

## Policy Brief

# The impact of the structural reform: what do academics think and do?

Jeroen Huisman, Thea Eide, Stijn Daenekindt and Nicoline Frølich<sup>1</sup>

## Abstract

In 2015 a large-scale structural reform was introduced in Norway, aiming at improving the quality of higher education. Through mergers between institutions, reform objectives such as high-quality education and research, robust academic communities, proper access to education throughout the country, regional development, world leading academic communities and efficient use of resources were to be achieved. A 2021 survey among academic staff allows us to gain insight in the teaching, research and third mission activities of academic staff and to see some perceived impacts of the structural reform. Teaching and research activities were quite similar across the sector, with some differences between subfields, merged institutions versus non-merged institutions and across institutional types. In contrast, involvement in third mission activities differed significantly. Also here there were marked differences by subfields, merged/non-merged institutions and institutional type. Regarding the level of change experienced, we found that across all reform dimensions respondent very often did not witness much change or did not know. Overall, the impact of the reform appears to be – according to the respondents – limited.

## Introduction

As a result of the Structural Reform that was launched in 2015, many universities and colleges have merged into larger institutions. The Norwegian higher education sector now also includes several large multi-campus universities and university colleges. Mergers included associations between former university colleges, creating larger university colleges, and associations between former university colleges and established universities. One may indeed ask if this new dynamic has changed the landscape substantially. Previous studies of the higher education landscape have shown that at the shop floor of academic practices, change is less evident (Frølich, 2015; Reymert, Hjellbrekke, Aamodt, & Frølich, 2015).

The main goal of the reform was to achieve high quality in education and research, accompanied by

goals related to regional development, efficiency, and accessibility. The research-based evaluation examines the extent to which the reform brings Norwegian higher education closer to the stated reform goals and the factors that contribute to goal attainment. As part of the project, a nation-wide large-scale survey has been conducted among academic staff at 21 institutions including six institutions which were established as consequence of the reform during 2016 and 2017 (INN, NORD, HVL, USN, UiT and NTNU) (Eide, Solberg, Huisman, & Frølich, 2021). This policy brief reports the main findings from the survey related to teaching, research and third mission practices, as well as changes on six dimensions related to the reform goals; high quality education, robust academic communities, «proper» access to education, regional

development and cooperation, international orientation/global competitiveness/world leading and the efficient use of resources. The brief reports on differences between the merged institutions (the six case institutions) and the other higher education institutions. In addition, differences between subject fields and types of institutions are taken into account.

The survey was distributed in February 2021 to 7,461 academic staff at Norwegian universities and university colleges. We received 3,753 valid responses, implying a response rate of 50,3 % (Eide, Solberg, Huisman, & Frølich, 2021). The survey concerns the working conditions for academic staff and includes questions about teaching practices, (the conditions for) research activities and their involvement in 'third mission' activities. Furthermore, it gathered their experiences with administrative support, management and organizational matters. The survey was sent to academic staff at universities and colleges, regardless whether

their institution was part of the merger process. This enabled us to make comparisons between the six case institutions (INN, NORD, HVL, USN, UiT and NTNU) and the other Norwegian higher education institutions. We also made comparisons by eight subfields (business and administration; teacher education and pedagogy; natural science; social science; humanities and arts; medicine; health and care; and engineering and technology), denoting the professional/academic background of the respondents and by type of higher education institution. For that latter dimension, we thought it helpful to distinguish between subgroups of types of institutions such as old universities (UiO, UiB, UiT and NTNU), new universities (UiS, UiA, Nord, Oslomet and USN), specialized university colleges (Nmbu, Nhh, Aho, Nih, NmH, KhiO), university colleges (HiV, HiM, Hiof) and aspiring university colleges (HVL, Hinn). See Eide, Solberg, Huisman, & Frølich (2021) for number of responses per institution.

## Teaching, research and third mission activities – what do academics do?

### Teaching activities

Table 1 Percentages per answer category, mean values and standard deviations for each item. To what extent do you disagree or agree with the following statements? In my courses...

Teaching activities	Largely disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Largely agree	Mean	Std. Dev.
I pay attention to the development of students' generic capabilities (e.g. critical thinking, teamwork, communication skills)	2	3	7	27	62	4.44	0.87
I stress the understanding of theoretical concepts	1	2	5	29	62	4.50	0.78
I make use of real-life examples	1	1	2	15	81	4.74	0.64
I relate theory to practice	1	2	5	21	71	4.59	0.77
I make use of a variety of learning tasks	1	3	9	33	54	4.35	0.85
I develop empathic relationships with students	3	7	20	34	36	3.94	1.04
I motivate students by being encouraging	1	2	11	35	51	4.33	0.83
I take care that learning activities are consistent with the intended learning outcomes	1	1	5	28	65	4.54	0.74
I take care that student assessment is in line with the intended learning outcomes	1	2	11	30	56	4.37	0.85
My courses are well-structured and well-organised	1	2	8	38	50	4.35	0.78

Table 1 shows that in their teaching activities, most of the respondents pay attention to the development of students' generic capabilities, stress the understanding of theoretical concepts, make use of real-

life examples, relate theory to practice, make use of a variety of learning tasks, motivate students by being encouraging, take care that learning activities are consistent with the intended learning outcomes and

have well organised and structured courses. The item on the development of emphatic relationships with students is the statement that most disagree with or neither agree nor disagree with. On all the other questions, more than half of the academic staff largely agree.

In a two-sampled t-test, we found that there were only significant differences<sup>2</sup> between the group of merged institutions and the other higher education institutions on two items. We found that the latter group has a somewhat higher mean value for the items that states that they stress the understanding

of theoretical concepts and make use of real-life examples. However, there are differences between subfields. Using a one-way ANOVA for all teaching activity variables, using subfield as the factor variable, we found that there are significant differences between the different subfields on all items except the last item: «my courses are well-structured and well-organised». When looking at different types of institutions, we found that there were significant differences between the types of institutions on all the items except «I stress the understanding of theoretical concepts».

### Research activities

Table 2 Percentages per answer category. To what extent do you disagree or agree with the following statements?

Research activities	Largely disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Largely agree	Mean	Std. Dev.
In my research, I focus on international themes	3	4	10	27	56	4.28	1.01
In my research, I focus on national and/or regional themes	8	6	14	35	37	3.87	1.21
In my research, I work together with colleagues at foreign institutions	14	9	8	31	37	3.68	1.41
In my research, finding solutions for practical problems is important	6	10	17	32	35	3.80	1.19
I publish for an international readership	4	3	6	18	68	4.42	1.04
In my research activities, I am guided by the key intellectual challenges in my field/discipline	2	4	15	35	44	4.16	0.94
I can rely on technical/administrative staff to support my research activities	16	19	22	28	15	3.07	1.32
I can rely on research facilities and infrastructure to carry out my research (libraries, computer networks, laboratories etc.)	3	7	8	31	51	4.21	1.03

Table 2 shows, overall, a slightly lower level of agreement than for the educational activities items presented above. More than two-third of the academic staff somewhat or largely agree that they focus on international themes in their research, on national/or regional themes, on working together with colleagues at foreign institutions, on finding solutions to practical problems important in their research, on publishing for an international readership, on being guided by key intellectual challenges and on being able to rely on research facilities and infrastructure. In some contrast to this general level of positive agreement, we see that less than half of the academic staff agree that they can rely on administrative staff to support their research activities.

In a two-sampled t-test, we found that there were quite some significant differences between the merged institutions and the other institutions. The latter are more internationally oriented – they have higher mean value on the items «in my research, I focus on international themes», «In my research, I work together with colleagues at foreign institutions» and «I publish for an international readership». For the non-merged institutions, we also found significantly higher scores for the items «I am guided by the key intellectual challenges in my field/discipline», «support for research activities», and being able to «rely on research facilities and infrastructure to carry out my research (libraries, computer networks, laboratories etc.)». Actually, the merged institutions only had sig-

nificantly higher scores for the items «in my research, I focus on national and/or regional themes» and «in my research, finding solutions for practical problems is important».

We carried out a one-way ANOVA on all the items using subfield as the factor variable. We found that

there are significant differences between the different subfields on all items. There are also significant differences between the types of institutions on all the items.

### Third mission activities

Table 3 Percentages per answer category. To what extent do you disagree or agree with the following statements?

Third mission activities	Largely disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Largely agree	Mean	Std. Dev.
In my research, I collaborate with private and/or public organizations	25	6	13	30	26	3.26	1.53
I disseminate my research findings to lay audiences/readerships	10	8	16	37	29	3.67	1.25
I develop courses or programmes for external organizations (e.g. executive training)	54	11	16	13	6	2.05	1.31
I teach on courses or programmes for external organizations	53	10	13	18	7	2.14	1.39
I tender for applied research projects (contract research)	54	10	14	15	8	2.14	1.40
I carry out consultancy activities	58	10	11	17	5	2.02	1.34
I participate in advisory committees external to my institution	50	7	10	19	15	2.42	1.58
I participate in licensing and/or spin-off activities	79	6	10	4	2	1.44	0.94

Table 3 shows that there is quite some variety across the sector regarding third mission activities. There is considerable agreement on collaboration with private and/or public organizations and on disseminating research findings to lay audiences/readerships. For the first item, however, there is also a fair percentage that largely disagrees (25 percent). For all the other items relating to third mission activities, at least 60% disagreed with the statements. The highest level of disagreement was found for licensing and/or spin-off activities.

A two-sampled t-test shows that there are some differences between the merged institutions and the rest of the sector when it comes to third mission activities. The latter group has a significantly higher mean value on the items «I disseminate my research findings to lay audiences» and «I participate in ad-

visory committees external to my institution». The merged institutions have a significantly higher mean value on the item «I participate in licensing and spin-off activities». They also have a higher mean value on the items «I develop courses or programmes for external organizations» and «I tender for applied research projects».

The one-way ANOVA shows that there are significant differences between subfields on all the items regarding third mission activities. There are also significant differences between the types of institutions on five of the eight items. There are no significant differences between the types of institutions on the items «I disseminate my research findings to lay audiences/readerships», «I participate in advisory committees external to my institution» and «I participate in licensing and/or spin-off activities».

## How is the sector changing – six reform dimensions

The structural reform focuses on a variety of politically desirable, but not necessarily internally consistent objectives, such as high-quality education and research, robust academic environments, good access to education and competence, regional development, world leading academic environments and efficient use of resources. The reform aligns with the generic objectives of reform initiatives of governments across the world aiming to increase quality, efficiency (rationalisation/standardisation) and competitiveness through concentration of resources and diversification of the system (see Frølich & Stensaker, 2021; Vukasovic, Frølich, Bleiklie, Elken, & Michelsen, 2021). In the survey, academic staff across the HE sector were asked how key areas speaking to the reform objectives have – in their view – changed over the last five years. Table 4 shows how they responded to a list of items related to six reform dimensions: high quality education, robust academic communities, proper access to education, regional development and cooperation, internationally oriented/globally competitive/world leading and efficient use of resources. The dimension of robust academic communities is split into four sub-themes: capacities for change, equipment, less vulnerable offer/variety of perspectives and administrative support. The dimension of regional development and cooperation is split into two sub-themes: regional needs and expectations and close cooperation between institutions and society. It should be noted that for some items we asked respondents to reflect on change experienced regarding the study programme they are most acquainted with, for other items we asked about change regarding their (organizational) unit. Please also note that for this set of questions, respondents were allowed to tick the box «I don't know». Quite a lot of respondents (ranging from 13% to even 50% for one item) made use of this option.

### High quality education

The table shows that 40 percent respond that their ability in education to meet standards of excellence has become somewhat or much better. A little under 30 percent responds that their ability to offer tailor-made courses for specific target groups has become somewhat or much better, however 36 percent says that it has not changed. 19 percent responds that the enga-

gement of external stakeholders in their teaching activities has become somewhat or much better, while 39 percent says that it has not changed. All in all, the respondents often responded not to know, or reported that it has not changed. But fewer respondents reported that there has been a negative development (versus numbers that reported a positive change).

### Robust academic communities

The first four items are related to the institutions' capacities for change. For two of the items (capacity to carry out research and the flexibility of our research agenda) the developments are deemed more positive than negative with 35% and 28%, respectively, saying the situation improved. That said, a very large group says that the situation has not changed. The other two items show a less optimistic picture. Only 23 percent responded that the flexibility in their activities became somewhat or much better, while 32 percent say it did not change. 25 percent reports that there has been a positive development in the sense of shared identity, but a larger percentage (30) say that the sense of shared identity has become somewhat or much worse.

The next item is related to equipment. We see that around half of the respondents report that the access to facilities and infrastructure did not change. However, quite a large group, 28 percent, report that the access became somewhat or much better. We then have three items related to less vulnerable offer/variety of perspectives. 53 percent say that the coherence of the study programme has become somewhat or much better. 29 percent report that their collaboration with other departments in the faculty became somewhat or much better, but 38 percent say it did not change. Regarding collaboration with other faculties, more than 40 percent say it did not change and only 23 percent report that there was a positive development. Overall, the evaluation of the dimension less vulnerable offer/variety of perspective is slightly positive.

The last theme under robust academic environments is administrative support. The table shows that around one-third of the respondents thought there were no changes. The group of respondents agreeing with a positive change is slower or lightly lower than the group that saw the situation deteriorate in the past five years.

Table 4 How do you evaluate the development over the last five years?

	Became much worse	Became somewhat worse	Did not change	Became somewhat better	Became much better	I don't know	Mean	Std. Dev.
<b>1. High quality education</b>								
Our ability in education to meet standards of excellence	2	9	19	30	10	31	3.51	1.00
Our ability to offer tailor-made courses for specific target groups	3	6	36	21	7	28	3.31	0.89
The engagement of external stakeholders in our teaching activities	1	2	39	16	3	38	3.28	0.71
<b>2. Robust academic communities: Capacities for change</b>								
The capacity to carry out our research	5	17	27	25	10	15	3.22	1.09
The flexibility of our research agenda	3	10	38	21	7	21	3.26	0.92
The flexibility in our activities	8	17	32	18	5	19	2.93	1.05
Our sense of a shared identity	12	18	31	18	7	15	2.88	1.13
<i>Equipment</i>								
The access to facilities and infrastructure (libraries, computer networks, laboratories etc.)	2	6	51	19	9	13	3.3	0.84
<i>Less vulnerable offer/variety of perspectives</i>								
The coherence of our study programme	2	8	22	38	15	15	3.65	0.97
Our collaboration with other departments in our faculty	3	9	38	23	6	21	3.23	0.90
Our collaboration with other faculties at the institution	4	7	42	19	4	23	3.16	0.87
<i>Administrative support</i>								
The administrative support for our study programme	9	21	34	14	3	18	2.77	0.99
The administrative support for our research	6	17	37	18	5	17	2.98	0.98
The administrative support for third mission activities	6	10	36	10	2	37	2.88	0.88
<b>3. Proper access to education</b>								
Our ability to contribute to lifelong learning	1	3	36	27	8	24	3.49	0.80
Our ability to attract a diverse student population	1	7	39	21	6	26	3.32	0.83
Our ability to meet the varied needs of students	2	9	33	29	8	19	3.4	0.91
<b>4. Regional development and cooperation: Regional needs and expectations</b>								
Our ability to take regional expectations into account	2	5	42	21	6	25	3.32	0.8
Our ability to take regional expectations into account in our research	1	3	38	23	9	25	3.48	0.81
<i>Close cooperation between institutions and society</i>								
Our engagement in the commercialization of research outcomes (e.g. patents, licensing and spin-offs)	2	2	40	9	3	45	3.16	0.7
The collaboration in research with private companies and/or public sector organizations	1	3	36	25	7	29	3.48	0.77
The possibility for our members to have positions in private companies	2	4	38	4	1	50	2.97	0.67
The possibility for our members to have positions in public sector organizations	1	3	40	6	1	47	3.05	0.62
The engagement of external stakeholders in our research activities	1	2	34	21	5	36	3.44	0.76
<b>5. Internationally oriented, globally competitive, world leading</b>								
The collaboration with international colleagues	1	4	33	29	15	17	3.62	0.9
<b>6. Efficient use of resources</b>								
Our ability to use the financial resources for our study programme efficiently	3	9	31	18	5	35	3.2	0.91
Our ability to use financial resources for our research efficiently	2	7	34	22	8	27	3.37	0.9

### Proper access to education

Next up there are three items related to the reform goal of proper access to education. 35 percent say their ability to contribute to lifelong learning became somewhat or much better, while only 4 percent say it became somewhat or much worse. 27 percent report a positive development in their ability to attract a diverse student population, while only 8 percent report a negative development. However, the largest group of respondents say it did not change (39 percent). 37 percent report that their ability to meet the varied needs of students became somewhat or much better, while only 11 percent report a negative development. Overall, this dimension was generally positively evaluated.

### Regional development and cooperation

The fourth dimension of the reform goals is regional development and cooperation. The first two items relate to the regional needs and expectations. 27 percent say that their ability to take regional expectations into account became somewhat or much better, while the largest group of respondents say it did not change (42 percent). 32 percent say that their ability to take regional expectations into account in their research became somewhat or much better. Also here, the largest group say it did not change. For this subdimension, it would be fair to summarise the situation as being one of rather limited change, but still somewhat positive.

The next five items relate to close cooperation between institutions and society. We see that only 12 percent say that their engagement in the commercialization of research outcomes became somewhat or much better, while 40 percent say it did not change. 32 percent say that their collaboration in research with private companies and/or public sector organisations became somewhat or much better, while 36 percent say it did not change. Only 5 percent report a positive development in the possibility for their members to have positions in private companies and 6 percent report a positive development in the possibility for their members to have positions in public sector organisations. The largest group say that these possibilities did not change (38 and 40 percent). 26 percent report that the engagement of external stakeholders in their research activities became somewhat or much better. However, also here a large group say it did not change.

### Internationally oriented, globally competitive, world leading

The fifth dimension of the reform goals is internationally oriented, globally competitive, world leading academic communities. We see that 44 percent report that the collaboration with international colleagues became somewhat or much better over the last five years, signaling a change in line with the reform objectives.

### Efficient use of resources

The final dimension of the reform goals is the efficient use of resources. 23 percent report a positive development in their ability to use the financial resources for their study programme efficiently, while 31 percent say it did not change. 30 percent say that their ability to use the financial resources for their research efficiently became somewhat or much better. 34 percent say it did not change.

In the following analysis, the items in each category are combined into 10 measures reflecting the 6 dimensions/subdimensions (average scores for these [sub]dimensions). A two-sampled t-test show that there are some differences between the six merged institutions and the rest of the sector when it comes to these ten (sub)dimensions. On seven of the dimensions, the rest of the HE institutions have a higher mean value than the merged institutions: higher education quality, capacity for change, less vulnerable offer/variety of perspectives, administrative support, «proper» access to education, internationally oriented/globally competitive/world-leading and efficient use of resources. For the other three of the dimensions, we found no significant differences between merged institutions and the rest of the HE institutions

Through an ANOVA of the ten measures (dimensions), we found that there were no significant differences between subfields on the «Higher education quality» dimension. We found that there are significant differences between subfields on all the measures related to the «Robust academic communities» dimensions. The differences by subfields on this dimension are visually presented in figure 1. It is difficult to summarise a key trend, but it appears that respondents from the fields of engineering and technology see – generally speaking – more positive change than those in teacher training/pedagogy and humanities and art.

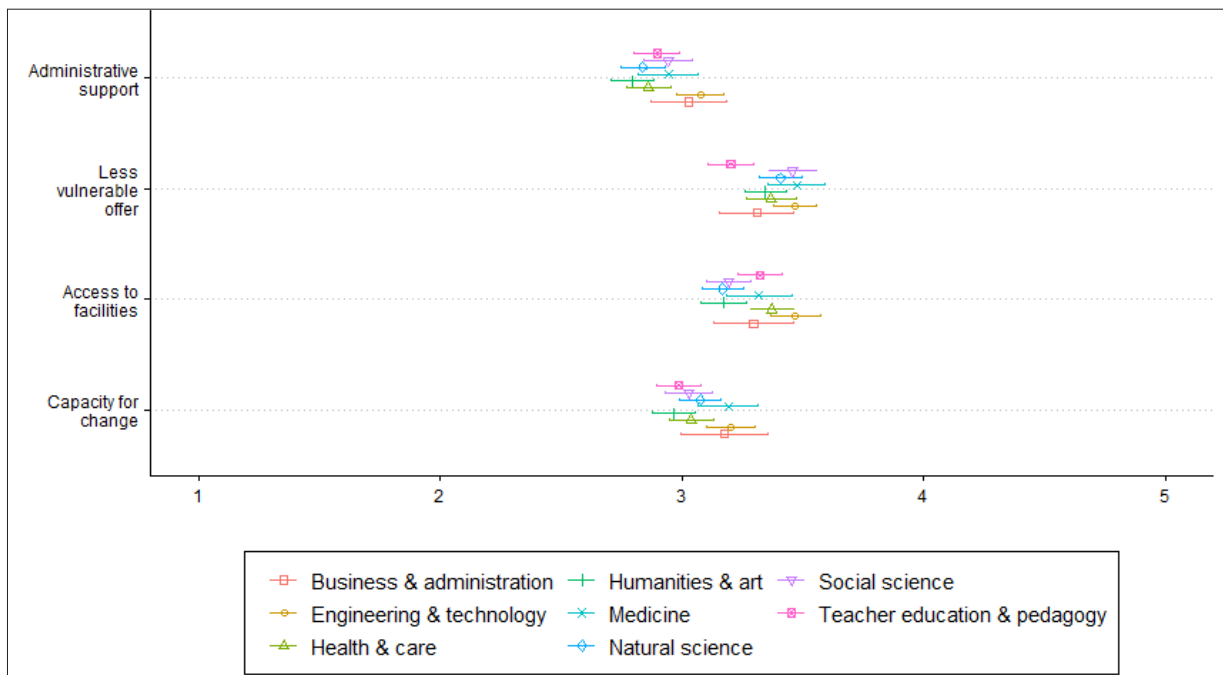


Figure 1: average of responses by reform dimension (robust academic communities) and subfield.

Further, we find that there are no significant differences between subfields on the «proper» access to education dimension (not shown). Regarding the regional development and cooperation dimension, there are significant differences between subfields on the mea-

sure related to «Regional needs and expectations» (Regional development), see figure 2. Engineering and technology and health and care – generally speaking – score higher than the other subfields.

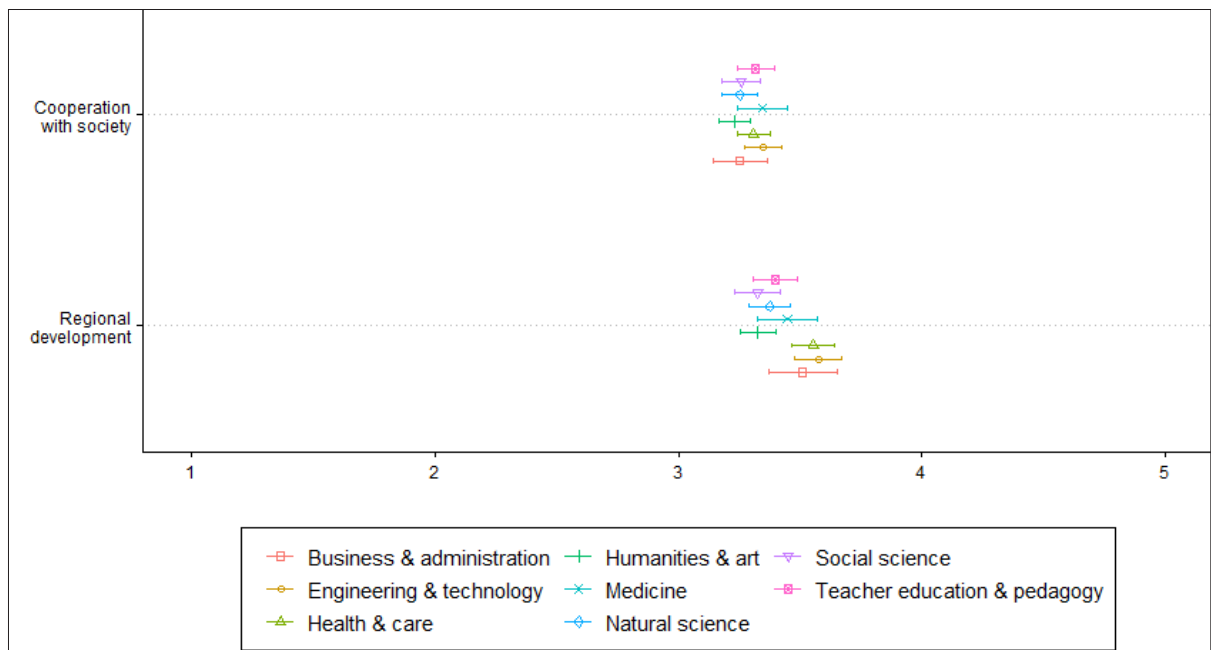


Figure 2: average of responses by reform dimension (regional development and cooperation) and subfield

There are no significant differences between subfields on the dimension internationally oriented/globally competitive/world-leading and the last dimension – efficient use of resources (not shown).

We found, carrying out ANOVAs, that there are no significant differences between types of institutions on the higher education quality dimension, but there are significant differences between types of institu-



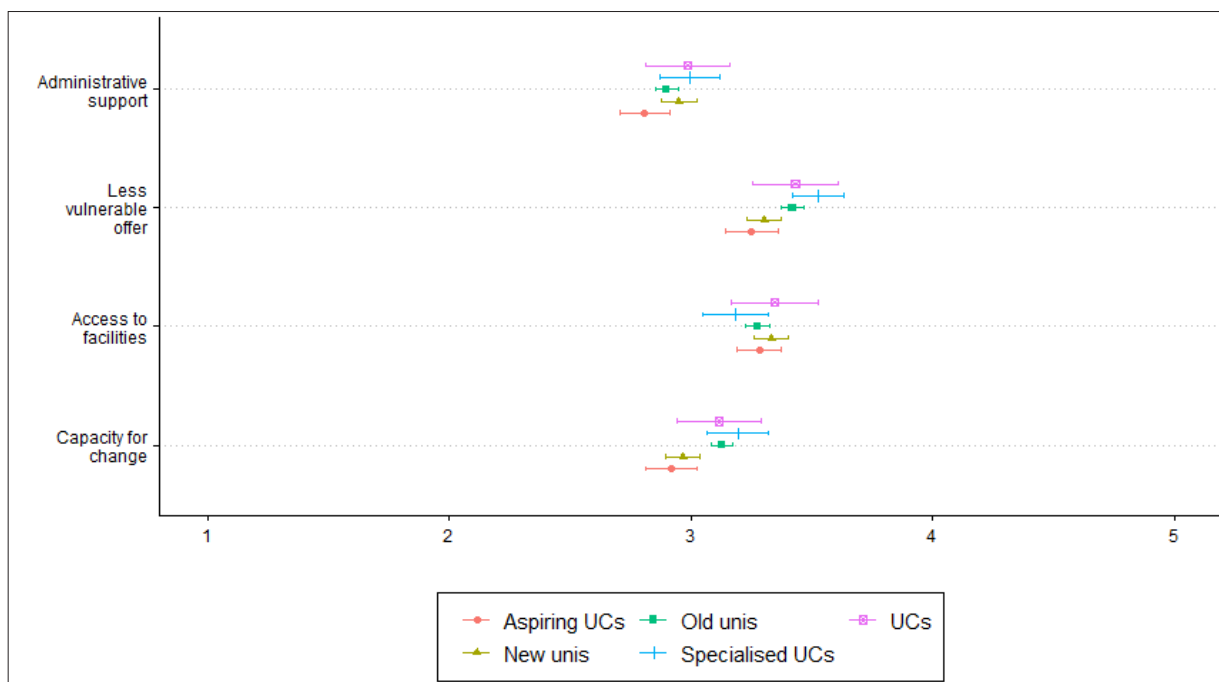


Figure 3: average of responses by reform dimension (robust academic communities) and institutional type.

tions on three of the sub-themes under robust academic communities: less vulnerable offer/variety of perspectives, administrative support and capacity for change (figure 3). The specialized UCs have a higher mean value, certainly in contrast to the aspiring UCs.

There are also significant differences between types of institutions on the «proper» access to education

(lifelong learning and flexible education) dimension (figure 4). Here we see important differences between the aspiring UCs on one side and the university colleges and the specialized universities, on the other side.

There is also a significant difference differences between types of institutions on the international orientation dimension, between old universities and

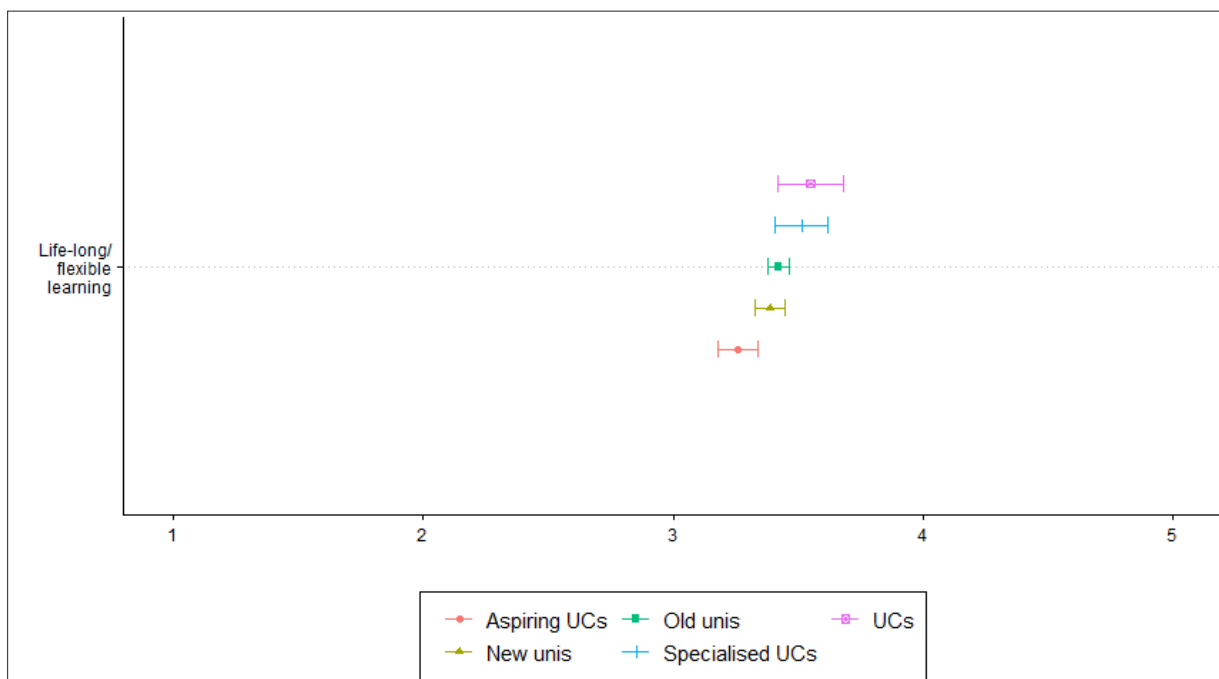


Figure 4: average of responses by reform dimension ("proper" access to education) and institutional type.

aspiring university colleges. There are no significant differences between types of institutions on the rest of the dimensions (equipment, efficient use of resources and regional development and cooperation: regional needs and expectations and close co-operation between institutions and society).

### **Is the HE-sector moving in the direction of the reform objectives?**

This policy brief has analysed a large-scale survey to academic staff with the aim of exploring core practices and to what extent these have been changing over the last five years. For this policy brief we decided to stick primarily to presenting the 'facts' as in: the opinions and experiences of the staff that filled out the survey. This means that the findings do not allow for far-fetched conclusions regarding the state of the art in the Norwegian higher education sector. It should also be borne in mind that we, next to presenting the results by item and furthermore «only» looked at broad differences between merged versus non-merged institutions, between disciplines and between types of higher education institutions. In the remainder of the project, we will carry out more fine-grained and sophisticated analyses. With these caveats, we think the following can be concluded.

- For teaching activities, we see strong support for the statements. In fact, for teaching activities (vis-a-vis research and third mission), the agreement is highest. There are marked differences if we compare subfields and types of higher education institutions, but hardly when we compare merged and non-merged institutions. Given that we based our items on teaching activities on research on effective teaching (Devlin and Samarawickrema, 2010), we see the results as support for effective teaching, even if we take into account that some of the items may have invited respondents to offer socially-acceptable answers. Differences between subfields and types of institutions suggest that effective teaching plays out differently across the disciplines. The fact that we did not find stark differences between merged and non-merged institutions strongly suggests that the mergers did not yet affect teaching effectiveness.
- For research activities we also see considerable support for the statements, the reliance on support for research being the outlier. There are marked differences in average scores on the research

activities items when we compare between merged and non-merged institutions, between subfields and between types of institutions. Here we think that the different research foci and profiles of certain higher education institutions (traditional universities versus institutions focusing on the professions and applied research; and the international versus local/domestic orientation) explains much of the differences.

- The third mission activities vary importantly, with considerable engagement of staff in collaboration with private/public organisations and in disseminating their research findings among lay audiences/readerships. Respondents are far less involved in other third mission activities. This partly can be explained by the disciplinary background: some subfields lend themselves easier for certain types of third mission activities (this particularly relates to licensing, spin-offs and consultancy activities). Like in the area of teaching, non-merged institutions generally score higher on these items than merged institutions, strongly suggesting that the mergers have not yet significantly affected involvement of third mission activities.
- Regarding the perceived change over the past five years, the overall message that can be gleaned from the data is that a very large group of respondents perceive either no change or do not know. This strongly suggests that the intended change through the structural reform has not yet materialised. Moreover, for seven of the ten dimensions of the reform, we found that respondents of merged institutions showed – on average – lower scores than non-merged institutions. It could be speculated – and this is a quite paradoxical finding – that the merging process inhibited many of the institutions involved to realise the reform objectives.
- This latter conclusion should be seen in perspective, however. We emphasised that the analyses we presented are not (yet) sufficiently sophisticated to arrive at firm conclusions. Also, our additional analyses that compared the results by subfield and type of institution indicate that discipline and other background characteristics of the institutions (beyond the merged/non-merged divide) strongly matter. In other words, research, teaching and third mission activities are different across disciplines and institutions and hence perceptions of change also differ. That said, our careful overall

analysis suggests limited change in the Norwegian higher education sector. Insofar change has been noted, this is not unambiguously related to the reform intentions of the government. Here we also have to bear in mind that the reform was not the only change in the Norwegian sector. The reform is a successor of earlier reforms and obviously activities and perceptions of change are affected by other external factors as well.

## Notes

1. This brief is written as part of the Re-Structure project which is the research-based evaluation of the Structural reform conducted by researchers amongst others from CHEGG at Ghent University and NIFU.
2. All significant tests were at level of 0.05.

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# NIFU

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research institute, offering decision-oriented  
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education and research policy – from  
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## NIFU

PB 2815 Tøyen, NO-0608 Oslo  
www.nifu.no | post@nifu.no