Three incremental and complementary (!) innovations in the evaluation of R&D&I support

- The added value of taking a behavioural change perspective and measuring and understanding how the R&D&I behaviour of companies changes in response to policy measures

- Recent advances in mixed-method approaches, including econometrics, use of control groups and qualitative methods

- The opportunities and challenges of big data, including data linking, in policy evaluations

Scope: evaluation of business R&D grants...

- When looking into state-of-the-art approaches in evaluation
  - Evaluation closely linked to monitoring
  - Business R&D grants only one part of the policy mix
  - Businesses only one type of actors in the innovation system

Understanding behavioural change

- Based on psychology, behavioural economics and organisational studies, and acknowledging heterogeneity

- Changes in R&D&I behaviour of companies, or other actors, or innovation systems (cf. transitions)

- Extent to which these changes are induced by R&D&I policy (cf. additionality, attribution)

- Examples: investments in R&D&I, technological and thematic priorities (e.g. societal challenges), risk-taking, timing of projects, investing in human capital, collaboration, etc.

- Changes intended (intervention logic, theory of change, pathways) and unintended

Mixed-method approaches

- New individual evaluation methods and combinations/mixes
- Understand 'why' and 'how much'
- Examples:
  - Case studies to explore/understand behavioural change
  - Surveys to address paucity of data
  - Control groups and econometrics to attribute effects to policy intervention(s)
  - Online engagement to validate and discuss policy changes
  - Follow-on surveys and big data to address lagged effects, e.g. did beneficiaries continue to innovate and grow?

Big data including data linking

- Growing opportunities to collect, process, link, analyse and use a variety of data

- Evaluation of R&D&I policy: big data largely concerns data linking rather than new types of data or new tools

- Example: link datasets about beneficiaries (e.g. several scheme-specific datasets) and datasets about economic performance of companies (open or closed data)

- Data linking to address the challenge of attribution

- Text mining to address the issue of skewed impact distribution

The report contains 14 cases of recent evaluations with BC, MM and/or BD aspects

- For example:
  - Competitiveness clusters in France, linking datasets and using control groups to assess the impact of participation in clusters, taking into account company characteristics, including size and participation in tax credit schemes
  - SME support scheme in Sweden, long-term perspective, tracing the innovation journey of SMEs and also asking them about impacts on partners and innovation systems
  - Digital Catapult UK, experiment with Agent Based Modeling, including a qualitative phase and data linking
  - BC and MM examples in Lithuania, Poland, other countries

Data platform for R&D&I policy in Norway
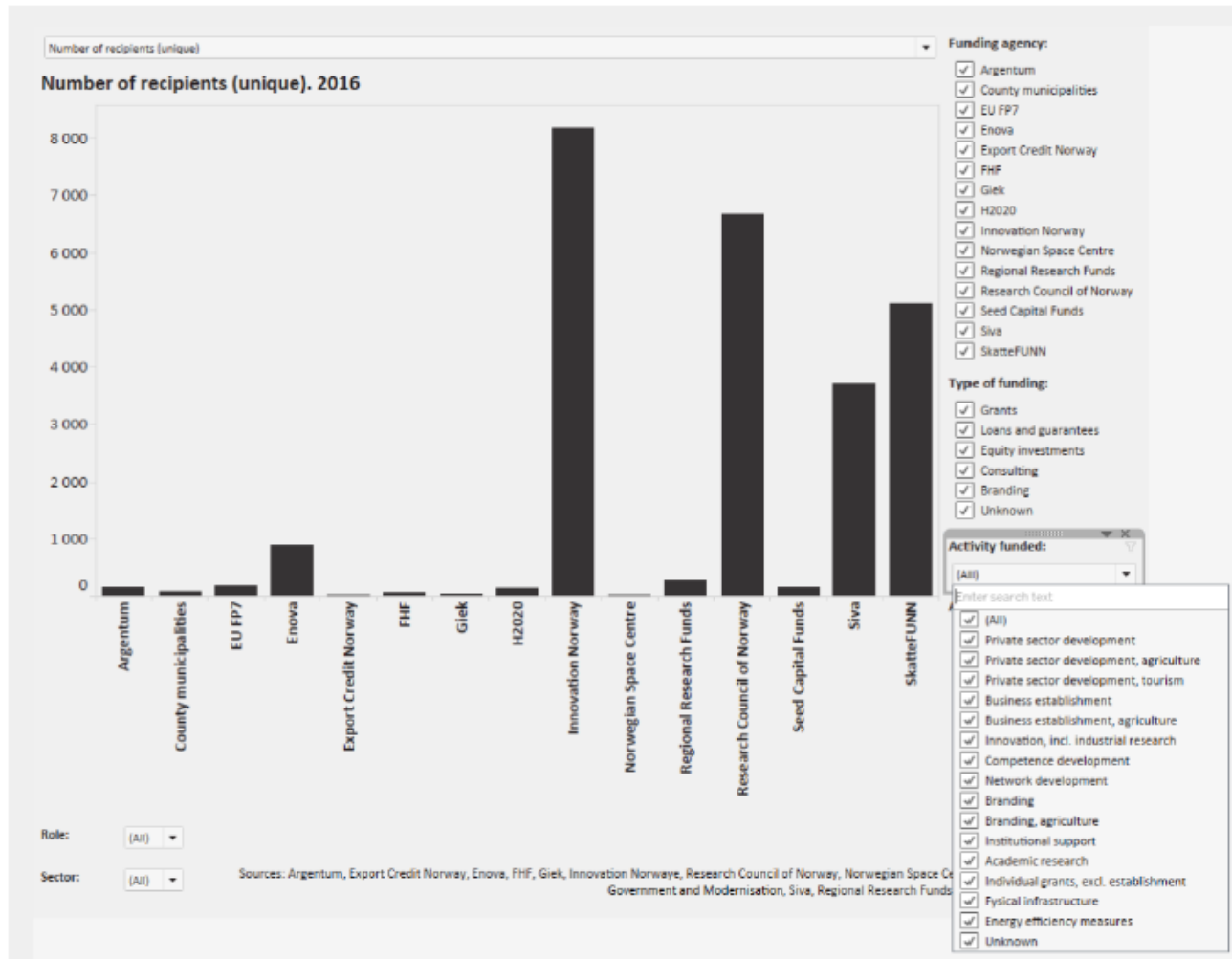
Policy relevance

- The interface between evaluation and policy development will be addressed this afternoon...

- ...but just to mention that a behavioural change perspective, mixed-method approaches and big data:

  - Help to address evaluation challenges such as attribution
  - Allow for discussing whether, why, which effects occur
  - Still require phrasing of 'easy to digest' messages
  - Does not solve all timing issues, e.g. policy decisions taken before proper evaluations are done/possible, and decisions about one support scheme taken 'in splendid isolation'