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User survey and impact assessment of the Norwegian social science institutes

**Tobias Fridholm, Tomas Åström, Emma Ärenman and Lena Johansson
de Château**

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Summary

The assignment reported herein was tasked with investigating the views of the users of the Norwegian social science institutes, and with providing an assessment of the societal impact of the institutes' R&D. For the purposes of the assignment, users include both clients buying commercial services from the institutes and partners collaborating with the institutes in publically co-funded R&D projects. The survey is part of the background material for an evaluation of the social science institutes that is conducted by a Scandinavian panel of experts appointed by the Research Council of Norway (RCN). The assignment was carried out by Technopolis Group between January and July 2016.

The social science institutes

The social science institute sector, which comprises 22 institutes, is quite diverse. The institutes encompasses topics such as labour and social policy, health, welfare, education, industry, development, regional development, foreign policy, international conflicts, and global development. Some institutes have a profile towards basic research while others mainly conduct applied research, and the types of problems and methodological approaches varies significantly between institutes. However, they all have in common that organisations in the public sector are the most important sources of funding – either through funding of R&D projects from RCN or the European Commission, or as direct clients. To rationally deal with an immense amount of empirical data, we have grouped the institutes into three groups based on an overall assessment of their main characteristics:

- Four internationally oriented institutes
- Nine regionally anchored institutes
- Nine institutes in welfare and society

Method and empirical data

User survey

The user survey was conducted through a web survey and through interviews. The web survey generated 620 responses, corresponding to a response rate of 25 percent. Almost four in five survey respondents are partners, and two out of three are based in Norway. More than half of respondents represent higher education institutions (HEIs) and research institutes (other than the social science institutes), and slightly more than a quarter represent the national, regional or local public sector. The survey response rates differ quite a bit between institutes, from 59 percent down to a mere 9 percent.

We have conducted 78 telephone interviews, but since some interviews – mainly with key users in the national public sector – concerned more than one institute, the interviews encompass a total of 96 user–institute relationships. Slightly more than half of the interviewees represent the national, regional or local public sector, and a mere 6 percent are foreign, plainly due to very few institutes having very many foreign users that are not academic research partners (with presumed limited insight into the Norwegian institutes as such).

Impact assessment

The impact assessment was predominantly based on 71 impact cases submitted by the institutes at RCN's request. RCN asked for societal impact, defined as any impact except impact on other R&D and impact on the institute's own organisation. The impact assessment was inspired by the British Research Excellence Framework from 2014 (REF2014). For 15 impact cases, we engaged in additional data collection through document studies and interviews to be able to complement and elaborate the cases further, as well as to verify the information provided by the institutes. As a complement to the impact cases, we also used the web survey to collect data on user impact from working with the institutes.

User survey

The users of the institutes agree that accessing expertise is the most important motive for collaboration. This concerns subject-specific as well as methodological expertise, and in the case of regionally anchored institutes, region-specific knowledge.

A clear majority of users are highly satisfied with the scientific and methodological competence of the institutes. This is true for all institute groups and all individual institutes, with the highest ratings going to the internationally oriented institutes, while the regionally anchored institutes lag behind in this respect. Users generally give lower scores for relevance of services than for scientific expertise. One reason for this may be that most users are in a better position to assess relevance and usefulness than scientific expertise, and therefore have higher demands. However, some users expect R&D services with less academic emphasis than they presently receive, meaning more adapted to their specific needs. Users see several reasons why the R&D results from the institutes are not as useful as they could be. Some reason that the institutes to a certain extent lack staff with experience from working in for example public agencies or companies. Others users argue that (small) institutes should cooperate more with other actors to make up for their size- and capacity-related weaknesses. Overall, clients give lower ratings to the institutes' ability to provide strategic support and to support with implementation of their R&D results.

Overall, users are also highly satisfied with the institutes' project management and project-related cooperation skills. However, almost all institutes receive lower ratings for their managerial skills than for scientific competence. It is evident, that there is room for improvement in this respect, and especially for some individual project leaders. Several interviewees mention bottlenecks in project management, in particular too heavy workloads for the institutes' project managers, which result in delays and dissatisfactory communication. Clients have higher expectations on project management than partners.

Users are in general highly satisfied with the value for money they get. Users assess the institutes as being more competitive compared to their competitors in terms of scientific expertise, quality and relevance, than on their project management skills and value for money.

While the expertise of the internationally oriented institutes and the institutes in welfare and society is generally quite academic in nature, the regionally anchored institutes offer their users a more context-specific expertise linked to the regions in which they are based. These orientations determine what types of main competitors that users identify for the respective groups. Internationally oriented institutes and institutes in welfare and society mainly see competition from HEIs and other research institutes, while the regionally anchored institutes to a greater extent than the other groups are challenged by consultancies.

Quite a few interviewees express concern about the small size of some institutes. Above all, that concerns the institutes' capacity to maintain competence in their specific fields of expertise. Users discuss networks, alliances and even mergers both in relation to critical mass and as a means to maintain scientific expertise. Some interviewees would like small institutes to give up areas in which they are less competitive, to expand in areas where they are stronger. At the same time, regionally anchored institutes, who are the most vulnerable in this respect, are highly valued for their deep understanding of their region. If these institutes were to give up a certain area of competence because they lack the capacity to compete for assignments outside their region, it could threaten a strategically important competence in the Norwegian R&D system.

It is notable that some users value the institutes' networks outside the users' own geographical area of influence. A regionally anchored institute is for example expected to serve as a 'knowledge hub' that links the region with R&D groups in other Norwegian regions and abroad. Quite a few institutes have strengthened this role (and their R&D expertise) by establishing closer relations with HEIs. While this in general has been helpful, it has for some institutes meant a risk of losing some of their senior researchers to the HEIs.

Impact assessment

Following REF2014, the impact cases were classified in terms of topics, beneficiary types and geographical reach of the impact. In terms of topics, the dominance of business, innovation and entrepreneurship is obvious, followed by work and labour markets, international development, and regional growth policy. The first topic comprises cases from the regionally anchored and welfare and society institutes, whereas the subsequent three topics are dominated by one group each, namely the welfare and society, internationally oriented, and regionally anchored institutes, respectively.

Most beneficiaries are to be found among policymakers. A third of beneficiaries are national Norwegian policymakers and a tenth are regional and local policymakers in Norway, whereas every seventh is a foreign policymaker. While the social science institutes mainly cater to the public sector, it is noteworthy that companies are beneficiaries in 15 percent of the cases. The company beneficiaries are to be found in a range of sectors, from oil and gas to tourism. In four cases out of five, the impact is realised in Norway and in one of these cases at the regional level; the impact of the fifth case is foreign or international in reach.

We have found, mainly through the impact cases and the interviews, that the R&D activities of an institute generally benefits a user in two main ways; through delivery of knowledge outputs (reports, datasets, software, etc.) and through enhancement of the skills of individuals of the user organisation. Quite often, the benefits at this stage only concern a limited part of the user organisation, for example the individual or the team that directly interacted with the institute. In the next stage, this individual or team refines the institute's contribution further, for example by spreading reports and results within the organisation, processing the information and merging it with information from other sources (internal work or input from other external sources). At this point, the impact of the institute's R&D may be discernible within the user organisation, also beyond the level of individuals. The organisation may for example adapt its internal routines or strategies, or undertake more extensive changes, such as internal reorganisations, or development of external networks, collaborations and alliances.

At a certain point, the user organisation produces an output that may be seen as an 'intermediate societal impact'. A ministry or a government agency may present a new policy or policy instrument that in turn leads to societal impact when it affects actors in society. Similarly, a company may introduce a new product on the market that leads to societal impact when its customers use it. Other intermediate societal impact may be dissemination of material to inform or educate societal actors, or knowledge spillovers from the user organisation, such as mobility of staff, publications etc. Throughout this gradual development, the initial contribution of the institute is blended with input from a range of internal and external sources in a process that is also influenced by general societal and economic developments.

Against this background, we see a need to distinguish between *intermediate societal impact* and *societal impact* as such:

- **Intermediate societal impact** (e.g. policy discussions, policies, policy instruments, publicly available reports and other information material, participation in media, knowledge spillovers)
- **Societal impact:**
 - *Economic impact* (impact related to e.g. increased turnover, profit, productivity, competitiveness, investment, employment and capabilities in the private and public sectors, as well as creation of spin-off companies)
 - *Environmental impact* (impact related to e.g. improved adaptation to or prevention of climate changes, improved environmental sustainability, improved energy efficiency, as well as improved environmental safety and protection)
 - *Health impact* (impact related to e.g. improved physiological and mental well-being, improved family relations, prevention of illnesses, and improved medical treatments)
 - *Social impact* (impact related to e.g. strengthened democracy or democratic institutions, improved trust between societal stakeholders or in society as a whole, higher tolerance)

towards foreigners, improved integration of immigrants, improved gender equality, more equal conditions for prosperity in all parts of the country, improved public welfare systems and better education)

- *Impact on efficiency of public services* (impact related to e.g. information on available social services; efficiency improvements of health and welfare services, research and education systems, and tax collection; reduced corruption; and positive effects of better monetary policies)
- *Symbolic impact* (impact on e.g. maintaining or improving Norway's reputation as conflict mediator and defender of humanitarian values, increasing regions' attractiveness to tourism or enterprise, and improvement of companies' brands and trademarks)

In our empirical material, we have indications – albeit oftentimes circumstantial – of all of the examples provided in parenthesis in this bulleted list, and these examples could perhaps be used as a point of departure for developing a more fine-grained typology. The present assignment has shown that the lion's share of the documented impact consists of intermediate societal impact. Thus, reaching further in terms of (ultimate) societal impact would require substantial resources to carry out very ambitious case studies in order convincingly to attribute a given impact to a specific institute's R&D.

Concluding remarks

In summary, the user survey shows that the users of the social science institutes for the most part are highly satisfied. We must nevertheless bear in mind that both web survey respondents and interviewees likely constitute a positive selection. We argue that this bias is not likely to be very large, at least for the overall population of respondents and interviewees, but there is little doubt that there is some. The user survey therefore probably paints a slightly more positive picture than is warranted, but this does not affect the overall assessment that the social science institutes are appreciated by the vast majority of their users.

The issues where users identify room for improvement are mostly related to size (or lack of critical mass) both of the institutes themselves and of individual topical specialities. One possibility to address this issue would be to form tighter alliances between institutes, or to go all in and merge, to reduce the current obviously fragmented situation. However, users are keen to point out that the regional knowledge, and to some extent presence, of many of the institutes is key. Thus, regardless of whatever future changes to the sector that may take place (if indeed any), it will be important to balance critical mass with regional knowledge and presence.

It is obvious that the social science institutes fulfil an important function and make important contributions to societal impact, mainly within Norway. In most cases, the institutes contribute to 'intermediate societal impact', rather than to more easily observed 'ultimate' societal impact, meaning that attribution to a specific institute's R&D is most difficult to ascertain. This may be a pedagogical problem for the social science institutes, and it is a difficult one to solve, since the problem is inherent to the sector.

1 Introduction

1.1 Evaluation of the Norwegian social science research institutes

According to its statutes, one of the main tasks for the Research Council of Norway (RCN) is to “work to achieve a constructive distribution of tasks and cooperation between research institutions, and take strategic responsibility for the research institute sector”.¹ RCN’s five-year plan for evaluation of research institutes states three overarching objectives for such evaluations:²

1. To strengthen the knowledge base for the efforts of the Research Council and the ministries to develop an effective, targeted research policy,
2. To provide a basis for assessing the design of the Research Council’s funding instruments, and
3. To provide knowledge for the institutes’ own strategic development efforts

As part of its strategic responsibility for the institute sector, RCN evaluates the research institutes, and the time has now come to evaluate the Norwegian social science institutes that receive public basic funding via RCN. As stated by RCN, the role and task of these institutes is to “Deliver high-quality, applied research results of relevance to trade and industry, the public administration and society at large in the market for commissioned research. The institute sector is also responsible for knowledge development in national priority areas and for fostering innovation, particularly with a view to linking basic and applied research.”³

The sector comprises 22 institutes, listed in Table 1. As the table suggests, the sector is quite diverse and comprises institutes addressing labour and social policy, health, welfare, education, industry, development, regional development, foreign policy, international conflicts, global development, and more. Some institutes have a profile towards basic research while others mainly conduct applied research, and the types of problems and methodological approaches may vary significantly between institutes. However, they all have in common that organisations in the public sector are the most important sources of funding – either through funding of research projects e.g. by RCN or the European Commission, or as direct clients in one way or another.

An important reason behind the diversity lies in the institutes having quite different backgrounds. Some institutes date back to the 1950s or earlier that were typically founded as ‘flagship initiatives’. NUPI was for instance established by the Norwegian parliament (*Stortinget*) in 1959 to support the political leadership with foreign policy expertise, and ISF and PRIO were established around some of Norway’s most renowned academics in the humanities and social sciences, while CMI and FNI were founded based on donations for specific research purposes. NIFU was established in 1996 when RCN’s research division, dating back to the 1950s, formed an independent institute.

Around half of the 22 institutes were established as regional institutes, generally in the 1980s. Most of these are located close to regional university colleges with which they have collaborated closely through commissioned research and sharing of staff. These institutes typically developed social science profiles, both because there was regional demand for such studies, and because social science research was relatively cheap and easy to establish. Regional universities and university colleges have often been part owners of these institutes, increasingly so during the 2000s. The regionally anchored institutes still tend to have profiles that somewhat reflect needs in the region, even if their client and partner base is largely national (and in some cases international). A few other social science institutes – notably Frisch Centre, NTNU Social Research, SNF and Uni Research – were established more recently on direct initiative from universities or university colleges to function as links between the higher-education institutions and practitioners, by performing applied and commissioned research.

¹ Statutes of the Research Council of Norway, 2011.

² ‘Instituttevalueringer, Overordnet plan’, Research Council of Norway, 2013.

³ ‘The institute sector’, Research Council of Norway, 2016, http://www.forskningsradet.no/en/Article/The_institute_sector/1196115145239

Table 1 The 22 social science institutes encompassed by the evaluation.

<i>Institute</i>	<i>Abbreviation</i>	<i>Profile</i>
Agder Research	Agder	Industrial development; regional development; innovation in the public sector; cultural and creative industries; equality and integration
Chr. Michelsen Institute	CMI	Global development (e.g. aid, anti-corruption, gender, governance, health, natural resources and rights)
Eastern Norway Research Institute	ØF	Regional development; wilderness and mountain regions; welfare
Fafo Research Foundation	Fafo	Labour relations and labour market; rights and security; migration, integration and skills; welfare and living conditions
Fridtjof Nansen Institute	FNI	International environmental, energy and resource management politics and law
Frisch Centre	Frisch	Labour market, welfare and education; energy and environment; public sector and health
Institute for Social Research	ISF	Labour issues; welfare; gender equality; migration; civil society; elections and democracy; new media
International Research Institute of Stavanger AS	IRIS Samf	Labour issues; welfare, policy and politics; safety; innovation
Møreforskning	Møre	Health and education; logistics; marine; industrial economics and policy; social research; transport economics
Nordic Institute for Studies in Innovation, Research and Education	NIFU	Studies in innovation, research and education
Nordland Research Institute	NF	Entrepreneurship; welfare; environment
Northern Research Institute AS (social science division)	Norut	Regional development; innovation; petroleum; nature and the environment; Sami conditions
Norwegian Institute of international affairs	NUPI	Foreign affairs
NTNU Social Research AS	NTNU Samf	Security; organisation studies; health; welfare; social inclusion; education; mental health; labour issues; space
Peace Research Institute Oslo	PRIO	Peace and conflict studies
SINTEF Technology and Society	SINTEF T&S	Health; care and welfare; oil and gas; safe societies; labour issues; transport systems; climate and the environment
SNF Centre for Applied Research at Norwegian School of Economics	SNF	Applied studies in economics and business administration
Telemark Research Institute	Telem	Health and welfare; cultural policy; local public finance and organisation; regional development
Trøndelag Research and Development	TFoU	Welfare and service innovation; innovation systems; industrial development
Uni Research (Rokkan Centre and Health division)	Uni Samf	Rokkan Centre: Democracy and politics; welfare; health; management and organisational studies; culture; labour issues Health division: Rehabilitation and social welfare; mental health; general practice and emergency primary health care
Western Norway Research Institute	VF	Usability in ICT; environment; innovation; tourism
Østfold Research	Østfold	Environmental protection; business and regional development

Sources: Websites of the institutes.

The evaluation is instructed to be future-oriented, and to focus on opportunities and challenges the social science institutes face on their national and international markets, as well as on their strategies to deal with these challenges. According to its mandate, the evaluation is to be based on the following perspectives and circumstances:⁴

- Each institute's specific characteristics and contextual situation shall function as point of departure
- The research and the research systems are in transition; research themes, resources and results become more international and global. The grand societal challenges require more inter- and multidisciplinary, and more national and international research collaboration
- Organisational changes and challenges in the Norwegian research system, with mergers between institutes and universities or university colleges, as well as between universities and/or university colleges. The evaluation shall highlight how the organisational changes affect the interplay and competition between the institutes, as well as between the institutes and other R&D performers in Norway or abroad. It shall focus on the framework conditions of the institutes and the division of labour within the social science sector
- Norwegian research activities have increased, and the demands on results and impact have grown. The evaluation shall show – supported by this report – how the institute users experience and use the institutes' R&D

1.2 Supporting documentation for the evaluation

The evaluation of the social science institutes is conducted by a panel of experts appointed by RCN, supported by a secretariat contracted by RCN. The panel, which consists of experts from Norway, Denmark and Sweden, will conduct hearings with the institute entities, and does additionally have a considerable background material at its disposal, including:

1. Internal evaluations (self-assessments) by the institutes
2. A descriptive fact report on the institutes and the current institute politics prepared by RCN
3. Annual reports from the institutes
4. Previous evaluations of the social science institutes
5. User survey and impact assessment
6. Bibliometric analysis
7. Other documentation, including guidelines for governmental base funding to research institutes, statistical information on the institutes, etc.

RCN has procured a three-part assignment to produce items 5 and 6 in this list and to carry out the secretariat function. The first two parts of the assignment, items 5 and 6, have been carried out by Technopolis Group in collaboration with Danish Centre for Studies in Research and Research Policy (CFA) at Aarhus University between January and June 2016. The user survey and impact assessment subproject has been carried out by a team consisting of Tobias Fridholm, Tomas Åström, Emma Ärenman and Lena Johansson De Château, all at Technopolis Group. The subproject was led by Tobias Fridholm and quality controlled by Erik Arnold. The team has been supported by Markus Lindström. This report summarises the findings of the user survey and the impact analysis; the bibliometric analysis subproject is presented in a separate report. Technopolis Group will carry out the secretariat function until the evaluation panel concludes its work in early 2017.

1.3 The user survey and impact assessment

The user survey and impact assessment shall document how the users regard R&D services of the social science institutes, and produce a collection of examples of societal impact of their R&D. The user

⁴ «Evaluering av de samfunnsvitenskapelige instituttene: Mandat og oppgavebeskrivelse», Norges forskningsråd, 2015.

survey shall focus on issues of importance to the users and the institutes themselves, and respond to questions related to:

- Client and partner satisfaction
- The institutes' delivery capacity, and the quality and relevance of the deliveries
- Collaboration, dialogue and exchange of knowledge between the institutes and their users
- The institutes' availability to the users
- The institutes' professional integrity and independence (from politics, public agencies and vested interests)
- How the users regard the institutes (alone and as a group) in relation to other R&D providers with similar kind of competence, in Norway and abroad

The impact assessment shall render an understanding of the role and importance of the institutes from a qualitative perspective. The assessment shall use impact case studies from the institutes' self-assessments as points of departure. These case studies shall include how an institute's R&D is, and has been, of importance to society. The impact assessment shall also try to gather other examples of impact. The examples shall be systematised and analysed, and shall together with the user experiences give a full picture of the societal significance of the social science institutes. The impact assessment shall be inspired by the British Research Excellence Framework (REF) from 2014 (REF2014).⁵

1.4 Definitions

This report uses the following terminology:

- A *partner* is a private or public organisation in a publicly co-funded R&D project, e.g. from RCN and the EU Framework Programme (FP)
- A *client*, which refers to a private or public organisation that buys services from an institute on commercial premises
- A *user*, which is a common term for a partner and/or a client
- A *Norwegian* or *foreign* user is defined based on the location of the legal entity that collaborated with the institute (i.e. if a US corporation collaborated with an institute through its Norwegian-based subsidiary, the user is considered Norwegian)
- The term *company* refers, if nothing else is stated, to a private company
- An *HEI* (higher education institution) is a university or a university college
- *Research institute* respondents consist of individuals representing (Norwegian and foreign) research institutes which are not among the evaluated social science institutes
- The *private sector* and *commercial users* refers to private companies
- The *national public sector* includes ministries, embassies, government agencies, county governor's offices, and public enterprises owned by the state. We have also included the one respondent from the juridical system in this category
- The *regional or local public sector* refers to county municipalities, municipalities, health trusts, regional or local public agencies, and public enterprises that are owned by county municipalities or municipalities
- The *public sector* refers to the national and the regional or local public sectors together
- The *other* category includes all kinds of users that are not companies, HEIs, research institutes or part of the public sector as defined above. In this case, the category mainly consists of non-governmental organisations (labour unions, employers' organisations, independent foundations etc.) and international organisations (EU, OECD, United Nations, World Bank etc.).

⁵ «Assessment framework and guidance on submissions», REF 02.2011, HEFCE, 2011.

In this report we have, following consultation with RCN, grouped the 22 institutes into three groups that have been defined based on an overall assessment of their main characteristics, see Table 2. We use this grouping rationally to present an immense amount of empirical material in a comprehensible manner.

Table 2 *Institute groups.*

<i>Institute group</i>	<i>Institutes</i>
Internationally oriented institutes	CMI, FNI, NUPI, PRIO
Regionally anchored institutes	Agder, Møre, NF, Norut, Telem, TfoU, VF, ØF, Østfold
Institutes in welfare and society	Fafo, Frisch, ISF, IRIS Samf, NIFU, NTNU Samf, SINTEF T&S, SNF, Uni Samf

1.5 Method and empirical data

1.5.1 *Empirical data and their implications for interpretation of results*

Since the user survey and impact assessment tasks are predominantly qualitative in nature, we applied a combination of document studies, interviews, web survey and case studies, see Table 3. A web survey is an efficient way to collect the views of a large number of individuals. We conducted interviews to obtain a deeper understanding of users' experiences, to be able to better interpret survey results, and to learn more about the impact the institutes have had. The impact assessment is largely based on the impact cases described by the institutes in their self-assessments, complemented by document studies, interviews and to some extent by the web survey. The document studies included RCN's fact report prepared for the panel, the 22 institutes' self-assessments, RCN's annual reports on the social science institutes, the institutes' websites etc., and for the impact cases also case-specific documentation.

Table 3 *Overview of methods used.*

<i>Part of study</i>	<i>Document studies</i>	<i>Interviews</i>	<i>Web survey</i>	<i>Institute self-assessments</i>
Background information	***			
User survey		***	***	
Impact assessment	***	**	*	***

Note: Contribution of each method rated on a scale from some (*) to extensive (***).

There is a significant variety in the institutes' relations with their users. At one end of the scale is a client relation where the user procures an assignment in open competition and monitors the activities from a distance until the institute delivers a report that responds to the client's questions. At the other end of the scale is a relation between researchers, where the user may be a university researcher who collaborates with an institute researcher in a fundamental research project and maintains frequent contact in jointly solving a problem they have defined together with the intention of producing a publication in a scientific journal.

To capture such a wide array of relations, we opted for a classification of users into 'clients' and 'partners'. These implicate different characters of interaction between the institute and the user, not least because clients from the public sector (the dominant user category) are typically required to select contractors through public procurement, which means that they cannot simply pick the contractor they want. Besides the issue of the client alone defining the task, client relations are thus also characterised by a more 'one-off' relation than partner relations, where projects are normally preceded by discussions or negotiations between the institute and the user that implicates a more intimate cooperation between the two. We introduced the client and partner distinction to acknowledge this difference.

Client and partner projects are also often located at different parts of the ‘R&D value chain’: client projects tend to be more application-oriented than partner projects. This point unfortunately made the interface between the two categories more difficult to define than we had predicted. One reason is that partner projects funded by for example the Regional Research Funds (RFF) and RCN’s programme for Regional R&D and Innovation (VRI) often seem to function in more or less the same ways as client projects on the same topics, which makes the client-partner distinction less relevant. Another reason is terminological: Despite asking survey respondents to classify themselves as client or partner according to our stated definitions, some users classified themselves as partners even though we would most likely have classified them as clients. This is probably mainly because some survey respondents considered the content rather than the type of relation – also client projects can deal with relatively fundamental research. We also gave the users the option of classifying themselves as “client and partner in roughly equal proportions”. Since a partner relation is likely more in depth than a client relation (which was also the message these users typically gave us in interviews), we usually treated these users as partners, even though we investigated the client relation as well.

Most institutes sent us extensive lists of users, more than a hundred names on average, which we interpret as more or less complete sets of users over the last few years. We therefore believe that the risk of a positive selection bias is rather marginal, although some institutes may of course have taken out a small number of known dissatisfied users. A few institutes submitted considerably fewer users than other institutes of the same size, which means that it is possible that they have made a conscious positive selection. We have no real reason to suspect that this is the case, but it is a possibility that cannot be disregarded. However, we believe that at least their main users were included. There is also a certain risk for a positive bias among survey respondents, primarily because positively inclined users may be expected to be more interested than dissatisfied ones in contributing to this type of a study. Most institutes submitted several contact persons at some organisations, which we interpret as different contact persons for single assignments or at different units of large organisations. The user survey is thus to some extent a mix between opinions of a ‘population of assignments’ and a ‘population of user organisations’.

1.5.2 Analysis of impact cases

The impact assessment is predominantly based on the 71 impact cases submitted by the institutes. RCN asked the institutes to submit a maximum one case per ten researcher years (full-time equivalents), a ceiling which most institutes made sure to use. Only cases based on R&D that to a significant extent had been carried out by the institute during the last 10–15 years were allowed, although references to longer R&D traditions at the institute could be made. RCN only asked for societal impact, which was defined as any impact except impact on other R&D and impact on the institute’s own organisation. RCN also gave a range of examples on what societal impact could be, for instance changes in activities, perspectives, economy, competence, policy etc. among individuals, groups, organisations, in a certain public sphere, or in other parts of society. We also asked survey respondents and interviewees for additional examples of impact, but this route only rendered a small number of new potential cases and none that we considered significant enough to develop into another case study.

We analysed the impact cases in three main ways. Firstly, we collected information from all 71 cases on:

- Topic of impact
- Beneficiaries of impact
- Geographic reach of impact

This process was inspired by the study that researchers at King’s College carried out on REF impact cases, which is described in detail in Chapter 0 and in Appendix B.⁶ Secondly, we developed an impact

⁶ “The nature, scale and beneficiaries of research impact: An initial analysis of Research Excellence Framework (REF) 2014 impact case studies.” King’s College London and Digital Science, 2015, Research Report 2015/01.

typology within which we organised the impact cases to illustrate the great variety of types of impact that the social science institutes contribute to. Our aim was explicitly to mention cases from all 22 institutes, but since a few of the institutes have provided inferior case descriptions, this has not been possible.

Finally, we selected 15 impact cases to present in detail. For these cases, we engaged in additional data collection through document studies and interviews to be able to complement and elaborate the cases further. In addition, we sought to verify the information provided by the institutes in their self-assessments, and we did not find any obvious inaccuracies. The 15 cases were selected because we found them particularly well presented, well underpinned by evidence and references, and because they represented a fair picture of the types of cases submitted by the institutes. We thus did not select the 15 cases because we considered them the most important ones in terms of impact significance or reach.

As a complement to analysing impact cases, we also used the web survey to collect a comprehensive set of data on user impact from working with the institutes. We did this by asking users to what extent working with an institute has contributed to various types of impact, for instance improved skills, use of new types of data, or expanded networks. The results from this part of the investigation are presented alongside the figures on impact topics, beneficiaries and geographic reach of the impact cases.

1.5.3 Web survey

We sent the web survey to users from three kinds of sources:

- Lists of users that the institutes on RCN's request submitted to us. On average, the institutes submitted more than 100 users each, although not all could be reached due to e-mail addresses being missing or outdated⁷
- A subset of RCN's data warehouse, including RCN-funded projects finished in 2013 or later and where one or more of the institutes had been partners⁸
- A subset of the E-Corda database of FP7 projects finished from 2013 and later in which one or more of the institutes had been partners; a total of 27 project participations⁹. Only partners representing more than seven percent of a project's funding from the European Commission were included

As Table 4 shows, the web survey reached 2,475 recipients and yielded 620 responses, a response rate of 25 percent. The response rates differ quite a bit between institutes, from the Frisch Centre's 59 percent down to a mere nine percent for SNF. Among Uni Research's users, only seven out of 233 partners to the National Centre for Emergency Primary Health Care (NKLM) – a centre that Uni Research runs on commission from the Norwegian Ministry of Health and Care Services – responded to the survey. If we exclude NKLM, the response rate for Uni Research increases from 15 to 27 percent, and from 25 to 27 percent for the entire survey. Also SNF, Agder Research, Nordland Research Institute, Norut and Eastern Norway Research Institute stand out with low response rates, which is particularly problematic in the cases of SNF and Agder Research, since they had few survey recipients in the first place. In addition, Telemark Research Institute and Frisch Centre had very few recipients, but also the two highest response rates. We have compensated for particularly low numbers of responses or low response rates by adding an extra interview or two for these institutes.

Altogether, the regionally anchored institutes have a collective response rate of 22 percent, while the welfare and society institutes have a response rate of 24 percent and the internationally oriented

⁷ In some cases, we obtained missing e-mail addresses through googling, particularly in the case of Eastern Norway Research Institute, which submitted an extensive list where a large majority of e-mail addresses were missing.

⁸ We imposed a threshold of €30,000 for the institutes' participation in the projects, which led to the exclusion of one project.

⁹ We also intended to include projects in Horizon 2020, but unfortunately that was impossible since the database lacked e-mail addresses and names of contact persons for those projects.

institutes have 32 percent. The lower response rate for regionally anchored institutes may be because these institutes have many small projects and fewer recurring (national) users, which would mean weaker links with survey recipients overall. However, the correlation between the institutes' number of recipients and their response rates is only slightly negative.

Table 4 Web survey respondents by institute.

<i>Institute</i>	<i>Number of recipients</i>	<i>Number of responses</i>	<i>Response rate</i>
Agder	45	7	16%
CMI	118	41	35%
Fafo	80	26	33%
FNI	75	31	41%
Frisch	46	27	59%
IRIS Samf	76	19	25%
ISF	127	49	39%
Møre	87	22	25%
NF	92	14	15%
NIFU	110	34	31%
Norut	96	15	16%
NTNU Samf	117	29	25%
NUPI	132	42	32%
PRIO	183	50	27%
SINTEF T&S	126	30	24%
SNF	44	4	9%
Telem	24	11	46%
Tfou	60	14	23%
Uni Samf	463	70	15%
VF	156	44	28%
ØF	115	17	15%
Østfold	103	24	23%
All	2,475	620	25%

Source: Web survey.

A response rate of 25 percent for the entire social science institute sector translates into a margin of error (confidence interval) of less than 4 percent at a confidence level of 95 percent. In other words, for the entire sector there is 95 percent likelihood that the survey results differ less than 4 percent from the results of a (hypothetical) survey with 100 percent response rate. At a 99 percent confidence level, the margin of error is still less than 5 percent. When survey results are broken down onto institute groups, the margins of error for the internationally oriented and the regionally anchored institute groups are between 6 and 7 percent, and for the institutes in welfare and society just over 5 percent – all at 95 percent confidence level. A margin of error of 5 percent at 95 percent confidence level is

commonly seen as an indicator of statistically significant results.¹⁰ However, given the difficulties in obtaining survey results that meet that requirement, lower thresholds are often accepted.¹¹ In this case, all institutes groups for instance have margins of error of less than 5 percent at 85 percent confidence level. However, the survey results per institute are not statistically significant even with more generous thresholds, and should therefore be interpreted with utmost care.

Table 5 shows the number of responses by user category and institute group. It is particularly worthwhile noting the many respondents from universities, university colleges and research institutes, which together represent 54 percent of all responses. Not surprisingly, the respondents from the public sector significantly outnumber private sector respondents; 28 percent of respondents represent either the national (20%) or the regional or local (8%) public sector. A mere eight percent of respondents represent the private sector, while the remaining ten percent do not belong to any of the aforementioned categories.

The internationally oriented institutes on average have a more academic character than the other two types of institutes, witnessed for instance in their comparably high output of academic publications per researcher. In the survey, their academic orientations are reflected in their larger shares of respondents from research organisations. The institutes in welfare and society are generally oriented towards the national public sector, and have a slightly larger share of their respondents in this category than the other two institute categories, while the regionally anchored institutes have significantly larger shares of their respondents in companies and in the regional or local public sector. It is also noteworthy that the institutes in welfare and society have received nearly half of all responses.

Table 5 Web survey respondents by user category and institute group.

<i>User category</i>	<i>Internationally oriented institutes</i>	<i>Regionally anchored institutes</i>	<i>Institutes in welfare and society</i>	<i>All</i>
National public sector	30 (18%)	26 (15%)	65 (23%)	121 (20%)
Regional or local public sector	0 (0%)	26 (15%)	25 (9%)	51 (8%)
Companies	7 (4%)	28 (17%)	17 (6%)	52 (8%)
Research institutes	31 (19%)	25 (15%)	41 (14%)	97 (16%)
HEIs	76 (46%)	48 (29%)	114 (40%)	238 (38%)
Other	20 (12%)	15 (9%)	26 (9%)	61 (10%)
All	164 (100%)	168 (100%)	288 (100%)	620 (100%)

Source: Web survey.

The many respondents from the research sector are also reflected in Table 6, which shows the respondents separated on clients and partners. Almost four in five respondents are partners, a clearly dominant category for all the three institute groups.

¹⁰ "Multivariate Data Analysis (6th ed.)", Hair JF, Black WC, Babin BJ, Anderson RE, Tatham RL, 2006, Prentice Hall; and "The Practice of Business Statistics (2nd ed.)" (chapter 6), Moore, DS, McCabe, GP, Duckworth, WM, Alwan, LC, 2009, W.H. Freeman Company

¹¹ "Survey response rate levels and trends in organizational research", Y Baruch and B.C. Holtom, Human Relations 61 (8) pp. 1139-1161, 2008

Table 6 Web survey respondents by user relation and institute group.

<i>User relation</i>	<i>Internationally oriented institutes</i>	<i>Regionally anchored institutes</i>	<i>Institutes in welfare and society</i>	<i>All</i>
Clients	24 (15%)	46 (27%)	69 (24%)	139 (22%)
Partners	140 (85%)	122 (73%)	219 (76%)	481 (78%)
All	164 (100%)	168 (100%)	288 (100%)	620 (100%)

Source: Web survey.

Table 7 shows that two out of three respondents are based in Norway. As expected, the internationally oriented institutes are significantly over-represented when it comes to responses from outside Norway. Three out of four respondents located outside Norway come from the research sector, which means that around half of the respondents in this broad category are based outside Norway. In the category “other” one third of respondents are based outside Norway, while respondents in Norway strongly dominate the remaining categories, particularly among the public sector respondents.

Table 7 Web survey respondents by user location and institute group.

<i>User location</i>	<i>Internationally oriented institutes</i>	<i>Regionally anchored institutes</i>	<i>Institutes in welfare and society</i>	<i>All</i>
In Norway	67 (41%)	133 (79%)	214 (74%)	414 (67%)
Outside Norway	97 (59%)	35 (21%)	74 (26%)	206 (33%)
All	164 (100%)	168 (100%)	288 (100%)	620 (100%)

Source: Web survey.

1.5.4 Interviews

We selected interviewees almost exclusively from the users that the institutes had listed as “Key clients or partners” (a subset of the user lists used for the surveys) and tried to maintain a fair balance between user categories. We also considered the profile of the institutes, and made sure to spread the interviews across their various fields of competence, and for institutes with more academic orientation to interview at least one representative of academia. For most of the regionally anchored institutes, we interviewed a representative of the regional higher education institution with which the institute in question has close links. For our purposes, interviewing representatives with experience of working with more than one institute was particularly fruitful, as they were able to compare institutes with each other. We therefore intentionally selected some of these individuals as interviewees.

Compared to the respondents of the web survey, the institutes’ lists of key users showed an over-representation of representatives of the national public sector. The regionally anchored institutes had comparably many representatives of the regional or local public sector among their key users. Arguably, these two categories were over-represented because these users are economically important for the institutes and function as hubs in their respective sectors or regions. The national public sector is also likely to be an important user category for the institutes since its organisations are demanding clients expecting high quality and answers to complex questions, which helps the institutes in building competence, therefore making such users good references when bidding for new assignments.

Table 8 Interviews by user category.

<i>User category</i>	<i>Number of interviews</i>	<i>Number of user–institute relations covered</i>
National public sector	22 (28%)	32 (33%)
Regional or local public sector	18 (23%)	21 (21%)
Companies	12 (15%)	13 (14%)
Research institutes	6 (8%)	8 (8%)
Higher education institutions	12 (15%)	14 (15%)
Other	8 (10%)	8 (8%)
All	78 (100%)	96 (100%)

We conducted 78 interviews, distributed as shown in Table 8. Some interviews covered more than one institute, meaning that the interviews investigated a total of 96 user–institute relationships. This particularly concerned users in the national public sector, which underlines the central position of this user category. Only five interviews were conducted with foreign users, which is considerably fewer than we had expected. This is explained by the fact that very few institutes have many foreign users, and the ones they have are typically research partners from universities with limited insight into the Norwegian institutes as such, and the institutes have rarely listed these as key users. Most foreign interviewees were interviewed as users of the internationally oriented institutes. It was not possible to maintain a difference between clients and partners in the interviews, although we made sure to investigate the type of relation the users had with the institutes.

The interviews covered an overall description of the collaboration, user satisfaction with the institute in a number of dimensions, as well as the user’s suggestions and thoughts on how the institute and the social science institutes as a group could develop their services in the future. The interviews also concerned the users’ rationale for collaborating with the institute and what results and impact the collaborations had already had, or were expected to have, on the users. The latter questions were intended for the impact analysis.

1.6 Report structure

The remainder of the report consists of three sections. In **Chapter 2**, we present results from the user survey, separated on Motives for collaboration, Competence, Management and Competitiveness. **Chapter 3** presents the impact assessment. We begin by giving an overview of the 71 impact cases (types of beneficiaries, impact topics etc.) followed by a comprehensive presentation of the cases. 15 of the cases are also presented in more depth in Appendix A. In chapter 3 we also present impact from the users’ point of view, based on results from the user survey, and end by developing an impact typology. In the final chapter, **Chapter 4**, we present our conclusions. The reports ends with appendices, which beside impact cases contain a presentation of how we classified the impact cases, our interview guides, and our survey questionnaires.

2 User survey

This chapter presents the results from the user survey, based on web survey and interviews. For the most part, web survey results are presented for the institutes as a group and are reported on a Likert-type scale, where survey respondents have been asked to what degree they agree with a statement. Depending on question, the scale has three different interpretations:

1. Very poor	Strongly disagree	Much less
2. Poor	Disagree	Less
3. Satisfactory	Neither agree nor disagree	Equally
4. Good	Agree	More
5. Excellent	Strongly Agree	Much more

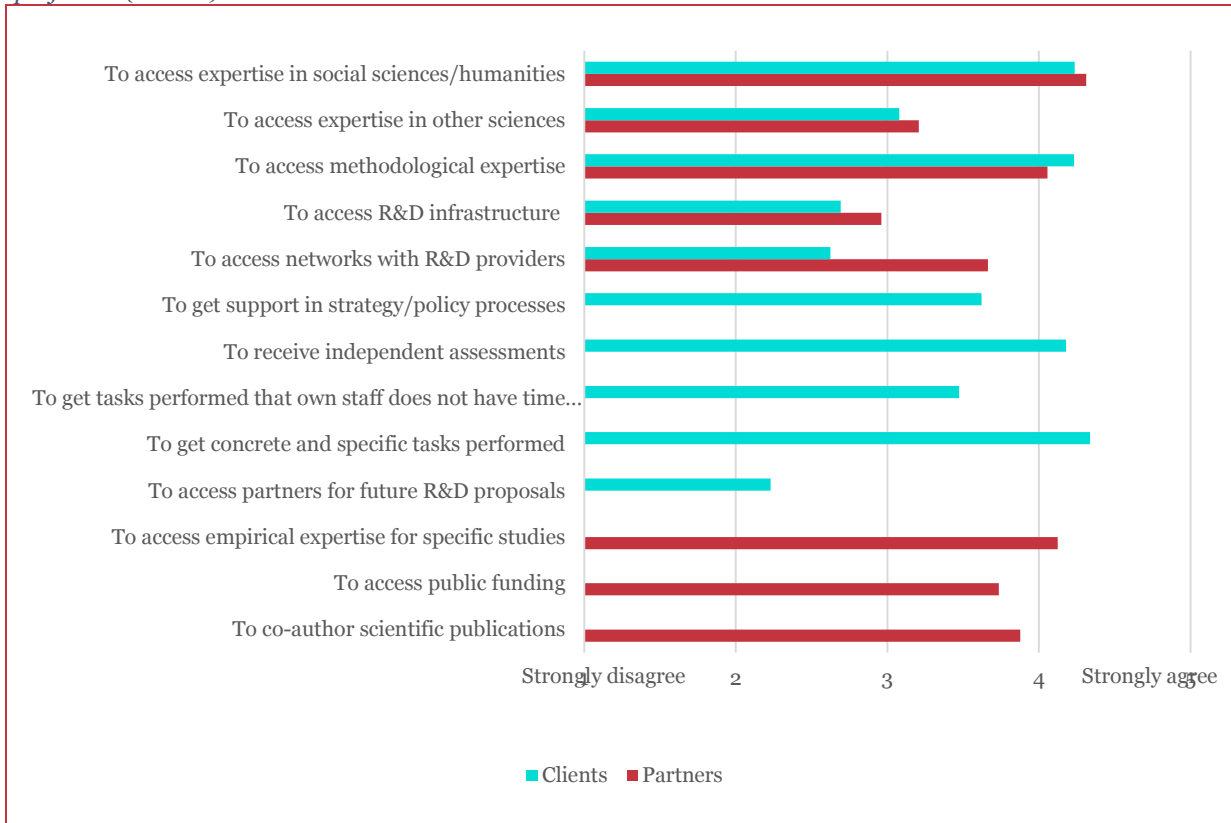
For all statements, there was also a ‘do not know/not applicable’ option. Statements from interviews have been selected to help interpret web survey results and to support the discussion. The selection of statements is intended to give a fair and balanced representation of the interviews, without hiding the heterogeneity of the material or specific statements that we find particularly noteworthy. We have chosen to keep interview statements anonymous, as quite a few interviewees expressed a fear that certain remarks would harm their future relations with the institutes. However, we have at least indicated user category and whether the user was based in or outside Norway. Although a fair balance and representativity between the institutes in terms of (positive/negative) quotes would be preferred, that has not been possible, essentially because interviewees differ greatly in terms of how they formulate themselves; far from all of them have delivered statements that would add enough flavour to the text.

2.1 Motives for collaboration

Understandably, organisations vary in their motives for enlisting the services of the institutes. In this section, we explore motives for collaboration. Figure 1 shows the motives for clients and partners, and Figure 2 the same information separated onto user categories. As expected, the most important motive for both clients and partners is to access expertise in social sciences or humanities. The interviews confirm this picture. Particularly users of the internationally oriented institutes (88% agree)¹² and welfare and society institutes (82%) find this important, while it is a slightly less important motive among users of the regionally anchored institutes (66%). A third of users agree that access to expertise in other sciences a motive, which may be surprisingly many. Most of these responded for institutes that have notable activities in, or bordering on, other sciences than the social sciences and humanities, such as IRIS, Møreforskning, Norut, NTNU Social Research, Østfold Research, SINTEF Technology and Society, Uni Research and Western Norway Research Institute. Companies respond more often than other types of users that access to expertise in other sciences is a motive, mainly because institutes with activities in the natural sciences and technology have more companies as users.

¹² By ‘agree’ we here and later in the report refer to users responding either ‘agree’ or ‘strongly agree’ in the survey.

Figure 1 Clients' and partners' motives for using the institutes. The truncated alternative continues “..time to perform”. (N=620)



Source: Web survey.

A specific motive among users of the regionally anchored institutes that was not an alternative in the survey, but that is mentioned in the interviews, is the importance of regional knowledge. A statement from an actor in the Norwegian regional or local public sector:

We work very closely with Agder Research nowadays. It is never about sending away money to them, we want on-going interaction. They are able to coordinate many activities because they know the region and the actors here. It is also good that they can combine local presence and coordination with empirical studies.

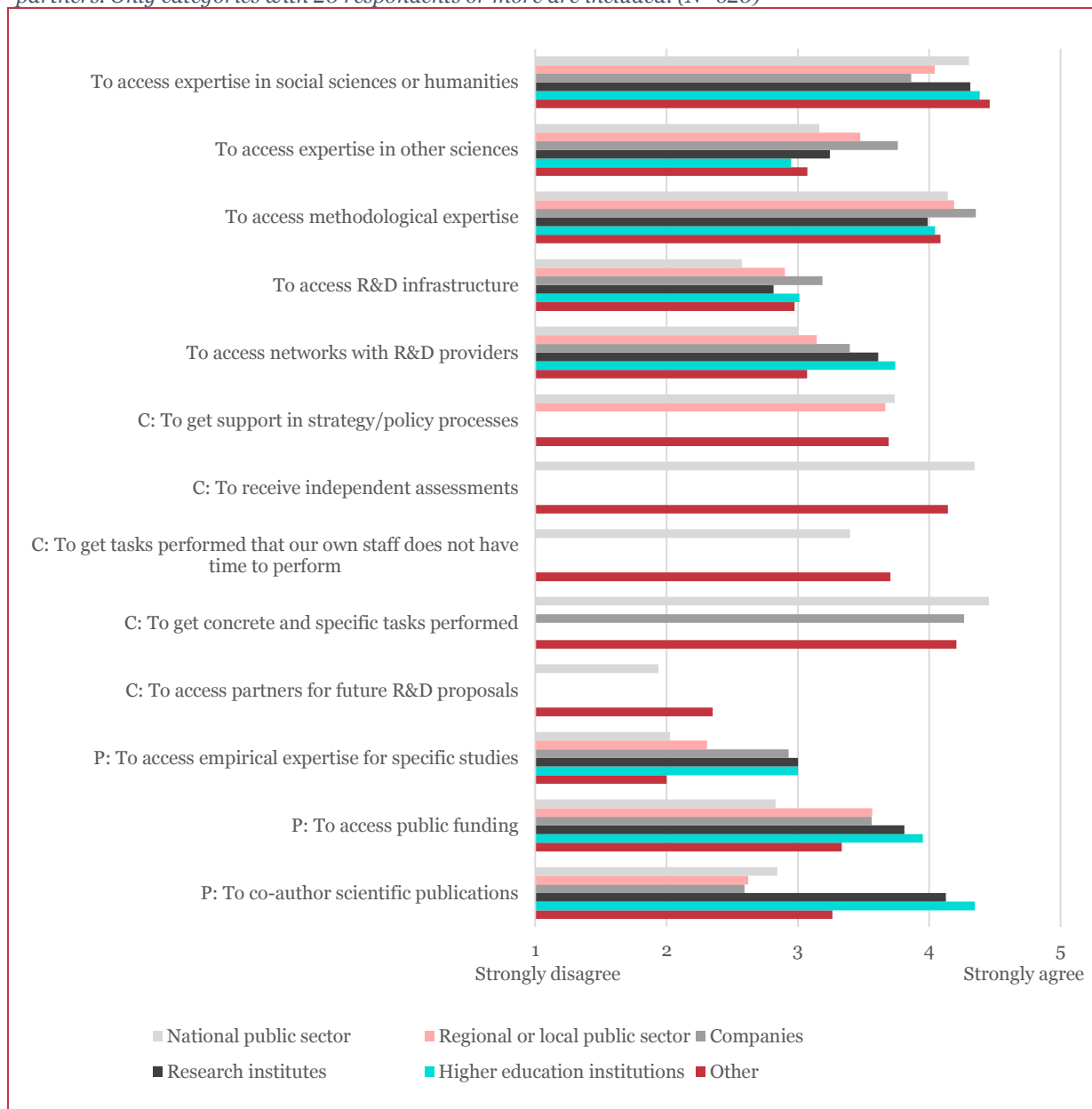
Several interviewees from regional public actors and national actors with specific regional interests also identify regionally anchored institutes as assets with often unique networks and knowledge about the region, which organisations located outside the region would find it almost impossible to develop.

Access to methodological expertise is an important motive for the users, regardless of organisation type. Four in five of both clients and partners agree to that motive. This is confirmed by interviewees; a representative example (from the national public sector in Norway):

A motive for buying services from IRIS is that it is creative and does not use 'standard methods'. By using its methodological knowledge, we have been able to produce interesting results.

More than four in five clients agree that getting concrete and specific tasks performed is an important motive. That picture is confirmed by the interviewees, who explain that concrete and specific tasks include, for example, performing evaluations, or providing well-specified documentation or data sets. Another important motive for clients is to receive independent assessments; about three in four agree that this is a motive.

Figure 2 Users' motives for using the institutes. Questions marked by C were only put to clients and by P only to partners. Only categories with 20 respondents or more are included. (N=620)



Source: Web survey.

The survey results indicate that clients generally enlist the institutes to access competences they do not have themselves. On the other hand, almost half of clients agree that ‘getting tasks performed that the organisation’s own staff does not have time to perform’ is a reason for buying services from an institute, and a number of interviewees from both the public and private sectors mention that they may have expertise and/or methodological competence to carry out tasks themselves. In the words of a representative of the analysis department in a government agency in Norway:

Our motives are primarily to obtain expertise in a specific area, or if we do not have the resources to do the task ourselves.

As expected, HEIs and research institutes state co-authoring of scientific publications as a motive for collaboration, and they also rate access to expertise and to public funding somewhat higher than other user categories. Users outside Norway are particularly interested in co-authoring scientific

publications. That is not surprising as foreign users typically collaborate with the institutes to access specific expertise, but also because R&D performers are over-represented among foreign users.

The only significant difference between clients and partners is the motive to access networks with R&D providers. Only six percent of clients strongly agree that this is a motive, while one in four partners do. However, some interviewees underline that access to *international* networks is a significant motive. These interviewees, who represent both private and public sectors, argue that it is important to access expertise through the institutes' wide-ranging, international networks with recognised scientists and experts. While this is mentioned by users of all institute groups, it is particularly emphasised by quite a few regional users of the regionally anchored institutes, who see the institutes as regional 'knowledge hubs' with spokes stretching nationally as well as internationally. A representative of a Norwegian regional public agency clarifies:

Nordland Research Institute knows what is going on both nationally and internationally. Its researchers can judge the quality of our work and indicate to what extent our activities are of international quality. [...] By conducting research on us they also market us nationally and internationally as forerunners.

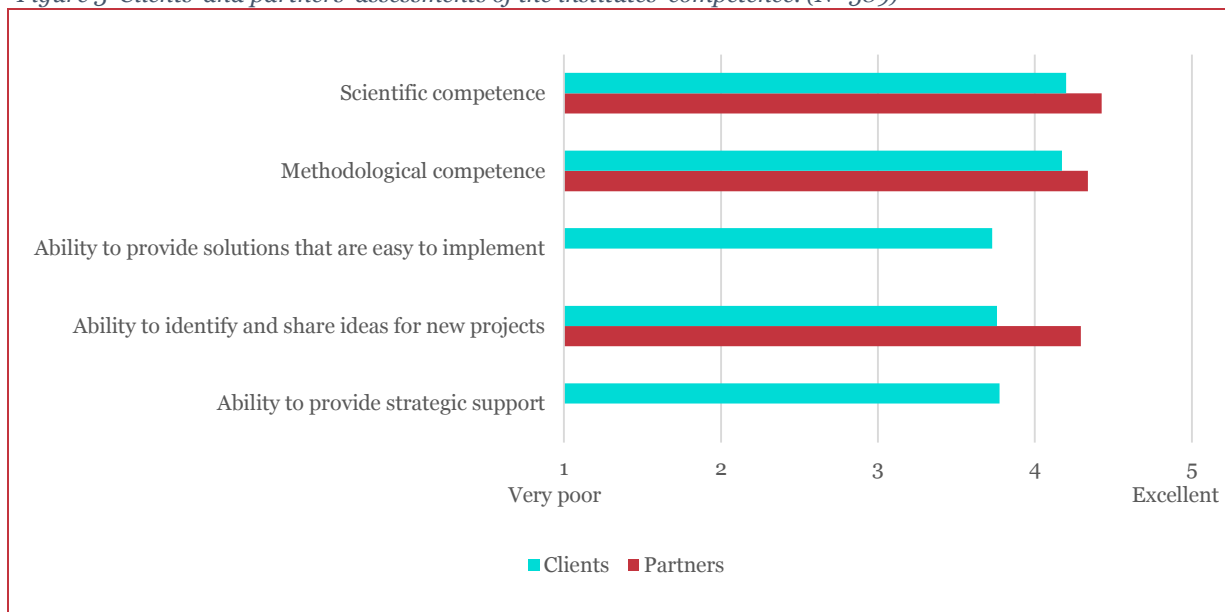
Main findings in section 2.1

- Accessing expertise are the most important motives for using the institutes. This concerns subject-specific expertise as well as methodological expertise, and in the case of regionally anchored institutes, region-specific knowledge
- Direct or indirect access to networks outside the users' own geographical reach is an important motive to some users for collaborating with or buying services from the institutes

2.2 Competence

This section presents the users' degree of satisfaction with the competence of the institutes, except for managerial competence, which is dealt with in section 2.3. As Figure 3 illustrates, the general view is that the institutes perform very well in terms of both scientific and methodological competence. Almost half of the users selected rate the scientific competence as excellent and almost 45 percent the methodological competence as excellent. Only a marginal share of users used one of the two lowest grades. Partners are generally slightly more satisfied than clients with the institutes' scientific competence. The largest difference between partners and clients is the ability to identify and share ideas for new projects, where almost half of partners opt for excellent, which only every seventh client did. One reason for this is probably that client assignments often consist of producing specific documentation or an evaluation, which are less open-ended than R&D projects.

Figure 3 Clients' and partners' assessments of the institutes' competence. (N=589)



Source: Web survey

The interviews support the positive picture of the institutes' scientific and methodological abilities. One interviewee from the national public sector in Norway comments:

The competence of Møreforskning is excellent. I am quite sure it is on a high international level. For instance, is it better than competing actors in Denmark and Sweden.

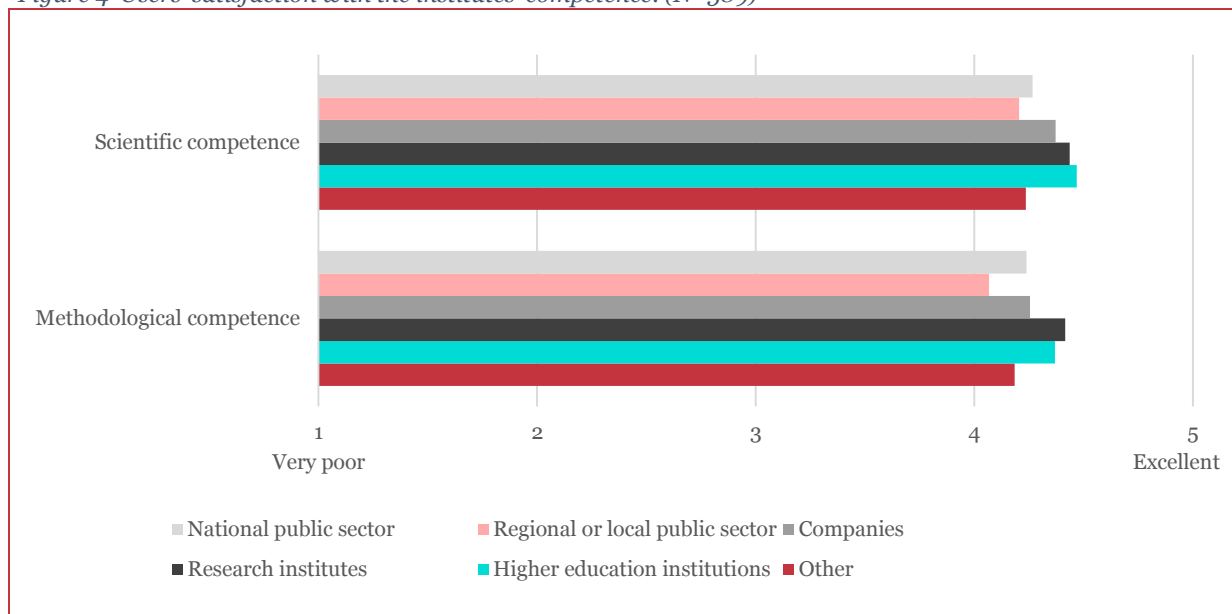
On the other hand, there are also a few negative remarks on institutes regarding their scientific and methodological competence. A Norwegian university partner to one of the regionally anchored institutes notes:

The scientific competence is not good enough. The institute has too few projects with RCN and too few scientific publications.

Several interviewees, talking about different institutes, also remark that the scientific skills vary too much between individuals.

Figure 4 shows how different user categories value the institutes' scientific and methodological competences. Without exception, all categories are highly satisfied with the institutes in these respects. Surprisingly, the user categories that one may expect have the highest level of scientific and methodological competence rate the institutes the highest, whereas one might have expected the most advanced users to be the most critical. One possible explanation may be that many institutes have developed R&D skills that are relatively generic and well suited for participation in academic environments, while users from practically oriented organisations are typically more interested in specific and context-related scientific competences and methods tailored towards specific objects of study.

Figure 4 Users' satisfaction with the institutes' competence. (N=589)



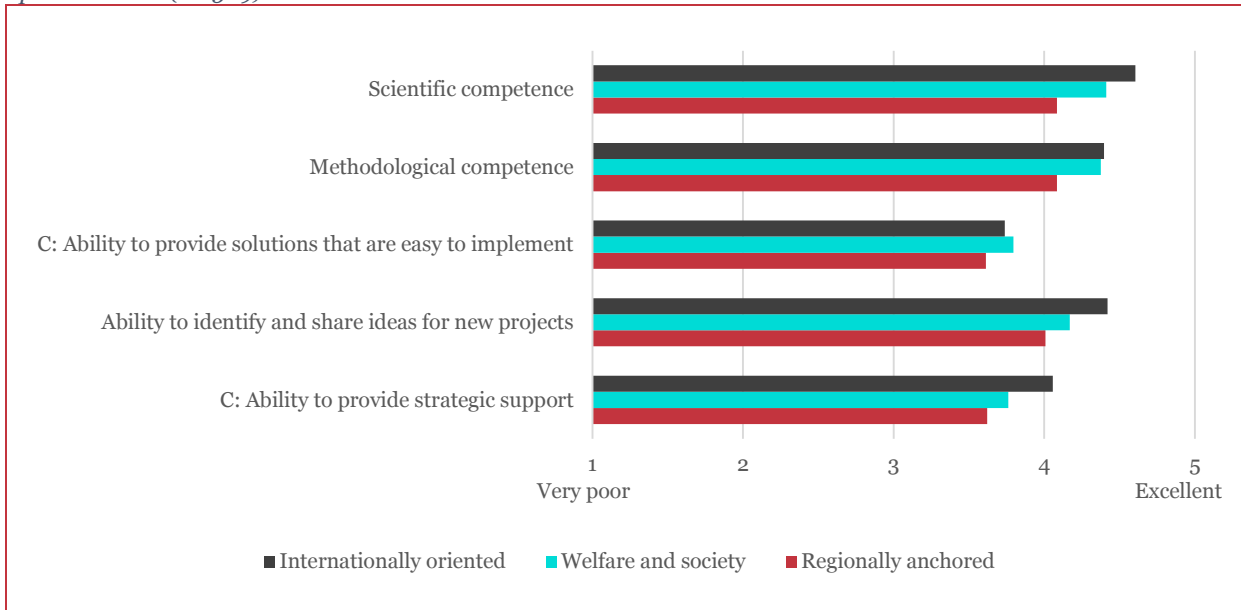
Source: Web survey.

As shown in Figure 5, internationally oriented institutes, which have more academic profiles and higher shares of R&D performers among their users, are rated higher than the other two groups. Institutes in welfare and society receive higher ratings than regionally anchored institutes. Seven in ten users of the internationally oriented institutes consider the respective institute's scientific competence to be 'excellent', compared to half of the users of the institutes in welfare and society and one third of the users of regionally anchored institutes.

Foreign users are more satisfied with the institutes' methodological and scientific competence than Norwegian ones. That is expected, since foreign users are likely to collaborate with the institutes because of their specific competences rather than because of where they are located. Foreign users are also dominated by institutions with rather academic profiles, in particular the users of the internationally oriented institutes. More than 60 percent of the foreign users consider the scientific and methodological competences as 'excellent', compared to around 40 percent of Norwegian users.

Figure 5 also shows the clients' assessments of the institutes' ability to provide solutions that are easy to implement, and their ability to provide strategic support, meaning to support the clients over and beyond providing R&D results. On these dimensions, the institutes receive lower scores. Almost no clients use the two lowest scores, but most respond 'satisfactory' or 'good', and around one in five selected 'do not know/not applicable'. The internationally oriented institutes have the highest score for all statements in Figure 5, except for their ability to provide solutions that are easy to implement. In this case, these institutes' academic profiles and complex subject matter are probably a negative factor. As an example, one interviewee, a client from a national public sector actor outside Norway, states that the institute had delivered a very academic report, which was only useful after it had been rewritten by the client.

Figure 5 Users' satisfaction with the institutes' competence by institute group. Questions marked by C were only put to clients. (N=589)



Source: Web survey.

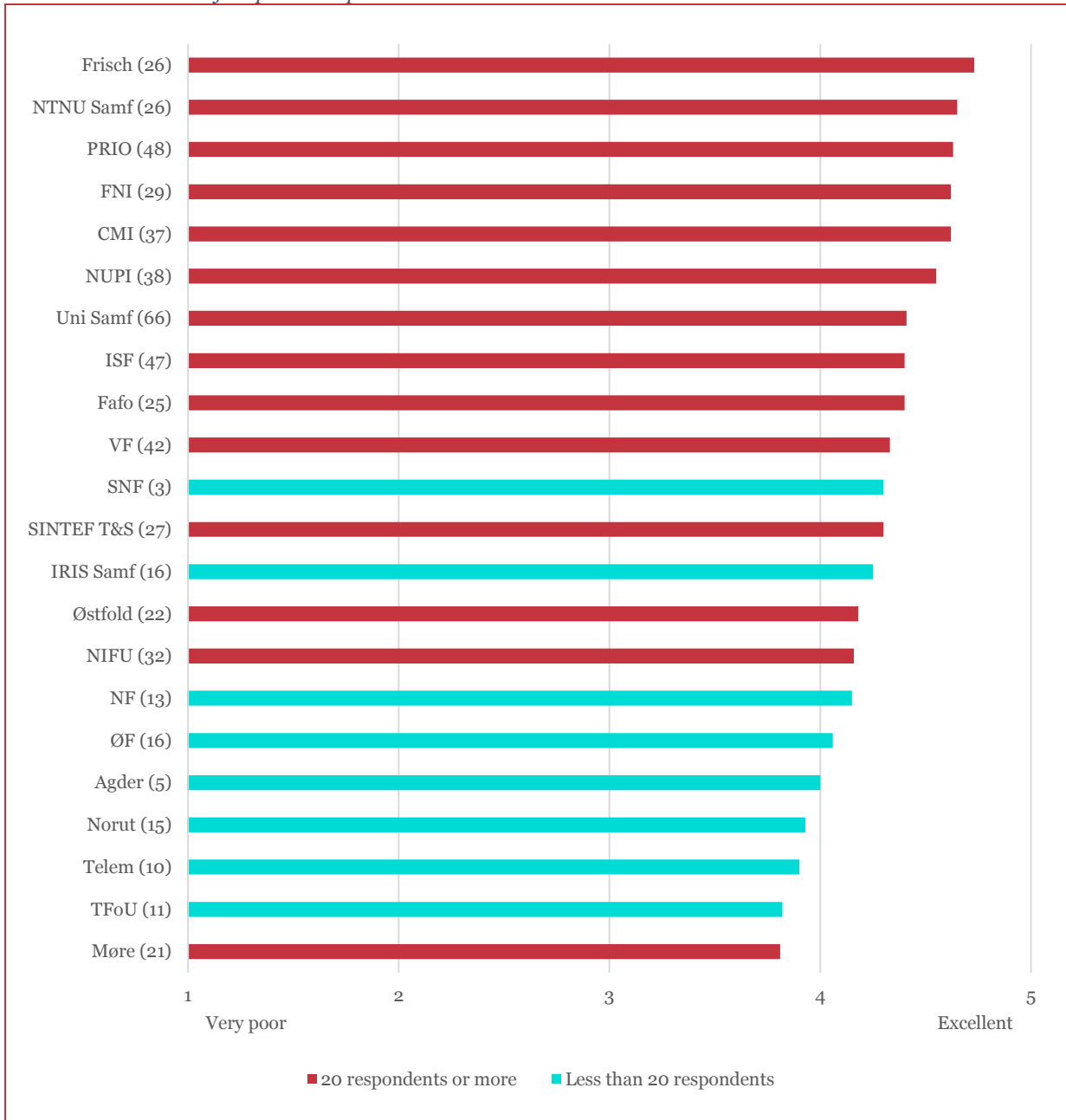
Figure 6 shows the users' assessments of the scientific competence in individual institutes. The data should be interpreted with caution, since some institutes have very few respondents, in particular Agder Research and SNF that have only five and three respondents, respectively.¹³ A number of institutes receive very high ratings on scientific competence, with Frisch Centre on top, but also NTNU Social Research, PRIO, FNI, CMI and NUPI have scores above 4.5, all with a satisfactory number of respondents. At the bottom, we find most of the regionally anchored institutes, although their ratings are in most cases less robust due to smaller number of responses. No institute stands out by receiving a higher share of 'poor' or 'very poor' ratings than others. In Table 9 in section 2.3 we correlate the users' assessments of the institutes' scientific competence with their numbers of researchers and their shares of commissioned research, showing robust correlations in both cases.

Figure 7 shows that users are highly satisfied with the institute personnel's collaborative and communicative abilities. More than 80 percent of survey respondents opt for the two top grades. Again, only very few respondents select one of the two lowest grades; most of these were users of regionally anchored institutes. Partners are slightly more satisfied with the institutes' personnel than clients, which is expected since partners typically have a closer interaction with the institutes than clients have. This is also reflected in interviews, which recount that long-standing relationships result in efficient and fruitful collaboration. HEIs and research institutes are more satisfied than other users as regards collaboration and communication issues, but also companies are, such as this Norwegian company client:

I think SNF was really good! The institute has a good structure with follow-up meetings. In addition, they were responsive to questions from us and other industrial representatives.

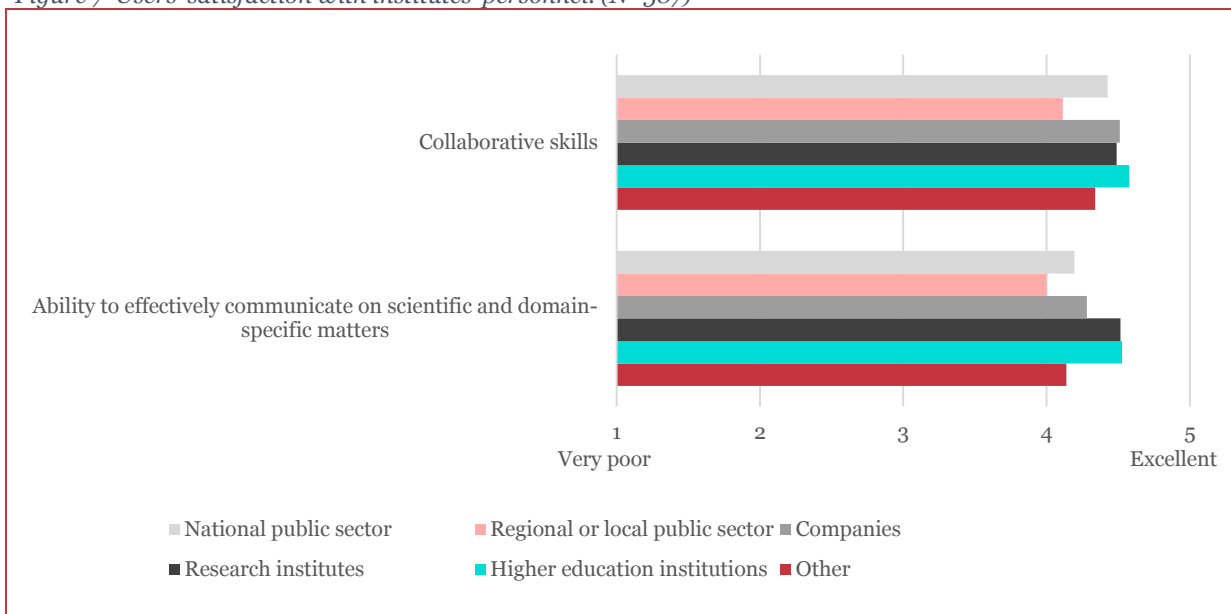
¹³ The reason for the very small number of responses for Agder and SNF is these institute users' low propensity to respond to the survey, and the fact that the ones that after all did respond did not answer this specific question.

Figure 6 Users' assessments of the scientific competence of individual institutes. The numbers in parenthesis indicate the number of respondents per institute.



Source: Web survey.

Figure 7 Users' satisfaction with institutes' personnel. (N=587)



Source: Web survey.

Some interviewees have been critical to institutes that merely want to finish assignments as soon as possible and get on with the next, but no institute stands out in that respect. A number of interviewees yet refer to collaboration and communication skills as weak points for the institutes, regardless of institute group. Besides project management, which is discussed in section 2.3, the criticism relates to the institutes' difficult position in-between academia and consultancies. One interviewee talks about poor presentation techniques and long reports with poor figures and tables:

Compared with several consultancies, there are quite a few institutes falling behind. The entire institute sector should become better at communication. We expect it, we live in 2016 now. Poor communication also makes the institutes less capable of supporting us with the implementation of the results they deliver.

We also surveyed clients about their perceptions of the institute personnel's client focus (not presented in any figure due to too few responses for many user categories). For the user categories combined, four in five respond with one of the two top grades and only five of 131 respondents opt for one of the two lowest grades. One rare negative comment from the survey:

The institute could be much better at client focus. They act a bit too busy and don't understand that we are clients who need full attention when we have commissioned a service.

Figure 8 shows the users' views on the institutes' challenges with respect to improving the usefulness of their R&D services. Please note that the scale in this figure should be interpreted differently than the previous (and subsequent) figures; a low average is in this case a better rating than a high. The low average ratings indicate that most users do not see any particularly severe challenges for the institutes to improve their usefulness. This is a result well in line with other parts of the survey, which portray a largely positive user population. There are no notable differences between user categories, for which reason we instead focus on differences between clients and partners.

Figure 8 Users' assessments of the institutes' challenges to improve the usefulness of their services. (N=547)



Source: Web survey

First and foremost, clients find that the institutes lack competence for practical implementation, which according to interviewees is primarily due to a lack of staff with experience of working in client-type organisations. More than a fifth of clients agree to the institutes lacking competence for practical implementation. In a comment that might have applied to quite a few other institutes as well, one client interviewee elaborates:

Norut is good theoretically and methodologically, but to some extent lacks the knowledge to transform the knowledge for practical use.

Some clients are also self-critical, with the second highest score going to lack of competence in the client's own organisation. This may be an underestimate, as some clients probably do not realise, or want to admit, that they may be a problem for the institutes. A bit unexpected, lack of user involvement is not highly rated; that would arguably be one of the most convenient ways to make services more useful. However, company representatives stand out on this point, with one in four either strongly agreeing or agreeing. One company user elaborates:

It is important for the institutes to be tight on the companies and to understand their needs. SNF needs to improve in this respect, but it is also important that the companies follow up on research projects and make resources available.

To be fair, other SNF interviewees and survey respondents give a completely different picture, stating that SNF is an exemplary partner due to its deep understanding of company matters.

Partners cite underfunded assignments as the most important challenge for the institutes to develop more useful services. Lack of scientific competence appears to be a certain challenge for the regionally

anchored institutes, as 21 percent of their partners agree on that point. Corresponding results for the internationally oriented and welfare and society institutes are seven and six percent, respectively.

Interviewees suggest that higher base funding, less strict rules for public procurement and less competition between institutes and with consultancies could improve the usefulness of the institutes' services, as all of these would give the institutes more resources and room to develop more long-standing links with their users. In the words of a representative of the Norwegian national public sector, who has experience of using four of the institutes:

The procurement system has a systemic weakness, as it makes the institutes afraid to talk and collaborate with each other.

Quite a significant number of interviewees say that they would like the institute in question to collaborate more with HEIs or other institutes than they presently do. This particularly concerns the regionally anchored institutes. Although those comments mostly focus on improved access to scientific and methodological competences and more stability in the organisations, improved usefulness is mentioned as well. One interviewee from the national public sector in Norway who has used the services of several institutes expresses:

Occasionally, we would like a deeper collaboration between the institutes, to cover up for their respective weaknesses.

Notably, only eight per cent of survey respondents find that lack of collaboration with other R&D providers is a challenge for the institutes to make their own services more useful. Staff turnover is not seen as a particular challenge for improving the usefulness of the institutes' services.

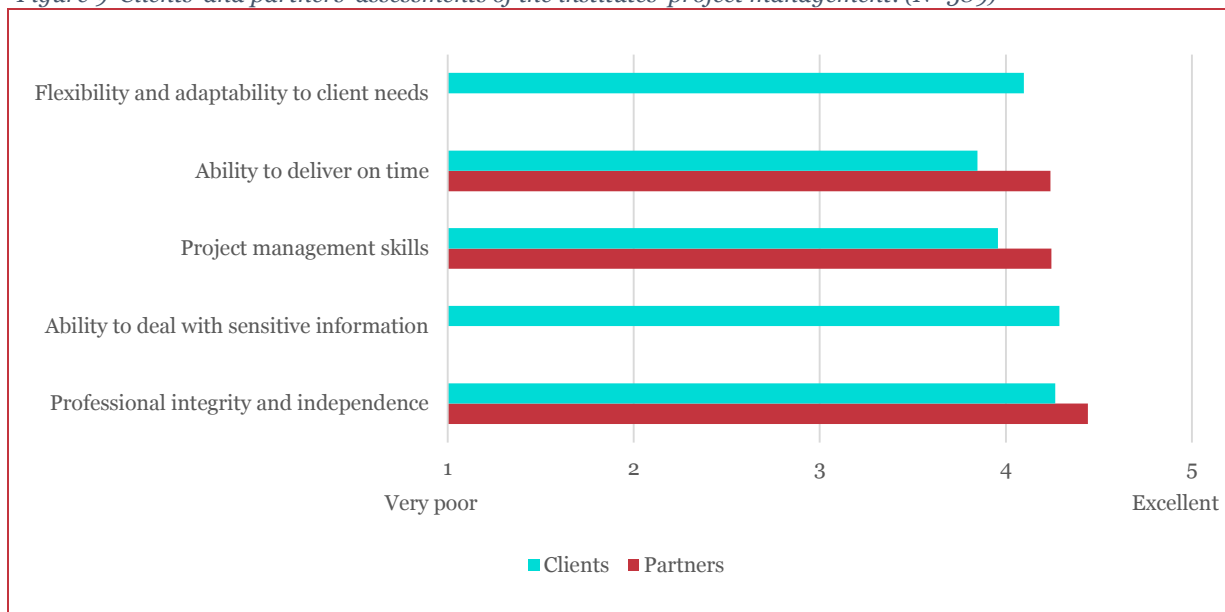
Main findings in section 2.2

- A large majority of the users are highly satisfied with the scientific and methodological competence of the institutes. The internationally oriented institutes receive the highest scores.
- A majority of the users are highly satisfied with the collaborative and communicative skills of the institutes
- The users give lower ratings on the institutes' abilities to provide strategic support and to support with implementation than on other dimensions, but it is not evident what the main reasons to this situation are

2.3 Management

The interviews indicate that management skills, especially project management skills, is a factor that matters when users choose which institute to cooperate with or to buy services from. Clients seem to value good project management skills higher than partners do. This is not surprising, since client projects tend to have tighter deadlines and it is possible that clients have higher demands that the deliveries are made on time. Interviewees consider good project management particularly important at the inception of projects, and in general appreciate an effective and positive relation with the institutes. Figure 9 shows that in general respondents are quite content with the institutes' ability to manage projects. Partners are slightly more satisfied than the clients. Clients are content with the institutes' flexibility and adaptability to client needs.

Figure 9 Clients' and partners' assessments of the institutes' project management. (N=589)



Source: Web survey.

It is important to take into consideration that the quality of the project management varies between individuals. One interviewee exemplifies this by talking about several projects that the organisation has commissioned to one institute, where the management has worked well in almost all cases, except for one project that is referred to as a management disaster. More than ten interviewees, company representatives as well as representatives from national, regional and local public organisations, have had similar experiences. Other issues include poor communication, typically because it was difficult to get a hold of the project leader. As indicated above, effective communication can make the difference between a successful and a failed project. Interviewees often link insufficient project management to some institutes being too dependent on single individuals, who often have too much to do.

Several survey respondents and at least one third of interviewees mention that institutes have not always delivered on time. However, if institutes indicate well in advance that they cannot keep a deadline, users are usually able to extend the deadline, which the interviewees describe as typically non-problematic. The problem occurs when there is no such advance warning. Interviewees often link this to institutes being short of staff capable of carrying out the work, and observe organisational bottlenecks. Once again, this is often linked to overloaded senior researchers. While several interviewees express an understanding, and acceptance, that this problem can occur, they also point to the need for senior researchers to spend considerable time writing tenders, which some of them identify as a systemic failure that is damaging for the institutes' capacity to contribute to their users.

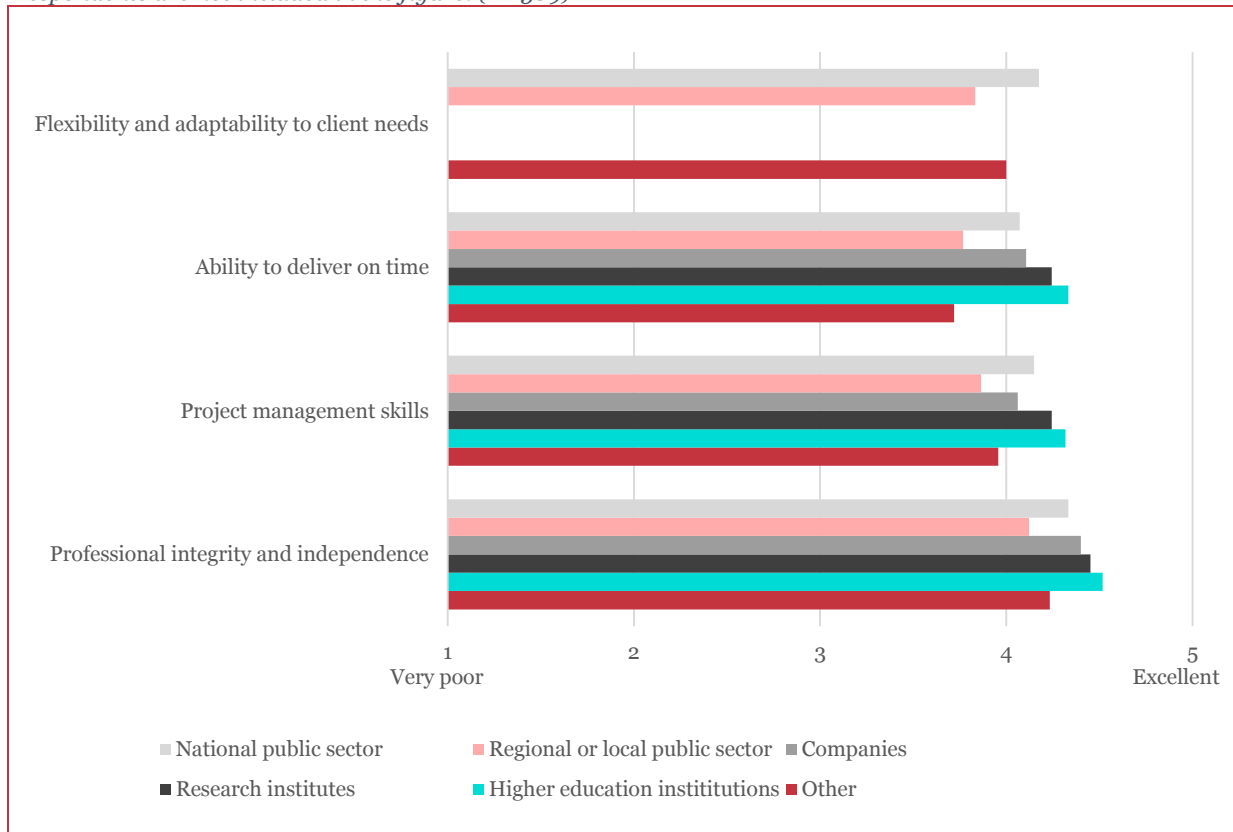
Professional integrity and independence is indeed important for users; it concerns the reliability of the institutes and to what extent their work is truly evidence-based, which is underlined by interviewees. As Figure 10 shows, the users are highly satisfied with the institutes in this regard. The interviews give the same picture with only a few remarks on integrity and independence. Notably, almost all interviewees on Fafo recognise the institute's labour union background, but none considers that having any impact on Fafo's professional integrity and independence today, and Fafo scores above average on that dimension in the web survey. Two interviewees make critical remarks about institutes losing integrity and independence following closer relationships with HEIs. In the words of one of them, from the national public sector in Norway:

Recently, several institutes have begun cooperating more with 'their' universities, which sometimes makes the institutes less independent. They get 'ideological', but

from the scientific side. You can see the interests and theoretical views of the professor who is on the team. This can lead to some issues being sidelined.

On the other hand, such situations are arguably natural, since evidence-based studies should be rooted in science, which in the case of the social science and humanities usually implies that several conflicting perspectives are represented in a certain field. The clients are overall pleased with the institutes' abilities to deal with sensitive information, and no interviewee mentions any example of unacceptable behaviour in that respect.

Figure 10 Users' assessments of the institutes' project management. User categories with less than 20 respondents are not included in the figure. (N=589)



Source: Web survey.

A number of interviewees observe that project management depends on the user's procurement skills, and consider it important that public organisations develop their procurement skills. We also asked partners about their degree of satisfaction with the institute as project coordinator. Three in four responded either excellent or good. This good review is underpinned by several free-text statements from the web survey:

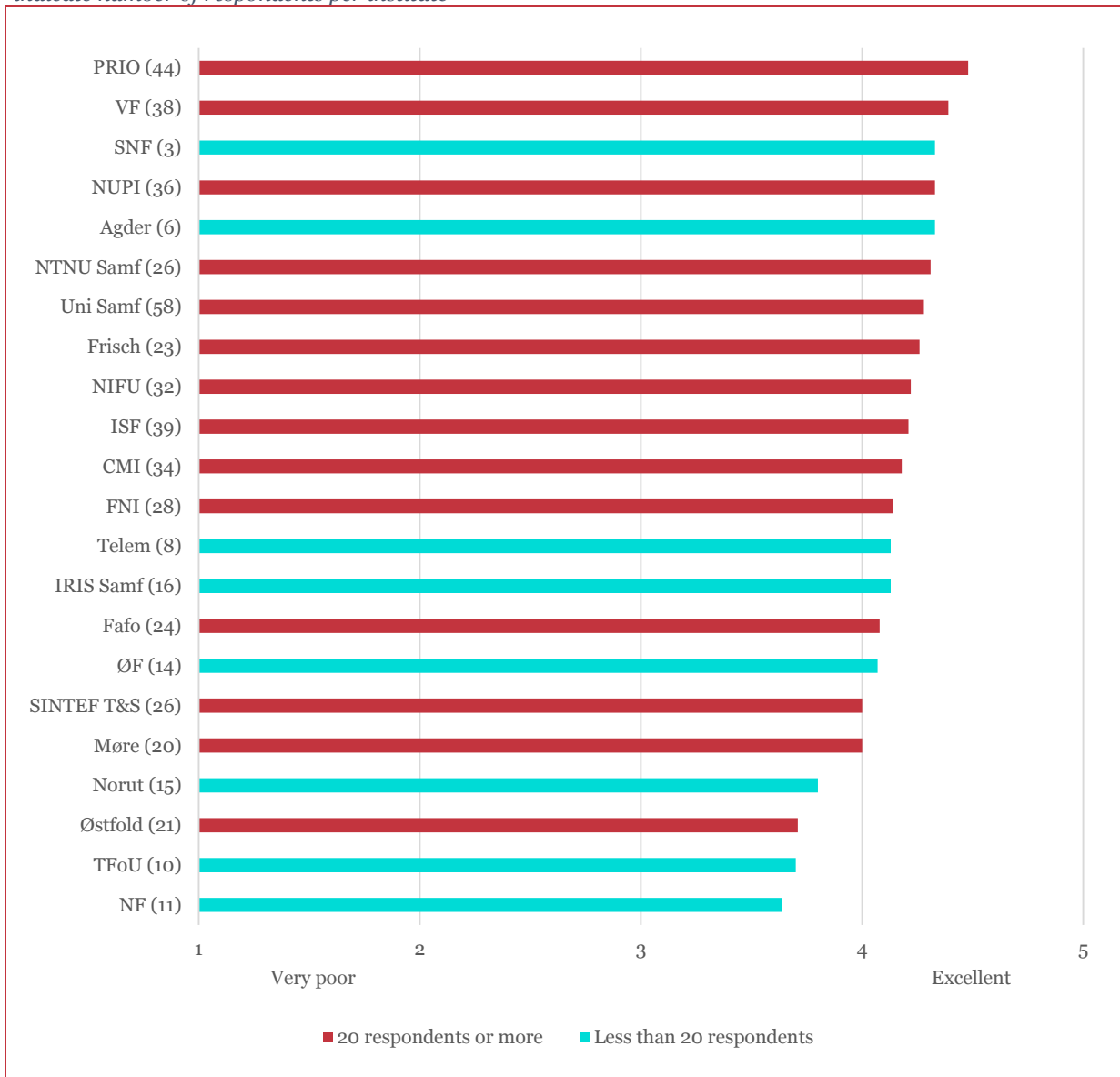
PRIO's coordinator is highly qualified as a researcher. Extremely generous and supportive. Really interested in real collaboration and integration of different points of views, types of expertise and experiences.

NUPI is one of the most professional and service-minded partners I have yet worked with.

There were also several negative statements. Figure 11 shows how users assess the project management skills of individual institutes. Since quite a few of the institutes had a low number of respondents, the figure should be read with caution. Less than 20 respondents indicate less robust results, and in particular SNF, Agder Research, and Telemark Research Institute stand out with tree,

six, and eight respondents respectively, followed by Trøndelag R&D and Nordland Research Institute with around ten respondents each. The users rate project management skills lower than they rated scientific competence (cf. Figure 6), but it is noteworthy that more or less the same institutes are to be found at the top and the bottom of both figures. PRIO receives the highest rating for project management followed by Western Norway Research Institute. All institutes except four receive average scores of four (good) or better. Again, we find most of the smaller, regionally anchored institutes in the bottom.

Figure 11 Users' assessments of the project management at single institutes. The numbers in parenthesis indicate number of respondents per institute



Source: Web survey.

To further investigate the accuracy between the stated correlations between the institutes’ sizes and the level of their project management, we conducted a Spearman rank correlation¹⁴ between the institutes. The correlation should however be interpreted with caution, in part because many institutes have relatively (or very) few responses in the web survey, and in part because many institutes receive more or less the same user ratings. As proxy for institute size, we used the number of researcher full-time equivalents (FTE) in 2014. As Table 9 shows, there is no significant correlation between the two variables. However, there is a strong negative correlation between an institute’s share of turnover for commissioned research (on the total turnover), i.e. that institutes with high shares of commissioned research are typically found at the bottom of Figure 11. A possible explanation may be that clients have higher demands on efficient project management than partners have.

Table 9 Correlations between institutes’ numbers of research FTEs and shares of commissioned research, and users’ assessments of the institutes’ scientific competence and project management (, ** and *** indicates statistical significance of 90%, 95% and 99% respectively).*

	Number of research FTEs (2014)	Share of commissioned research (2014)
Scientific competence	0.42*	-0.61***
Project management competence	0.29	-0.45**

Source: User survey and NIFU’s R&D statistics bank.

We also tested the correlations between number of researcher FTEs and the users’ assessment of the institutes’ scientific competence, and between the shares of commissioned research and their scientific competence. As Table 9 shows, these correlations are stronger than the ones on project management, and both are statistically significant. That is not surprising, as an institute’s scientific competence makes it more competitive, and thereby is able to attract more funding to employ more researchers. In particular, high scientific competence makes the institute more competitive when applying for funding from e.g. RCN and the European Commission.

Main findings in section 2.3

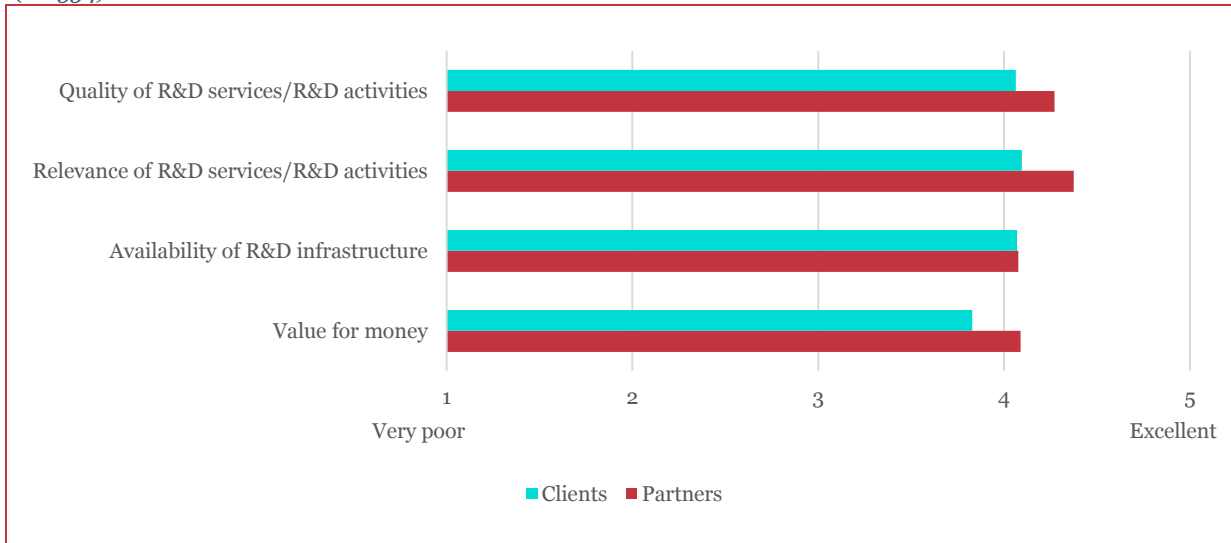
- Overall, the survey respondents are satisfied with the institutes’ project management and project cooperation. However, there is room for improvement.
- Issues relating to individual project leaders seem to be rather common. Several interviewees mention different bottlenecks linked to management, for instance, lack of communication or heavy workload which results in postponed deadlines
- Several interviewees, especially from public sector, emphasise procurement skills and that public organisations must become more skilled; “you get what you order”

2.4 Competitiveness

In the self-assessments that the institutes submitted prior to the evaluation, most institutes have observed fierce competition for research funding and in winning commissioned assignments. The institutes stated that the competition is mainly from HEIs, other institutes and from consultancies. However, many competitors are also partners in other projects. That mostly concerns HEIs and other research institutes, but sometimes consultancies as well.

¹⁴ A Spearman rank correlation is a non-parametric test that shows the correlation between two variables ranked in ascending order. In this case, the institute with the largest number of research FTEs was ranked 1, the second largest 2, and so on. Similarly, the institute with the highest rate on project management competence was ranked 1, etc.

Figure 12 Clients' and partners' assessments of the institutes' competitiveness. Clients were asked about the quality and relevance of R&D services; partners were asked about quality and relevance of R&D activities. (N=554)



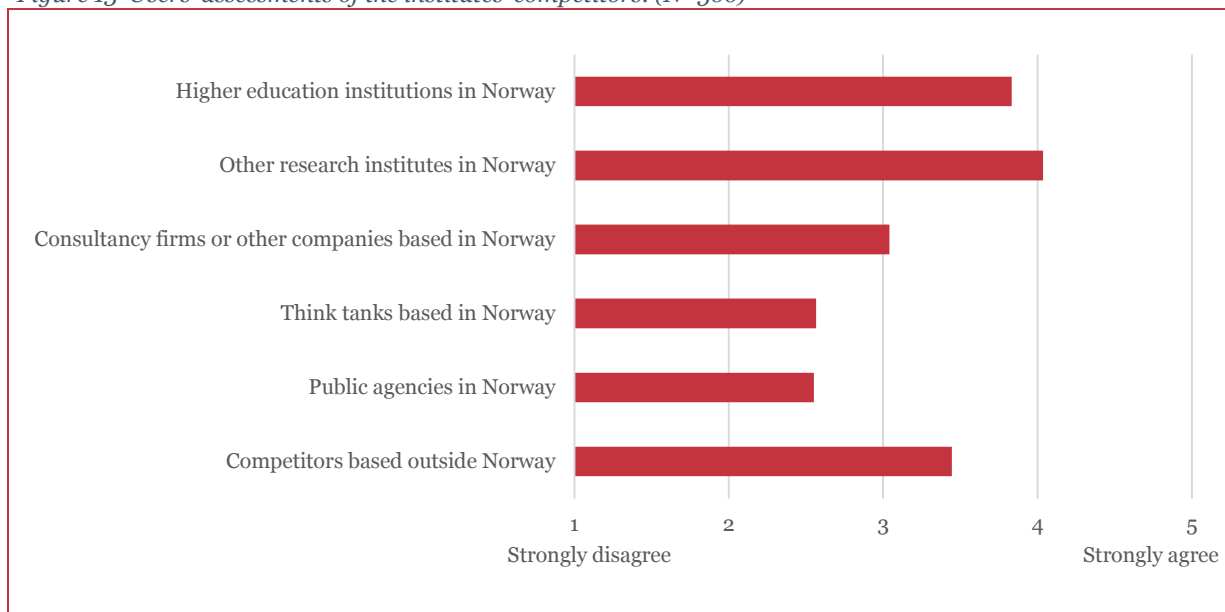
Source: Web survey.

Figure 12 shows that users are generally very pleased with the institutes' quality of R&D services/activities: almost four in five users give one of the two highest ratings. Partners from HEIs are the most satisfied user category, and foreign partners give higher ratings than Norwegian ones. Users of the regionally anchored institutes are less satisfied with the quality than users of the other institute groups. We posed the same question specifically about scientific competence, methodological competence, project management, ability to deliver on time, and professional integrity and independence, and these results were practically identical to the results for quality.

The response patterns for users' assessments of the relevance are also almost identical to their assessments of quality. This means that there are marginal differences between partners and clients, across user types, as well as for Norwegian and foreign users. Figure 12 also shows that the users' satisfaction with the institutes' R&D infrastructure is high. Half of all users opt for either good or excellent while a large share, 36 percent, responded do not know/not applicable. No institute group or user type stands out in any respect.

The question about value for money is intriguing, as it partly indicates the extent to which the institutes' performance leaves room for competition. We find that 60 percent of the users give the respective institute one of the two highest ratings, while 20 percent opt for 'do not know/not applicable'. Only four percent rate it as 'poor' or 'very poor'. There are no notable differences between Norwegian and foreign users. Partners rate the institutes' value for money higher than clients do, which is logical since they do not have to pay for the institutes' services, and there are no significant differences between users of different types. However, more users from companies than from other user types opt for one of the two top grades (76 percent), but company users are also overrepresented among the dissatisfied users with 10 percent rating the respective institute's value for money as 'poor' or 'very poor'. Perhaps surprisingly, given the patterns of scientific competence and project management in the previous section, and on quality and relevance above, there are only minor differences between the users of the three institute groups. The interviews confirm the picture from the survey.

Figure 13 Users' assessments of the institutes' competitors. (N=566)



Source: Web survey

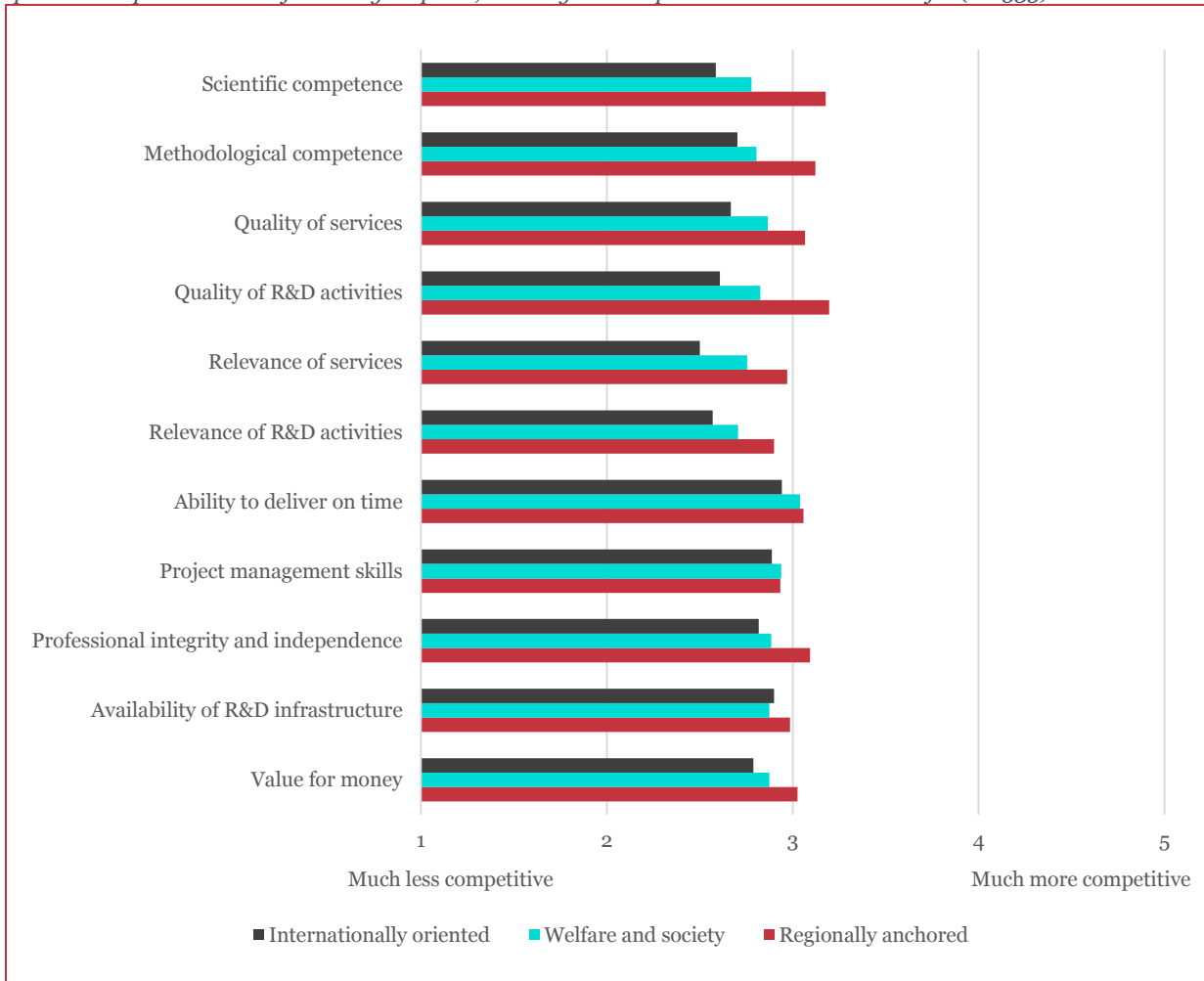
Figure 13 shows that, according to the survey respondents, the institutes' main competitors are other research institutes in Norway followed by HEIs in Norway; 71 and 65 percent, respectively, of users agree on that. The third highest average score is for competitors outside Norway, followed by consultancies or other companies based in Norway. Results are almost identical between the institute groups regarding competition from other research institutes in Norway, while institutes in welfare and society are perceived to face slightly more competition from HEIs in Norway than the other two groups. As expected, internationally oriented institutes are rated as having significantly higher competition from actors outside Norway. These institutes are also perceived to face more competition from think tanks in Norway than the other two groups. Users find that consultancies or other companies based in Norway are significantly more important competitors to regionally anchored institutes than the other two, and more important competitors to institutes in welfare and society than internationally oriented institutes. The interviewees confirm the pattern in the figure.

Figure 14 shows the users' assessment of Norwegian competitors compared with the institutes on different dimensions. Please note this figure should be interpreted differently than previous figures; a short bar is a positive result for the institutes. Almost without exception, 'equally competitive' (3 in the figure) and 'do not know/not applicable' represent the (by far) highest shares of responses per alternative. Consequently, most bars in the figure represent averages around three. The internationally oriented institutes receive the best ratings on almost all dimensions, followed by the institutes in welfare and society.

The interviewees confirm the picture of the institutes' competitiveness being satisfactory, and in some aspects good or even very good. However, some see room for improvement regarding the scientific and methodological competence, and one of them comments on the challenges that institutes have when they are forced to rely a lot on commissioned R&D services:

How can Uni Research and the other institutes build research competence while competing on the commission market?

Figure 14 Users' assessment of the institutes' competitiveness. C represents only client responses, and P only partner responses. In the following respects, Norwegian competitors are... ..in terms of... (N=535)



Source: Web survey.

As mentioned in section 2.2, quite a few interviewees remark that the competence varies too much between individuals. It is particularly important to maintain a high competence level for some institutes, for instance for NIFU, which works with education, research and innovation, with users who often have high competence. One interviewee, who gives a very positive assessment of NIFU, states:

NIFU is indeed vulnerable. The institute must maintain the level of competence. It is for instance crucial for them to have staff with PhDs in order to be legitimate towards the higher education sector.

Quite a few interviewees reflect on the size of the institutes, arguing that some of them are too small and this can be a challenge to their long-term competitiveness. The interviewees in particular point at high dependence on a few key individuals. An interviewee from the Norwegian national public sector elaborates:

We have raised concerns whether smaller institutes can be assigned larger projects. It is too uncertain whether they deliver because their number of employees is too small.

To compensate for this concern, and to build scientific competence, many institutes have deepened their collaboration with HEIs. One interviewee from the regional public sector reflects on that:

We have a challenge understanding who actually works at Agder Research. People move between the institute and the University of Agder. If one senior individual moves, a whole competence area may more or less disappear from the institute. In addition, we find it difficult to handle Professor IIs. Agder Research uses them in tenders, but we know that they only work 20 percent of their time at the institute. It is very difficult to understand if they will actually contribute a lot in the assignment. This is very difficult to handle in the procurement process. Do we dare use them? We take a risk. To be fair, Agder Research is far from the only institute where this applies.

That resonates with a handful of other interviewees, who observe that closer collaboration between regionally anchored institutes and their respective regional HEI has resulted in several senior institute researchers moving from the institute to the HEI, while the mobility of staff in the other direction has been lower. A couple of interviewees also discuss about opportunities for institutes to form alliances with each other, and one interviewee from the Norwegian national public sector observes that the two leading institutes in his field almost always collaborate with each other in commissioned assignments. There are also interviewees who suggest that small institutes should drop some of the areas where their competitiveness is weak, and instead invest in areas where they are stronger, to create more critical mass and be able to compete in new markets.

Main findings in section 2.4

- Higher education institutions and other research institutes are the main competitors to the institutes. Regionally anchored institutes face significantly more competition from consultancy firms and other companies than the other two institute groups do.
- The institutes' competence and quality and relevance of services are most often regarded as equally competitive to Norwegian and foreign competitors
- The users are generally satisfied with the value for money of working with the institutes.

3 Impact assessment

Our sources of empirical evidence on impact of the institutes' R&D are the case descriptions in the institutes' self-assessments, web survey data and interviews. There is an important difference between these sources in that the self-assessments provide the institutes' own views, whereas the web survey and the interviews are their users' views. The impact cases elaborated on in the text boxes of section 3.2 (and in Appendix A) build on the descriptions of the information from the self-assessments that we have complemented through additional document studies and interviews. Through these further investigations, we have sought to verify the institutes' allegations, but it should be borne in mind that the impact cases nevertheless constitute a very positive selection. The first three sections of this chapter predominantly present our empirical evidence with limited analyses only, whereas section 3.4 summarises our finding on impact and attempts to place them within a typological framework.

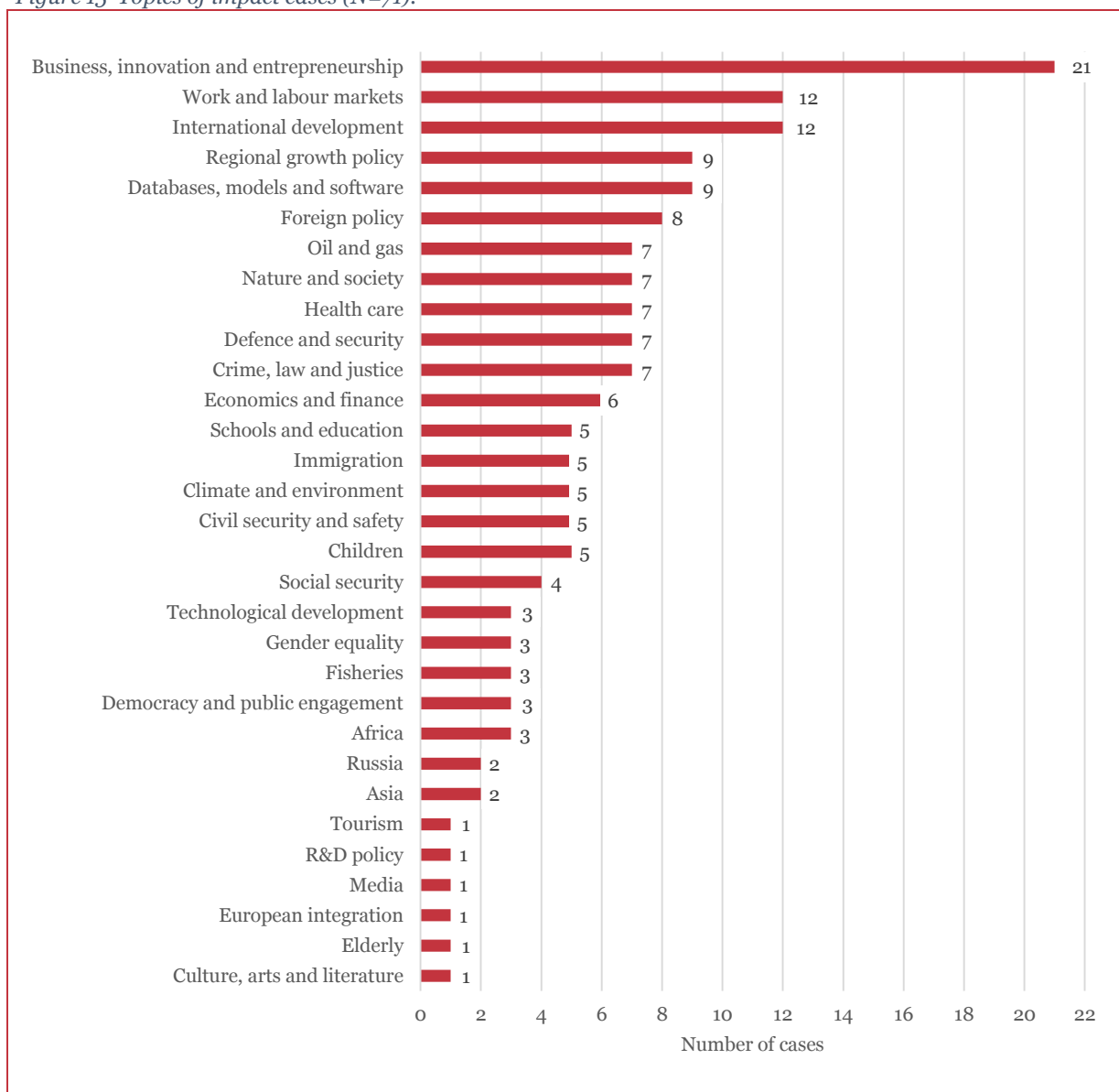
3.1 Overview of impact cases

As described in Chapter 1, the institutes were allowed to submit a maximum of one case per ten researcher years (full-time equivalents). This resulted in between one and seven cases per institute, and a total of 71 cases. These are of very variable quality. Around ten cases are concise and to the point and describe the impact well, while some are very poor in terms of narrative and/or whether it is even possible to understand what the impact is supposed to be. The majority of cases lie somewhere in between these two extremes. RCN's exercise is inspired by the 2014 British REF, wherein cases in general were very ambitious. It is thus evident that most of the social science institutes have not taken RCN's evaluation equally seriously. This may of course be due to the fact that for these institutes less is at stake than it was for the British institutions.

We classified all cases in terms of topics, beneficiary types and geographical reach of the impact. Each case could be classified into up to three topics and three beneficiary types (on average, cases were classified in 2.3 topics and 2.3 beneficiary types), but only one geographical reach. The classification into up to three topics and beneficiary types implied no ranking. In classifying cases onto topics and beneficiary types, we departed from the REF exercise, wherein almost 6,700 cases were classified. With only a hundredth as many cases, we had reason to both eliminate some topics (for lack of cases) and add some that we felt were missing, mainly due to the differences in national contexts. We similarly had reason to adapt the number of beneficiary types by combining REF categories into broader categories, by introducing some new ones and by dividing one category into three. The classification exercise is further described in Appendix B.

The outcome in terms of impact topics is summarised in Figure 15. The dominance of the business, innovation and entrepreneurship topic is obvious, which is in part explained by the fact that it is a very broad one. The following three topics nicely reflect the three institute groups (welfare and society, internationally oriented, and regionally anchored institutes, respectively). Foreign policy and defence, and security are also high on the list, which is not surprising given the activities of the internationally oriented institutes. Seven cases concern the oil and gas sector, almost exclusively on issues related to safety and security. There are altogether quite a few issues related to welfare represented on the list, but mostly in relatively small numbers of cases per topic.

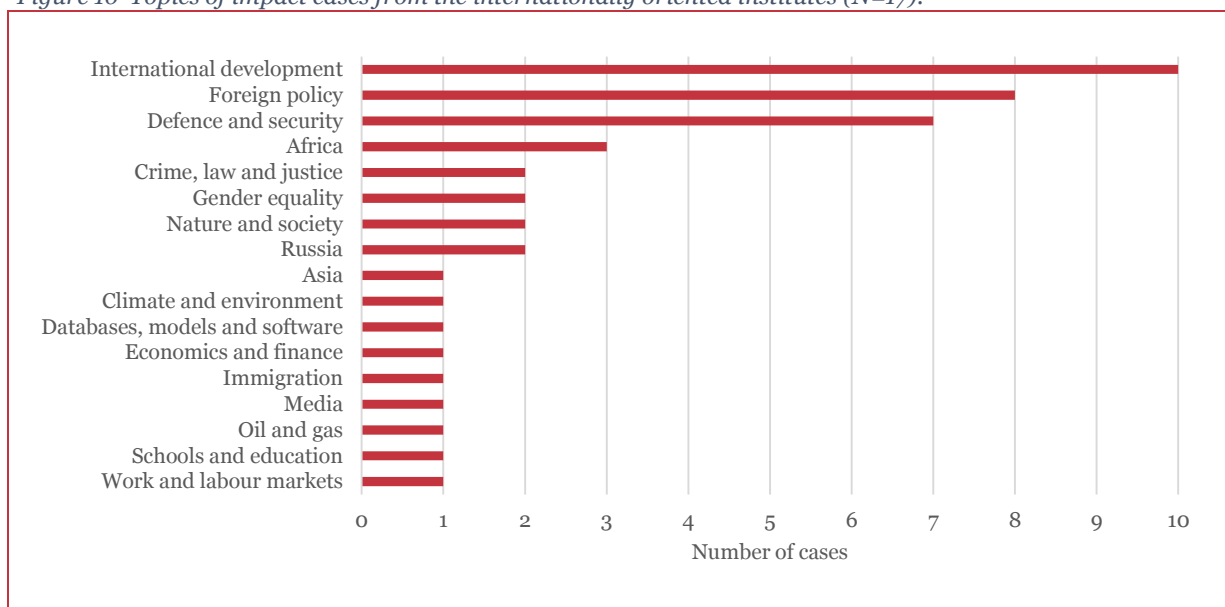
Figure 15 Topics of impact cases (N=71).



Source: Institute self-assessments.

Taking a closer look at the impact cases, we see that there are quite significant differences between the three institute groups. Figure 16 shows that the cases from the internationally oriented institutes mainly belong to the topics of international development, foreign policy, defence and security, and other parts of the world (Africa, Russia and Asia). These topics are nearly completely absent for the other two institute groups (there are only two cases on international development and one on Asia from the institutes in welfare and society). We may furthermore note the internationally oriented institutes have not reported a single case related to the biggest category overall (business, innovation and entrepreneurship) and none to regional growth policy or health care.

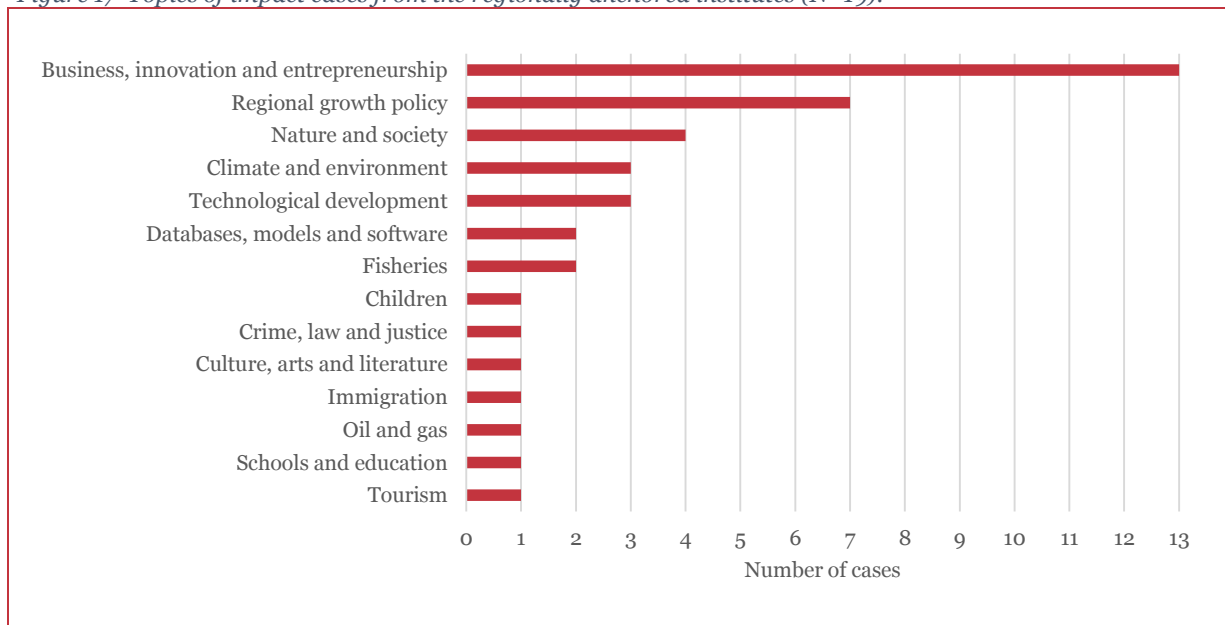
Figure 16 Topics of impact cases from the internationally oriented institutes (N=17).



Source: Institute self-assessments.

The impact cases of the regionally anchored institutes of course show a completely different pattern. Figure 17 illustrates that their focus is very strongly on stimulating business and regional growth, as well as to on nature and the environment. We may note that these institutes have no case in the topics of foreign policy or international development. The difference from the internationally oriented institutes is stark, but entirely logical given their very different profiles.

Figure 17 Topics of impact cases from the regionally anchored institutes (N=19).

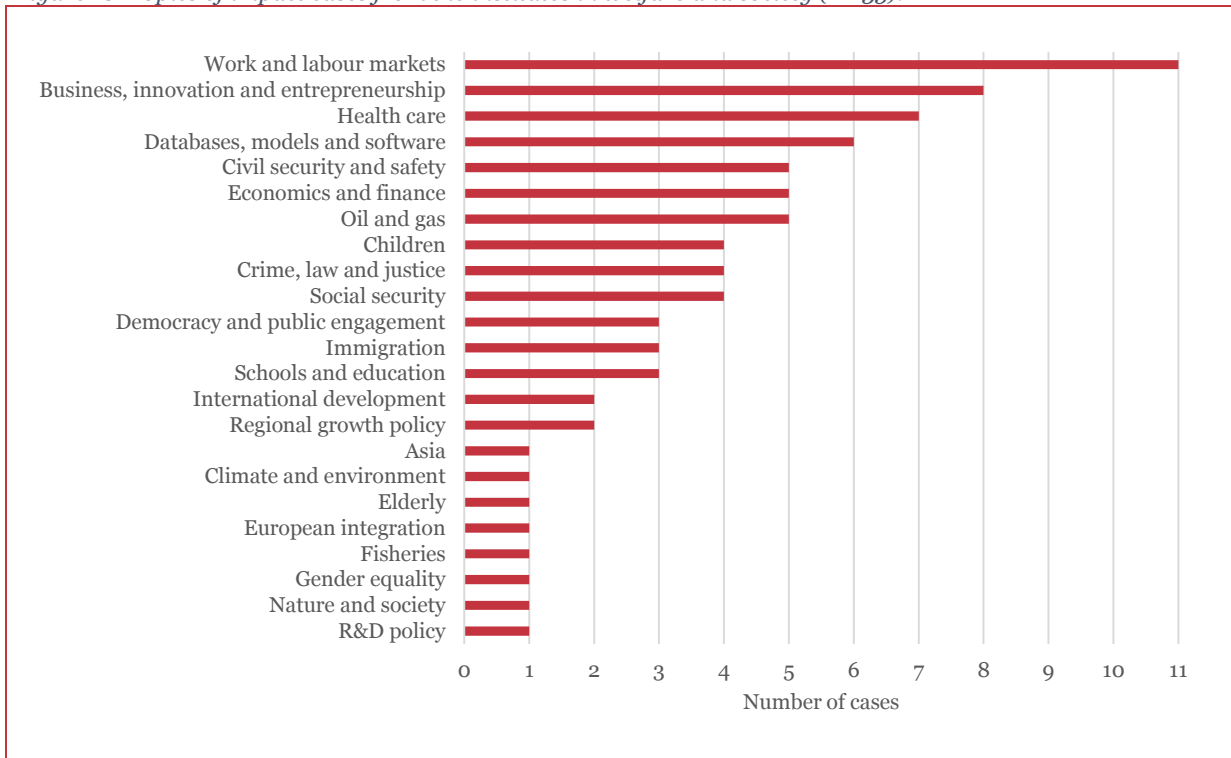


Source: Institute self-assessments.

The institutes in welfare and society seem to have the broadest scope in terms of topics, see Figure 18, but this is in part due to them having submitted equally as many cases as the other two institute groups together. Having said that, there is little doubt that the institutes in welfare and society collectively are broader; witness the concentration to a small handful of topics for the two

aforementioned groups, and compare that with the breadth of Figure 18. The impact cases of the institutes in welfare and society are mainly concentrated to work and labour markets; business, innovation and entrepreneurship; health care; databases, models and software; civil security and safety; economics and finance; and oil and gas. These institutes are alone in having cases in the topics of health care; civil security and safety; and social security; and have no cases in foreign policy or defence and security.

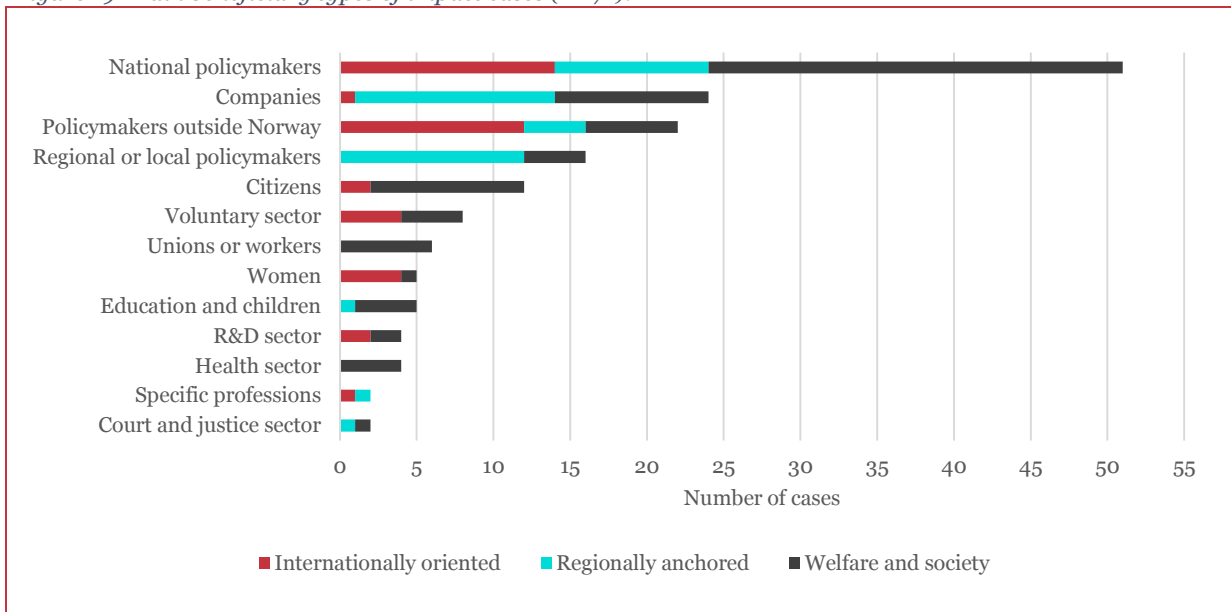
Figure 18 Topics of impact cases from the institutes in welfare and society (N=35).



Source: Institute self-assessments.

Figure 19 clearly shows that most beneficiaries are to be found among policymakers. A third of beneficiaries are national Norwegian policymakers and a tenth are regional and local policymakers in Norway, whereas every seventh is a foreign policymaker. Coincidentally, the REF beneficiary type that had so many cases that we thought it best to split it in three was ‘policymakers’. While the social science institutes mainly cater to the public sector, it is noteworthy that companies are beneficiaries in 15 percent of the cases, although this is perhaps not surprising with the dominance of the business, innovation and entrepreneurship topic of previous figures. The company beneficiaries are found in a range of sectors, from oil and gas to tourism. We see that all institute groups have cases with beneficiaries in the top three beneficiary types, but for all other types at least one group is ‘missing’. We were conservative in our classification and only included beneficiaries that in the self-assessments were explicitly stated to be beneficiaries, which explains why ‘only’ twelve cases have citizens as beneficiaries.

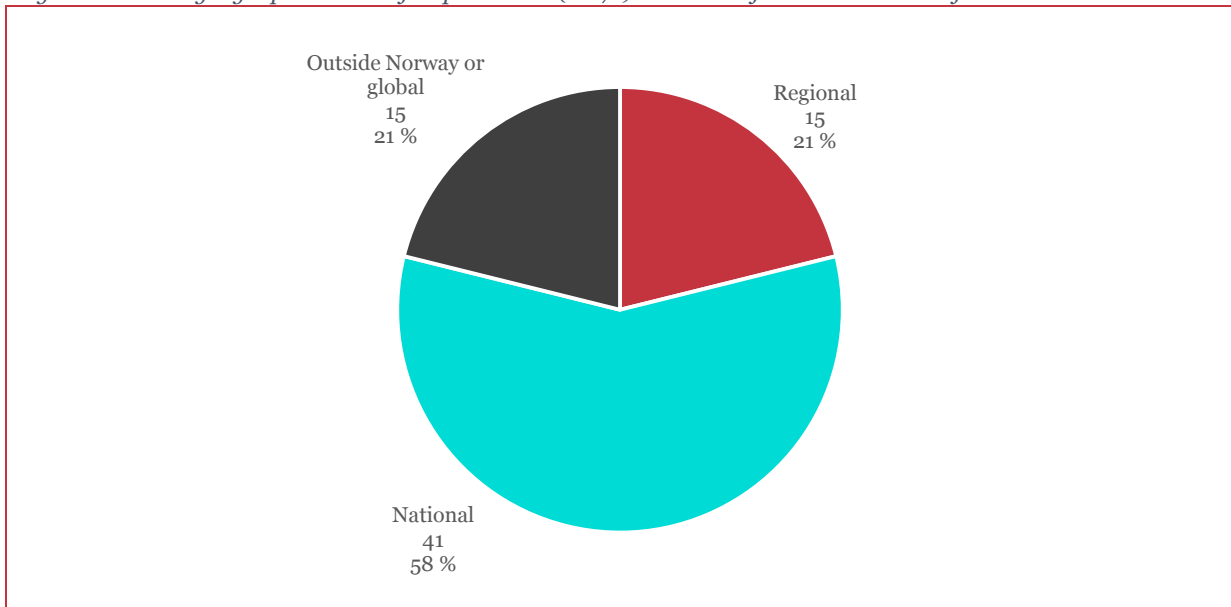
Figure 19 Main beneficiary types of impact cases (N=71).



Source: Institute self-assessments.

Figure 20 illustrates that the impact of the vast majority of cases (79%) is felt in Norway. Once again, we recognise the three institute groups, and most clearly the regionally anchored and internationally oriented institutes. However, this geographic distribution is probably not entirely representative of the reach of the social science institutes’ impact; we suspect that the institutes mostly have chosen to highlight Norwegian cases since it is was RCN that posed the question, meaning that it is likely that their impact is reality somewhat more international than this figure suggests. It is also possible that the institutes chose to display cases of national rather than regional impact.

Figure 20 Main geographic reach of impact cases (N=71). Number of cases and share of total.



Source: Institute self-assessments.

3.2 Impact cases

Appendix A comprises descriptions of 15 impact cases that largely build on the institutes' self-assessments, complemented by additional document studies and interviews to verify or complement the information from the self-assessments. These cases were selected because we found them particularly well presented, well underpinned by evidence and references, and because they provide a fair picture of the total population of cases. This selection does not imply that these cases are more important than the others in terms of impact significance or reach. In this section, we have organised a more superficial description of a larger number of cases (still based on the institutes' self-assessments) under seven broad topic headings, which we have tried further to exemplify with a few case descriptions in text boxes.

3.2.1 *Impact on business, innovation and entrepreneurship*

Quite a number of institutes report impact that relates to regional innovation support. Agder Research has through many years of research, strategic advice and process coordination contributed to new and improved instruments for regional innovation policy. The institute has in particular made impact through developing and managing cluster projects and R&D programmes on the regional level. The institute reports that its work has had an impact on Innovation Norway's development of contracts, guidelines, evaluation plans, new programmes etc. Similarly, Trøndelag R&D has for a long time conducted R&D on favourable conditions for innovation, using regional innovation systems and cluster approaches. It has also acted as advisor, coordinator and knowledge broker in the regional innovation policy networks. The institute reports that it has contributed to regional policies that support a number of sectors, for instance wood, food and experience-based tourism, and to the establishment of a number of new projects.

IRIS reports impact through many years of industrial analysis in Western Norway. On behalf of Norges Bank, the institute every year conducts interviews with the 400 key enterprises that contribute to Norges Bank's annual report on monetary policy. Also Agder Research and Eastern Norway Research Institute contribute to the report.¹⁵ IRIS has also contributed with new knowledge on employees in the offshore sector, the regional dependence on the petroleum sector, and contributed to a possible improvement of the methodology for annual national accounts per county. Telemark Research Institute reports that the institute has developed methods and tools for analysing and monitoring 'the growth of places'. The institute has particularly worked with analysing factors that contribute to increased employment, and places' attractiveness. According to Telemark Research Institute, the methods and tools have been used by a significant number of municipalities and county municipalities in their development of local and regional development policies.

Other institutes claim societal impact in more specific parts of regional development and innovation areas. Western Norway Research Institute has conducted R&D specifically focused on ICT and regional innovation, and made impact particularly through IT-forum Sogn og Fjordane, which was established in 1995 and functions as a broad platform that gathers actors from all sectors to secure that the region of Sogn og Fjordane is in the forefront of using ICT. The forum is described in our interviews as very successful. Western Norway Research Institute has for a very long time acted as secretariat and coordinator for the forum. A range of regional development projects are connected to the forum, and the institute reports that the forum has been a key factor behind the region's ability to attract NOK300m in investments related to digital infrastructure.

¹⁵ "Regionalt nettverk", Norges Bank 2016-06-19, <http://www.norges-bank.no/pengepolitikk/fakta-om-regionalt-nettverk/>

Impact case: Gode Sirklar AS (SINTEF Technology and Society)

Gode Sirklar AS is a company set up by the Fjell, Sund and Øygarden municipalities to boost local industry. SINTEF Technology and Society has on behalf of the municipalities been running Gode Sirklar since its inception in 2005, with the role of providing relevant knowledge and R&D and to make use of SINTEF's extensive network in the establishment and implementation of projects. It has provided a director who has worked full-time for the company. All other work has been carried out by staff working on shorter terms as project leaders for specific assignments. An evaluation of Gode Sirklar in 2010 calls it 'a formidable success', a statement that echoes through the interview with a key municipality representative. Impact includes:

- The establishment of what today is GCE Subsea, a centre of expertise in underwater technology for the oil and gas sector, supported through the Norwegian Innovation Clusters programme
- Large projects in developing education at all levels, from kindergarten to tertiary education. The main focus has been on 'practice-based learning' through collaboration between schools and local industry
- Attracting substantial external funding to run projects. In the period 2005–2010, Gode Sirklar attracted around NOK100m in external project funding
- As a partner with a good reputation and network, SINTEF has opened many doors for the municipalities, enabling them to work with partners they otherwise would not have had access to
- A significant boost for municipal leadership and competence. As a spin-off to Gode Sirklar, Fjell municipality has signed an agreement with SINTEF that includes the municipal leadership going to Trondheim once every one or two years to meet the SINTEF group, which according to an interviewee has led to a 'tremendous change' in how the municipality works

Eastern Norway Research Institute has during the last 10–15 years carried out a broad spectrum of analyses on regional development in mountainous and peripheral areas. The studies have particularly focused on what it means that land is increasingly being used for recreation and less and less for farming. The institute participates in EU-funded projects in this field. The institute reports that it has influenced policies directed towards mountainous and peripheral areas, including how these areas shall be defined. The institute also evaluated Statskog SF, which made the state enterprise change how it handles complaints. Eastern Norway Research Institute has also contributed to numerous local and regional development plans for this type of areas, and established two websites that brings stakeholders in Norway together and disseminates knowledge.

Norut conducted an ongoing evaluation of the gas field Snøhvit outside Hammerfest between 2002 and 2008, and since 2009 the institute does the same for the Goliat oil field in the Norwegian part of Barents sea. One impact was to show how a break-up of Statoil's contract regimes into smaller lots could stimulate participation from companies in the Finnmark region, and another to provide evidence that the regional economic impact from the Snøhvit establishment was considerably underestimated in national analyses, which led to adjustments of regional economic policies.

3.2.2 Impact in specific industrial sectors

Several institutes report impact on safety and security in the oil and gas sector. IRIS has conducted R&D on safety for 30 years, mostly on health, environment and safety (HES), safety cultures and workplace organisation in the petroleum sector. The institute reports that the R&D has made significant contributions to the safety field in Norway's petroleum sector through training of highly capable individuals that today occupy key positions in the leading companies and in the Petroleum Safety Authority Norway. It has also contributed to organisational changes in Statoil after its merger with Hydro in 2007.

SINTEF Technology and Society also reports impact on safety in the petroleum sector, for example through 20 years of investigations on helicopter safety. According to the institute, this has contributed to Norway having a considerably better development in offshore helicopter safety than for example the

UK, since the industry has been keen to implement the institute's recommendations. NTNU Social Research reports a somewhat similar case on Statoil's marine operations, where the institute claims to have made Statoil implement a long range of new routines (on coordination, handling rough weather conditions, technological improvements and extra staff) through extensive investigations within the company, which has contributed to a dramatic reduction of accidents. SINTEF Technology and Society has also developed a method for assessment of control rooms, which it reports has become standard in the sector. It has also conducted extensive investigations on safety following the Deep Water Horizon accident in the Gulf of Mexico in 2010, which led to a list of recommendations that, according to the institute, the Petroleum Safety Authority Norway is spreading to companies in the sector.

Impact case: Security after gas blowout at Snorre A (NTNU Social Research)

The gas blowout on Snorre A in 2004 was one of the most serious incidents in Norway's history as a petroleum producer. The investigation report from the Petroleum Safety Authority Norway concluded that the accident resulted from general failures in Statoil's planning, procedures and assessments. Statoil commissioned NTNU Social Research to analyse how improvements could be made. The data collection was conducted jointly between NTNU Social Research and Statoil. Approximately 150 interviews were carried out, as well as document studies and a survey. The analysis revealed a number of organisational and managerial weaknesses in the Snorre organisation.

According to NTNU Social Research, the impact was profound. A number of suggested improvements were implemented, and Statoil invested several hundred million NOK in new initiatives, for instance regarding planning, risk assessments and management involvement in connection with drilling and well operations; integration of the Snorre organisation into Statoil; expertise on well control and barrier understanding; cooperation and communication between the onshore and offshore organisations at Snorre A and extended TTS; technical upgrading at the Snorre A plants; leadership training and improvement of HSE tools. Insights from the analysis were also used in the merger between Statoil and Hydro's petroleum divisions.

Møreforskning reports three cases of impact on the fisheries sector. One case concerns many years of investigation of deep-water fish resources, as potential replacements to the declining supply of cod. The R&D covered the full value chain from mapping populations and catching the fish, to market research. According to the institute, the impact is primarily found in an expanded knowledge base. A similar case is reported with focus on the Greenland halibut. A third case concerns the LEGASEA cluster, which focuses on Omega-3 oils. Møreforskning has developed methods and tools for sensor analysis (taste and smell) of the oils, for use in the Omega-3 industry. Also SNF reports a case on the fisheries sector, albeit a very different one, concerning structural fees for the fishing fleet in order to decrease its over-capacity and increase its profitability. SNF devised an instrument to calculate an optimal fee, which was implemented for a five-year period (2003–2008) and then removed as planned. According to SNF, the societal economic impact was positive, as the total capacity was reduced and the profitability increased.

Telemark Research Institute has conducted two large surveys on artists' economic situation and working conditions, which according to the institute have had considerable impact on the debate on cultural policy and on the knowledge base for governmental policies for the sector. The artists' lobby organisations are reported to have made considerable use of the reports. Agder Research has conducted a range of studies on the mechanic industry in Southern Norway, which according to the institute has improved regional industrial policy and contributed to national data on the industry.

Impact case: Regional tourism sector (Nordland Research Institute)

During the last decade, Nordland Research Institute has together with other R&D performers participated in a range of R&D activities within tourism. A core aim in these has been to promote innovation in the tourism sector. Three programmes have been particularly important, and Nordland Research Institute has played a central role in all of them: ARENA Innovative Opplevelser (AIO), VRI Reiseliv and Opplevelser i Nord (OiN). All three initiatives have the strategy of close collaboration between companies and R&D institutions, and complement each other by focusing on different parts of the 'R&D value chain'. The R&D activities have focused on innovative and competitive tourism companies, experience-based tourism that creates economic value, and development of destination resources. An important part of the activities has been to be highly present 'in the field', meeting representatives for companies and the public sector.

According to Nordland Research Institute, the companies have understood and acknowledged the complexity in producing experiences, for instance the psychological aspect and the importance of designing the experience. The final evaluation of AIO's first period showed very good results in terms of for example improved innovative capabilities, a very high satisfaction among participants, a highly successful project management, which led the evaluator to conclude that it was a 'very successful project'.¹⁶ The document reviews and interviews for this impact assessment point in the same direction regarding the institute's role in the regional tourism ecosystem as a whole. The R&D activities in the tourism sector led to the establishment in 2011 of Novadis (Norwegian research centre for experience-based tourism) at Nordland Research Institute.

3.2.3 Impact on the Norwegian health and welfare system

For many years, SINTEF Technology and Society has conducted R&D on the health services on behalf of the Norwegian Directorate of Health. The institute claims particular impact from the models for allocating resources between different regions and units. SINTEF Technology and Society supported the national investigation in 2008 on resource allocation between regional health authorities (*Magnussen-utvalget*), which showed a skewed distribution between some regions that according to the institute led to adjustments. Through its health division, Uni Research has conducted much work on the emergency primary healthcare (*legevaktjenesten*) that includes background documentation and analyses as well as support with the organisation of the services, which has supported national coordination. It has also conducted work on music therapy that, according to the institute, has had significant impact on the national recommendations for treatment of individuals with psychoses. Through the Rokkan Centre, Uni Research has also made impact through studies on general practitioners' role as 'gate-keepers' to, for example, citizens' rights to compensation for sick leave. The studies have been used in the formulation of national guidelines, steering etc.

Fafo, Frisch Centre and ISF all report impact on the Norwegian pension system. Frisch Centre has for instance in a range of studies investigated the elderly population's participation in the labour market, which enabled the institute to make concrete suggestions for a new pension system (AFP). Frisch Centre claims to see clear evidence that some of its key results informed the reform, which was introduced in 2011. Fafo has for many years worked broadly on the pension system, and claims impact by providing background documentation to the labour union LO in its negotiations prior to the aforementioned pension reform. It has also provided documentation to other labour unions and the Ministry of Labour and Social Affairs. ISF claims to have provided key actors with background documentation throughout the entire reform process, and to have developed an alternative model for the pension system, which LO in its 2005 congress elected as its preferred model.

Fafo claims significant impact on the introduction scheme for newly arrived refugees (*Introduksjonsordningen*). The foundation for the impact was laid around 20 years ago with two Fafo reports on the living conditions of newly arrived refugees, one that ended with a list of recommendations for an introductory scheme. The government established such a scheme in

¹⁶ Oxford Research (2012). Evaluering av Arena Innovative Opplevelser. Sluttevaluering av Arena-prosjekt.

2003/2004, and Fafo reports that it recognises a range of its recommendations in the scheme, which implicated a departure from several key principles in the Norwegian welfare system, such as local self-governance, the sector principle and personal autonomy. Also NTNU Social Research claims impact on policies related to living conditions of newly arrived refugees, and observes that the institute has frequently participated in media on these issues.

PRIO claims impact in the attitudes, policies and legislation in Norway towards migrant remittances. In the beginning of the 2005–2010 period, such remittances were looked upon with suspicion and the services were slow, expensive and tightly regulated. By demonstrating the humanitarian aspects of the transfers, the dysfunctional market and the importance of legal services for the immigrants' integration in Norway, PRIO claims to have contributed to several government-initiated changes to the system, and to better contacts between actors in the field. According to PRIO, the institute has also contributed internationally on the issue by for example an openly accessible handbook that has been downloaded 4,600 times from PRIO's website and sold in 600 copies in the past two years. ISF reports that it has contributed significantly to a government investigation on welfare and migration (*Brochmann-utvalget*), which has received much attention across the Nordic countries.

According to Fafo, the institute has also produced key documentation to policy discussions that have resulted in changed regulations in the area of working life, such as regulations on shift work, rota, working hours etc., as well as collective agreements, labour immigration and more. ISF reports key contributions to a recent assessment of the Norwegian Labour and Welfare Administration (NAV) as a learning organisation, where ISF's investigation, according to the institute, led to a shift of senior executives in NAV.

NTNU Social Research has since the mid-1990s conducted longitudinal R&D on (families with) functionally impaired children. The institute claims that results from the project stimulated the government to work out a strategy for families with functionally impaired children, which was implemented in 2005. According to NTNU Social Research, the institute has also made an impact by alerting government agencies in the field that the main challenges for parents were related to their struggles to access assistance from the public sector, rather than previously identified challenges such as higher divorce rates, low participation on the labour market or the quality of the public assistance. According to NTNU Social Research, the changed perspectives led to new or altered work from the agencies. Uni Research's Health division has developed and driven a longitudinal study that has followed a subset of all children born in Bergen 1993–1995 with a primary focus on the children's psychological well-being. According to the institute, the documentation has been very important to understand the prevalence of certain psychological conditions and thereby to dimension the social services, as well as to support other, related studies.

3.2.4 Impact on democracy, education and the fiscal system

Impact case: Studies on elections (ISF)

ISF has carried R&D on elections in Norway since 1957. Today, the institute carries out research related to all elections in Norway. Studies include voting procedures, evaluations of general elections, trials with 16-year-olds voting in local elections, and e-voting, and studies on elections for the Sami parliament, church elections, and more. One researcher at ISF was also member of the election law reform commission (*valglovutvalget*) that proposed changes regarding the electoral legislation. ISF has also provided experts on elections to NRK.

Impact has mainly concerned an improved knowledge base in an area that indeed is at the core of a well-functioning democracy. Although the studies have made most impact in the public sector, for instance in the Norwegian Parliament and in the Ministry of Local Government and Modernisation, it is also likely that the often extensive media coverage of the results have contributed to citizen's knowledge about the elections. For example, ISF's evaluation of the trial of 16-year-olds voting has, according to ISF, affected the public and political debate regarding voting age in Norway, and the evaluation of the e-voting trial is likely to have had an impact on the Parliament's decision to abandon future trials of e-voting.

NIFU claims impact on policy initiatives to reduce high school dropout rates. In 2008, NIFU published a report on behalf of seven county municipalities, in which around 10,000 pupils were monitored for five years. The report received much attention and NIFU has presented it to practitioners and policymakers on 239 occasions. It was also a key background document for a government White Paper on the issue. The NIFU researcher was appointed expert to a reference group (*GIVO-utvalget*) to the Minister of Research and Education in 2006, where recommendations from the report influenced the group's conclusions. NIFU also influenced other proposals from the group, for instance on a new kind of competence certificate, *praksisbrev*, which was introduced on trial in some county municipalities. The institute also reports impact on R&D policy through its publications on the national R&D statistics, which NIFU has national responsibility to collect. Eastern Norway Research Institute presents an impact case on entrepreneurship education, which has been a prioritised topic of Norwegian education policy during the last decade. The institute has a leading researcher in the field, who is an expert in the European Entrepreneurship Education Network, an advisory council to the European Commission. According to Eastern Norway Research Institute, the institute has made impact on Norwegian education policy in the field by providing background documentation.

Impact case: Norwegian system for publication indicators (NIFU)

Around year 2000, R&D funding ministries in Norway wanted to introduce performance-based funding to public research organisations. NIFU developed i) a national database with complete coverage of peer reviewed research literature with bibliographic references standardised and structured to enable verification and analyses, and ii) a publication indicator that gives the publications different weight to enable balance between different subject fields and stimulates publishing in prestigious channels. The system (*Tellekantsystemet*) was implemented in Norway in 2005, and later also in around five other countries. In Norway it is used in distributing institutional funding to HEIs, research institutes and regional health trusts. The indicator has received very extensive attention in the Norwegian R&D system, where it is also used on local institutional levels. An evaluation in 2014 showed that the indicator may have contributed to increased Norwegian publication, and that the quality of the publications had developed positively. The indicator has also received much attention in the international bibliometrics research community.

ISF has conducted R&D on the voluntary non-profit sector, which according to the institute has contributed to public regulations of the sector, for instance regarding VAT, a public register (*Frivillighetsregisteret*) that serves to make contacts between the voluntary sector and the public sector more efficient, as well as background documentation to government investigations and budgets. The institute also claims impact on the voluntary sector itself regarding for example organisational efficiency, expanded knowledge base on motives for voluntary work, financial data and more. ISF also points out that media frequently uses the institute's staff as experts on the voluntary sector. SNF reports impact on the fiscal system and the Norwegian public finances through methods to reduce tax evasion, see box.

Impact case: Tax evasion (SNF)

In 2013, a possibility for experiments on how to improve the accuracy of tax self-reporting on incomes in other countries arose. Together with Tax Norway, SNF sent a letter to tax payers identified as probably under-reporting foreign income, informing them on how foreign income and wealth should be reported. One group, which was used as a control group, did not receive a letter, one group received a neutral letter and two groups received letters with moral appeals. Compared with the control group, the neutral letter led to a 39 percent increase in self-reported foreign income. The moral appeals led to the reported income increasing by 69 percent compared with the neutral letter. The project led to an increase in reported foreign income by NOK150m for 2013. Although that amount (and the resulting increase in tax revenue) is marginal in relation to the entire estimated tax evasion, it means that the project certainly paid off. Tax Norway now uses a version of the letter every year.

3.2.5 *Impact on environmental issues*

For more than 25 years, Western Norway Research Institute has conducted R&D on environmental policies of municipalities and county municipalities, and claims to be in the national forefront of the field. The institute was the first organisation in Norway to calculate a municipality's climate footprint (Oslo in 2002), and has developed a web-based guideline for climate adaptation. According to Western Norway Research Institute, the impact has primarily consisted of expanded knowledge bases and re-orientation of climate strategies, and its work has put climate issues higher on national, regional and local policy agendas.

Nordland Research Institute has conducted a number of studies on nature-based industries, climate and environmental change and local societies in Northern Norway, which has contributed to local planning. The reports have also been cited in work for the United Nations' climate panel and in investigations commissioned by the Norwegian government. On a local level, Nordland Research Institute participates in a public seminar series aimed to involve and inform citizens about on-going R&D.

Through R&D on climate and conflict, PRIO has also made impact on environmental issues. The field has been subject to strategic investments of PRIO, and the institute claims a reputation as a globally leading hub for R&D in the area, recognised for instance by a five-year grant that one of PRIO's researchers was awarded by European Research Council in 2015. The institute claims to have influenced the United Nations' Intergovernmental Panel on Climate Change's (IPCC) and other actors' treatment of the issue by placing focus on security consequences and by providing evidence-based assessments and advice. The institute believes that its report on climate and security to the World Bank in 2008 was particularly influential.

3.2.6 *Impact outside Norway and on Norway's international relations*

One impact case from CMI concerns the U4 Anti-Corruption Resource Centre. U4 was established in 2002 in cooperation with development agencies in four countries and with participation of agencies from eleven countries. According to the institute, the centre has been a key actor on preventing corruption in international development support. U4 has had impact through educating officials both in donor and recipient countries, making risk assessments of support in different fields, and by expanding the knowledge base on the topic. Another case by CMI concerns tax reforms in several African countries, where CMI, through close collaboration with local actors, has conducted R&D and supported reforms. According to CMI, this has had impact both in recipient countries and on Norwegian strategies for international development support.

PRIO presents a case on how the institute's long-standing R&D on the effects of conflict on issues such as economic growth, women's and children's health, democratisation and human rights, arguing that it has contributed key evidence to the statement 'Conflict is development in reverse', today a guiding principle of the World Bank and other international organisations. For instance, PRIO notes that 23 of its publications were referenced in the 2011 World Development Report, a report that the institute refers to as a 'game-changer' on the conflict and development issue. PRIO claims that its R&D served as a backbone in changing the World Bank's policies after 2011, and that it has also influenced national policies in a number of countries. PRIO has also contributed in other ways to a more evidence-based understanding of peace and conflict, including by being heavily cited in popular books. In addition, PRIO presents an impact case on societal security in Europe, where the institute claims to have improved and re-shaped the understanding of security and insecurity as outcomes of societal relations, rather than notions of state security. The impact has largely been made through extensive media participation and through cooperation with national governmental security agencies, ministries, the European Commission and Frontex.

Both FNI and NUPI present impact cases that concern Norwegian policies towards Russia. FNI claims to have represented a controversial standpoint that Russian officials were suspicious towards Norwegian support and activities in the country, at a time when the Norwegian policy was that 'Russia is now like us' and relatively unconditionally appreciated the Norwegian support. FNI claims that the

institute's perspective now is mainstream in Norwegian foreign policy towards Russia. NUPI claims to have been a key provider of knowledge on Russian foreign policy and petroleum issues to Norwegian policymakers and industry, and has had impact by reducing risks and improving security.

NUPI also reports impact on Norwegian trade policy, where the institute's R&D is claimed to have had impact on Norway's trade policy towards the least developed countries. These have since 2002 had free access to the Norwegian markets, and NUPI's R&D has documented positive effects for these countries. NUPI's recommendations to expand the toll free trade to 'the second poorest countries' have been adopted by the government.

CMI reports impact on Norwegian foreign and development policies directed towards Afghanistan. The institute's R&D showed that foreign, especially military, presence was likely not to improve the situation in Afghanistan, which contributed to a gradual shift of the international policy to hand over more responsibility to Afghan representatives. CMI has also conducted research on gender issues, migration and international development support that the institute says has influenced Norwegian policies towards Afghanistan. Another CMI case concerns Sudan, where the institute claims to have supported Sudan's capacity building in terms of support to the peace process, Sudanese higher education, gender issues and advice to Norwegian diplomats. NUPI claims impact in terms of expanded knowledge bases in general through studies on Norwegian foreign policies and United Nations' peacekeeping operations. In the latter case, NUPI's researchers collaborated closely with the United Nations and wrote key documents to the organisation on coordination of its activities.

3.2.7 *Impact on gender equality*

For more than 50 years, ISF has conducted R&D on gender equality and has covered many parts of the field. According to ISF, examples of societal impact include that the institute in 2015 was commissioned by the government to further investigate the much skewed gender balance in the business elite, and that the institute's research on gender equality on the labour market was much cited in the most recent White Paper on gender equality. ISF also observes that the institute's R&D on children as a factor behind wage differences between men and women was a cornerstone in the documentation behind a government investigation in 2008 on men's and women's wages (*Likelønnsutvalget*). The institute also observes that researcher from ISF are often invited by media as experts on gender issues.

Impact case: Female entrepreneurship in Ethiopia (CMI)

In 2009–2010 CMI conducted research on micro-enterprises in Nepal, aiming to understand the potential for and barriers to growth. Barriers found included discrimination and problems to access credits. They also concluded that some entrepreneurs had personal capabilities that made them more likely than others to succeed. In other research, CMI together with the Norwegian School of Economics found that the success of government programmes to support entrepreneurship in Norway partly depended on targeting 'the entrepreneurial individuals'. One of the two CMI-researchers later went on leave to work for the World Bank, where he presented a design for an entrepreneurship programme in Ethiopia that targeted growth-oriented females, as these were found to be discriminated against. In 2015 the World Bank invested \$50m in such a programme, which in October 2015 had reached 11,000 women. These women on average increased their credits by ten times, and in one year their profits increased by 36 percent and the employment rate by 18 percent, while the repayment rate of the credits was 99 percent. The programme has received much attention and CMI expects the format to be used also in other contexts.

According to PRIO, the institute has had impact on gender equality issues by being the leading R&D group in Norway on gender and peace and conflict issues. The institute seeks to achieve impact by providing background documentation, acting as a dialogue partner to policymakers, and by teaching and training policymakers. The institute claims large impact on Norway's national plan for the implementation of the United Nations Security Council's Resolution 1325 on Women, Peace and Security, also by drafting texts. According to PRIO, the Norwegian plan later served as a model when other countries developed their own plans. PRIO also claims impact on Norway's focus in recent years

on sexual violence in conflicts. PRIO has trained 130 high-level United Nations officials on gender issues.

3.3 Impact from the users' point of view

So far in this chapter, we have discussed impact from the institutes' perspective, but now the time has come to compare their views with their users'. However, before we start, it is important to be aware of and keep in mind that the users that have responded to our web survey and the individuals that we have interviewed differ significantly from the beneficiaries of the case studies. Table 10 compares the relative distributions of impact cases, survey respondents and interviewees on beneficiary type/user category. However, it should be noted that while the classifications in user categories is consistent for survey respondents and interviewees, it does not completely match the beneficiary types for the impact cases (which is more fine-grained), so interpretation of this table must be done with some care.

Table 10 Relative distribution of impact cases, survey respondents and interviewees on beneficiary type/user category.

Beneficiary type/user category	Impact cases (N=71)	Survey respondents (N=620)	Interviewees (N=78)
National public sector	32%	20%	28%
Regional or local public sector	10%	8%	23%
Companies	15%	8%	15%
Research institutes	0%	16%	8%
HEIs	2%	38%	15%
Other	41%	10%	10%
Total	100%	100%	100%

From the table, we see that HEIs and other institutes account for more than half of survey respondents and almost a quarter of interviewees, and they hardly appear at all as beneficiaries. Moreover, taking the impact cases as reference, national policymakers are quite well represented among interviewees, but underrepresented among survey respondents. Similarly, regional or local policymakers are well represented among survey respondents, but overrepresented among interviewees. For companies, representation is perfect among interviewees, but there is an underrepresentation among survey respondents. Since there is quite a strong imbalance between impact cases on the one hand and interviewees and survey responses on the other, we have to be careful with our comparisons and conclusions. The main reason for this imbalance lies in the input from the institutes. This is not intended as an accusation of any sort, it is merely an observation. It is natural that the organisations that the institutes collaborate with are not always the main beneficiaries of their collaboration.

The data presented in Figure 21–Figure 24 originate from one and the same survey question that contained a rather extensive list of statements to assess. For the sake of the narrative in this section, we have taken the liberty of separating the assessments of these statements into four figures. Figure 21 illustrates that users mainly benefit from collaborating with the institutes (as clients or partners) by improving their own skills and working practices. These skills and practices, together with implementation of new types of data and analytical methods, help users to better fulfil their own aims and goals, and to do so more efficiently. In interviews, the vast majority of clients explain that the immediate result of collaboration is increased knowledge, since many assignments are studies, mapping exercises, evaluations etc. This knowledge is blended with information from other sources and then feeds into internal processes in an opaque manner, which in the longer term help users in doing their job better. A couple of client accounts exemplify how this may work:

Møreforsking is very good in transport modelling and for this they need a lot of basic data from a range of different national, local and private sources. Their

models have helped us make better predictions for the national transport plan. (Norwegian government agency)

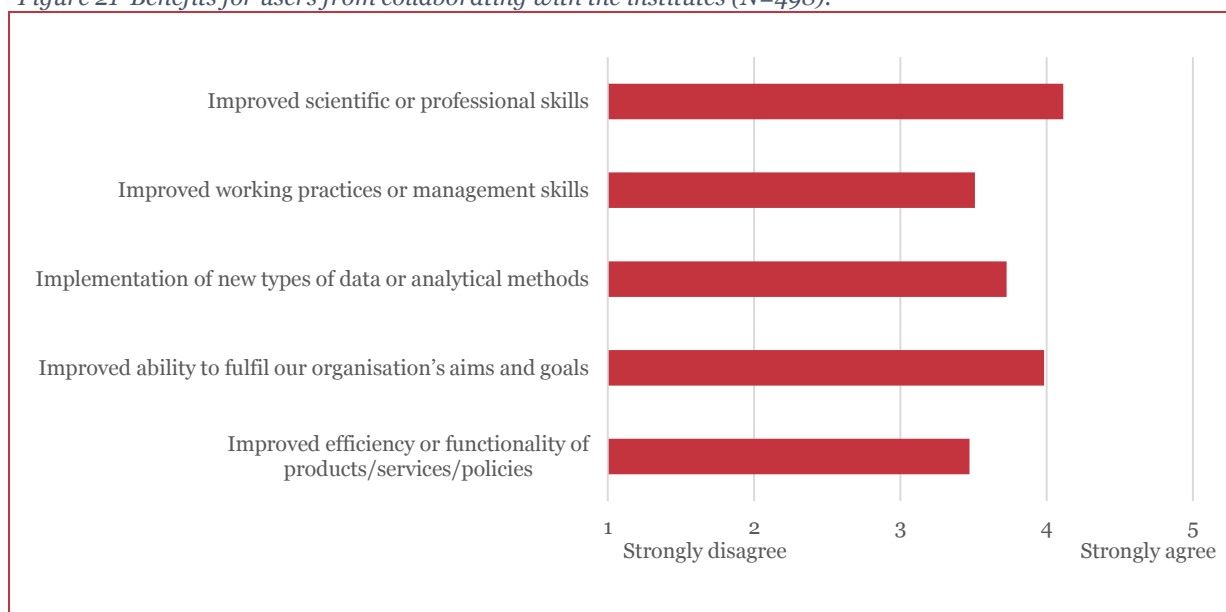
Our main motive for collaborating with NUPI is to get access to country-specific knowledge and analyses. We have for example gained a genuine understanding for political processes and power relations on the Balkans, which means that we have a better dialogue with national authorities there. (Norwegian multinational company)

However, quite a few client interviewees say that it is difficult to point to a clear cause-effect chain, or in the words of a representative of a Norwegian government agency, ‘it is seldom that projects result in concrete impact’. Most partner interviewees also refer to increased knowledge or competence development, for example:

We have benefitted from PRIO’s knowledge of Norwegian foreign aid policies and their thematic expertise in security. This has helped us fulfil our tasks. (Norwegian government agency)

Our collaboration with Frisch Centre has been beneficial for our employees’ competence development, and it has given us ideas for new research topics. (Norwegian government agency)

Figure 21 Benefits for users from collaborating with the institutes (N=498).



Source: Web survey.

Users also find that collaborating with the institutes improves their networks in Norway and abroad, see Figure 22. It is quite common that they participate in publicly co-funded R&D projects and that they jointly write scientific publications. To a very significant extent, users are so satisfied with their institute collaboration that they elect to establish long-term strategic relationships with the institutes. Some clients relate:

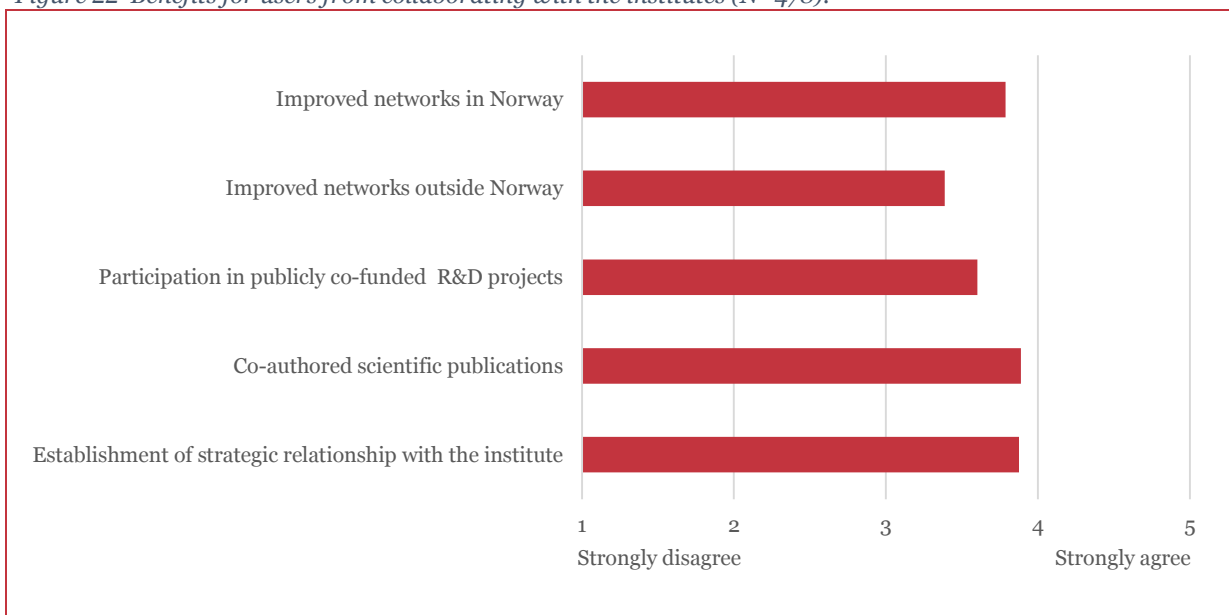
Working with IRIS has – unintentionally – improved our collaboration with other stakeholders, mainly private ones. (Norwegian regional agency)

Together with Frisch Centre, we have won projects that we would not won on our own, and we have also made better deliveries than we would have managed on our own. (Norwegian government agency)

Every other year, NUPI arranges a ‘Balkan seminar’ together with us, but it largely rests on resources and intellectual input from NUPI. The seminar gives us concrete high-level relation building on the western Balkans and in Norway. (Norwegian multinational company)

Buying services from Østfold Research has resulted in further collaboration and an extended network with other actors. (Norwegian company)

Figure 22 Benefits for users from collaborating with the institutes (N=478).



Source: Web survey.

The aforementioned client’s experience do not seem to differ much from those of partners:

We have a symbiotic relationship with Østlandsforskning. We have high-profile professors, while Østlandsforskning excels in securing funding from both regional and national sources. They also have good project leaders that are better than most of our researchers. (Norwegian university college)

We have a long-standing relationship with NTNU Social Research, and we have collaborated in several projects. These have led to new contacts with others and increasingly intense collaboration with the institute. (Norwegian SME)

Our collaboration with Møreforskning has significantly increased our interactions with Norway and Northern European countries, with both academic partners and companies, as well as regulatory bodies. (French research institute)

Teaming up with PRIO has proved very useful for getting EU grants (Swedish government research institute)

Some foreign partners from further afar are somewhat more enthusiastic in their accounts:

CMI is a profoundly positive space for international research collaboration. (African university)

By collaborating with CMI, I have accessed a worldwide network of scholars and resources, have increased the impact of my research, and have been able to obtain a professional recognition that I would not have reached without CMI's mentoring and support. (South American university)

SINTEF has made a major contribution to building research capacity in disability studies in our region. (African university)

In the previous two figures, we presented the assessments of all users together. However, the last seven impact statements to rate were intended for subsets of the user population only. Two statements were for public sector users only, and five for commercial users only. From section 1.4 we recall that 'public sector users' refer to national, regional and local public sector organisations together, while 'commercial users' refer to private companies.

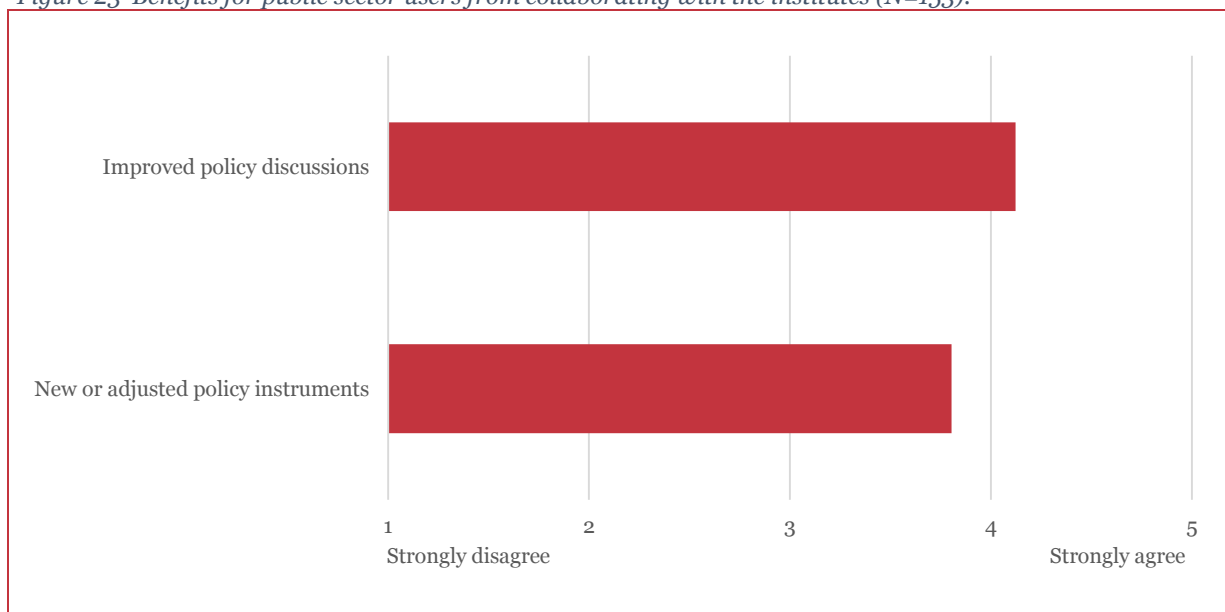
Public sector users obviously experience improved policy discussions to a significant extent, see Figure 23. Three clients provide examples of their experiences in this respect:

FNI has an ability to see issues from unexpected and for us new angles. (Norwegian government ministry)

We expect that ISF's and Uni Research's project on lowering the voting age eventually will influence the public debate. The project probably has potential to have a large impact. (Norwegian government ministry)

IRIS has shown how applied research can be made more relevant and a lot more interesting by including a proper theoretical and analytical framework. (Norwegian state enterprise)

Figure 23 Benefits for public sector users from collaborating with the institutes (N=153).



Source: Web survey.

Despite the aforementioned recurring challenge to see a direct link between cause and effect, there are several client accounts of incremental changes that for example have led to new or improved policy instruments, for example:

Large evaluations of large on-going programmes usually lead to adjustments to the programmes. (Norwegian government agency)

NIFU's evaluation of the Centres for Excellence in Education Initiative programme, which showed that the centres had had large impact, have also had a notable impact on politicians since it was well written and easy for them to absorb. (Norwegian government agency)

Norut does not develop policy, but the institute's work contributes to regional policy development. (Norwegian government ministry)

A Norwegian partner (though not classified as public sector user in this respect) sheds further light on how improved policy discussions may arise:

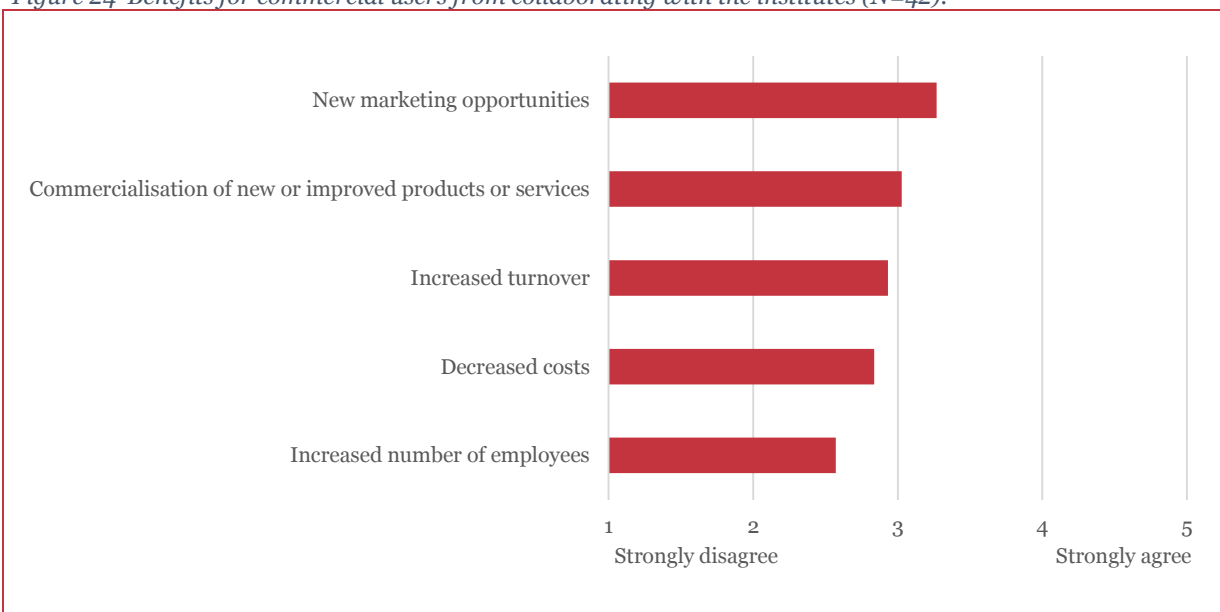
A great benefit of working with CMI is their ability to bridge academic institutions and policymakers, judges and civil society, nationally and in other countries, which enables research projects to make useful contributions to practice. (Norwegian university)

The commercial impact for commercial users is not as pronounced as the impact presented above, which is understandable since the time perspective from R&D to observable commercial impact often is many years. Figure 24 nevertheless illustrates that quite a few of the commercial users have seen marketing opportunities materialise (41% of respondents strongly agree or agree) and many have commercialised new or improved products or services (37%). Some commercial users have experienced increased turnover (34%) and decreased costs (30%), but only in a few cases has this led to recruitment (12%). While pondering these percentages it is important to note that the number of commercial survey respondents is low, only 42 (on average for the five alternatives). Some companies elaborate on impact:

Although difficult to quantify, there is no doubt that it has been beneficial for us in marketing terms to work with NTNU Social Research. We are seen and heard in media – also outside Europe – as supplier of high-quality products. (Norwegian SME)

Our collaboration with Østfold Research has helped us reduce food waste and costs for packaging, which in turn has increased our competitiveness. (Norwegian company)

Figure 24 Benefits for commercial users from collaborating with the institutes (N=42).



Source: Web survey.

As many as 30 users (from all types of organisations, 28 of them partners) agree to collaboration having led to establishment of spin-off companies. Such information, which invariably includes some double counting, should of course be taken with a grain of salt, in part because the attribution to the institute collaboration has not been investigated, in part because many spin-off companies do not survive. There is nevertheless no reason to doubt that the institutes have contributed to the establishments of a number of new companies.

At this point in the narrative, it would have been nice to be able conclude that the users' point of view confirms that of the institutes (or vice versa). Although some of the quotes in this section might be classified into most of the sub-headers in section 3.2, we have none that clearly belongs to health and welfare or gender equality. Moreover, most of the quotes cannot (easily) be classified into any of the categories of section 3.2. Is this a problem?

Before answering this question, we would like to remind the reader of a methodological issue. Most survey respondents and interviewees were proposed by the institutes. For the survey, we complemented the lists of users with objective data from RCN's data warehouse and E-Corda, but these two sources did not yield that many additional e-mail addresses (for reasons discussed in section 1.5). For the interviewees, we did intentionally focus on the individuals that the institutes had indicated were key users.

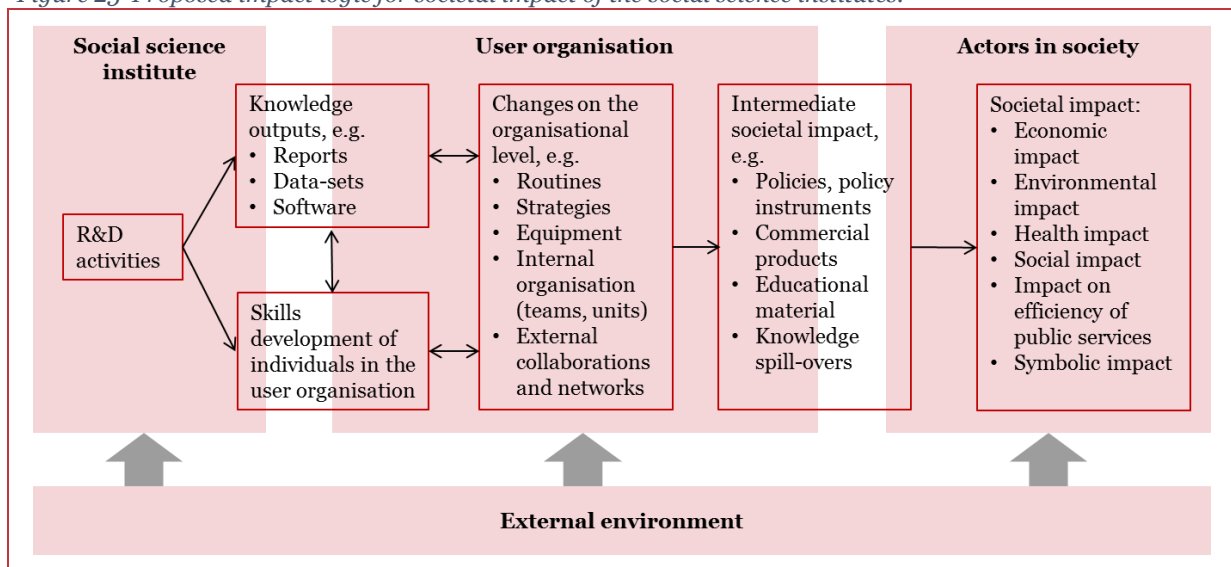
Now, to answer the question, we do not think that it is a problem that there is only a partial 'match' between the institutes' and the users' points of view. The aforementioned methodological issue may rather be seen as an advantage in that the institutes' perspective is complemented and extended by their users' views. The latter thus adds a certain element of objectivity, or counterweight, to the strong subjectivity (bias) of the impact cases, and thus helps us better understand how the institutes contribute to societal impact, which is the topic of the next section.

It should also be noted that while almost all interviewees provided useful incremental bits of information, most interviewees did in fact did not express themselves eloquently enough to merit it being repeated as a quote in a report such as this one. (This issue is inherent to interviews as a data-acquisition method and has nothing to do with this specific assignment.) Although we have tried to achieve a reasonable balance between types of interviewees and types of impact, the quotes are therefore by necessity not entirely representative of all 78 interviews. We would also like to emphasise that the fact that not all 22 institutes have been mentioned in the quotes of this section does not mean that they have not contributed to any societal impact, only that 'their' interviewees did not provide us with any quote informative enough to recount.

3.4 Impact typology

We have developed an impact logic in an attempt to try to explain how the social science institutes contribute to societal impact, see Figure 25. As we have learnt from the previous sections of this chapter (and Appendix A), many of the impact cases describe societal impact through collaboration or (looser) interaction with user organisations, often large and complex, such as ministries, government agencies, HEIs, international policy organisations, non-governmental organisations and companies. The figure is thus an attempt to describe, in a simplistic manner, the route from an institute's R&D activities to societal impact through collaboration or interaction with one or several users. (An institute may of course also contribute to societal impact through collaboration with smaller and less complex organisations, or directly with societal actors, as illustrated by some of the case studies and indicated by some of the quotes above, but such cases are not primarily intended to be captured by this model.) As the figure indicates, the connection between R&D activity and impact is usually complex and far from direct. Typically, the R&D activity results in knowledge outputs that a user employs in its own policy-development or decision-making processes before any trace of societal impact can be observed. Hence, attributing an observed societal impact to a specific R&D project, or even a specific institute, is in most cases almost impossible, since the institute's contribution tends to be so indirect and since it has been filtered through complex processes and merged with input from other sources.

Figure 25 Proposed impact logic for societal impact of the social science institutes.



The R&D activities of an institute generally benefits a user in two main ways; through delivering knowledge outputs, such as reports, datasets, software, etc., and through enhancing the skills of individuals of the user organisation. Quite often, the benefits at this stage only concern a limited part of the user organisation, for example the individual or the team that directly interacted with the institute. In the next stage, this individual or team refines the institute’s contribution further, for example by spreading reports and results within its own organisation, processing the information and merging it with information from other sources (internal work or input from other external sources). At this point, the impact of the institute’s R&D may be discernible within the user organisation, also beyond the level of individuals. The user organisation may for example adapt its internal routines or strategies, or invest in new equipment. We have also seen several examples of more extensive changes, such as internal reorganisations or development of external networks, collaborations and alliances. These changes may in turn result in further internally produced knowledge outputs and development of skills; it is obvious that these processes have a recursive character.

At a certain point, the user organisation produces an output that may be referred to as an ‘intermediate societal impact’. A ministry or a government agency may present a new policy or policy instrument that in turn leads to societal impact when it affects actors in society (organisations or individuals). Similarly, a company may for instance introduce a new product on the market that leads to societal impact when customers buy and use it. Other intermediate societal impact may be the dissemination of material intended to inform or educate societal actors, or knowledge spillovers from the user organisation, such as mobility of staff, publications in scientific or professional journals etc. Throughout this gradual development, the initial contribution of the institute is blended with input from a range of internal and external sources in a process that is also influenced by general societal and economic developments.

Against this background, we propose a typology for the types of impact that the social science institutes’ R&D may give rise to. This typology is very much in line with the one devised by Bugge¹⁷ that we have ever so slightly adapted based on the experiences gained in this assignment. As argued above, we see a need to distinguish between *intermediate societal impact* and *societal impact* as such:

¹⁷ M. Bugge, «Kronikk: Måling av forskningens samfunnseffekter», Forskningspolitikk, 06.2015.

- **Intermediate societal impact** (e.g. policy discussions, policies, policy instruments, publicly available reports and other information material, participation in media, knowledge spillovers)
- **Societal impact:**
 - *Economic impact* (impact related to e.g. increased turnover, profit, productivity, competitiveness, investment, employment and capabilities in the private and public sectors, as well as creation of spin-off companies)
 - *Environmental impact* (impact related to e.g. improved adaptation to or prevention of climate changes, improved environmental sustainability, improved energy efficiency, as well as improved environmental safety and protection)
 - *Health impact* (impact related to e.g. improved physiological and mental well-being, improved family relations, prevention of illnesses, and improved medical treatments)
 - *Social impact* (impact related to e.g. strengthened democracy or democratic institutions, improved trust between societal stakeholders or in society as a whole, higher tolerance towards foreigners, improved integration of immigrants, improved gender equality, more equal conditions for prosperity in all parts of the country, improved public welfare systems and better education)
 - *Impact on efficiency of public services* (impact related to e.g. information on available social services; efficiency improvements of health and welfare services, research and education systems, and tax collection; reduced corruption; and positive effects of better monetary policies)
 - *Symbolic impact* (impact on e.g. maintaining or improving Norway's reputation as conflict mediator and defender of humanitarian values, increasing regions' attractiveness to tourism or enterprise, and improvement of companies' brands and trademarks)

Our original intention was to use Bugge's typology as a point of departure for developing a more elaborate, or detailed, typology, but this has proved far more difficult than we had envisaged. In our empirical material, we have indications – albeit oftentimes circumstantial – of all of the examples provided in parenthesis in the bulleted list above, and these examples could perhaps be used to develop a more fine-grained typology. However, we would then be skating on preciously thin ice for lack of solid enough evidence. The present assignment has shown that the lion's share of the documented impact consists of intermediate societal impact. Reaching further in terms of (ultimate) societal impact would require substantially larger resources than we have had at our disposal to carry out a great number of seriously in-depth case studies to convince ourselves of an impact genuinely being attributable to a specific institute's R&D. Moreover, given the complexity of the links in the cause-effect sequence that we have tried to illustrate in Figure 25, it is quite possible that many such in-depth case studies would end up not being able decisively to conclude on any such attribution.

Although it certainly does not come as a surprise that impact chains are very complex in social sciences, we may once again contrast this with the engineering field of the technical-industrial institutes, where it is considerably less difficult to attribute an impact to an R&D effort. This is clearly a considerably more challenging task for the social science institutes.

4 Conclusions

4.1 Users' assessment

The user survey reveals that the users of the social science institutes for the most part are highly satisfied. Overall, the institutes receive high scores in the web survey and the interviews paint a similar picture. We must nevertheless bear in mind that both web survey respondents and interviewees likely constitute a positive selection. In Section 1.5, we argue that this bias is not likely to be very large, at least for the overall population of respondents and interviewees, but there is little doubt that there is some. The user survey therefore probably paints a slightly more positive picture than is warranted.

Scientific expertise

A clear majority of users are highly satisfied with the scientific and methodological competence of the institutes. This is true for users of all institute groups and all individual institutes, with the highest ratings going to the internationally oriented institutes. Frisch Centre, Uni Research and NTNU Social Research, all closely linked to Norway's three largest universities, receive high scores as well, while the regionally anchored institutes lag behind. Among individual institutes, Frisch Centre's users are the most positive, followed by users of NTNU Social Research, PRIO, FNI, CMI and Uni Research. The high degree of satisfaction in these dimensions is a very positive result, since the institutes' legitimacy is based in the expertise they offer their users. To access expertise is coincidentally the most important motive for becoming an institute user. However, some users express concerns about the institutes' ability to retain its scientific expertise over time, which we return to below.

Relevance and usefulness of services

The R&D of the social science institutes shall not only be of high quality, it shall also be relevant for use in industry, the public sector and in other parts of society.¹⁸ In this dimension, users generally give lower scores than for scientific expertise. One reason for this may be that most users are in a better position to assess relevance and usefulness than scientific expertise, and therefore have higher demands. However, some users expect R&D services with less academic emphasis than they presently receive, meaning more adapted to their specific needs. Overall, clients give lower ratings to the institutes' ability to provide strategic support and to support with implementation of their R&D results.

Users recognise several reasons why R&D results from the institutes are not as useful as they could be. Some reason that the institutes to a certain extent lack staff with experience from working in for example public agencies or companies. Others users argue that (small) institutes should cooperate more with other actors to make up for their size- and capacity-related weaknesses, and there are also users who partly blame their own organisations for lacking competence or resources to engage in a fruitful discussion with the institutes on how to implement their R&D results.

At the same time, there are good examples in the impact cases of highly relevant and useful institute services. Many of these seem to have in common that the institute services consisted of both traditional R&D in form of empirical studies, report writing etc. and quite intense interaction between the institute and the user. However, different users have different needs. In cases where users themselves are highly capable of developing a scientific report into policies or other practical uses, there is less need for interaction.

Project management

Overall, users are highly satisfied with the institutes' project management skills and project-related cooperation. Some institutes are very highly rated, with PRIO and Western Norway Research Institute on top. However, almost all institutes receive lower ratings on their project management skills than on scientific competence. It is evident, not least from the interviews, that there is room for improvement in this respect, especially for some individual project leaders. Interviewees typically mention

¹⁸ "Instituttsektoren. Forskningsrådets strategi 2014–2018." Research Council of Norway, Oslo

bottlenecks in project management, in particular too heavy workloads for the institutes' project managers, which result in deadlines not being kept and/or dissatisfactory communication.

Clients appear to have higher expectations on project management than partners, which probably partly relates to the characteristics of their projects; client projects are generally less uncertain in terms of content and typically also shorter, and thereby easier to manage. Client assignments are also commissioned, which means that a client to a greater extent than a partner 'owns' the project. It is also possible that clients on average have less internal flexibility to handle late deliveries. Institutes that rely a lot on commission work are thus more pressured than others to practice good project management. In this respect we would expect the regionally anchored institutes to be particularly challenged, since they are smaller than most of the other commission-oriented institutes and often are highly dependent on a few senior researchers. As we showed in section 2.3 (albeit with a bit shaky data), there is indeed a significant negative correlation between an institute's share of funding for commissioned research (as part of the institute's total funding) and the users' assessments of its project management. However, there is no significant correlation between an institute's number of research FTEs and the users' assessments of its project management. It may still be possible that the internal competence diversity of institutes (i.e. dependence on single individuals) correlates with the users' assessments of project management, but we could not test that correlation.

Competitiveness and value for money

Users are in general also highly satisfied with the value for money they get. Clients are a bit less satisfied than partners, which is natural since partners do not pay (as much) for the institutes' services. The institutes receive satisfactory ratings on value for money also when compared with their competitors; they are usually rated as 'equally competitive' or more often as 'more competitive' than the other way around. Users assess the institutes as on average being more competitive in terms of their scientific expertise, quality and relevance than on their project management skills and value for money.

While the expertise of the internationally oriented institutes and the institutes in welfare and society is generally quite academic in nature, the regionally anchored institutes offer their users a more context-specific expertise linked to the regions in which they are based, in addition to an academic dimension. These orientations determine what types of main competitors that users identify for the respective groups. Internationally oriented institutes and institutes in welfare and society are perceived of as mainly seeing competition from the higher education sector and other research institutes, while the regionally anchored institutes to a greater extent than the other two groups are challenged by consultancies and other companies.

Quite a few interviewees express concern about the small size of some institutes. Above all, that concerns the institutes' capacity to maintain competence in their specific fields of expertise if one or two senior researchers leave. Indeed, as we showed in section 2.3, there is a statistically significant correlation (on less robust data, though) between users' assessments of the institutes' scientific competence and their numbers of research FTEs. One interviewee in the national public sector expresses concerns that using some institutes is considered a risk, because the size of the institutes might mean that they will not have the capacity to deliver as planned, or with the expected quality. That comment deserves to be taken seriously, as one may argue that all institutes should be able to compete on the national level at least for average-sized assignments without being hindered by their size. One way of reducing that risk would be that more institutes form alliances with each other, or even merge. A couple of interviewees also mention that alliances appear to become more common, for instance that two institutes that used to be competitors recently have submitted more or less every tender together (which rather may be a strategy to reduce competition). A couple of interviewees suggest that small institutes give up areas in which they are less competitive, to expand in areas where they are stronger. At the same time, regionally anchored institutes, who are the most vulnerable group in this respect, are highly valued for their deep understanding of their respective region. If these institutes would give up a certain field of competence because they lack the capacity to compete for assignments outside their region, that could also threaten a strategically important competence in the

Norwegian R&D system. If mergers were to take place among the regionally anchored institutes, they would therefore probably have to depend on distributed teams to maintain the regional presence.

Networks for scientific expertise

Users discuss networks and alliances not only in relation to institutes' critical mass, but also as a means to maintain their scientific expertise. In particular, it is evident that international networks are important; in order to stay abreast with scientific developments, the institutes need to follow the scientific discussion in their respective fields. RCN- or EU-funded R&D projects and international cooperation are critical in this respect. Our evidence shows that some institutes – in particular the internationally oriented ones – have better prerequisites in this respect than most other institutes. While having foreign-based objects of study indeed helps in building international links, the internationally oriented institutes also have stronger academic profiles than almost all other institutes.

It is notable that users highly value the institutes' networks outside the users' own geographical area of influence, for example that a regionally anchored institute is expected to serve as a 'knowledge hub' that links the region with R&D groups in other Norwegian regions and abroad. Quite a few institutes have also strengthened this role (and their R&D expertise) by establishing closer relations with HEIs. While this has most probably in general been helpful, a consequence it has, at least for some institutes, meant a (partial) loss of some of their more senior researchers to the HEIs, which worries some users. The other way around, institutes that are more or less spin-offs to HEIs with strong research environments, such as Frisch Centre, NTNU Social Research, SNF and Uni Research, are highly rated in the web survey and/or very highly valued by interviewees for their scientific competence.

4.2 Impact assessment

It is evident from the impact cases that the institutes have made many important contributions to society, mainly to (or through) the public sector. However, it should be borne in mind that the cases clearly constitute a very positive selection, since that is what the institutes were asked to submit. On the other hand, as we noted above, the cases are of very variable quality, meaning that some of them in effect do not do their authors justice. One conclusion that may be drawn from this vast quality variation is that enough was not at stake (in terms of base funding) for many of the institutes to make a serious effort.

The 71 impact cases submitted by the institutes clearly indicate – albeit with varying degrees of evidence – that the institutes have made valuable impact in Norway, and in some cases abroad. The impact covers a broad range of topics, with 'Business, innovation and entrepreneurship' as the most frequent (and arguably broadest) category followed by 'Work and labour markets', 'International development' and 'Regional growth policy'. 'National policymakers' is the by far most common type of beneficiary, followed by 'Companies' and 'Policymakers outside Norway'. Given these beneficiary types, it is logical that the geographical reach of the impact cases is mainly at the national level, with the regional and foreign/global levels sharing the second place.

Looking deeper into the cases, we find that the institutes only rarely present impact beyond the policy level. However, the 'ultimate' societal impact arguably arises when the policies are implemented, and affect organisations and individuals in society. We consider the policy-level impact as 'intermediate societal impact'. The documented ultimate societal impact that we find mostly concerns public welfare systems and economic impact through certain investments and improved efficiency in organisations. Though hard evidence is generally scant, the cases nevertheless give indications – oftentimes circumstantial – of a range of other ultimate societal impact that may be classified into:

- *Economic impact* (impact related to e.g. increased turnovers, profits, productivity, competitiveness, investment, employment and capabilities in the private and public sectors, as well as creation of spin-off companies)
- *Environmental impact* (impact related to e.g. improved adaptation to or prevention of climate changes, improved environmental sustainability, improved energy efficiency, as well as improved environmental safety and protection)

- *Health impact* (impact related to e.g. improved physiological and mental well-being, improved family relations, prevention of illnesses, and improved medical treatments)
- *Social impact* (impact related to e.g. strengthened democracies or democratic institutions, improved trust between certain actors in society or in society as a whole, higher tolerance towards strangers, improved integration of immigrants, improved gender equality, more equal conditions for prosperity in all parts of the country, improved public welfare systems and better education)
- *Impact on efficiency of public services* (impact related to e.g. information on available social services and efficiency improvements of health and welfare services, research and education systems, and tax collection, less corruption, and positive effects of better monetary policies)
- *Symbolic impact* (impact on e.g. Norway's reputation as conflict mediator or defender of humanitarian values, regions' attractiveness to tourism or enterprise and companies' brand and trademarks)

We conclude that further developing this coarse typology into a more fine-grained one would be speculative due to lack of solid enough evidence. Further exploring ultimate societal impact would require substantial resources to carry out seriously in-depth case studies, but it is still not certain that such case studies would end up being able decisively to conclude on attribution to a specific institute's R&D. It is clearly very difficult to do so for the social science institutes.

4.3 Concluding remarks

There is no doubt that the social science institutes are appreciated by the vast majority of their users. The issues where users identify room for improvement are mostly related to size (or lack of critical mass) both of the institutes themselves and of individual topical specialities. An obvious conclusion would be to form tighter alliances between institutes, or to go all in and merge to reduce the current obviously fragmented situation. However, users are keen to point out that the regional knowledge, and to some extent presence (which may be a prerequisite for regional knowledge), of many of the institutes is key. Thus, regardless of whatever future changes to the sector that may take place (if indeed any), it will be an important challenge to balance critical mass and regional knowledge and presence.

It is obvious that the social science institutes fulfil an important function and make important contributions to societal impact, mainly within Norway but to some extent also outside. However, in most cases the institutes contribute to 'intermediate societal impact', rather than to more easily observed 'ultimate' societal impact, meaning that attribution to a specific institute's R&D is most difficult to ascertain. This may be a pedagogical problem for the social science institutes (it is easier for the technical-industrial institutes), and it is a difficult one to solve. Well-resourced in-depth case studies could possibly shed some light on the impact in individual cases, but the problem is inherent to the sector in which the social science institutes operate.

Appendix A Impact case studies

This appendix contains 15 cases of societal impact the institutes have made. The information largely comes from the impact cases that the institutes submitted as part of their self-assessments for the evaluation, but we have also conducted our own studies of documents and made interviews to verify or complement the information. The 15 cases were selected because we found them being particularly well presented, (able to become) well underpinned by evidence and references, and because they represent a fair picture of what kinds of cases that were submitted. We did thus not select the 15 cases because we consider them being the most important among the 71 cases in terms of impact significance or reach.

A.1 Anti-corruption measures in Norwegian development support – Chr. Michelsen Institute

A.1.1 Underpinning R&D

The U4 Anti-Corruption Resource Centre runs one of the main research programmes at Chr. Michelsen Institute (CMI). U4 provides easily accessible and action oriented research and information to development practitioners in order to support them to address anti-corruption efforts in the developing world. The material is offered to different stakeholders through a web-based support centre, through workshops and training on anti-corruption measures and strategies as well as a by a helpdesk service. Furthermore, U4 has a partnership with eight development agencies in different countries.

U4 has identified an evidence gap where there is insufficient knowledge on corruption and anti-corruption. The research aims at filling this evidence gap by providing knowledge on corruption, the impact of corruption on development as well as how donors can best address the issue of corruption. According to the institute, U4 draws “on the cutting edge of academic research and the empirical evidence generated by those working on anti-corruption in practice”.

A vital part of the material offered to development practitioners is based on applied research on anti-corruption approaches divided into a broad spectre of themes. The current focus of U4 is on the following main work themes:

- Corruption & aid
- Health & education
- Justice
- Natural resources
- Citizen engagement
- Political corruption
- Evaluation & measurement tools

In 2015, U4 produced 29 publications covering subjects like forest carbon rights and corruption, open government reforms and corruption risks in the criminal justice chain. Moreover, some reports handled research on gender and corruption. U4 will continue to develop this subject, and more specifically, to create a better understanding on victimisation by gender and what it might mean for the donors’ work. In addition, current research will investigate new approaches by bilateral agencies to support interagency collaboration in handling corruption cases as well as donors’ support to the justice sector.

A.1.2 Impact on society

U4’s vision is that both donors and developing countries will be more effective by reducing the negative effects of corruption. In order to accomplish this, U4’s efforts aim at supporting the

development for stakeholders to do at better and more informed job. According to the institute, U4 has come to be perceived as the leading contributor, and source of, research on corruption and anti-corruption. Moreover, U4 states that their research findings are widely disseminated and they work to reach out to different development practitioners through workshops and training and bringing different stakeholders together in dialogue.

The research output develops a knowledge basis for the following:

- Raising capacities and facilitating dialogue – the research provides a strong evidence base for the programme of training and capacity development through about 100 workshops with more than 3000 participants
- Contributions to specific thematic areas – the research contributes to an understanding of corruption in different areas like natural resources, political corruption and citizen engagement
- Building the evidence base – the research outputs contribute to the learning of development agencies on approaches and priorities within the area of corruption and anti-corruption

A.1.3 Sources

The case is based on CMI's self-assessment. Furthermore, the case builds on the following sources:

- Chr. Michelsen Institute, www.cmi.no
- Chr. Michelsen Institute (2016). Annual Report 2015. www.cmi.no
- Johnsen, Taxell and Zaum. 2012. Mapping evidence gaps in anti-corruption: Assessing the state of the operationally relevant evidence on donors' actions and approaches to reducing corruption. U4. Bergen.
- OECD Policy Dialogue on Natural Resource Based Development, Multistakeholder Working Group on Corruption Risks in Extractives.
- Rocha Menocal and Taxell. 2015. Why corruption matters: understanding causes, effects and how to address them. DFID.
- UN-REDD Programme. 2014. Guidance on Conducting REDD+ Corruption Risk Assessments. UN-REDD Programme. Geneva.
- U4 Anti-Corruption Resource Centre, www.u4.no

A.2 Female entrepreneurs in Ethiopia – Chr. Michelsen Institute

A.2.1 Underpinning R&D

Previous studies show that microenterprises can be a possible way out of poverty in developing countries and capital returns for microenterprises in poor rural areas can be rather high. However, few individuals reinvest their profit. The RCN funded project *Poverty traps in industries with low knowledge- and investment barriers* was carried out by CMI. Hatlebakk and Villanger, senior researchers at CMI, studied growth opportunities for microenterprises in Nepal and barriers to investment in industries with low knowledge and investment barriers. Focus was on individuals who have potential access to credit and the knowledge, but still don't make profitable investments.

First, CMI conducted a household survey of barriers to investment in low entry cost industries by analysing how caste-based segmentation in the capital and labor markets can function as barriers to investment in microbusiness in rural Nepal. The study indicated that segmentation leads to inefficient allocation of entrepreneurial skills, labor and capital. Consequently, this results in lower wages, smaller and/or less profitable businesses for low castes, and low economic growth.

Thereafter, CMI carried out a case study of rickshaw cyclists who may be renting a bicycle instead of buying one and studied if a possible explanation is a high time-preference rate or a high elasticity of the marginal utility of consumption based on choices made by rickshaw cyclists between hypothetical

financing schemes for rickshaws, explained by preferences that are formed by consumption close to a subsistence level. In order to explain lack of investments, the institute studied the role of time-preferences and poverty by using experiments of intertemporal choice. The conclusion was that microfinance will have no effect on the rickshaw cyclists as microcredit requires that the cyclists save every day for the weekly payment by end of every week.

Previous studies have found that different support measures for microenterprises don't work as well as they should. The main components of these measures (such as microcredit and entrepreneurship training) have little or no effect on income or employment, especially for women. The project identified several policy issues, but also policy measures that can increase profitable microenterprises. As stated above, the study focus on caste-based segmentation, however, the conclusions are transferable to other types of discrimination.

A.2.2 Impact on society

After the *Poverty traps in industries with low knowledge- and investment barriers* project, Villanger went for leave to the World Bank. His first initiative was to create a concept for how a new entrepreneurship programme in Ethiopia should be designed. He identified a number of barriers for female entrepreneurs in Ethiopia. Women in several developing countries come across more challenges than men when starting or expanding a business. Women are less likely to own assets that can be used as collateral for loans. In addition, they face discriminatory regulations and laws and often have less education.

Approximately 70 percent of all SMEs owned by women in emerging markets are underserved by financial institutions. This sums up to a financing gap of approximately \$285bn. In this light, and due to findings from the CMI project, the World Bank decided to allocate \$50m to create a project for growth-oriented female entrepreneurs in Ethiopia, *Women Entrepreneurship Development Project*. The objective is to increase earnings and employment for women-owned companies in Ethiopia. In addition, the project aims to unlock capital to help close the financing gap for growth-oriented businesses that need loans equivalent to \$10 000 or more.

The project is ongoing, however, listed below are a number of early findings:

- In August 2015, the project provided loans to more than 3 000 women entrepreneurs and entrepreneurship training to 4 500 women. In October 2015, the project had reached more than 11 000 growth-oriented women entrepreneurs
- The average loan size for participants has almost tenfold
- A before and after comparison shows that profits for participants who received loans increased by 36 percent in one year. In addition, the employment rate increased by 18 percent
- The repayment rate was 99 percent
- According to the World Bank economists Francesco Strobbe and Salman Alibhai, female entrepreneurs tend to hire other women and this result in that their businesses “can be a key driver in reducing high overall unemployment rates”
- Today, the World Bank is promoting the *Women Entrepreneurship Development Project* as a role model in other developing countries

Several countries have been interested in supporting and expanding the project. The UK and Canada have already funded the project by \$3m each, and Italy has provided €15mln. Japan have indicated that they want to contribute with \$50m. This makes the project the largest entrepreneurial project for women in the world. According to CMI, several countries have shown interest in starting up similar projects.

A.2.3 Sources

The case is based on CMI's self-assessment. In addition, the following sources have been used:

- Hatlebakk, M. (2015). “Myopic preferences or subsistence income among rickshaw cyclists”, *International Journal of Development Issues* vol. 14 no. 3 pp. 204-214.
- Villanger, E. (2015). “Entrepreneurial abilities and barriers to microenterprise growth: A case study in Nepal”, *Journal of Entrepreneurship*, vol. 24 no. 2, pp. 115-147.
- Villanger, E. (2012). “Caste discrimination and barriers to microenterprise growth in Nepal”, *CMI Working Paper WP 2012:9*.
- <http://www.worldbank.org/projects/P122764/women-entrepreneurship-development-project?lang=enU34T>
- <http://www.worldbank.org/en/news/feature/2015/11/16/in-ethiopia-female-entrepreneurs-get-a-chance-to-pursue-their-dreams>
- <http://www.worldbank.org/en/news/feature/2015/11/16/financing-women-entrepreneurs-in-ethiopia>

A.3 Rights and access to genetic resources – Fridtjof Nansen Institute

A.3.1 Underpinning R&D

During the last two decades, FNI has conducted research on rights and access to genetic resources. The research has concerned international efforts to ensure conservation and sustainable use of biodiversity and fair distribution of benefits from genetic resources where interaction with trade agreements and intellectual property rights is central.

The institute describes that results with societal impact are partly based on research within political science and law, including rights to genetic material and protection of inventions that are based on biological material. The research on legal rights and access to genetic material has focused on public international law regulations and especially on the Convention on Biological Diversity (CBD). The convention entered into force on 29 December 1993 and has three main objectives:

- Conservation of biological diversity
- Sustainable use of the components of biological diversity
- Fair and equitable sharing of the benefits arising out of the utilisation of genetic resources

During the last decade, negotiations have resulted in a new protocol on implementation of rules in relation to rights and access to genetic material. The legal research of FNI comprises analyses of various alternative regulatory models, especially how consequences of different models influence achievement of the CBD objectives. The regulatory framework for access to genetic resources under the Food and Agriculture Organization of the United Nations (FAO) is also relevant and FNI has reviewed the interaction between the CBD and FAO. New regulations of rights to genetic resources regarding the oceans and Antarctica are also under development. FNI has conducted research with political scientific approach on the interaction between the different processes. FNI has particularly investigated to what extent the new areas of law for the oceans and Antarctica can benefit from experiences gained in the two existing regimes for exchange of genetic resources.

The institute also investigates how global patent systems affect developing countries’ abilities to enforce their rights to genetic resources. In addition, FNI has reviewed the overall features of the development of supranational elements of the patent systems, with particular focus on the consequences for developing countries. Research on international law is, following FNI, a good starting point for further exploring the countries’ possibilities to implement the commitments in their national policymaking and legal frameworks.

In addition, FNI has also approached the field by studying the experiences of the countries that have implemented international legislation on rights and access to genetic resources. The institute has also addressed the area through investigating private stakeholders’ approaches to patenting and legal

regulation of rights and access to genetic resources, focusing on their behaviour and their perceptions of the regulations.

A.3.2 Impact on society

According to the FNI, the institute has affected the development of international standards through implementation of research at national levels and in the interaction between stakeholders. The research is held to help finding solutions that will support the respective regulatory frameworks. FNI's initiatives are largely aimed at disseminating research findings to relevant users.

Societal impact of the FNI research has been made internationally, in national implementation and in the function of the system between actors in the field. In addition to basic research, the institute has also conducted commissioned research, commissioned education and provided concrete advice on policy and legal development in several countries.

Other examples of societal impact are, according to FNI:

- Research that during on-going negotiations has evaluated the potential of alternative legal solutions to achieve the CBD objectives
- Work for development organisations to identify positions that developing countries can adopt to develop international law in a direction that promotes their interests.
- Articles, books and reports from FNI that have been recognised in the development of the new access legislation for genetic resources. According to FNI, the book *Beyond Access* and other FNI publications changed the discussion in CBD's forum to focus more on implementation in user countries. FNI's analyses and ideas on how that can be achieved, have, following the institute, been used as models in the development of the international framework.
- FNI has also supported a range of developing countries of highly varying sizes (from India to Micronesia) with implementation of legal frameworks, also through extensive workshops and educations. In some countries FNI has also assisted some countries in the development of agreements and strategies towards private actors

A.3.3 Sources

The case is based on FNI's self-assessment. In addition, the following sources have been used:

- FNI's webpage
- The Convention on Biological Diversity. <https://www.cbd.int/intro/default.shtml>.
- FAO (2015). Voluntary guidelines to support the integration of genetic diversity into national climate change adaptation planning. Report I4940

A.4 Studies on elections – Institute for Social Research

A.4.1 Underpinning R&D

ISF has for many years conducted surveys to collect research data and presented trend analyses on public opinion. The institute focuses on, for instance, voters' habits, behavior and opinions. The majority of studies regarding elections and voting in Norway have been carried out by ISF. The institute carried out its first study in the field already in 1957. Since 1961, ISF has conducted surveys at each general election. In addition, the institute has carried out studies of each municipal and county council election since 1995. The institute has also carried out Sami parliamentary election surveys in 2009 and 2013, analyses of the church elections in Norway, studies of local democracy and been involved in several other studies and evaluations related to election and voting procedures. An important project is a very extensive longitudinal study of public opinions in Norway, as well as of political priorities and government formations. Today, the institute conducts research related to all kinds of elections in Norway, most of the time in collaboration with universities, university colleges or other institutes.

A.4.2 Impact on society

Following ISF, the arguably most profound societal impact concerns a certain degree of ‘institutionalisation’ of ISF’s perspectives and terminology on elections and voting among the Norwegian public, and on politics as a whole; the institute has been a key player for such a long time that it has shaped the public understanding of the field. Media’s uptake of ISF’s research plays a key role in this.

ISF has evaluated the Norwegian electoral system several times. One of its researchers was member of the election law reform commission (*valglovutvalget*) that proposed changes in the electoral legislation. Several proposals highlighted in the report were implemented when the new electoral legislation was adopted in 2002 (the Representation of the People Act 2002 (Act No. 57 of 28 June 2002)). Regulations have also been issued with further provisions in certain areas.

In order to strengthen political participation among young people in Norway, the government proposed a trial in which the voting age would be reduced to 16. The Norwegian government stated that the most important reason was that this could encourage more young people to become active participants in the local community.¹⁹ 20 municipalities were selected and the trial was held in the local elections in 2011. After that, the trial was evaluated by ISF. The evaluation has, according to our interviewee, affected the public and political debate regarding voting age in Norway. An evaluation of a similar experiment carried out in 2015 is underway.²⁰

The trials with e-voting in 2011 and 2013 were evaluated by ISF in 2012 and 2014. The report presents the findings from the evaluation of the internet voting trial (also called i-voting) that took place in ten Norwegian municipalities in the 2011 local elections. The aim of the evaluations was to assess the i-voting trial as a democratic project and provide an understanding about the democratic effects of the trial. ISF used different types of qualitative as well as quantitative data, for example representative voter surveys, data on people with disabilities, the youngest voters and the local media coverage of the trial. The other report from 2013 shows that the voters have limited knowledge about the security mechanisms in the system. This is knowledge that affects the pilots’ premise of free and fair elections.

Both evaluations have been used in the political debate about the future of e-voting systems in Norway. After the latest evaluation, the Ministry of Local Government and Modernisation stated in a press release that the voting pilot is to be discontinued:

There has been political disagreement about the pilots, and the Storting has discussed the issue on several occasions. The Government wants to make sure that the voters’ high confidence in the Norwegian electoral process is safeguarded, and believes that political discord relating to the implementation of elections is unfortunate²¹

In addition, ISF have carried out other studies:

- Local democracy studies (*Lokaldemokratiundersøkelsene*) include studies regarding voter behavior, political trust, the role of the parties at local level, local government structure and the county’s role.
- The Sami Parliament election studies (*Sametingsvalgundersøkelsene*) focus on, for example, issues that are dividing the Norwegian Sami policy, the legitimacy of the Sami Parliament, participation. In 2013, the survey was conducted in collaboration with Swedish researchers. Thus, it was possible to compare the Norwegian Sami Parliament with the Swedish Sami Parliament.

¹⁹ St.meld. nr. 33 (2007-2008) Eit sterkt lokaldemokrati

²⁰ For more information about the new experiment, see <https://www.regjeringen.no/no/portal/valg/forsok-med-stemmerett-for-16-aringer-2/forsok-med-stemmerett-for-16-aringer-2/id581646/>

²¹ Minister of Local Government and Modernisation Jan Tore Sanner, see Kommunal- og regionaldepartementet (2014). Ikke flere forsøk med stemmegivning over Internett. Pressemelding 27.06.2014.

- Studies regarding church elections in Norway were carried out in 2009 and 2011. Findings from the studies were included in the evaluation of the Democracy Reform of the Norwegian Church (*Demokratireformen i den norske kirke*).
- A report from 2014 highlights changes regarding the parliamentary election system. The report is the basis for the Norwegian government's proposal (*høringsforslag*) where personal/preferential voting in parliamentary elections is proposed.

A.4.3 Sources

The case is based on ISF's self-assessment. In addition, the following sources have been used:

- Aardal, B. & J. Bergh, red.(2015). *Valg og velgere. En studie av stortingsvalget 2013*, Oslo: Cappelen Damm Akademisk.
- Bergh, J., red. (2014). *Stemmerett for 16-åringer. Resultater fra evalueringen av forsøket med senket stemmerettsalder ved lokalvalget 2011*. Oslo: Institutt for samfunnsforskning (Rapport 2014:1)
- Bergh, J., D.A. Christensen, B. Folkestad, R. Karlsen & J. Saglie (2014). *Personvalg ved stortingsvalg. Konsekvenser av en endring av personvalgreglene ved stortingsvalg*. Oslo: Institutt for samfunnsforskning (Rapport 2014:8).
- Seggaard, S.B., H. Baldersheim & J. Saglie (2012). *E-valg i et demokratisk perspektiv. Sluttrapport*. Rapport 2012:5. Oslo: Institutt for samfunnsforskning.
- Seggaard, S.B, D.A. Christensen, B. Folkestad & J. Saglie (2014). *Internettvalg. Hva gjør og mener velgerne?* Rapport 2014:07. Oslo: Institutt for samfunnsforskning.
- Kommunal- og regionaldepartementet (2014). *Ikke flere forsøk med stemmegivning over Internett*. Pressemelding 27.06.2014.
- Kommunal- og moderniseringsdepartementet (2015). *Høringsnotat om endring i personvalgreglene ved stortingsvalg*.
- Kommunal- og moderniseringsdepartementet (2015). *Testet ut tiltak som kan bidra til å øke valgdeltakelsen*. Pressemelding 23.09.2015
- Interview for this study with a representative from the Ministry of Local Government and Modernisation

A.5 Promoting innovation in the tourism sector in Nordland – Nordland Research Institute

A.5.1 Underpinning R&D

During the last decade NF has together with other R&D performers participated in a range of R&D activities within tourism. A core aim in these has been to promote innovation in the tourism sector. Three programmes have been particularly important, and NF has played a central role in all of them:

- ARENA Innovative Opplevelser (AIO): Established in 2008, this is a cluster cooperation between companies in the tourism sector and R&D institutions, partly funded by Innovation Norway
- VRI Reiseliv: VRI in Nordland has since its inception in 2008 had "Experience-based tourism" as one of its three strategic areas. The programme is administered by Nordland county municipality and funded by RCN
- Opplevelser i Nord (OiN): An R&D programme driven by R&D institutions in Nordland and Troms, initiated in 2009 and funded by RCN through "Forskningsløft Nord"

All three initiatives have the strategy of comparably close collaboration between companies and R&D institutions, and complement each other by focusing on different parts of the 'R&D value chain'. NF presents OiN as particularly important, since it enabled NF and the other actors to base their activities more firmly in research. The R&D activities have focused on innovative and competitive tourism companies, experience-based tourism that creates economic value, and development of destination

resources. An essential part of the activities have been to understand what innovation in the tourism sector is about, and how it can lead to new or better experiences, development and value creation in the companies.

Most of the empirical studies have concerned nature-based tourist experiences, but also extraordinary or extreme experiences have been investigated. Much of the studies have served to increase the understanding of how value is created in the interplay between customers and service providers, which involves investigating the subject both from the customers' and from the companies' perspectives. It has also involved investigating the capacities of (small) companies to be innovative. In addition, the studies have investigated the potential of the development of local resources, collaboration between different actors at the destination, as well as use of digital media, local history and cultural traditions to create value.

An important part of the activities has been to be highly present 'on the field', meeting representatives for companies and the public sector and that way contributing to a constructive dialogue between researchers and the actors, as well as between the various actors in the sector. NF has played a highly significant role in those activities by e.g. organising seminars where they present R&D results, frequently meeting public actors and companies for discussions on strategies, producing guidelines, and by meeting companies and others as part of the empirical work. A particular activity is a kind of arenas ("*tenkeloft*") where companies can identify problems for the R&D performers to work with.

A.5.2 Impact on society

NF observes that the tourism sector shows a high demand for R&D-based knowledge, and it is evident that the activities of NF and the other R&D performers have significantly improved the sector's capacity to absorb R&D. According to NF, the companies have understood and acknowledged the complexity in producing experiences, for instance the psychological aspect and the importance of designing the experience. The final evaluation of AIO's first period showed very good results in terms of e.g. improved innovative capacities, a very high satisfaction among the participants, a highly successful project management, which lead the evaluator to conclude that it was a "very successful project".²² The document reviews and interviews for this impact assessment point in the same direction regarding NF's role in the regional tourism ecosystem as a whole. The impact of NF is also well in line with the goals of national strategy for the tourism sector: i) to increase value creation and productivity in the tourism sector; ii) increase the number of all-year employments and solid companies, especially in rural areas; and iii) increase the number of unique experiences of high-quality, which attract a growing number of guests with a high solvency.²³

The R&D activities in the tourism sector lead to the establishment in 2011 of Novadis (Norwegian research centre for experience-based tourism) at NF. The centre is a collaboration between NF and Nord University, and its establishment was encouraged by regional authorities and companies which asked for a more permanent organisational structure to serve as a link between tourism research and companies in the sector. Another outcome of the activities is that Innovation Norway has funded around a dozen design projects to the sector in recent years. NF has together with other R&D performers in the region also applied to RCN for establishing an SFI (Centre for Research-based Innovation) on tourism.

A.5.3 Sources

The case is based on NF's self-assessment. In addition, the following sources have been used:

- Innovative opplevelser (2016). Innovative opplevelser. <http://www.innopp.no>
- Interview for this impact assessment with a representative for the tourism sector in Nordland

²² Oxford Research (2012). Evaluering av Arena Innovative Opplevelser. Sluttevaluering av Arena-prosjekt.

²³ Ministry of Enterprise and Trade (2012). Destinasjon Norge: Nasjonal strategi for reiselivsnæringen.

- Ministry of Enterprise and Trade (2012). Destinasjon Norge: Nasjonal strategi for reiselivsnæringen.
- Nordland County Municipality (2016). Virkemidler for regional FoU og innovasjon. <https://www.nfk.no/vri/>
- Novadis (2016). Opplevelsesbasert verdiskaping. <http://www.novadis.no/>
- Opplevelser i Nord (2016). Opplevelser i Nord. <http://www.opplevelserinord.no/>
- Oxford Research (2012). Evaluering av Arena Innovative Opplevelser. Sluttevaluering av Arena-prosjekt.

A.6 Publication indicator – Nordic Institute for Studies in Innovation, Research and Education

A.6.1 Underpinning R&D

The Publication Indicator is an innovation emanating from Gunnar Sivertsen at NIFU. The Publication Indicator is part of a model for funding of research institutions, which consists of three components. NIFU has contributed to the development of the first two components. The three components are:

1. A national database with full coverage of scientific peer-reviewed literature with bibliographic references, which are standardised and structured in a way that makes it possible to verify and analyse them.
2. A Publication Indicator that puts different weight on the publications in order to balance disciplinary differences in publication patterns and to stimulate publication in the most demanding and prestigious publication channels.
3. A results-based funding system where a minor share of the funding is distributed between institutions according to sum of publication points at institutional level.

Together, these three components are known abroad as ‘The Norwegian Model.’ NIFU’s research contributed to the first component and contributed directly to the second component when the Ministry of Education and Research (UFD) and the Ministry of Health and Care Services (HOD) introduced performance-based funding of research in the early 2000s. Until then Norwegian research documentation was using incomplete and unstructured bibliographic data. When the need arose for development of the funding model that became the third component, NIFU developed and formulated a solution for the first component. NIFU’s contribution to development of the second component was first published in 2003. Both components were implemented in 2004–2005 through a report from UHR called ‘Vekt på forskning’. Later NIFU contributed to the further development of the first component by leading the work that led to the establishment of the CRISTIN system and to the further development of the second component through continuous advisory assignments for the ‘Nasjonale Publiseringutvalget’ at UHR as well as in HOD.

The breakthrough for the solution proposed by NIFU came at a national meeting in 2002 organised by UFD and UHR with all Norwegian higher education institutions present. The occasion was later called “the bibliometric turn” in Norwegian research documentation. When Denmark introduced the second component with assistance from NIFU in 2009, it got the name ‘The bibliometric research indicator’ (*Den bibliometriske forskningsindikator*).

Bibliometrics is an international field of research with its own journals and conferences since the 1970s, and it has contributed significantly to science studies and statistics research. The basis for NIFU’s contributions to the Publication Indicator is that NIFU started bibliometric research in dialogue with the Norwegian Research Council for Science and the Humanities (Norges allmennvitenskapelige forskningsråd) in the late 1980s. NIFU invested early in international participation and international publishing. An article by Luukkonen, Persson & Sivertsen from 1992 became the most internationally cited publication of Norwegian social sciences research that year. Later, the bibliometric research at NIFU has developed and NIFU’s researchers have authored a range

of internationally highly-cited articles. NIFU's bibliometric research has contributed significantly to creating an overview of Norwegian and Nordic research, and basis for evaluation.

A.6.2 Impact on society

In Norway, the Publication Indicator has been adopted in the budgets of HEIs as well as in the results-based allocation of funding to regional health authorities. It is also used in the funding of research institutes. The Indicator has been the driving force behind a process where the research institutions have got better overview and insight into their own research through CRISTIN. It has furthermore resulted in an expanded base of information for RCN's evaluations.

Few research initiatives have received as much attention in the academic community as the Publication Indicator; it has been heavily debated in Norway. An evaluation of the Publication Indicator in 2013 by the Danish Centre for Research Analysis showed that the indicator is well known, that it is perceived both positively and negatively, and that it is frequently used at local levels. Following the introduction of the Indicator, the publishing activity in Norwegian research has increased more than what could be expected as a result of increased funding of the research. It thus seems that it has had a positive effect on the publishing activity. A closer analysis also showed that the growth has not occurred at the expense of quality.

The evaluation also notes that internal use of the Publication Indicator at university and university college institutions in general is characterised by considerable variation between institutions, between faculties within each institution, and between individual departments within the same faculty, over time. This variation is particularly evident across fields where the Indicator is generally given greater emphasis, such as within humanities and social sciences. More generally, there are, according to NIFU, also indications that the Indicator has had the greatest importance in humanities and social sciences, where international academic publishing and publishing in top level journals have previously played a minor role. The Indicator has been a little less important in more research-intensive areas where international publishing was weighted heavily already before the Publication Indicator's introduction. These findings suggest that the impact has been greatest among individuals and units that have not previously prioritised publication on an international arena and/or in high level journals.

The reason why the Publication Indicator is discussed globally, is that it has been implemented in funding of higher education institutions also in other countries: in Denmark and Finland, in Flanders, Portugal and in South Africa. It is also used for local purposes at most Swedish universities. The spread of the Indicator has, probably, not occurred through contacts with Norwegian authorities, but as a result of NIFU's presentations of the Indicator and experiences of it at international conferences. Such presentations resulted in subsequent invitations to present the Indicator to national authorities in Denmark, Finland, Flanders and Sweden in 2007, in South Africa in 2011 and in Portugal in 2014.

A.6.3 Sources

The case is based on NIFU's presentation of the Publication indicator in NIFU's self-assessment. In addition, the following sources have been used:

- Dansk Center for Forskningsanalyse. (2014). Evaluering af den norske publiceringsindikator. Aarhus Universitet.
- Luukkonen, T., Persson, O., & Sivertsen, G. (1992). Understanding Patterns of International Scientific Collaboration. *Science, Technology & Human Values*, 17(1), 101-126.
- Sivertsen, G. (2003). Bibliografiske datakilder til dokumentasjon av vitenskapelige publikasjoner: En utredning for Utdannings- og forskningsdepartementet. NIFU skriftserie 22/2003.
- Universitets- og høyskolerådet. (2004). Vekt på forskning. Nytt system for dokumentasjon av vitenskapelig publisering. Oslo.

A.7 Security after gas blowout at Snorre A – NTNU Social Research AS

A.7.1 Underpinning R&D

The gas blowout on Snorre A in 2004 was one of the most serious incidents in Norwegian petroleum history. The investigation report from the Petroleum Safety Authority (PSA), published in spring 2005, showed that the accident resulted not from chance, but from general failures in Statoil's planning, procedures and assessments. The authority's investigation uncovered a wide range of deviation prior to the incident, and the report cited 29 nonconformities from the regulations. In addition, the drilling contractor was criticised.

Against that background, PSA instructed Statoil to conduct an analysis able to explain why the gas blowout could happen. Statoil commissioned Studio Apertura at NTNU Social Research to carry out the analysis. The institute used expertise in organisation studies and security. The data collection was carried out jointly between researchers at NTNU Social Research and representatives from Statoil. Approximately 150 interviews were carried out with representatives for the Snorre organisation. Furthermore, NTNU conducted in-depth document studies and a survey.

Statoil presented the report to its Executive Board and on the company's annual management conference. The analysis revealed a number of organisational and managerial weaknesses in the Snorre organisation, and provided a basis for extensive investment and improvement, which, following NTNU Social Research, together contributed to an increase in security levels on the shelf.

A.7.2 Impact on society

According to NTNU Social Research, the former CEO of Statoil stated that the report was the most important document he had read in that position, and the report is claimed to have led to a long range of improvements. These improvements were specifically made in the Snorre organisation, but also in other contexts. Statoil invested several hundred million NOK in new initiatives.²⁴ These initiatives related to, for instance:

- Planning, risk assessments and management involvement in connection with drilling and well operations
- Integration of the Snorre organisation into Statoil
- Expertise on well control and barrier understanding
- Cooperation and communication between the onshore and offshore organisations at Snorre A
- Extended TTS on Snorre A
- Technical upgrading at the Snorre A plants
- Leadership training for operational managers
- Improvement of tools for health, safety and environment (HSE), systems and analysis in Statoil UPN (Utvikling og produksjon Norge)

In addition, NTNU Social Research was responsible for a follow-up study of the effects of the measures that were implemented in the organisation. The analysis showed positive consequences regarding the new focus on operational safety in all parts of the organisation. Three key factors were pointed out:

- Increased awareness regarding issues related to well integrity
- General awareness of the need to prioritise security, and take the time and costs that is necessary in order to ensure this
- More robust *planleggingsløp* (i.e. the importance of implementing all requirements in all policy documents)

²⁴ Data from the NTNU self-assessment

Moreover, insights from the analysis have been used in the case in subsequent merger between Statoil and Hydro's oil division. Terje Overvik, Executive Vice President at Statoil UPN has stated that:²⁵

Almost all informants in the study describes the development of safety in Statoil as positive after the gas blowout. The company has obtained a more explicit focus on safety, and this applies to the entire organisation. The investigations after the gas blowout pointed out that Snorre was not integrated into Statoil's safety culture quick enough, and that there was a the lack of safety management focus during this period. Based on lessons learned from the incident on the Snorre A platform, Statoil and Hydro have decided that our operating plants should not be touched in the planning of the integration of the companies. This shall ensure the necessary focus on HSE from both the management and employees during the integration period.

A.7.3 Sources

The case is based on NTNU Social Research's self-assessment. In addition, the following sources have been used:

- Statoil UPN nr4/2007
- https://www.regjeringen.no/html/smk/22julikommissjonen/22JULIKOMMISSJONEN_NO/CONTENT/DOWNLOAD/308/2358/VERSION/6/FILE/NOTAT_10_12_SCHIEFLOE.PDF
- <http://www.statoil.com/no/NewsAndMedia/News/2005/Pages/SnorreABlowoutCausesAnalysed.aspx>
- <http://www.psa.no/articles-in-safety-status-and-signals-2012-2013/snorre-a-an-intense-drama-article9148-1095.html>

A.8 Trade policy for least developed countries – Norwegian Institute of international affairs

A.8.1 Underpinning R&D

Developing countries have become drivers of trade, and today, developing countries account for over 50 percent of the world exports. However, Least-Developed Countries (LDCs) have remained marginalised due to the fact that the countries often are held back by lack of production capacity and economic diversification.²⁶ In 1971, Norway introduced the GSP system (Generalized System of Preferences). The GSP system enables industrialised countries on an autonomous basis to grant preferential tariff treatment to products from developing countries. Since the introduction, the Norwegian GSP system has been amended several times. In 2002, a more consistent method was adopted to implement the former scheme of duty and quota-free market access for all products originating in all LDC countries. Since then, LDCs have zero tariffs to the Norwegian market regarding goods, agriculture included. The Norwegian GSP system was also amended in 2005 and 2008. In 2008, the system was extended to 14 other low-income countries.²⁷

A.8.2 Impact on society

NUPI indicates that its many studies on trade policy for LDCs have had an impact on Norway's policy development in the area. Since the 1990s, NUPI has conducted several studies on trade policy in Norway. NUPI carried out a study on GSP in 2004-2005 (*Norges tollpreferanser for import fra u-land*). In the report, the institute states that zero tariff schemes for LDCs had little impact on trade because the poorest countries have too many constraints on the supply side. In this light, NUPI proposed an extension of the zero tariff scheme to cover all low-income countries.

²⁵ Statoil UPN nr4/2007

²⁶ Data from European Commission.

²⁷ See <http://www.toll.no/en/corporate/import/free-trade/gsp---generalized-system-of-preference/>

The second example is the study carried out by Melchior, Perry and Rich in 2011-2012 (*Norsk handel med det fattigste: Mellom profitt og utviklingspolitikk*). The study examines the impact of the GSP system reform in 2008 and Norway's trade with developing countries (with focus on the LDC+14 countries). The study indicates that the Norwegian GSP reform in 2008 has not led to a significant aggregate increase in imports from the poorest countries. As stated in the report, approximately half of Norway's imports from developing countries is shipped indirectly. Also stated in the report, indirect trade is often necessary due to transports, logistics or economies of scale in trade. However, on the way from developing countries, the value of trade increases by 83%, and this value increase is larger if more is shipped indirectly.

Previous studies show that LCDs are less successful to utilise the preferential arrangements. In their report, NUPI argues for a trade policy regime with extended tariff reductions for the lower middle group (also referred to as "second poorest" countries) since "the lower middle countries are poor countries with a great need for development and large poverty, and some of them have better capacity to exploit opportunities created by improved market access". In addition, the report presents detailed proposals for reform in the GSP system, where lower middle countries are granted a considerable improvement, and upper middle countries obtain some, but limited improvements.

Both studies mentioned above have resulted in a number of changes regarding the GSP system (also mentioned above). According to NUPI, the proposals have resulted in increased trade and consequently improved access for developing countries. As stated above, the study carried out in 2011-2012 indicates that the inclusion of low-income countries in the zero tariff scheme led to increased trade.

A.8.3 Sources

The case is based on NUPI's self-assessment. In addition, the following sources have been used:

- Melchior, A., K. Rich og B. Perry (2012). *Norsk handel med det fattigste: Mellom profitt og utviklingspolitikk*. NUPI-rapport
- Melchior, A. (2005). *Norges tollpreferanser for import fra u-land*. NUPI-notat 680a
- St.prp. nr. 1 (2007-2008), Skatte-, avgifts- og tollvedtak
- Prop. 1 LS (2012–2013), Skatter, avgifter og toll 2013
- Meld. St. nr. 29 (2014-15) om Globalisering og handel
- Innst. 101S (2015-2016)

A.9 Conflict is development in reverse – Peace Research Institute Oslo

A.9.1 Underpinning R&D

'Conflict is development in reverse' is one of six impact cases presented by the Peace Research Institute Oslo, PRIO. This case illustrates how the institute's long-standing research on the effects of conflict on economic growth, women's and children's health, democratisation and human rights, has contributed to the the global development agenda. The case demonstrates that PRIOs work has contributed to shaping the United Nations' and the World Bank's analyses and policies. Today, the statement 'Conflict is development in reverse', serves as a guiding principle of the World Bank and other international organisations.

War is a major obstacle to development. As stated by the long-time PRIO collaborator and former World Bank Director of Research Paul Collier, conflict is development in reverse. The consequences of armed conflict are profound and far-reaching, and extend far beyond direct battlefield casualties. Although media attention usually stops soon after a ceasefire has been signed, this is when the most dramatic consequences kick in. PRIO researchers have examined three types of development consequences: economic, political and health. PRIO reports that a great deal of analysis has been

carried out in the past decade on the economic consequences of war. A central finding of this literature is that war, especially civil war, is a development issue.

War is at once both a consequence of lacking development, and a cause of it. This has the potential of locking countries in a conflict trap. Wars, the most severe form of conflict, differ from less violent armed conflicts in that the latter usually inflict relatively fewer consequences on their communities. Wars have a lingering effect on growth; conflict both pushes a country off its initial growth path, and may slow it down long after the conflict has ended. Wars also have detrimental development effects as evaluated in terms of the United Nation's Millennium Development Goals (MDGs). More concretely, a medium-sized conflict with 2,500 battle deaths is estimated to increase undernourishment by 3.3 percent, reduce life expectancy by about one year, increase infant mortality by 10 percent, and deprive an additional 1.8 percent of the population from access to potable water. The detrimental effects of war on children are especially severe.

The political consequences the effects of conflict are also considerable. Conflict all too often leaves a legacy of repression in its wake. A country which experienced a durable war has a significantly higher probability of being in a situation where 'murders, disappearance and torture are a common part of life'. The mechanism causing this is state securitization. As reported by PRIO, war induces insecurity for leaders and this causes them to resort to political incarceration, brutal subjugation and torture.

A.9.2 Impact on society

The World Bank sees violent conflict as a profound development challenge. Much of the world has made rapid progress in building stability and reducing poverty in the past 60 years, but areas characterized by persistent violence and fragile institutions are being left behind, their economic growth compromised, and their citizen security threatened. Moreover, the number of conflicts worldwide is increasing, according to the Uppsala Conflict Data Program (UCDP). There were 40 active armed conflicts in 2014, six more than in 2013. These conflicts are also more violent than has been the case for a long time. The UCDP reports that for the first time since the end of the Cold War, over 100,000 deaths in armed conflicts have been recorded in a single year.

For many years, PRIO researchers have been working with the World Bank and the United Nations, especially the Economic and Social Commission for Western Asia (ESCWA). PRIO's research has been instrumental in establishing the relationship between development and conflict. Indeed, the concept of the 'conflict trap' came from PRIO's collaboration with Paul Collier during his tenure as World Bank Research Director. Up to this point, most research (PRIO and other) focused on how poverty and underdevelopment was casually linked to the onset of armed conflict.

In their reporting, PRIO points at how the institute's research has contributed fundamentally to World Bank and UN reports. As statistical sources and analytical points of reference, used by governments, civil society organizations and, also, the private sector, the World Bank and UN reports tend to have considerable impact on policy making on global, regional and national level. For example, the 2011 World Development Report (WDR) included references to 23 different publications involving PRIO researchers. The 2011 WDR in particular has been referred to as a "game changer". PRIO research as reflected in the 2011 WDR and other reports altered the prioritization of conflict as a development issue. In other words, as stated by PRIO, the institute's research on the consequences of conflict directly influenced the World Bank's and the UN's policies on development and conflict. Notably, when world leaders reached a consensus regarding a set of new development goals, the Sustainable Development Goals (SDGs), which replaced the Millennium Development Goals (MDGs), conflict was placed at the centre of the agenda.

Moreover, PRIO's research served as the analytical and substantive backbone to the 2011 World Development Report: Conflict, Security and Development. This WDR was a watershed in terms of altering World Bank policy. PRIO research also served as the principal background paper for two reports by the Economic and Social Commission for Western Africa (ECSWA). Further, a number of aid agencies, such as UK's DIFID, have also incorporated PRIO's analysis into their policymaking.

PRIO researchers are now engaged in the process of developing indicators of the SDGs. For the first time, the UN will measure the incidence of one of the most controversial, but important, development indicators: the amount of armed conflict in the world. The indicators developed by PRIO researchers will play a critical role in shaping how development policy is assessed. According to PRIO, the institutes research will have served an instrumental role in shaping development policy globally.

The impact of the ‘Conflict is development in reverse’ statement is global and concerns international development in general (cf the impact on SDGs) with a special view to security. Beneficiaries of the PRIO research are multilateral organisations, such as the World Bank or UN, governments and policy makers in donor countries, as well as governments, policy makers and other officials and development workers active in conflict regions and fragile states. Research data published by PRIO in collaboration with the Uppsala Peace and Conflict Research institute (PCR) has also been referred to in US state of the union addresses, for example by Bill Clinton. Further, they were used in a popular scientific book, ”The better angels of our nature”.

A.9.3 Sources

The case is based on PRIO’s self-assessment. In addition, we have used

- PRIO webpage, www.prio.org
- Uppsala Conflict Data Program, UCDP. www.ucdp.uu.se/
- Interview with a research partner to PRIO

A.10 Defining global policy on climate and conflict – Peace Research Institute Oslo

A.10.1 Underpinning R&D

‘Defining global policy on climate and conflict’ is one of six impact cases presented by PRIO. The case shows that PRIO researchers have been instrumental in providing scientific evidence on security implications of climate change, and thereby making human and national security an integral part of the mandate of the UN’s Intergovernmental Panel on Climate Change (IPCC).

Increased conflict and instability are among the gravest possible consequences of climate change. According to PRIO, the early policy debate on the topic suffered from speculative reasoning, selective referencing, and a poor understanding of historical climate-conflict connections. PRIO-based research on security implications of climate change gained momentum with the establishment of the institute’s Centre for the Study of Civil War in 2003. With one of the seven working groups dedicated to environmental factors, supplemented by independent research projects funded by, among others, the UN’s Office for the Coordination of Humanitarian Affairs, the World Bank, FP7 and RCN, PRIO has since then established itself as a leading provider of empirical research on the environment and armed conflict. More recently, PRIO’s research portfolio has been strengthened with financial support from the US Department of Defense’s Minerva program and the European Research Council (ERC).

Over the past decade, research conducted by PRIO has resulted in some of the most widely read and cited academic articles in the field, as well as a highly influential World Bank-commissioned report. In particular, the World Bank report offers important evidence-based recommendations for peer researchers and experts, policy and practice. Testimony to the institute’s central role in developing the field, PRIO researchers Gleditsch and Nordås coordinated and guest-edited the first two special issues of scientific journals on climate change and conflict (*Political Geography* 2007; *Journal of Peace Research* 2012), and several PRIO scholars have offered critical input to the IPCC’s recent Fifth Assessment Report (AR5; 2014).

A fundamental component of PRIO’s research on security implications of climate change is rigorous statistical research of the historical association between shifting environmental and climatic conditions and societal response. The researchers analyse as many cases as possible to maximise generalisability and make use of the best available data and advanced methods. Much of the conflict data has been collected by PRIO and collaboration partners at Uppsala University, and the freely

available PRIO-GRID data framework uniquely provides meteorological, environmental, and societal data in a common high-resolution space-time framework suitable for visualisation and statistical analysis. Collectively, this research has revealed that climatic changes are not linked to insecurity and conflict in the simple and direct manner that sometimes is assumed. It is noted that more research is needed to identify and assess more subtle and indirect possible climate effects that only is observable under certain conditions. This insight, now shared by the large majority of the scientific community, has accentuated calls to exercise restraint whenever discussing security dimensions of climate change.

A.10.2 Impact on society

PRIO considers itself as a world-leading research institute in peace and conflict studies. The institute's conscious investment in broadening the research portfolio on environmental issues has earned PRIO the reputation as a main hub for quantitative, evidence-based knowledge production on climate and conflict. The fact that the ERC in 2015 awarded a prestigious consolidator grant to one of PRIO's researchers (Buhaug) for a five-year project on 'Climate Variability and Security Threats' is testimony to the topic's importance, the high quality of PRIO's past research, PRIO's success in communicating findings and recommendations to policy and the public, and PRIO's continued commitment to improving our understanding of nature-society relationships. Publication downloads and citation statistics reveal that PRIO's investment has been an academic success, and that the institute's research has reached far beyond academic peers and into the arena of policymaking. Perhaps most importantly, PRIO has helped shape the IPCC – the global agenda setter on climate change adaptation and mitigation policies, as well as other policy actors' treatment of the security issue in important ways.

According to PRIO, this has been made possible firstly by contributing to putting security consequences on the policy agenda, and secondly by ensuring that unfounded alarmist (and denialist) claims are replaced by more careful, evidence-based assessments and advice. With regard to putting security on the agenda, PRIO suggests that the 2008 World Bank-commissioned study played a pivotal role. This report has shaped the World Bank's thinking on the issue of security implications of climate change. The sixth and final recommendation from that report is unambiguous in recommending that 'the IPCC should take the lead in investigating [security implications of climate change] systematically'.

As the IPCC took this advice on-board, PRIO researchers continued to contribute to, and form, the IPCC's take on the climate security issue. First, by serving as invited expert to an IPCC-focused workshop in Paris in May 2012, where PRIO researcher Buhaug provided extensive guidance on the scope paper underlying the 'Human Security' chapter. Then, Buhaug, Gleditsch and Theisen served as expert reviewers on three rounds of drafts of various chapters of the AR5. A systematic comparison of these drafts reveals that the comments provided by PRIO were important in improving the report. In the report, PRIO research features centrally; the 'Human Security' chapter alone cites 12 PRIO-authored studies as substantiation for its conclusions. As a further contribution to the IPCC AR5, Buhaug served as contributing author to the 'Adaptation' chapter.

A.10.3 Sources

The case is based on PRIO's self-assessment. In addition, we have used the following sources:

- Klein, Richard J.T., et al. (2014). Chapter 16: Adaptation Opportunities, Constraints, and Limits.' In 'Climate Change 2014: Impacts, Adaptation, and Vulnerability. Working group II contribution to the IPCC Fifth Assessment Report.
- OECD (2010). Security Implications of Climate Change in the Sahel Region: Policy consideration. OECD Report.

A.11 'Gode Sirklar' partnership for boosting local enterprise – SINTEF Technology and Society

Gode Sirklar AS is a company set up by the Fjell, Sund and Øygarden municipalities to boost local enterprise. The municipalities are located next to each other on islands just west of Bergen and are all

relatively small, between 5,000 and 25,000 inhabitants each. SINTEF Technology and Society has, based on a partnership agreement, been running Gode Sirklar since its inception in 2005. To make the company as flexible as possible it has no employees, it hires competence based on the needs at the moment.

A.11.1 Underpinning R&D

Throughout the period, SINTEF's role in Gode Sirklar has been to provide relevant knowledge and R&D in areas prioritised by the municipalities and to make use of SINTEF's extensive network in the establishment and implementation of projects. SINTEF's most important task has been to provide a director who has worked full-time for the company. All other work has been carried out by staff working on shorter terms as project leaders for projects that have varied considerably in size and type of assignment. Some years up to 40 projects have been run. An interviewee in one of the municipalities estimates Gode Sirklar to represent between three and ten full-time equivalents per year.

SINTEF's size and scope was an important reason why the institute was given the assignment – the municipalities were particularly keen to access staff that understood the local industry, also in terms of technology, and SINTEF's very extensive network overall. The municipalities however instructed SINTEF to assign projects in Gode Sirklar to 'the most appropriate actors' and not to favour SINTEF itself. The instruction is believed to have been followed; SINTEF has normally carried out around half of the work and other actors the other half. The variety of tasks has meant that quite a few different individuals have been involved; one year around 20 different researchers worked for Gode Sirklar. The director stayed from the company's inception in 2005 until 2015, and also took part in the negotiations that led to the company's establishment. No other individual has worked for the company for a longer period of time.

The activities have mainly concerned industrial development and clusters, making the municipalities attractive places to live and work, developing education at all levels – partly to support local industry on medium and long-term – and tourism. Overall, SINTEF and the other actors has not provided much R&D in terms of 'arms-length' work with report writing, evaluations etc. Instead, focus has been on using SINTEF staff for planning and executing various development activities. The staff's R&D competence from their research careers, previous assignments in SINTEF, and general insights from their embeddedness in the SINTEF organisation, would secure that the activities in Gode Sirklar were based on R&D-generated knowledge.

SINTEF point out that the organisation and activities in Gode Sirklar have been much inspired by research in economic geography and the subfield of sociology that focuses on organisations and working life. This research emphasises the importance of understanding processes of knowledge creation, especially across distances, and which strategies that can be applied to deal with these. An important aspect is to understand the particularities of the place in question, why much of the work in Gode Sirklar during the first years was to make contact with actors in the municipalities and map the needs and preconditions. Throughout the years Gode Sirklar has tried to be present in the region, meeting people etc. Specific inspiration has been drawn from the so-called Triple Helix model, which stresses the need for interaction between the public sector, companies and knowledge creating organisations such as universities and research institutes. Based on research SINTEF has also stressed the importance of building capacity within a region, and reaching out and seeking dialogue, even if a certain responsibility formally lies with an actor (a governmental agency for instance) outside the region – 'governance' is a keyword in that respect. Other keywords that originate in research include regional innovation (systems) and clusters.

A.11.2 Impact on society

An evaluation of Gode Sirklar by Agderforskning in 2010 refers to the organisation and strategy of the company as "en formidabel suksess", a statement that echoes through the interview with a key municipality representative. Given the comparably small amount of resources the municipalities have been able to provide for Gode Sirklar, the impact has been most significant. Key impact includes:

- The establishment of what today is GCE Subsea, a centre of expertise in underwater technologies for the oil and gas sector, supported through the Norwegian Innovation Clusters programme and located in Ågotnes in one of the three municipalities. There are more than 100 oil and gas companies in the municipalities, including several large international corporations. The cluster has increased cooperation between the companies and thereby made them more anchored in the region. According to the interviewee, SINTEF's engagement and work with coordinating the application and establishing the cluster was absolutely crucial in attracting the centre to the region.
- Establishment of the "Mechanical company group", another, albeit much smaller, cluster initiative to promote collaboration, knowledge exchange and market collaborations, and a similar initiative within the seafood industry.
- Large projects in developing education at all levels, from kindergarten to tertiary education. Part of the development has been funded by the Norwegian Directorate for Education and Training. Main focus has been 'practice-based learning' through collaboration between schools and local enterprise, which according to SINTEF has been positive for the schools and pupils, and according to the evaluation in 2010 lead to more pupils choosing engineering educations in the local high school. Gode Sirklar has also been instrumental in attracting an educational programme in underwater technologies from Bergen University College to the municipalities. The evaluation in 2010 also highlights a project to support engineering education on high school level as successful.
- Activities within culture and tourism, with unclear tangible impact but yet presented in the 2010 evaluation as important in marketing and, arguably, local identity creation.
- Attracting substantial external funding to run projects. We only have figures for the period 2005–2010, during which Gode Sirklar attracted around 100m NOK in external project funding.
- As a partner with a good reputation and network, SINTEF has opened many doors for the municipalities, enabling them to work with partners they otherwise would not have had access to.
- A significant boost for municipal leadership and competence. As a spin-off to Gode Sirklar, Fjell municipality has signed an agreement with SINTEF that includes the municipal leadership going to Trondheim once every one or two years for training and inspiration from all of the SINTEF group. The interviewee in Fjell presents the impact of SINTEF, stemming from both two collaborations, as "a tremendous turn" in how the municipality works, especially the importance of collaborating constructively with national actors in e.g. road administration, health care and police, to make it easier for these to perform well in the municipalities. Overall, the municipality has learned "to be tough enough to collaborate with the best, and humble enough to collaborate with anyone" according to the interviewee, who also observed that he in the beginning of June will welcome the 26th delegation from Danish municipalities, visiting the three municipalities outside Bergen to get inspiration for their own work.

It is apparent that the SINTEF director has been a crucial factor to the success, acting as the link between Gode Sirklar and the municipalities, between the company and the project leaders, and as the coordinator within SINTEF. The change of director in 2016 is consequently presented as a risk, but the municipalities express high faith also in the successor.

A.11.3 Sources

The case is based on SINTEF T&S's self-assessment. In addition, the following sources have been used:

- Agderforskning (2010). Gode Sirklar: En evaluering. Prosjektrapport nr. 1/2010
- Gode Sirklar (2016). Gode Sirklar. <http://www.godesirklar.no>
- Interview for this impact assessment with a representative for Fjell municipality

A.12 Methods for economic analyses of large public investments – SNF Centre for Applied Research at the Norwegian School of Economics

A.12.1 Underpinning R&D

SNF has carried out several empirical projects where it has applied socioeconomic analysis in practice. The projects have highlighted challenges when operationalising already established methodologies, and one concrete example is the need for real-price adjustment when analysing long-term investment projects.²⁸ In combination with expertise from the Norwegian School of Economics, these projects have produced improved solutions, which later have resulted in changes in the Ministry of Finance's (FIN's) guidelines for socioeconomic analysis of public investments in Norway.

A.12.2 Impact on society

SNF's research has for a long time focused on gaining practical experience from application of research-based knowledge on socioeconomic studies of major public investment projects. The projects have been of quite different character. The institute has carried out projects on for example of road projects, transport investments, localisation options for new logistical hubs and large buildings. The studies have contributed to challenging established methodologies in several different areas.

In 2000, FIN established a quality assurance scheme for public investment projects in excess of NOK500m.²⁹ The quality assurance scheme was used when carrying out a socioeconomic analysis of the application from the Norwegian Confederation of Sports and the Olympic Committee for a Winter Olympics in Tromsø, a project funded by the Ministry of Culture and FIN. The analysis showed that there was indeed a need for real-price adjustments of the economic values that were included in the analysis, but previous guidelines had used fixed prices. However, a possible Winter Olympics would take place more than ten years after quality assurance, and the impact had to be assessed over many years to provide a true picture, and analyses would not capture actual conditions if they were carried out using fixed prices because the prices of goods and services do not change evenly over time. For instance, wages increase more than the general rate of inflation. Consequently, the price of labour-intensive goods and services increase relative to the price of less labour-intensive products. The economic analysis of a possible Tromsø Winter Olympics was the first time that real-price adjustments were used with FIN's quality assurance scheme.

In 2011, FIN appointed an expert committee to review the framework for socioeconomic analysis, and SNF researchers Hagen and Pedersen were made committee members, the former as chairman, courtesy of their experiences outlined above. The committee submitted its report in 2012, and it was the basis for the new policy for principles and requirements in the preparation of economic analyses that were implemented in 2014. The new principles and requirements were was a part of the guide for economic analysis that was released later the same year, and that now is handled by the Norwegian Government Agency for Financial Management.

²⁸ In order to compare current and future costs and benefits of a project, assumptions have to be made regarding how calculation prices will develop during the analysis period. A common simplification when calculating the economic benefits of a project is to keep prices unchanged throughout the analysis period in real terms. If the price of a good or a service on the benefit side of a project is expected to increase relative to the prices of other goods and services, the project will seem less profitable than is actually the case unless this is taken into consideration in the analysis. However, the assumption of constant calculation prices in real terms fails to reflect expected developments in some cases. See NOU 2012:16

²⁹ SNF participated in the project together with several actors. There were several examples of projects that had failed in terms of for example cost overruns and quality standards not being met. In this context, the Norwegian government initiated a project to review the systems for planning, implementing and following up public investment projects in late 1997. In 1999, the project steering committee delivered its report. It recommended a quality assurance scheme in major public projects' planning processes, and in 2000, a quality assurance scheme was introduced. It was first about quality assurance of the management base and cost estimates before a project is submitted to Parliament for approval and funding. The second period of framework agreements was 2005–2010, and the third period of framework agreements was 2011–2015. Both periods included some modifications. The fourth framework agreement was signed in autumn 2015. The current agreement does not differ much from previous agreements.

A.12.3 Sources

The case is based on SNF's self-assessment. In addition, the following sources have been consulted:

- Andersen, C; R.J. Brunstad, K.P. Hagen, P. Heum og K.R. Pedersen (2008). «Samfunnsøkonomisk analyse av et vinter-OL i Tromsø i 2018», SNF-Arbeidsnotat nr. 34/08. SNF-prosjekt nr. 2694
- Advansia AS, Det Norske Veritas AS, Samfunns- og Næringslivsforskning AS (2008). Kvalitetssikring av søknad om statsgaranti for OL/PL i Tromsø 2018. Rapport til Finansdepartementet og Kultur- og kirke departementet nr. 1438/2008
- NOU 2012:16. Samfunnsøkonomiske analyser. Finansdepartementet
- NOU 2013:10. Naturens goder – om verdier av økosystemtjenester. Klima- og miljødepartementet
- Rundskriv R-109/14 Finansdepartementet datert 30.04.2014 Prinsipper og krav ved utarbeidelse av samfunnsøkonomiske analyser mv. (see section 6.1.2 Realprisjustering)
- Direktoratet for økonomistyring (2014). Veileder i samfunnsøkonomiske analyser. Fagbokforlaget (see section 3.4.6 Realprisjuster relevante verdier).

A.13 Tax evasion and moral motivation – SNF Centre for Applied Research at Norwegian School of Economics

A.13.1 Underpinning R&D

In 2012 Norwegian Centre for Taxation (NoCeT) was established at NHH - Norwegian School of Economics, funded by Tax Norway and RCN (through funding from the Ministry of Finance) with a total of around 6 million NOK per year for a 5+5 year period. Some researchers at NoCeT also work for SNF from time to time.³⁰ In 2013 NoCeT researchers carried out, through SNF's programme for behavioural economics, a field experiment in cooperation with Tax Norway. Income from domestic sources is normally automatically reported to the tax authorities, but income in a foreign country must be self-reported by the taxpayers in their tax returns. Tax Norway has traditionally had limited opportunities to control whether or not those statements are correct, but during the last years the so-called AKU reports³¹ have given the Norwegian tax authorities better information about Norwegian tax residents' income in some foreign countries, most notably in Sweden and Denmark. Hence, a possibility had opened up for experiments on how to improve the accuracy of the self-reporting. The researchers were interested in evaluating different ways of doing this, and particularly keen at studying if appeals to moral motivation would reduce tax evasion. They also wanted to investigate if there were (particularly) cost-efficient ways to make the self-reporting more accurate.

Tax Norway identified 18,000 tax payers for whom the difference between the AKU reports and the self-reported foreign income in 2011 was between 2,000 and 200,000 NOK. Together with Tax Norway, SNF sent a letter to those tax payers informing them how foreign income and wealth shall be reported. One group was left outside as control group and did not receive a letter, while one group received a neutral letter and two groups received letters with different moral appeals.³² One of these groups received a letter with the sentence (translated from Norwegian): "The great majority report information about their income and assets in Norway correctly and completely. In order to treat all taxpayers fairly, it is therefore important that foreign income and foreign assets are reported in the same manner". To the other group, the researchers wrote "Your tax payment contributes to the funding of publicly financed services in education, health and other important sectors of society". To

³⁰ SNF is to a significant degree integrated with NHH, and it is sometimes difficult for outsiders to discern where the boundaries are. In this case, Tax Norway views the project as having been carried out by NoCeT, which is part of NHH. However, NHH had apparently located (part of) the project at SNF.

³¹ AKU stands for Automatic control reports from abroad (*Automatiske Kontrolloppgaver Utland*).

³² Since the research project also included other experiments, not relevant for this case, the groups are not equally large. The control group included around 2,000 tax residents, while the two groups that received moral appeals and the group that received the neutral letter comprised around 4,000 tax residents each. (The remaining 4,000 tax residents received a letter stating that the Tax Norway had information that they had misreported their foreign income, not relevant for this case.)

both letters the researchers also attached a flyer that illustrated publicly financed services in health, education, infrastructure and research.

The results showed the possibility to reduce tax evasion in a cost-efficient way, and that a moral appeal can improve the accuracy of self-reporting. Compared with the control group, the neutral letter led to a 39 percent increase in self-reported foreign income. The moral appeal had an even larger impact: the reported income increased by 69 percent compared with the neutral letter.

A.13.2 Impact on society

Attempts to estimate tax evasion in Norway indicate that around 100 billion NOK are withheld from taxation each year, which means that tax evasion probably is the socioeconomically most significant type of crime. It is also a type of crime that involves a great number of individuals – a good indication, SNF states, is that around 40 percent of the Norwegian population finds it acceptable to pay illicitly for minor work, and about as many admit to have paid for illicit work. The consequences of tax evasion include reduced public income as well as eroded tax morale. Tax evasion also gives criminals a competitive advantage as they can run businesses with lower costs.

The project by SNF led to an increase in reported foreign income by 150 million NOK for 2011. Although that sum (and the increased tax revenues it resulted in) is relatively marginal in relation to the entire tax evasion, it means that the project paid off greatly. Tax Norway now uses a version of the letter every year, although it does not follow up the effects. The experiment got significant attention in Tax Norway, and led the agency to introduce moral appeals also in other cases, most notably in initiatives to curb the black economy in the construction sector. The main alternative to moral appeals would be to employ tax controllers, which would be considerably more expensive and therefore not economically viable in situations where there are only small sums of money at stake. Tax Norway views the project by SNF as relatively groundbreaking: large experiments on tax issues are rare, and Tax Norway is not aware of any similar experiments elsewhere. The experiment has received considerable attention at tax conferences abroad.

A.13.3 Sources

The case is based on SNF's self-assessment. In addition, the following sources have been used:

- Bott, Kristina, Alexander W. Cappelen, Erik Ø. Sørensen and Bertil Tungodden (2014). You've got mail: A randomised field experiment on tax evasion. Discussion Paper 26/2014. Preliminary version. Department of Economics, Norwegian School of Economics
- Interview for this impact assessment with a representative for Tax Norway

A.14 General Practitioners as gatekeepers – Uni Research

A.14.1 Underpinning R&D

In the health care system, hard choices in allocation of resources are necessary and questions about health care priority settings have been given considerable attention in several countries over the past decade or two. However, decisions regarding how a country's health resources should be distributed are very difficult to take. Since the 1980s, health care prioritisation has been debated also in Norway. For instance, Norway was the first developed country to use national guidelines for prioritisations. The Patients' Rights Act of the Norwegian tax-based health service guarantees all citizens health care in case of a severe illness, a proven health benefit, and proportionality between need and treatment.

Several countries have health systems that are based on General Practitioners having a key role as gatekeepers. However, there have been indications that this is not functioning optimally. In this light, Rokkan Centre has conducted a number of studies, including for example surveys and interviews that have explored the General Practitioner's role as gatekeeper.

The studies have received attention in media, as well as in the medical profession and the health administration. In addition, the results have been presented and discussed at several events with representatives from the Norwegian government and actors from the medical profession.

A.14.2 Impact on society

The knowledge has been used to develop policies as well as management tools for practical use. For instance, the knowledge has been included in the Mykletun Committee's report to the Ministry of Labour regarding measures for reduction of sick leave in 2010. The committee proposed a strategy that prioritises active participation measures, return-to-work strategies and gradual sick leave. The committee proposed, for example, that gradual sick leave should be the main rule after eight weeks, and systematic work to improve the knowledge base for measures and implementation of an information strategy aimed at creating acceptance for the basic ideas behind the proposed measures. The committee emphasised that effective implementation of the proposed measures demanded high priority at the policy level and in public administration.

Regarding health care priority setting, a researcher from Uni Rokkan, recently led a committee (*Prioriteringsutvalget*) regarding the report *Åpent og rettferdig – prioriteringer i helsetjenesten* (NOU 2014:12). In late 2014, the Norwegian Commission on Priority Setting in Health Care, handed in its report to the Minister of Health. The committee had studied how to best meet current challenges regarding how to prioritise, and discussed the principles, criteria and tools for prioritisation in health care. The committee stated that work regarding prioritising should be built on four main principles:

- Priorities should help to maximise of the number of high-quality years life for all, and equally
- Priorities should follow on clear criteria
- Priorities should be made systematically, transparently and with user involvement
- Priorities should be conducted with a comprehensive set of effective measures

A.14.3 Sources

The case is based on Uni Rokkan Centre's self-assessment. In addition, the following sources have been consulted:

- National Council for Priority Setting in the Health Care (2015). Priorities in the Norwegian health care. <http://www.prioritering.no/artikkel?language=english&key=12348>
- NOU 2014:12. *Åpent og rettferdig – prioriteringer i helsetjenesten*.
- Norwegian Government (2014). Rapport om tiltak for reduksjon i sykefraværet.
- Prioriteringsutvalget (2014). *Åpent og rettferdig – prioriteringer i norsk helsetjeneste*. Pressemelding
- Tiltak for reduksjon i sykefravær: Aktiviserings- og nærværsreform. Ekspertgrupperapport til Arbeidsdepartementet 01.02.10 ifølge mandat av 27.11.09

A.15 Entrepreneurship in schools – Eastern Norway Research Institute

A.15.1 Underpinning R&D

Eastern Norway Research Institute (ØF) has since 2006 led research projects in the field of entrepreneurship in schools in Norway and in around thirty other European countries, as well as in Namibia and Uganda. The institute was responsible for research on basic education in the Ministry of Education's five-year research project, and for the evaluation of the Action plan for entrepreneurship in education in Norway, 2009–2014. In the period 2015–2018, ØF is involved in two EU projects. One of these is a major project about mini-companies, or 'Youth Companies', in five countries, supported by Erasmus+. The project is called 'Innovation Cluster for Entrepreneurship Education' (ICEE). ICEE is an educational experiment carried out in Belgium, Estonia, Finland, Italy and Latvia. The aim is to analyse how to effectively increase the percentage of students participating in Youth Companies during

their secondary education, and the impact such businesses can have on the students, for the school and for society. The data collection includes around 3,700 students, 2,000 parents, 800 teachers and 400 business representatives. In addition to an online survey, qualitative case studies in one school in each of the five countries are conducted. In the project, there are 20 schools that implement Youth Companies, where students start, operate and terminate their own business during a school year. In order to analyse the effects of entrepreneurship education, there are two control groups included in the project that do not participate in Youth Companies.

Junior Achievement Europe (JA) is Europe's largest provider of entrepreneurship programmes, and JA is coordinator and responsible for the practical implementation of the project. 14 partner organisations participate in the project, and about 100 people are included in the project management group. ØF leads a research team that also includes Strossmayer University in Croatia and The Danish Foundation for Entrepreneurship (Fonden for Entreprenørskab). A group of five researchers from ØF participate in this project. The research group 'Innovation Cluster for Entrepreneurship Education' will be led by Research Professor Vegard Johansen, who is a leading scholar in this field, having published more refereed works than any other on entrepreneurship education in secondary education. The project will provide the knowledge base for EU's future education policy. JA and ØF's ICEE project have budget of NOK 20m, wherein ØF's share is NOK5m.

A.15.2 Impact on society

Research on entrepreneurship in basic education has contributed to the knowledge base for development of educational policies and content of Norwegian and European educations. ØF researcher Vegard Johansen has been appointed expert in the European Entrepreneurship Education Network, which provides direct advice to the European Commission on the future of entrepreneurship education. The network is supported by the EU programme COSME and national authorities.

Entrepreneurship Education has been a field of activity in basic education for a long time. Ninety percent of secondary schools and high schools offer entrepreneurship education today. Although there has been significant advancement in the scientific knowledge base, there are still challenges, and work on entrepreneurship will continue undergoing continuous development. There is a significant need to develop more expertise in entrepreneurship education and to adapt teaching to different levels. There is also a great need for research-based knowledge about what students learn through different types of entrepreneurship education activities, and how they learn.

Traditionally, fewer women than men have participated in entrepreneurship education, but the gender difference is diminishing. Among other things, there are as many girls as boys taking part in Pupil Companies and Youth Companies, and there is a slight majority of girls in leadership positions in the Youth Companies. This development is exciting, as women are underrepresented as entrepreneurs. Entrepreneurship education is important to promote entrepreneurship among young people and not least women. Research has shown that in the short term (immediately after participation), Youth Companies have a gender-balancing effect, with respect to knowledge level and desire to start businesses, which is stronger for girls than boys. But in the longer term (5–10 years after participation), it seems as if the effects of participation in the Youth Company and Student Company become reversed, with stronger effects on young men than on young women. After having completed a number of studies in Norway and in other countries in Europe and Africa, it is reasonably certain that well-developed projects, such as the multinational Youth Company make more young people want to start their own businesses, and that they have the knowledge necessary to start and run them.

A.15.3 Sources

The case is based on the self-assessment from Eastern Norway Research Institute. In addition, the following sources have been consulted:

- The Danish Foundation for Entrepreneurship, <http://www.ffe-ye.dk/>
- Eastern Norway Research Institute, <http://www.ostforsk.no/>

Appendix B Classification of impact cases

In classifying types of beneficiaries, we departed from the scheme (hereafter: REF scheme) that King’s College London and Digital Science developed in their report on 6,679 impact cases that were submitted to the Research Excellence Framework (REF) in 2014. Since we only operate with 71 cases we needed to decrease the number of categories, which we did in a first step by combining categories in the REF scheme into new, broader categories. In a second step we adjusted the categories in relation to our material by introducing new categories where the REF scheme was not sufficient, and by dividing one category in which we found many cases (Government and other policymakers) into three new categories. The outcome is presented in Table 11.

King’s College London and Digital Science applied a bottom-up method whereby the data itself generated the categories through automated text mining. The low number of cases in our study made such a method less appropriate, why we applied manual classification. Each case has been assigned to one, two or three types of beneficiaries, with no order of rank between the assigned categories. Since we did not have the resources to dig deeply into every case, we chose to be conservative in our classifications, and typically included only types of beneficiaries that were explicitly mentioned as beneficiaries in the impact case studies. In other words, we did for instance not assign the “Citizens” category to cases where an institute only stated that it had affected national political reforms (which in the next step most likely affected citizens or organisations in Norway). A drawback with our approach is that we probably risk underestimating the impact the institutes through the studied cases have made among ‘less influential’ beneficiaries – we suspect that the institutes were more prone to claim impact on national policies than on local and regional policies, etc. We are also likely to underestimate the impact on actors affected by new or altered policies: companies, citizens, etc.

Table 11 Classification of beneficiaries

Category	REF category/-ies	Comment
Citizens	Citizens, Consumers, Patients	We assign this category to ‘ordinary people’ who do not evidently belong to a sector, type of organisation or profession covered by the other categories
Companies	Companies, Manufacturers, Consultants	
Court and justice sector	N/A	
Education and children	Schools, Pupils, Students, Children	Includes tertiary education
Health sector	NHS, Clinicians	Other types of organisations (health trusts etc.) or professions that show up in our material and belong to the health sector are added to this category
National policymakers	Governments, Policymakers, Ministers	Government and other policymakers on national level in Norway
Regional or local policymakers		Governments and other policymakers on regional or local level in Norway
Policymakers outside Norway		Governments and other policymakers in other countries or international organisations
R&D sector	N/A	Impact on e.g. top management level. We do not count cases where e.g. the research behind the impact has led to publications or other capacity building for the researchers or R&D organisations involved.
Specific professions	Teachers, Journalists, Writers, Curators, Designers, Farmers, Lawyers, Engineers, Museums	Other specific professions that show up in our material are added to this category.
Unions or workers	Unions, Workers	
Voluntary sector	Councils, Communities, Charities,	

<i>Category</i>	<i>REF category/-ies</i>	<i>Comment</i>
	Volunteers	
Women	Women	

Sources: Impact cases submitted for this evaluation by the 22 social science research institutes; King's College London and Digital Science (2015). The nature, scale and beneficiaries of research impact: An initial analysis of Research Excellence Framework (REF) 2014 impact case studies. Research Report 2015/01.

Regarding impact topics, we applied a similar method as regarding beneficiaries. We departed from the REF categories, and filtered the 71 impact through these. Due to our much lower number of cases, in most cases we combined REF categories to form new, broader categories. However, we also found cases which did not fit very well with the REF categories. In those cases we created new categories similar to the other categories in terms of style and scope. See Table 12 for details.

Table 12 Classification of impact topics

<i>Category</i>	<i>REF category/-ies</i>	<i>Comment</i>
Africa	N/A	
Asia	Asia, China	
Business, innovation and entrepreneurship	Business and industry, Regional innovation and enterprise	Including entrepreneurship
Children	Children	
Civil security and safety	N/A	
Climate and environment	Climate change	Includes also other environmental issues
Crime, law and justice	Crime and justice, Law and justice	
Culture, arts and literature	Architecture and building, Arts and culture, Film and theatre, Literature, Museums and exhibitions, Music, dance and performance	
Databases, models and software	Modelling and forecasting, Software development	
Defence and security	Defence and security	Including creation of databases
Democracy and public engagement	Democracy and political engagement, Public engagement	
Economics and finance	Banking, finance and monetary policy	Includes also other aspects of economic and financial activities on the micro and macro levels.
Elderly	N/A	
European integration	N/A	
Fisheries	N/A	
Foreign policy	Community and local government, Informing government policy, Parliamentary scrutiny	Includes trade policy
Gender equality	Women	
Health care	Cancer, Clinical guidance, Clinical tests, Dentistry, Food and nutrition, Health care services, Infectious diseases,	

<i>Category</i>	<i>REF category/-ies</i>	<i>Comment</i>
	Laboratory diagnostics, Mental health, Medical ethics, Pharmaceuticals, Public health and prevention, Surgery,	
Immigration	N/A	
International development	International development	Includes development policy
Media	Media, Print media and publishing	
Nature and society	Marine and ocean science, Nature and conservation, Water and flood management	Including natural disasters
Oil and gas	Oil and gas	
R&D policy		
Regional growth policy		
Schools and education	Schools and education	
Social security	N/A	
Technological development	Computing and quantum physics, Instrumentation, Engineering, design and manufacturing, Mobile technologies, Technology	Includes ICT
Tourism	N/A	
Work and labour markets	Work	

Appendix C Interview guide

C.1 Interview guide: Clients

Institute	
User organisation	
Interviewee, position	
Date	
Interviewer	

Type of organisation (company, public sector, research institution, NGO etc.)	
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Nature of collaboration	
<p>1. As far as we know, your organisation buys R&D services from the institute. Is that correct?</p> <ul style="list-style-type: none"> • Is your organisation also partner with the institute in publicly co-funded R&D projects? • Do you also buy services from other institutes? 	
<p>2. Could you briefly describe your organisation's (if large org.: unit's) relationship to the institute?</p> <ul style="list-style-type: none"> • Scope of your collaboration (number and approximate size of assignments per year, year of first assignment) • What is a 'typical' assignment? 	
<p>3. What are your organisation's motives to buy R&D services from the institute?</p> <ul style="list-style-type: none"> • Access to knowledge. Please specify (scientific expertise, competence to compile overviews of previous studies, to run evaluations, etc.) • Access to strategic/policy advice • Access to additional resources (e.g. to perform tasks that you have the competence, but not the time to do yourselves) • Access to an independent actor with high legitimacy • Access to networks • Other? 	
Impact	
4. What benefits has your organisation had from	

<p>buying services from the institute?</p> <ul style="list-style-type: none"> • Improved skills or methods • New or better data • Better services • Better policy-making • Deeper collaboration with the institute • New or improved networks • Economic impacts • Other 	
<p>5. Has buying services from the institute resulted in any particularly significant impact? If “no”, skip questions 6–13</p>	
<p>6. Please describe the project and its impact:</p> <ul style="list-style-type: none"> • What was the project about? • What kind of impact was achieved? <ul style="list-style-type: none"> – Skills development – Better public/policy debate – New/adjusted policy instruments or solutions – New data or methods for analyses – Cost savings – Better service to citizens etc. • Who are the beneficiaries? (Your organisation, other organisations – companies, public agencies, political bodies – regions, Norwegian citizens, foreign actors...) • How long time did it take from the initial work until the impact was realised? • How did the institute contribute? • How did you (the user organisation) participate? How did you develop the institute contribution internally, to achieve the impact? • Were there other organisations involved too? How did they contribute to achieve the impact? 	
<p>7. Please describe the project and the impact:</p> <ul style="list-style-type: none"> • What was the project about? • What kind of impact was achieved? <ul style="list-style-type: none"> – Skills development – Better public/policy debate – New/adjusted policy instruments or solutions – New data or methods for analyses – Cost savings – Better service to citizens – Other • Who are the beneficiaries? <ul style="list-style-type: none"> – Your organisation – Companies 	

<ul style="list-style-type: none"> - Public agencies - Political bodies - Norwegian citizens - Foreign actors - Other • How long time did it take from the initial work until the impact was realised? 	
<p>8. Please assess the impact in quantifiable terms, if possible.</p> <ul style="list-style-type: none"> • Follow up on impacts mentioned in the previous question • Were there any spin-off companies created? IPR? • <i>To companies:</i> Please assess the impact on your revenues, number of staff, market share, etc. 	
<p>9. Who participated and what were their roles?</p> <ul style="list-style-type: none"> • How did the institute contribute? • (How) did you (the user organisation) participate? (How) did you develop the institute's contribution further internally? • Did other organisations also contribute? 	
<p>10. What role has the impact had on your strategies and management?</p> <ul style="list-style-type: none"> • Has there been any re-organisation? 	
<p>11. Has the impact led to deeper collaboration with the institute in other projects? Has it led to new or improved networks with others?</p>	
<p>12. Please assess the likelihood that the impact would have been achieved also without the contribution from the institute. Could the impact have been realised also by working with another institute, or other actor in Norway or abroad?</p>	
<p>13. Is there someone else we should talk to in order learn more?</p>	
<p>Satisfaction</p>	
<p>14. How satisfied are you with the institute's...</p> <ul style="list-style-type: none"> • Expertise (scientific and methodological competence etc.)? • Strategic support (ability to facilitate processes, to support implementation etc.)? • Project management (plan and control the work process, communicate well with client, be responsive to client wishes, deliver on time etc.) • Professional integrity and independence (from public agencies, political actors, vested interests etc.)? 	

<ul style="list-style-type: none"> • The value for money of the institute's services? 	
<p>15. How could the institute improve its offer?</p> <ul style="list-style-type: none"> • How could the deliveries become (even) more useful and easy to implement? • Is there anything the institute lacks (type of competence, infrastructure, etc.)? 	
<p>16. Only to users from the public sector: The social science institute sector is expected to contribute to renewal of the public sector. How does the institute perform in that respect?</p>	
<p>17. Do you see any particular threats to the institute's competitiveness in the medium/long term?</p>	
<p>Final questions</p>	
<p>18. Only to Norwegian users: Considering the social science institute sector in Norway as a whole, does it fulfil your needs? If not, please elaborate.</p>	
<p>19. Is there something else you would like to add?</p>	

C.2 Interview guide: Partners

Institute	
User organisation	
Interviewee, position	
Date	
Interviewer	

Type of organisation (company, public sector, research institution, NGO etc.)	
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<p>Nature of collaboration</p>	
<p>1. As far as we know, your organisation is an R&D partner to the institute. Is that correct?</p> <ul style="list-style-type: none"> • Does your organisation also buy R&D services from the institute? • Do you also collaborate with other institutes? 	
<p>2. Could you briefly describe your organisation's (if large org.: unit's) relationship to the institute?</p> <ul style="list-style-type: none"> • Scope of your collaboration (number and approximate size of assignments per year, year 	

<p>of first assignment)</p> <ul style="list-style-type: none"> • What is a ‘typical’ assignment? 	
<p>3. What are your (organisation’s) motives to collaborate with the institute?</p> <ul style="list-style-type: none"> • Access to knowledge. Please specify (scientific expertise, competence to compile overviews of previous studies, to run evaluations, etc.) • Access to strategic/policy advice • Access to databases or other empirical support • Access to networks • Other? 	
<p>Impact</p>	
<p>4. What benefits has your organisation (or you) had from collaborating with the institute?</p> <ul style="list-style-type: none"> • Improved skills or methods • New or better data • Better services • Better policy-making • Deeper collaboration with the institute • New or improved networks • Economic impacts • Scientific publications • Other 	
<p>5. Has buying services from the institute resulted in any particularly significant impact? If “no”, skip questions 6–13</p>	
<p>6. Please describe the project and its impact:</p> <ul style="list-style-type: none"> • What was the project about? • What kind of impact was achieved? <ul style="list-style-type: none"> – Skills development – Better public/policy debate – New/adjusted policy instruments or solutions – New data or methods for analyses – Cost savings – Better service to citizens etc. • Who are the beneficiaries? (Your organisation, other organisations – companies, public agencies, political bodies – regions, Norwegian citizens, foreign actors...) • How long time did it take from the initial work until the impact was realised? • How did the institute contribute? • How did you (the user organisation) participate? How did you develop the institute contribution internally, to achieve the impact? 	

<ul style="list-style-type: none"> • Were there other organisations involved too? How did they contribute to achieve the impact? 	
<p>7. Please describe the project and the impact:</p> <ul style="list-style-type: none"> • What was the project about? • What kind of impact was achieved? <ul style="list-style-type: none"> - Skills development - Better public/policy debate - New/adjusted policy instruments or solutions - New data or methods for analyses - Cost savings - Better service to citizens - Other • Who are the beneficiaries? <ul style="list-style-type: none"> - Your organisation - Companies - Public agencies - Political bodies - Norwegian citizens - Foreign actors - Other • How long time did it take from the initial work until the impact was realised? 	
<p>8. Please assess the impact in quantifiable terms, if possible.</p> <ul style="list-style-type: none"> • Follow up on impacts mentioned in the previous question • Were there any spin-off companies created? IPR? • <i>To companies</i>: Please assess the impact on your revenues, number of staff, market share, etc. 	
<p>9. Who participated and what were their roles?</p> <ul style="list-style-type: none"> • How did the institute contribute? • (How) did you (the user organisation) participate? (How) did you develop the institute's contribution further internally? • Did other organisations also contribute? 	
<p>10. What role has the impact had on your strategies and management?</p> <ul style="list-style-type: none"> • Has there been any re-organisation? 	
<p>11. Has the impact led to deeper collaboration with the institute in other projects? Has it led to new or improved networks with others?</p>	
<p>12. Please assess the likelihood that the impact would have been achieved also without the contribution from the institute. Could the impact have been realised also by working with another institute, or other actor in</p>	

Norway or abroad?	
13. Is there someone else we should talk to in order learn more?	
Satisfaction	
14. How satisfied are you with the institute's...: <ul style="list-style-type: none"> • Expertise (scientific and methodological competence etc.)? • Strategic support (ability to facilitate processes, to support implementation etc.)? • Project management (plan and control the work process, communicate well with client, be responsive to client wishes, deliver on time etc.) • Professional integrity and independence (from public agencies, political actors, vested interests etc.)? • The value for money of collaborating with the institute? 	
15. How could the institute improve its offer? <ul style="list-style-type: none"> • How could the deliveries become (even) more useful and easy to implement? • Is there anything the institute lacks (type of competence, infrastructure, etc.)? 	
16. Only to users from the public sector: The social science institute sector is expected to contribute to renewal of the public sector. How does the institute perform in that respect?	
17. Do you perceive any particular threats to the institute's competitiveness in the medium/long term?	
Final questions	
18. Only to Norwegian users: Considering the social science institute sector in Norway as a whole, does it fulfil your needs? If not, please elaborate.	
19. Is there something else you would like to add?	

Appendix D Survey questionnaires

D.1 Introduction to respondents (e-mail)

Dear Sir/Madam,

The Research Council of Norway (RCN) has appointed an international panel to carry out an evaluation of the social science institute sector in Norway. The results of the evaluation are to be used in strategic development by the institutes themselves and in shaping future research policy in Norway. To support the panel evaluation, RCN has commissioned Technopolis Group to conduct a user survey and an impact analysis for the 22 social science institutes.

You have received this e-mail because, according to information from the institutes themselves and from RCN, your organisation has collaborated with [institute x] in recent years, either as client or as partner in publically co-funded projects. We would very much appreciate if you would take the time to share your experiences of collaborating with the institute with us. The link below takes you to a web survey that we estimate will take you 10-15 minutes to complete.

[Link]

We would appreciate your response to the survey at the latest by April 20.

Your response will be treated anonymously. You may forward this e-mail to a colleague in a better position to respond to the survey.

If you have also collaborated with other social science institute(s) than the one named above, please ignore these experiences and focus on your experiences of the institute named above.

If you have any questions regarding the survey, please contact Emma Ärenman, emma.arenman@technopolis-group.com.

As part of the user survey and the impact analysis, we will also conduct interviews with a selection of users. The web survey and the interview provide complementary information, so if you are later contacted for an interview we kindly ask you to set aside the time.

Thank you for your participation!

D.2 Introduction to respondents (in survey)

Dear Sir/Madam,

The Research Council of Norway (RCN) has appointed an international panel to carry out an evaluation of the social science institute sector in Norway. To support the panel evaluation, RCN has commissioned Technopolis Group to conduct a user survey and an impact analysis for the 22 social science institutes. We would appreciate if you would share your experiences of collaborating with the institute with us.

We kindly ask you to respond at the latest by April 20. The survey takes an estimated 10-15 minutes to complete.

We are aware that not all questions suit all survey respondents. This is because the 22 institutes have a broad array of activities among them, and quite different kinds of users. If a question appears irrelevant to your organisation's relation with the institute, please select "Not applicable".

You may write responses to open questions in Norwegian.

If you have any questions regarding the survey, please contact Emma Ärenman, emma.arenman@technopolis-group.com.

D.3 Client survey

1. What relation does your organisation have with the institute?

- Mainly client (we mainly, or only, buy R&D services)
- Mainly, or only, partner in national/regional knowledge centre established by sector organ(s) and hosted by the institute
- Mainly, or only, partner in R&D projects that are publicly co-funded by e.g. a ministry, sector agency, RCN or the European Commission
- Client and partner in roughly equal proportions

2. Which of the following alternatives best describes your organisation?

- Commercial company (AS, ASA) with more than 250 employees worldwide
- Commercial company (AS, ASA) with 51–250 employees worldwide
- Commercial company (AS, ASA) with 11–50 employees worldwide
- Commercial company (AS, ASA) with less than 10 employees worldwide
- Health trust (helseforetak)
- Public enterprise other than health trust (statsforetak, fylkeskommunalt foretak, kommunalt foretak etc.)
- Court or other part of the judicial system
- Ministry or embassy
- Government agency (statlig etat)
- County Governor's office (fylkesmann)
- County municipality or municipality (fylkeskommune or kommune)
- Regional or local public agency (fylkeskommunal or kommunal etat)
- University or university college
- Research institute
- EU or other international organisation (EU institution, OECD etc.)
- Non-governmental organisation
- Other [Open answer]

3. Where is your organisation – i.e. the legal entity that you are working for – located?

- In Norway
- Outside Norway

4. Please assess to what extent the following statements reflect your organisation's motives for buying R&D services from the institute:

Choose between: Strongly disagree –Disagree –Neither agree nor disagree –Agree –Strongly agree + Do not know/Not applicable

- To access expertise in social sciences or humanities

- To access expertise in other sciences
- To access methodological expertise
- To get support in strategy/policy processes
- To receive independent assessments
- To get tasks performed that our own staff does not have time to perform
- To get very concrete and specific tasks performed (evaluation, specific documentation etc.)
- To access R&D infrastructure (databases, software, specific equipment etc.)
- To access training/courses
- To access networks with R&D providers (universities and institutes)
- To access partners for future R&D proposals to for example RCN or the EU Framework programme (Horizon 2020)
- Other: [Open answer]

5. **Please assess to what extent buying R&D services from the institute has contributed to, or is expected to contribute to, the following for your organisation:**

Choose between: Strongly disagree –Disagree –Neither agree nor disagree –Agree –Strongly agree + Do not know/Not applicable

- Improved scientific or professional skills
- Improved working practices or management skills
- Implementation of new types of data or analytical methods
- Improved efficiency or functionality of products/services/policies
- Improved ability to fulfil our organisation's aims and goals
- Establishment of a long-term strategic relationship with the institute
- Improved networks in Norway
- Improved networks outside Norway
- Participation in R&D projects co-funded by for example RCN or the EU Framework programme (Horizon 2020)
- Spin-off company/-ies
- For public sector only: New or adjusted policy instruments
- For public sector only: Improved policy discussions
- For commercial clients only: New marketing opportunities
- For commercial clients only: Commercialisation of new or improved products or services
- For commercial clients only: Increased turnover
- For commercial clients only: Decreased costs
- For commercial clients only: Increased number of employees
- Other [Open answer]

6. **Have you experienced a particularly significant impact as a result of buying R&D services from the institute? If yes, would you like to share your experiences with us?**

Please describe the impact in 2–3 sentences, and add name and e-mail/telephone number so that we may contact you to learn more.

[Open answer]

7. What is your degree of satisfaction with the institute in the following respects?

Choose between Very poor –Poor –Satisfactory –Good –Excellent + Do not know/Not applicable

- Scientific competence
- Methodological competence
- Ability to provide solutions that are easy to implement
- Ability to provide strategic support
- Ability to identify and share ideas for new projects
- Quality of services
- Relevance of services
- Flexibility and adaptability to client needs
- Ability to deliver on time
- Project management skills (availability, communication etc.)
- Ability to deal with sensitive information, trade secrets and IPR
- Professional integrity and independence (from public agencies, political actors, vested interests etc.)
- Availability of R&D infrastructure (databases, software, specific equipment etc.)
- Value for money

8. What is your degree of satisfaction with the institute's personnel in the following respects?

Choose between Very poor –Poor –Satisfactory –Good –Excellent + Do not know/Not applicable

- Collaborative skills
- Client focus
- Ability to effectively communicate on scientific and domain-specific matters

9. Please assess to which extent the following types of actors are competitors to the institute (as potential alternative suppliers of R&D services):

Choose between Strongly disagree –Disagree –Neither agree nor disagree –Agree –Strongly agree + Do not know/Not applicable

- Universities/university colleges in Norway
- Other research institutes in Norway
- Consultancy firms or other companies based in Norway
- Think tanks based in Norway
- Public agencies in Norway
- Competitors based outside Norway

- Other: [Open answer]

10. How do Norwegian competitors compare with the institute (as potential alternative suppliers of R&D services)? In the following respects, Norwegian competitors are...

Choose between Much less competitive – Less competitive – Equally competitive – More competitive – Much more competitive + Do not know/Not applicable

- Scientific competence
- Methodological competence
- Quality of services
- Relevance of services
- Ability to deliver on time
- Project management skills (availability, communication etc.)
- Availability of R&D infrastructure (databases, software, specific equipment etc.)
- Value for money
- Professional integrity and independence (from public agencies, political actors, vested interests etc.)

11. How do foreign competitors compare with the institute (as potential alternative suppliers of R&D services)? In the following respects, foreign competitors are...

Choose between Much less competitive – Less competitive – Equally competitive – More competitive – Much more competitive + Do not know/Not applicable

- Scientific competence
- Methodological competence
- Quality of services
- Relevance of services
- Ability to deliver on time
- Project management skills (availability, communication etc.)
- Availability of R&D infrastructure (databases, software, specific equipment etc.)
- Value for money
- Professional integrity and independence (from public agencies, political actors, vested interests etc.)

12. Please assess the institute's challenges with respect to improving the usefulness of its R&D services:

Choose between Strongly disagree – Disagree – Neither agree nor disagree – Agree – Strongly agree + Do not know/Not applicable

- Lack of scientific competence
- Lack of methodological competence
- Lack of competence for practical implementation (for example policy competence)
- Lack of collaboration with other R&D service providers
- Too high staff turnover

- Lack of user involvement during the process
- Lack of user competence in our own organisation
- The institute's assignments have been underfunded
- Other: [

13. Do you have any suggestions on how the institute could improve its R&D services?

[Open answer]

D.4 Partner survey

1. What relation does your organisation have with the institute?

- Mainly client (we mainly, or only, buy R&D services)
- Mainly partner (we mainly, or only, collaborate in R&D projects that are publicly co-funded by e.g. RCN or the European Commission)
- Client and partner in roughly equal proportions

2. Which of the following alternatives best describes your organisation?

- Commercial company (AS, ASA) with more than 250 employees worldwide
- Commercial company (AS, ASA) with 51–250 employees worldwide
- Commercial company (AS, ASA) with 11–50 employees worldwide
- Commercial company (AS, ASA) with less than 10 employees worldwide
- Health trust (helseforetak)
- Public enterprise other than health trust (statsforetak, fylkeskommunalt foretak, kommunalt foretak etc.)
- Court or other part of the judicial system
- Ministry or embassy
- Government agency (statlig etat)
- County Governor's office (fylkesmann)
- County municipality or municipality (fylkeskommune or kommune)
- Regional or local public agency (fylkeskommunal or kommunal etat)
- University or university college
- Research institute
- EU or other international organisation (EU institution, OECD etc.)
- Non-governmental organisation
- Other [Open answer]

3. Where is your organisation – i.e. the legal entity that you are working for – located?

- In Norway

- Outside Norway

4. **Please assess to what extent the following statements reflect your organisation's motives for collaborating with the institute in R&D projects:**

Choose between: Strongly disagree –Disagree –Neither agree nor disagree –Agree –Strongly agree + Do not know/Not applicable

- To access expertise in social sciences or humanities
- To access expertise in other sciences
- To access methodological expertise
- To access empirical expertise for specific studies
- To access R&D infrastructure (databases, software, specific equipment etc.)
- To access public funding (from for example the Research Council of Norway or the EU Framework programme)
- To access networks with R&D providers (universities and institutes)
- To co-author scientific publications
- Other: [Open answer]

5. **Please assess to what extent collaborating with the institute has contributed to, or is expected to contribute to, the following for your organisation:**

Choose between: Strongly disagree –Disagree –Neither agree nor disagree –Agree –Strongly agree + Do not know/Not applicable

- Improved scientific or professional skills
- Improved working practices or management skills
- Implementation of new types of data or analytical methods
- Improved efficiency or functionality of products/services/policies
- Improved ability to fulfil our organisation's aims and goals
- Establishment of a long-term strategic relationship with the institute
- Improved networks in Norway
- Improved networks outside Norway
- Participation in R&D projects co-funded by for example RCN or the EU Framework programme (Horizon 2020)
- Co-authored scientific publications
- Spin-off company/-ies
- For public sector only: New or adjusted policy instruments
- For public sector only: Improved policy discussions
- For commercial partners only: New marketing opportunities
- For commercial partners only: Commercialisation of new or improved products or services
- For commercial partners only: Increased turnover
- For commercial partners only: Decreased costs
- For commercial partners only: Increased number of employees

- Other [Open answer]

6. **Have you experienced a particularly significant impact as a result of collaborating with the institute? If yes, would you like to share your experiences with us? Please describe the impact in 2–3 sentences, and add name and e-mail/telephone number so that we may contact you to learn more.**

[Open answer]

7. **What is your degree of satisfaction with the institute as project coordinator, if applicable?**

Choose between The institute has not been project coordinator –Very poor –Poor –Satisfactory – Good –Excellent + Do not know

8. **What is your degree of satisfaction with the institute in the following respects?**

Choose between Very poor –Poor –Satisfactory –Good –Excellent + Do not know/Not applicable

- Scientific competence
- Methodological competence
- Ability to identify and share ideas for new projects
- Quality of R&D activities
- Relevance of R&D activities
- Ability to deliver on time
- Project management skills (availability, communication etc.)
- Professional integrity and independence (from public agencies, political actors, vested interests etc.)
- Availability of R&D infrastructure (databases, software, specific equipment etc.)
- Value for money

9. **What is your degree of satisfaction with the institute's personnel in the following respects?**

Choose between Very poor –Poor –Satisfactory –Good –Excellent + Do not know/Not applicable

- Collaborative skills
- Ability to effectively communicate on scientific and domain-specific matters

10. **Please assess to which extent the following types of actors are competitors to the institute (as potential alternative R&D partners):**

Choose between Strongly disagree –Disagree –Neither agree nor disagree –Agree –Strongly agree + Do not know/Not applicable

- Universities/university colleges in Norway
- Other research institutes in Norway
- Consultancy firms or other companies based in Norway
- Think tanks based in Norway

- Public agencies in Norway
- Competitors based outside Norway
- Other: [Open answer]

11. **How do Norwegian competitors compare with the institute (as potential alternative R&D partners)? In the following respects, Norwegian competitors are...**

Choose between Much less competitive –Less competitive –Equally competitive –More competitive –Much more competitive + Do not know/Not applicable

- Scientific competence
- Methodological competence
- Quality of R&D activities
- Relevance of R&D activities
- Ability to deliver on time
- Project management skills (availability, communication etc.)
- Availability of R&D infrastructure (software, databases, specific equipment etc.)
- Value for money
- Professional integrity and independence (from public agencies, political actors, vested interests etc.)

12. **How do foreign competitors compare with the institute (as potential alternative R&D partners)? In the following respects, foreign competitors are...**

Choose between Much less competitive –Less competitive –Equally competitive –More competitive –Much more competitive + Do not know/Not applicable

- Scientific competence
- Methodological competence
- Quality of R&D activities
- Relevance of R&D activities
- Ability to deliver on time
- Project management skills (availability, communication etc.)
- Availability of R&D infrastructure (software, databases, specific equipment etc.)
- Value for money
- Professional integrity and independence (from public agencies, political actors, vested interests etc.)

13. **Please assess the institute's challenges with respect to improving the usefulness of its R&D services:**

Choose between Strongly disagree –Disagree –Neither agree nor disagree –Agree –Strongly agree + Do not know/Not applicable

- Lack of scientific competence
- Lack of methodological competence

- Lack of competence for practical implementation (for example policy competence)
- Lack of collaboration with other R&D service providers
- Too high staff turnover
- Lack of user involvement during the process
- The institute's assignments have been underfunded
- Other: [

14. Please assess the likelihood that your organisation in the next three years will collaborate with the institute on additional R&D proposals to for example the Research Council of Norway or the EU Framework programme:

Choose between: 1=Very unlikely – 2=Unlikely – 3=Likely – 4=Very likely + Do not know/Not applicable

15. Do you have any suggestions on how the institute could improve its collaborative skills and practices?

[Open answer]

Technopolis Group Sweden (Faugert & Co Utvärdering AB)
Skeppargatan 27, 1 tr.
114 52 Stockholm, Sweden
T +46 8 55 11 81 15
E tobias.fridholm@technopolis-group.com
www.faugert.se
www.technopolis-group.com