DFG Review Board 112 “Economic Sciences”

Managing Research Data: What does Review Board 112 “Economic Sciences” expect of applicants?

– Guidance on the information to be provided in section 2.4 “Data handling” (instructions on preparing proposals for research grants) –

During the research process, primary and secondary data are increasingly being collected and processed from a variety of sources (e.g. household and company surveys, laboratory experiments, field experiments, administrative data, company data and big data). In the interests of quality assurance (verifiability by means of reproducibility and replication), the economic use of resources and the optimisation of knowledge potential, these data need to be documented. Research data management is therefore a key methodological challenge in the social and behavioural sciences.

In response to a suggestion by the DFG Senate (see Guidelines on the Handling of Research Data, www.dfg.de/proposal_process/research_data/, the Review Board “Economic Sciences” has formulated subject-specific expectations for applicants in relation to the long-term management of research data. These expectations supplement and expand on the guides published by the German Data Forum (RatSWD) (see https://www.ratswd.de/en/publikationen/output or https://www.ratswd.de/dl/RatSWD_Output3_Forschungsdatenmanagement.pdf, in German only).

In line with the principle of open science, the Review Board expects that applicants who use research data in their proposed project always provide relevant information in section 2.4 of the proposal, “Data handling”. The use of research data relates to collected primary data and acquired secondary data and to quantitative, qualitative and experimental data. The aim is to encourage applicants to engage with the topic of data handling, make a statement, and commit to good research data management in relation to the planned research project.

The information provided in section 2.4 could consider the following points:

- As a basic principle, wherever possible and to the fullest extent possible, the data sets used should be archived, documented and made openly accessible for reuse with due consideration for data protection laws and the protection of trade secrets[1]. Existing services for the clear documentation and long-term storage of research data should be used in accordance with the state of the art in the discipline.
- If possible both legally and without breaching confidentiality, the processing and analysis of data in academic publications should be clear and traceable. As a minimum requirement, the programs used should be made available and a meaningful description should be provided of the data sets, which should be stored either by the journals themselves or in repositories (at universities, research institutes or central subject-specific information centres).
- Recommendation 7 on good scientific practice, regarding the safeguarding and storing of primary data, defines the minimum standard for the management of primary research data (see recommendation 7 in the white paper “Safeguarding Good Scientific Practice”: https://www.dfg.de/en/research_funding/principles_dfg_funding/good_scientific_practice/)

[1] In harmony with EU Directive (EU) 2016/943 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure, which, following the first reading of the bill on the protection of trade secrets (GeschGehG) in the Bundestag, is currently (November 2018) being implemented into German law

- With reference to the three variants of data storage referred to in the RatSWD guides (see above), applicants should plausibly describe which variant they intend to use in the project and justify their choice.
- A cut-off deadline for the reuse of primary data by third parties could be defined and justified by applicants.
- If it is intended that data should be published, then data protection law, copyright law, ethical considerations and the protection of trade secrets must be observed.
- If collecting and/or using confidential company data, applicants should explain to what extent confidentiality and the protection of trade secrets can be ensured while adhering to the principle of open science, for example through anonymization, or the use of pseudonyms.
- The collection and use of qualitative data presents particular challenges with regard to research data management. Nevertheless, in the case of the collection or use of qualitative data, statements on research data management are also expected.
- Applicants can explain whether they intend to preregister the hypotheses to be investigated (particularly in the case of experimental research).
- Additional resources can be requested for the management of research data. Requests for such resources will be considered during the review.
- The final project report should include a reference to research data management described in the proposal and explain to what extent the plans were implemented.