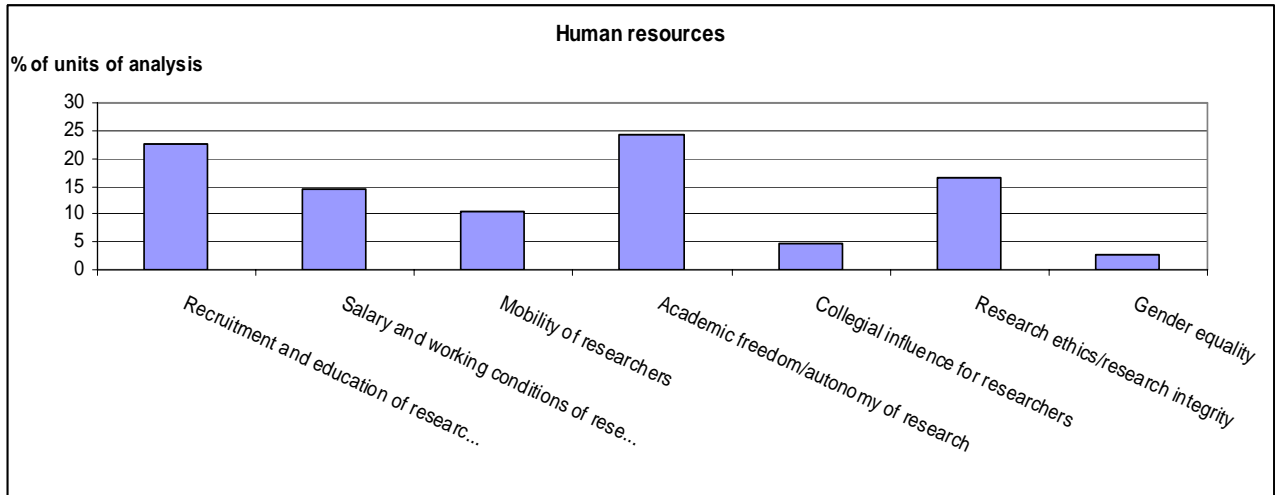
In summary it can be said that organizational issues in Denmark were very much concerned with the structural reforms and reactions to the structural reforms came primarily from researchers, among these associate professor Claus Emmeche from Copenhagen University but also very strongly from the Association of Sciences (Videnskaberne Selskab) warning about the results of the plans for changes in organizations, and here with very specific reference to risk of lowering quality of research.

Figure 10. Organizational management



Policy driven research as an issue within organizational management was on the agenda as well, very much like in Finland but not as much as in Sweden (see Nordic report). “Services for government” was a very Danish issue attached to the discussion of structural reforms of the governmental research institutes.

Figure 11. Issues within the theme 'Human resources' (pct.) Summary for 1998-2007



Human resources and here especially recruitment and education of researchers had already in the end of the 1990's a high place on the Danish agenda. Human resources as a theme and as an issue are generally much debated in Denmark. The theme was especially high on the Danish agenda in 2004, 2005 and 2006 and it is one of the issues getting increased attention from 2006 to 2007 among everyone due to the agenda set for discussion by the Globalization Council. The issue is of great interest to many actors, and it was an element discussed in the Globalization Council formed by the government in 2005 and with representatives from five ministries. Human resources and especially education and training of new scientists were therefore central elements in the report from the Globalization Council presented April 2006; since there were political agreements about money to be allocated to additional human resources and more researcher training it was naturally to have it on the agenda also in 2007 in Denmark, where the actual distribution should be discussed. But increasingly the theme was turned into an issue of academic freedom and autonomy of research as indicated in figure 14, which is the reason for the very high level in 2007.

Figure 12. Human resources

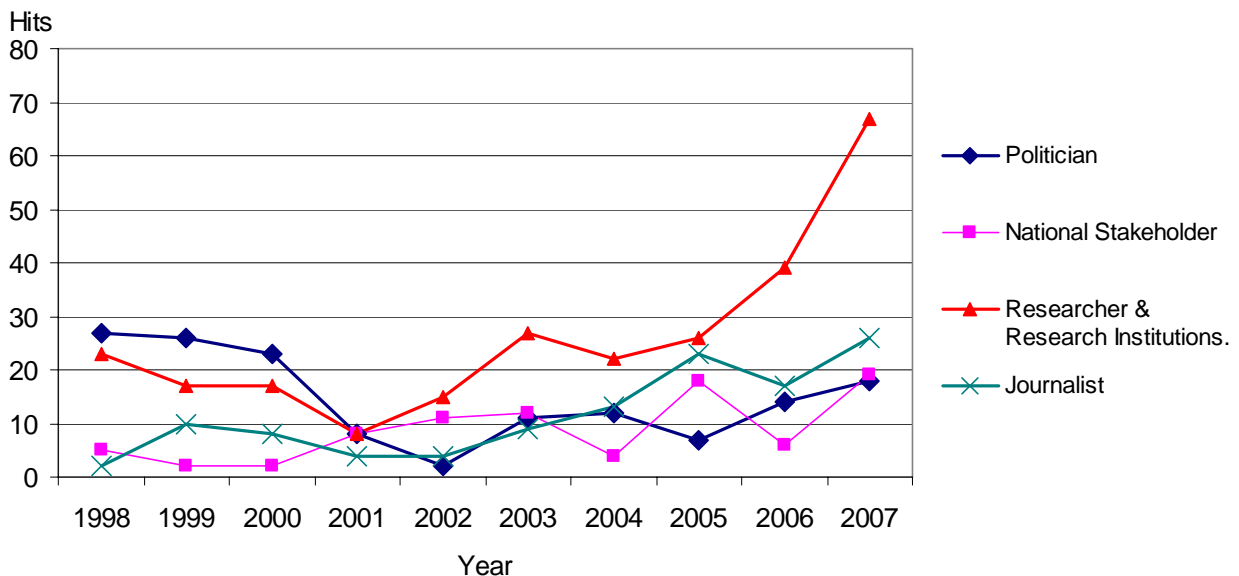
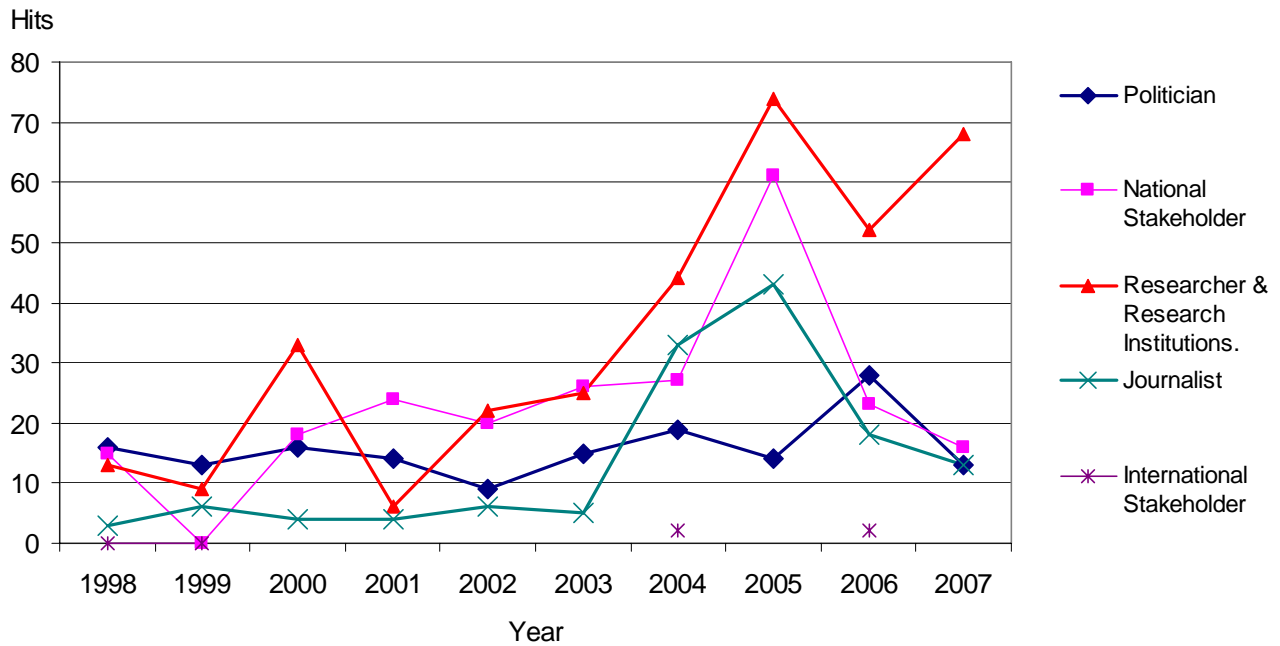


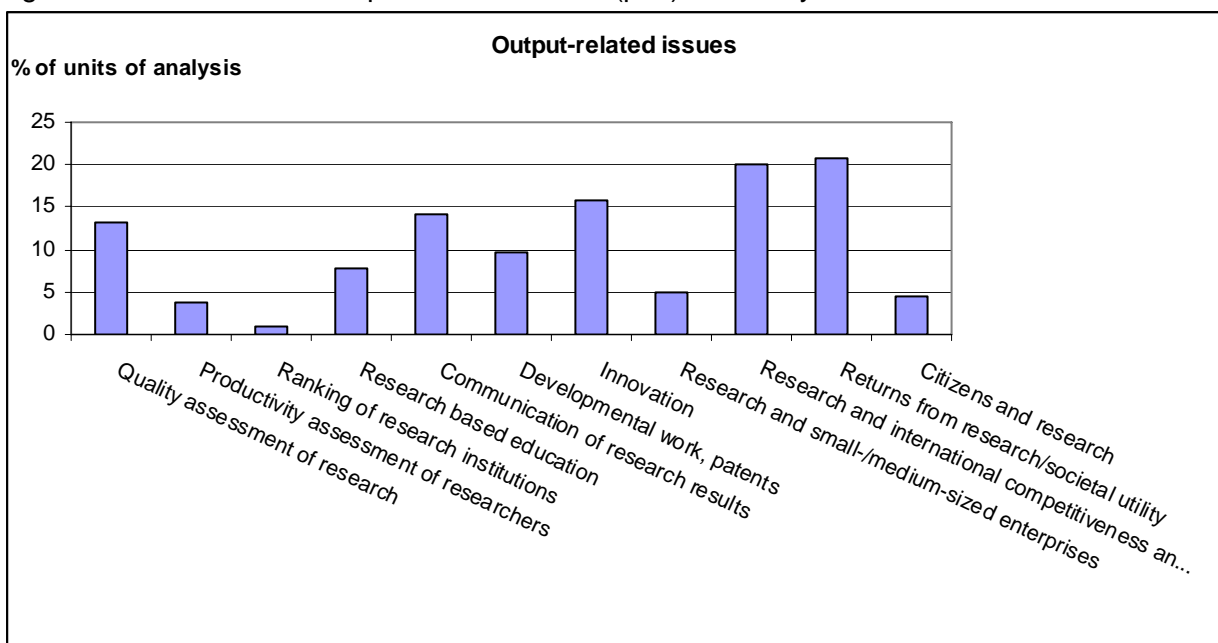
Figure 13. Output-related issues



During the ten year long period focus came on "Output from research". The change in government increased the focus on this aspect not the least by messages presented as a new action plan 2003 from Sander, the Minister of Science, Technology and Innovation since 2001, where he argued for more close cooperation between universities and the private sector. This is also the reason behind the high frequency of the issue "social utility".

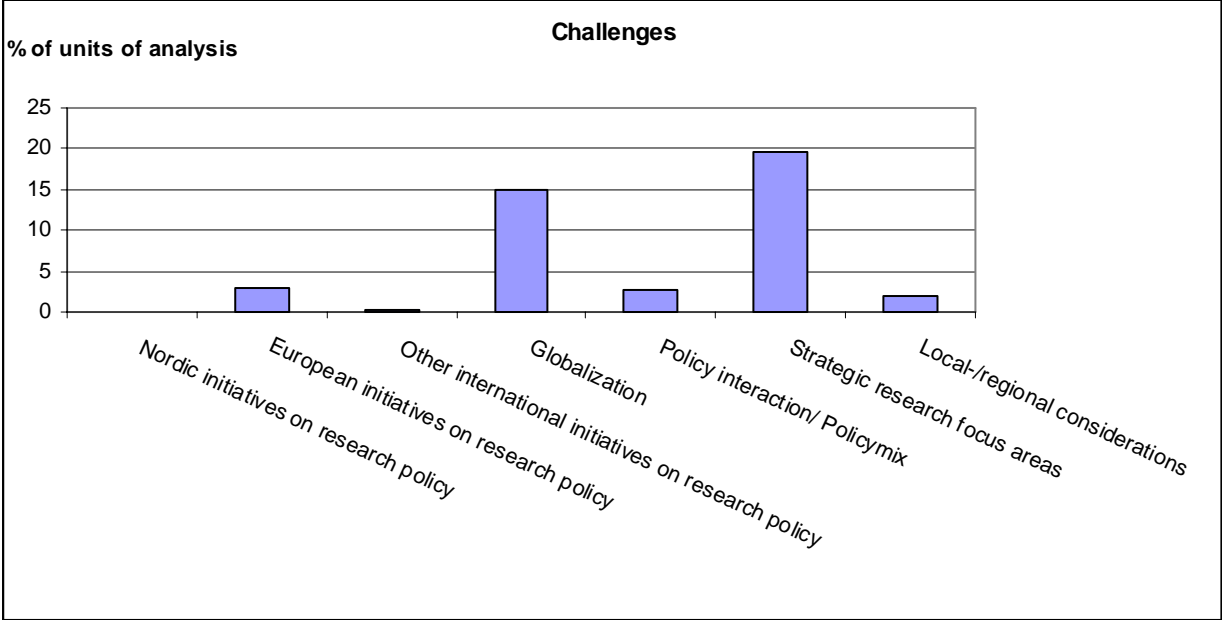
Albeit Denmark has been very strong with respect to innovation policy, defined by taking many initiatives related to innovation (Siune & Aagaard, 2006,2007) and though innovation policy already in 2001 was transferred from Ministry of Business and Economy and integrated in the Ministry of Science, Technology and Innovation, innovation was not as strong a subtheme in Denmark over these ten years as in Iceland and Finland. But increasingly it has come to be a central element on the agenda for Danish research policy.

Figure 14. Issues within 'Output-related issues' (pct.) Summary for 1998-2007



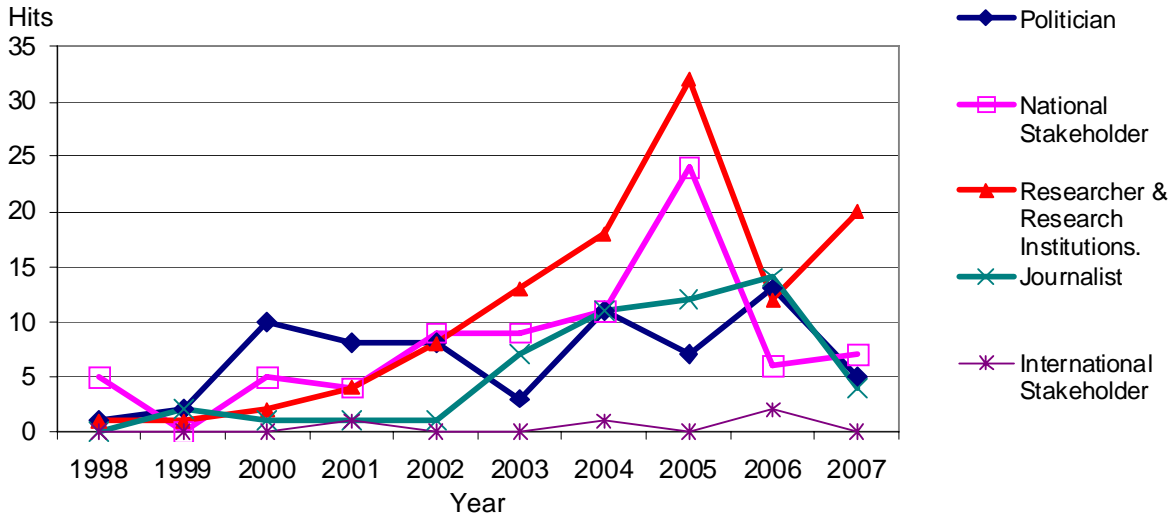
As shown in the figure 15 strategic research is on the agenda in Denmark and the comparative report shows that it is more on the agenda in Denmark than in any other Nordic country. The label strategic research is perceived by many Danish policy makers as a “plus-word” and used as argument for changes in distribution of funding and allocation of money to the variety of public research funding organizations in Denmark. Among researchers the reactions have sometimes been very negative, especially from those working in a scientific field not among those not included in the strategies.

Figure 15. Issues within the theme 'Challenges' (pct.) Summary for 1998-2007



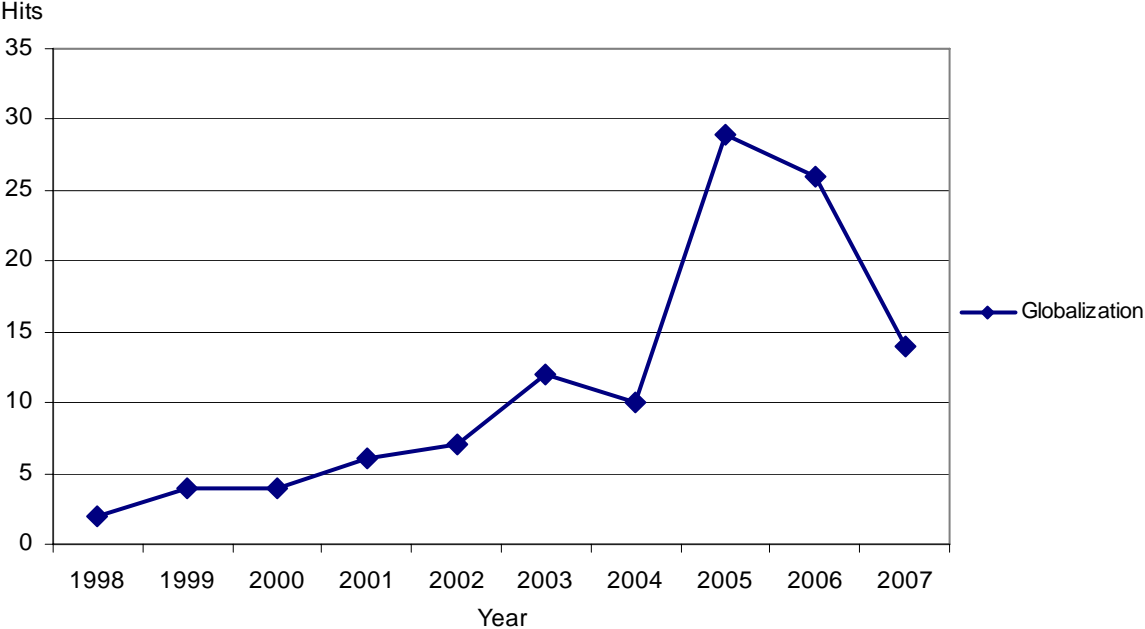
All actors agree that challenges in relation to research policy are increasing, reaching the highest level in 2005 as presented in figure 16.

Figure 16. Challenges



Challenges are of many different types, but the political initiatives are considered major challenges among researchers but political initiatives are also necessary and requested in a situation where the increasing globalization in itself is presented as a big challenge and a concern among national stakeholders as presented in figure 17.

Figure 17 Globalization



Conflicts are increasing, as shown in fig. 18, especially conflicts between researchers and the political system, where freedom of academics is the central issue (Siune 2009) as shown in figure 19.

Figure 18. Conflicts

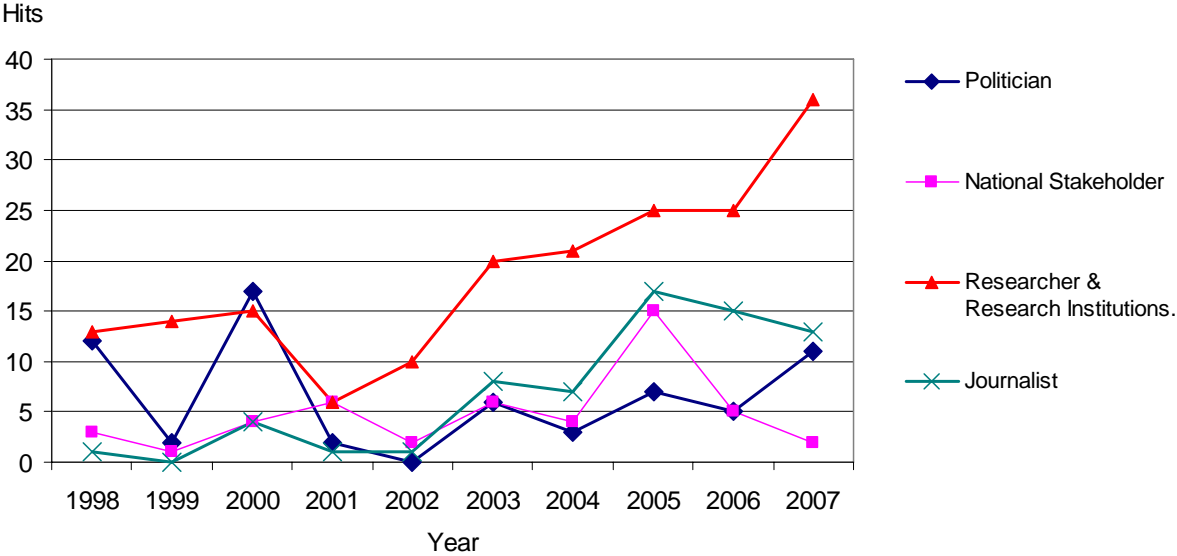
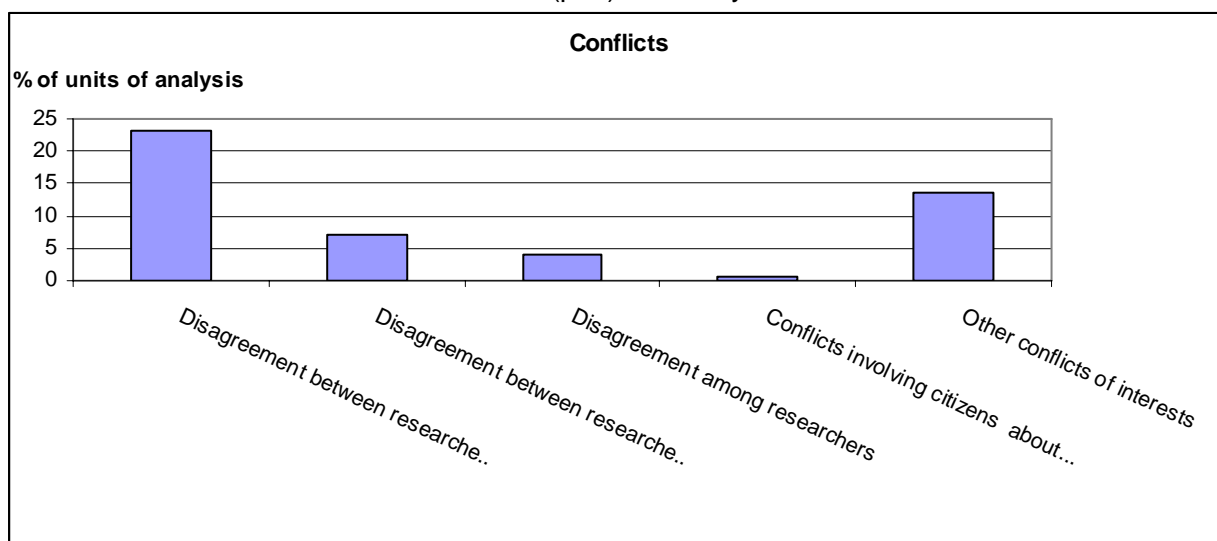


Figure 19. Conflicts distributed according to type of disagreement conflict among all with reference to conflicts 'Conflicts' (pct.) summary for 1998-2007



One of the main issues within the conflicts is the academic freedom, as shown in figure 20. And it is researchers more than policy makers who draw this line of issue. Looking at the timeline presented in fig. 20 it is interesting to see that politicians already early in the period state their opinions about this aspect of an academics life. National stakeholders are rather silent about this issue while journalists follow the line indicated by politicians asking politicians about their attitudes.

Figure 20. Academic freedom/autonomy of research

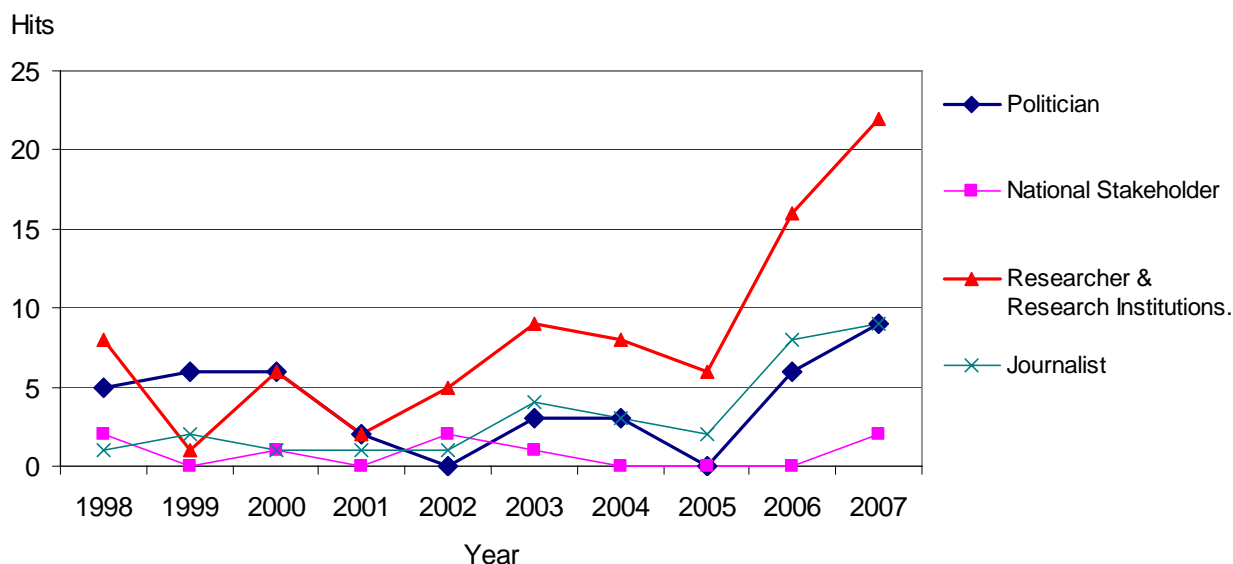
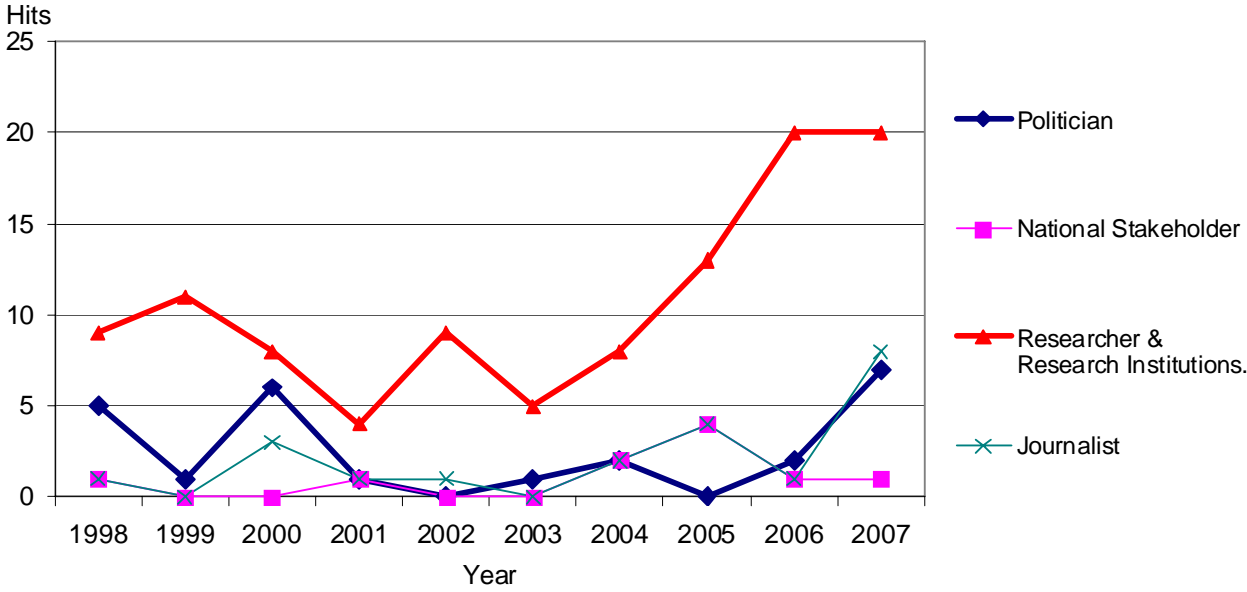


Figure 21. Disagreement between researchers and politicians



Disagreements between researchers and politicians increased in the statements presented by researchers and research institutions as shown in figure 21. And again we find that politicians and national stakeholders are relatively silent about this issue, letting the researchers and the research institutions drive the agenda originally started by the responsible ministers.

11. Summary of what was on the agenda

In summary it can be said that the themes and issues dominating the Danish debate about research policy during the period 1998 to 2007 are centered round political initiatives, and the quantitative analysis of the debate and the qualitative analysis of the debate show how university researchers more and more have reacted against the political initiatives. Political initiatives caused the Danish agenda!

It was as to be expected the Ministry of Science, Technology and Innovation but also the parliament as such who was setting the agenda. It is interesting to measure how active the at that time Liberal political opposition was during the years 1998 to 2001, at a time when also the Social democratic government was active. When the Liberals became part of a coalition government then the opposition now being led by the former government party the Social democrats was very limited in their participation in the debate. Not very much was orchestrated from society as such, but quite some initiatives were taken by interest groups, business and industry.

Very little of the debate, less than 10 percent over the ten year long period, was caused by individual researchers. In general they participated in the debate being authors of more than one fifth of all, but primarily they reacted to political initiatives more than they initiated debate.

In the later years of the period (2006 and 2007) researchers nevertheless were significantly more active in setting the agenda, measured by whom it was that caused the debate. Especially in 2006 journalists were causing interventions and the extreme high value of this year is caused by increased journalistic activity, but also a significant increase in the input from another type than the traditional participants in the debate, and some of these from citizens, might have caused 2006 to reach a high peak not reached in 2007 and not in 2008 that has been measured as a year of control. The most single increase in activity from 2005 to 2006 we find in the responsible minister, who in 2006 announced the plan for mergers of universities and governmental research institutes and researchers reacted. The intensified conflict between the minister and researchers reinforced the interest among journalists.

Conflicts were growing over the years, and the issue of freedom for all researchers was the only issue growing continuously in number during the whole period.

Basic research was on the agenda more than any specific scientific fields, and the knowledge society was widely accepted. Surprisingly few stated negative attitude to research as instrument to economic growth. Economy and organizational issues were strong on the agenda together with out put related issues.

The Danish debate is surprisingly not to be seen as an ongoing interactive debate, only 11 percent of the total number of articles was characterized as caused by an ongoing discussion based on references to former debate. Is the debate culture or what we here in this project have called the public debate structured differently in the other Nordic countries? The Nordic report might give the answer.

A study of the research political debate taking place outside the five newspapers we included in the Danish project shows that there has been hectic criticism of the political initiatives, especially in the magazine Forskerforum. In this magazine journalists and not the least researchers have been very actively involved in critical comments to many of the political initiatives. Articles about the risk of losing freedom have been numerous in this magazine, and the criticism has been of a kind so negative towards the minister so that the minister has refused to read and refused to comment articles published in Forskerforum.

12. Literature

DM's-DJØFs Forskerforum, All issues from 1997 to 2008. København: Dansk Magisterforening.

Forskningsministeriet 1997: Bekendtgørelse af Lov om forskningsrådgivning,

Forskningsministeriet, 1999: Udviklingskontrakter for universiteter.

Forskningsministeriet 2000: Kommissorium for Forskningskommissionen om forskningssystemets fremtid, www.fsk.dk).

Mejlgaard, Niels og Kaare Aagaard: Hvilken slags politik er dansk forskningspolitik – nu? Økonomi og Politik, vol. 82 nr. 2, s. 50-66.

Ravn, Erik 2009; Udviklinger og temaer i debatten vedrørende udviklingskontrakter for universiteterne. Dansk Center for Forskningsanalyse, AU.

Ravn, Erik, 2009: Notat om kvalitativ undersøgelse af forskningspolitisk debat. Dansk Center for Forskningsanalyse, AU.

Regeringen 2005: Danmark og Globaliseringen, debatpjecer om globaliseringens udfordringer for Danmark, København, Juni.

Regeringen 2006: Fremgang, Fornyelse og Tryghed, Strategi for Danmark i den globale økonomi. København, April.

Siune, Karen, 2009: "Forskningsfrihed" in *Humaniora*, 2:09, 2009 pp.8-13.

Siune, Karen and Kaare Aagaard, 2006: Annual Innovation Policy Trends and Appraisal Report – Denmark 2005. <http://www.cfa.au.dk/forskning/forskningsprojekter/trendchart/>

Siune, Karen and Kaare Aagaard, 2007: Annual Innovation Policy Trends and Appraisal Report – Denmark 2006. <http://www.cfa.au.dk/forskning/forskningsprojekter/trendchart/>

Siune, Karen og Thomas Vinther, 1999: Forskere og forskningsprogrammer, Tidsforbrug og intentioner ved ansøgninger om programmidler. Rapport fra Analyseinstitut for Forskning 1999/3.

Siune, Karen, 2009: Den offentlige debat i Danmark om forskningspolitik. Indholdsanalyse af fem danske dagblades dækning af forskningspolitisk debat. Notat fra Dansk Center for Forskningsanalyse, marts.

Aagaard, Kaare, 2000: Dansk Forskningspolitik, Organisation, virkemidler og indsatsområder. Rapport fra Analyseinstitut for Forskning 2000/9.