

# Innovation and RD data and the use of it - the Danish case

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# Agenda

1. Impact assessments – innovation programmes
2. The data and access to it..
3. Current focus – R&D data (better quality data and easier use)
4. The Danish experience / the Danish advice



# Impact assessments – innovation programmes

- Framework for doing impact assessments:  
Central Innovations Manual
- Important to choose the performance indicators in the design of the program and sticking to the indicators during the assessment process



# Impact assessments

- Econometric impact assessments of innovations programs
- Data from Statistics Denmark from the whole company population + possibly survey data from the treated population
- Choosing the appropriate comparison group using either the “nearest neighbour”, “propensity score matching” or diff-in-diff methods



# The data and access to it

- UFM register beneficiaries of public innovation grants in a central database
- The information on beneficiaries can be uploaded to Statistics Denmark and in a pseudonymized form be accessed for econometric analysis



# Statistics Denmark I

- Firm statistics at Statistics Denmark is a full population record-based statistics based on records from:
  - the Danish Tax Agency
  - the Danish Business Authority



# Data – Statistics Denmark II

- Researchers at a Danish research institute or Ministry can get access to pseudonymized data at Statistics Denmark
- The access to data is through a VPN connection and in a closed research environment
- Since 1999 it is not a requirement for the researcher to be on-site at Statistics Denmark but can get a remote access by her own computer



# Statistics Denmark III

## Research access

- Projected based access
- Need-to-know basis
- Research approach
- The possibility to upload own data to the research environment

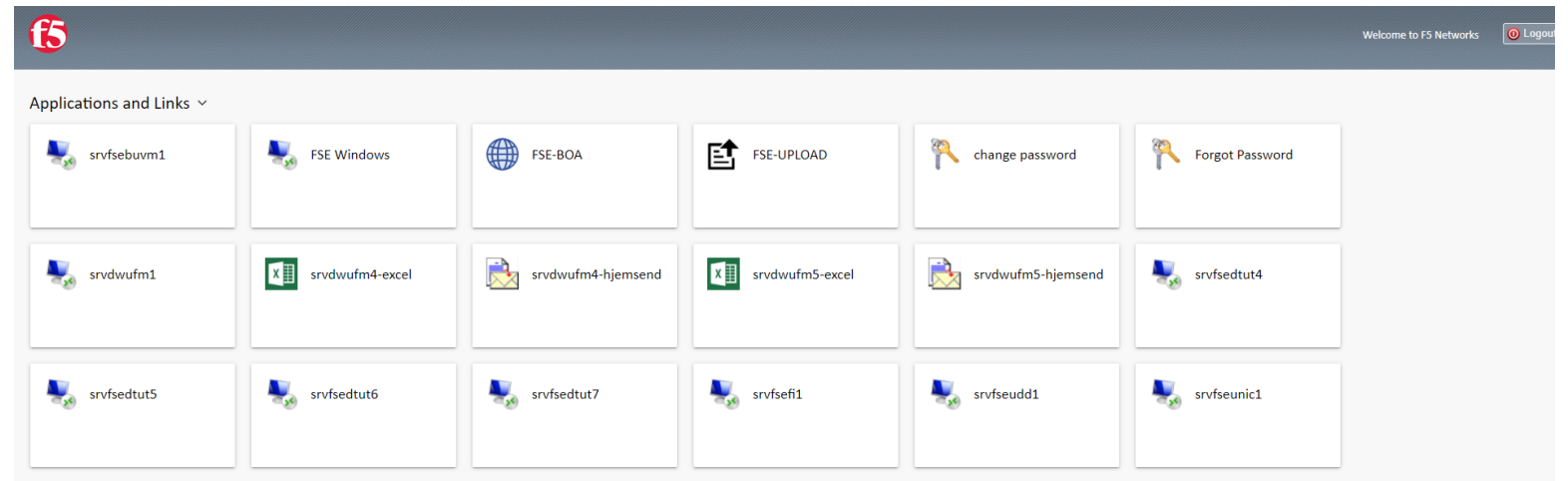
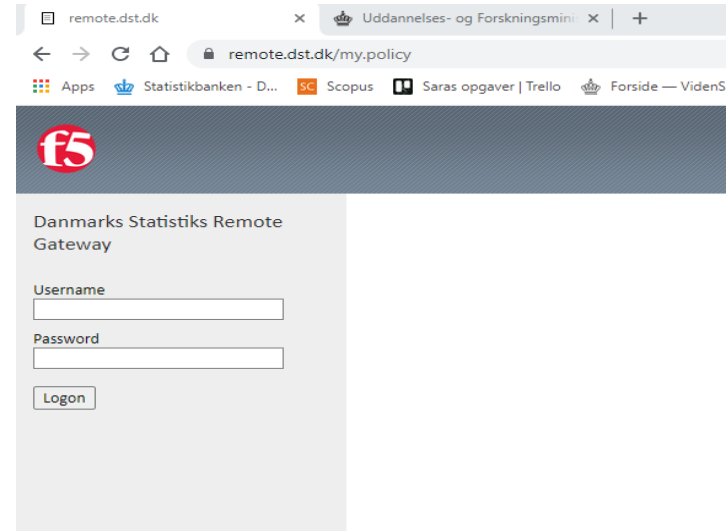
## Ministry access

- Permanent access
- Nice-to-know basis
- Policy approach incl. ad hoc answers
- The possibility to upload own data to the research environment



# Statistics Denmark IV

- Easy and remote access to data
- Via. VPN connection
- Different entries for different individuals
- The possibility to do econometrics quick and "easy"



# Statistics Denmark V

- Strict rules on publication of results!
- A breach of these rules leads to strict (and possible permanent) sanctions for both the researcher and the institution
- Research institutions and Ministries pay for access to data



# Data on innovation activities in private firms

- Survey executed by Statistics Denmark (European Innovation Scoreboard)
- Approximately 1.100 random selected companies (out of a population of 9.000)
- Data collected every other year
- Access to micro-data through Statistics Denmark



# The Effect of Multiple Participations in the Danish Innovation and Research Support System (2016)

- Comparing second participation to first time participation in one of ten different programs
- Data on beneficiaries (and participation) from UFM
- Firm statistics from Statistics Denmark (register data)
- Balanced panel
- Using a fixed effects diff-in-diff estimation

# The Effect of Multiple Participations in the Danish Innovation and Research Support System (2016)

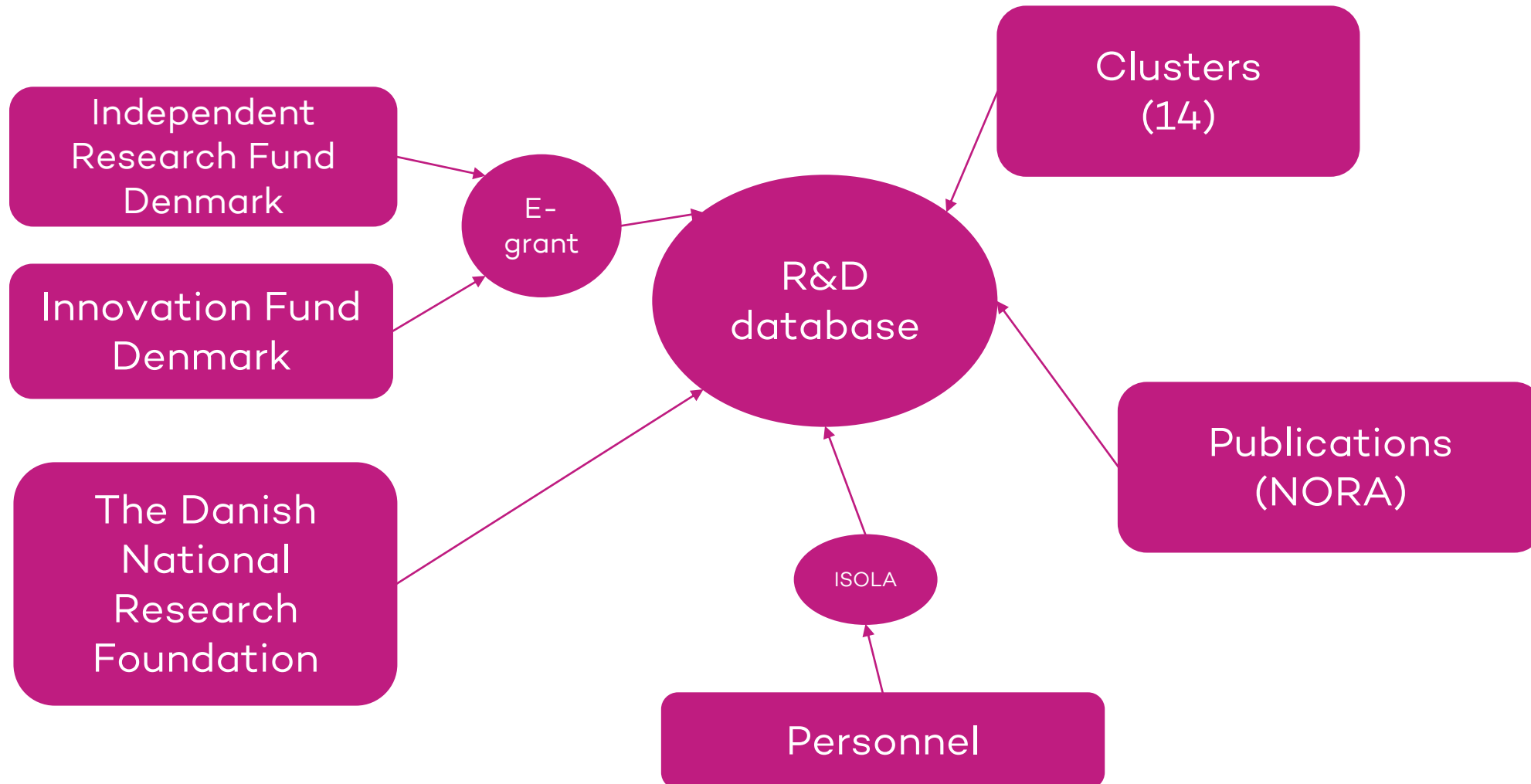
- 3.379 in the treated group and 162.597 in the control group
- The treated group with second participation was small!
- The measured effect was Total Factor Productivity growth
- No immediately significant effects on TFP growth by second or first time participation.
- Significant effects detected for the largest programs

# Current focus – R&D data (better quality data and easier use)

- A new approach for collecting data in UFM
- Data collected from the public research funds under UFM using their administrative records on both application and grants
- Data on scientific publications submitted by Danish researchers
- Information on personnel employed at one of the 8 Danish universities



# R&D data at UFM



# The Danish experience / the Danish advice

- High quality evaluations are an important part of program continuation decisions
- High quality data are becoming more and more important
- Widespread (and cheap) access to data are an important prerequisite for a lot of work in the field





# Questions?

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