



OSIRIS

OSLO INSTITUTE FOR RESEARCH
ON THE IMPACT OF SCIENCE

2018: Looking back

Newsletter 1/2019

Oslo Institute for Research on the Impact of Science (OSIRIS) was established in 2016. It is funded by the Forinnpol programme in the Research Council of Norway and will run for 8 years. The central questions of OSIRIS are: How can we characterise the process through which research makes an impact in society? Which preconditions are required for research to be put into use in industry, health and care, policymaking and other contexts?

Partners: TIK Centre for Technology, Innovation and Culture (TIK), Manchester Institute of Innovation Research (MIIoIR), INGENIO (CSIC-UPV), Statistics Norway (SSB).

2018 has been a year of growth, as four new researchers have joined the team, a fifth returned, and two ph.d positions were announced to be filled early 2019. Main events: further methodological developments and a pilot survey among policymakers, summer school on the science system, workshops on R&D networks, case scoping activities and a consortium meeting in Valencia.



Image: OSIRIS team members at the consortium meeting in Valencia in September 2018. Photo: Lars Wenaas/UiO.

Conceptual work

We are working on two conceptual papers. One is about what it means to see impact from the user side. Here we have developed a heuristic that we call “problem area”, which is a useful lens into looking at impact from the society rather than research side. A focus on problem areas rather than specific users makes it possible for us to not only explore how research is used in detail. It also allows us to look at how research is not used for various reasons, and at the wider context in which impact processes take place. Perspectives from this paper were presented at the EGOS conference summer 2018 and at a specialised workshop in Madrid.

The other paper deals with the institutional preconditions for impact. Here the aim is to make a theoretically informed discussion about the most important wider factors that influence the uptake and use of research, particularly within policymaking. The paper was presented at the EU-SPRI conference summer 2018.

In addition, some of our blogs deal with conceptual and methodological issues. An example is the [blog post on impact measurement problems](#).

Impact case studies

Based on our conceptual work, all our cases represent “problem areas” through which we will explore the uptake and use of research. At the moment we are working on the following cases:

- **Marine biodiversity:** How is research used when making decisions that affect marine biodiversity? This is a policy case, we are looking into opportunities for making a Norway-UK comparison.
- **Use of research in NAV:** We are looking into how research is used and implemented within the Work and Labour Directorate (NAV). Here we are exploring the more concrete problem areas of Individual Placement and Support (IPS) and addressing young people outside of the labour market.
- **Oral health among elderly:** This is a hidden but frequent societal challenge that is largely unexplored because oral health is not part of the public healthcare system in most cases.
- **Immunological diseases:** This is an interesting area in which to study impact, because treatment of many immunological diseases is very advanced, but the fundamental mechanisms behind them are still often poorly understood. The case is primarily oriented at understanding use of research in healthcare, but it also has industry and policy dimensions.
- **Transport policy:** We are looking into specific aspects such as air quality and congestion for the case of the Greater Manchester area. This is a case where the linkages between researchers and users are not well developed.
- **“Nudging”:** The second MIOIR longitudinal case study will focus on the past and present role of behavioural economics, behavioural science and political theory in the current popularity of ‘behavioural insights’ tool in UK policy. Nicknamed ‘nudge’, behavioural insights use indirect tools to influence behaviour or

decision making of target populations. The case study will focus on the role and activities of the Behavioural Insights Team, a social purpose company closely linked to the UK government.

- **Rare Diseases:** Interesting research and networking goes on within this problem area, which has a number of fundamental challenges for example related to the fairly low number of patients for each disease. Patient organisations play an important role, partly organised through the European peak body for patient organisations EURORDIS. Of potentially great interest is the new European Joint Fund for Rare Disease Research that commences in 2019.

In addition to these larger-scale longitudinal cases, we are exploring additional ones as well as related cases about obesity policy, drones in agriculture and other areas. With more OSIRIS personnel in 2019, more cases will be added to the list. A particularly interesting case is related to studying “POSTnotes” in the British Parliament. Postdoc Maria Karaulova was in 2018 successful in obtaining a grant for a ‘Parliamentary Fellowship’ and will work with the Director of Parliamentary Office for Science and Technology (POST) to analyse how the work of POST is used and whether it has impact in the UK Parliament. This project will trace the development process of two POSTnotes – horizon scanning briefs that present overviews of policy problems grounded in research evidence – and their subsequent use in the UK Parliament.

Impact surveys

Pilot survey: Mapping the way practitioners and policy makers use research

In early 2018, TIK and MIOIR developed a new questionnaire that started with current best practices for understanding use of research in policy organisations and incorporated the OSIRIS approach.

The survey was piloted in Norway among seven public organisations – five ministries and two underlying agencies – with 269 respondents in total. Preliminary results have been communicated to the participating organisations, and a report (in Norwegian) is available at the [OSIRIS web site](#). A summary of the preliminary results can also be found on the [OSIRIS blog](#).



Image: From the survey workshop January 2018.

The first data show that access to and use of research to a large degree takes place within informal settings and networks, often involving ad hoc search methods like “googling”. They also indicate major differences in use of research and related issues between the participating organisations, but we need a substantially larger data set to explore this further.

Based on the pilot experiences, OSIRIS aims for a full-scale survey among Norwegian public organisations in 2019 and a comparative survey among selected organisations in the UK in the same year.

The annual Norwegian R&D firm-level survey on cooperation between firms and private and public research organisations

In 2017, SSB and TIK proposed additional questions to this annual survey, meant to capture processes and motives for impact and interaction in a better way than the existing sets of questions. They were approved for the 2017 R&D survey, which was carried out in the spring of 2018 and with the first results published by SSB in October 2018. The data will be analysed and the results published in 2019.

The OSIRIS team also proposed extra survey questions related to absorptive capacity in 2018. A revised version of these questions was approved by the statistical agency and will be included in the Norwegian 2018 Community Innovation Survey (CIS), which will be published in late summer or autumn of 2019. The ability of a research group, such as OSIRIS, to be able to implement new questions for the official R&D and innovation surveys is to our knowledge unique in an international context.

Micro- and macroeconomic work

SSB's microeconomic work has progressed in 2018 with the publication of a discussion paper, [“Public R&D support and firms' performance: A panel data study”](#). Another strand of the microeconomic work is organised around a paper called “The effects of innovation policies on firm level patenting”. Like the first paper it investigates effects of public R&D support, but it uses a narrower performance indicator more closely related to innovation (patenting) than the broad indicators of firm growth, productivity and profitability.

The macroeconomic part related to “Identifying the impacts from research on the macro economy” involves a system of dynamic regression equations for relative change in Total Factor Productivity (TFP) specified for Norwegian industries using (mainly) data from the National Accounts. Using this model domestic spillover effects from R&D capital in other industries on TFP-growth is quantified. For each of the modelled industries we generate aggregate R&D capital stocks by industry-specific weighting schemes allowing potential domestic spillover effects. A discussion paper will be published in 2019.

A second strand that started in 2018 and will continue into 2019 is “The impacts of dirty and clean R&D – a macroeconomic approach.” Here we study Norway's R&D investments in carbon-intensive energy like oil and gas versus carbon-free renewables. Previous climate-change-related analyses applied to global or large economy settings and data indicate that the role of R&D is fundamental for transforming the economy towards a low-carbon future. Whether this applies to the case of a small, open economy with extensive trade and large natural energy resources is not known.

Publications

Two special sections of important academic journals were published in 2018 based directly on OSIRIS work:

A [special section of Science and Public Policy on excellence, impact and knowledge transfer](#) led by INGENIO researchers was published in December 2018 (Volume 45(6)). The special section contained six articles plus an introduction by guest editors Pablo D’Este, Irene Ramos-Vielba and Richard Woolley (INGENIO), in collaboration with Professor Nabil Amara from Laval University in Canada.

A [special section of Research Evaluation on measuring the impact of arts and humanities research in Europe](#) was edited by Magnus Gulbrandsen and Claire Donovan (who is in the OSIRIS advisory board).

The section, which explores new debates and procedures for impact measurement beyond the ones tailored to economic impacts and the hard sciences, contains four articles plus the guest editors’ introduction. Access the special issue [here](#).



This gives the following list of articles from 2018 directly attributed to OSIRIS:

1. Claire Donovan and Magnus Gulbrandsen (2018), [Introduction: Measuring the impact of arts and humanities research in Europe](#), *Research Evaluation*,
2. Pablo D’Este, Irene Ramos-Vielba, Richard Woolley and Nabil Amara (2018), [How do researchers generate scientific and societal impacts? Toward an analytical and operational framework](#), *Science and Public Policy*,
3. Irene Ramos-Vielba, Pablo D’Este, Richard Woolley and Nabil Amara (2018), [Introduction to a special section: Balancing scientific and societal impact—A challenging agenda for academic research](#), *Science and Public Policy*,

The other 10 articles in the special issues are of course also directly related to OSIRIS. In addition, OSIRIS-affiliated researchers have produced a number of articles from complementary projects, where the OSIRIS approach and team indirectly has been part of the thinking around impact and related issues in science and innovation policy. These are the most relevant ones:

1. Tommaso Ciarli and Ismael Rafols (2018), [The relationship between research priorities and societal demands: The case of rice](#). *Research Policy in press*.
2. Ismael Ràfols and Alfredo Yegros (2018), [Is research responding to health needs?](#) *Social Observatory of La Caixa Foundation* (refereed online publication), March 2018. Available also in Catalan and Spanish.

3. Nicolas Robinson-Garcia, Thed van Leeuwen and Ismael Ràfols (2018), [Using altmetrics for contextualised mapping of societal impact: from hits to networks](#), Science and Public Policy

Finally, two working papers directly based on OSIRIS work became available in 2018 along with a contribution in the journal Science from a complementary project:

1. Øivind Anti Nilsen, Arvid Raknerud and Diana Iancu (2018), [Public R&D support and firms' performance: A panel data study](#). Oslo: Statistics Norway, Discussion Papers 878.
2. Neils Mejlgaard, Richard Woolley et al. (2018), [Europe's plans for responsible science](#). Science, 361(6404): 761-762. (letter section)
3. Taran Thune (2019), Forskning og forvaltning. En pilotundersøkelse om bruk av forskningsbasert kunnskap i offentlige organisasjoner. Oslo: TIK, ISBN 978-82-7986-098-3

New staff in 2018

2018 saw the arrival of three new researchers (and one returning from leave) at TIK, one new ph.d candidate in MIOIR, and the posting of an additional two ph.d positions at TIK.

- **Postdoctoral fellow Silje Maria Tellmann (TIK)** Tellmann holds a PhD from OsloMet - Oslo Metropolitan University, with a dissertation titled "Experts in public policymaking: Influential, yet constrained". She has research experience from The Nordic Institute for Studies in Innovation, Research and Education (NIFU).
- **Researcher Gry Cecilie Høiland (TIK)** Høiland holds a PhD from the University of Stavanger, with a thesis titled "Frontline policy implementation in public organizations. A sociological analysis of the 'how and why' of implementation gaps". She will continue her work in an OSIRIS researcher position financed by NAV (The Norwegian Labor and Welfare Administration).
- **Ph.d candidate Derry Keohane (MIOIR)** Keohane holds an MA in Philosophy and Politics from the University of Edinburgh; dissertation in Social Cognition, and MA Politics from the University of Manchester; dissertation in Democratic Innovations. He joined the British OSIRIS team at MIOIR in autumn 2018. Derry's PhD project is entitled 'Impact of Science on Policymaking: Understanding the user side'.
- **Postdoctoral fellow Trust Saidi (TIK)** Saidi holds a PhD from Maastricht University, with a dissertation titled "Travelling nanotechnologies". He has experience in health innovation and design thinking from the University of Cape Town.

- **Ph.d candidate Kari-Elisabeth Vambeseth-Skogen (TIK)** Vambeseth-Skogen is employed at the Norwegian Ministry of Education and Research, as well as a ph.d candidate at TIK. She is a *Public sector Ph.D*, funded 50/50 by the ministry and the Norwegian Research Council.

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