



Research Projects for Internships at the Research Centre of the Deutsche Bun- desbank

Frankfurt am Main

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Allgemeine Informationen zu den Praktikumsprojekten im Forschungszentrum der Deutschen Bundesbank:

Auf den folgenden Seiten finden Sie Projekte, für die im Forschungszentrum der Deutschen Bundesbank in Frankfurt am Main derzeit Praktikanten gesucht werden. Falls Sie sich um ein Praktikum bewerben möchten, nutzen Sie bitte den Link zum [Online-Bewerbungsformular](#) und geben Sie in der Rubrik „Sonstige Mitteilungen“ den Titel des Praktikums, für das Sie sich bewerben sowie den Betreuer des Projekts an.

Weitere Informationen finden Sie unter

<https://www.bundesbank.de/de/karriere/praktika/hochschulpraktika>

Für Rückfragen steht Ihnen der Betreuer des Projekts zur Verfügung.

Non-German speaking applicants are welcome to upload their complete application credentials (cover letter, CV, study certificates or current transcript of records and optionally letters of recommendation) **at the English version of the [online application system](#)**

Please find more information at

<https://www.bundesbank.de/en/career/work-placements/work-placements-for-university-students>

If you have any questions, please do not hesitate to contact the supervisor of the project you are interested in.

Title: Visualisation of the research programme using a JavaScript Voronoi treemap

Description of the project:

The Research Centre website displays the research programme as a Voronoi treemap visualisation containing text descriptions of research areas and details about research papers. Various layers structure the information by topic and publication format.

The visualisation is realised using the product FoamTree, a licensed JavaScript library, developed by CarrotSearch. To compile the contents, a custom .exe application runs a custom Python script, which converts the structure of the source data from an XLS file to the structure of a JSON file to be embedded into an HTML framework.

The visualised data need to be updated, which involves tasks such as writing bug fixes for and making adjustments to the Python script.

Furthermore, the treemap needs further customisation, such as a search function and dynamic redrawing triggered by users' parameter selections.

In a medium-term project, which does not necessarily fall within the scope of this internship, there are plans to merge an underlying custom database with a graphic interface such as the treemap to improve user experience and facilitate dataset updates.

Tasks for the intern:

- Customising and writing bug fixes for existing JavaScript/JSON and Python scripts
- Improving technical data import procedures
- Taking the initiative and being creative to improve the data visualisation method

Necessary skills:

- Advanced JavaScript and Python programming skills
- Ability to code and customise basic .exe applications
- Experience in handling (text) data in JSON and XLS formats
- Sound knowledge of and ideally experience with data visualisation methods
- Web scraping skills for supplementing existing datasets a plus

Benefits for the intern:

You can apply your programming and data visualisation skills creatively using the full version of an advanced JavaScript library as a modern way to structure and display data. Meanwhile, you will gain experience in hierarchical structuring and visualising heterogeneous text data for different users.

You will get an in-depth insight into the workings of the Bundesbank Research Centre. Successful results will gain broad visibility through in-house presentations and online availability.

Estimated starting date: November 2021

Duration: 3-5 months depending on the scope of the project and subject to the intern's skills and interests

Project supervisor:

Julia Sturm, phone: +49 (0)69 9566 4935, email: julia.sturm@bundesbank.de

Further information:

Link to the visualisation of the research programme:

http://www.bundesbank.de/research_programme

More information on the product can be found on the internet.

Title: Research on Household Finance using data from the PHF-Study („Private Haushalte und ihre Finanzen“)

Description of the project:

The Panel on Household Finance (PHF) is a large scale survey of households in Germany. The main focus of the survey is on household finance. It yields detailed household-level information on the wealth and its composition for over 3,500 households. The PHF is an integral part of the Household Finance and Consumption survey (HFCS), a ECB coordinated project which collects harmonized data on household finance in all euro area countries. During the initial analysis of the data several questions were raised that require a more in-depth scientific analysis.

Task for the intern:

The intern will collaborate with members of the PHF team on the scientific analysis of the micro-data. Potential topics for analysis are listed in the research program (see below). However, we are also open for suggestions of topics from the prospective interns.

Necessary skills:

Experience with the analysis of micro-data on households. Stata skills would be beneficial.

Benefits for the intern:

You will get in-depth insight into an interesting scientific project and the workings of the Bundesbank research centre. You will be able to learn how to use a multiple-imputed dataset. A joint publication on some of the results is an option.

Estimated starting date: November 2021

Duration:

Approx. 3 months

Supervisor of the project:

Tobias Schmidt, phone: 069 9566-3730, E-Mail: Tobias.Schmidt@bundesbank.de

Further information:

Links to the research program and information on the PHF survey:

http://www.bundesbank.de/research_programme

www.bundesbank.de/phf-research

Internships in the Research Centre of the Deutsche Bundesbank

The Research Centre of the Deutsche Bundesbank is looking for interns to work on survey methodological issues on the two surveys it runs, namely the Panel on Household Finances and the online consumer survey.

In particular, candidates are sought to work on

- variance estimation
- data editing
- other topics, preferably from September 2020 onwards, include: longitudinal weighting, statistical matching, patterns of non-response

The above topics might also be combined with other ones suggested by the candidates. Interns may also be required to provide general research assistance, such as gathering and summarising data, preparing tables etc.

Required competences: Knowledge of survey methodological concepts such as weighting and variance estimation; some experience with programming in (preferably) stata or R; very good use of English. For the variance estimation project an M.Sc. student would be preferred. For the editing project a third or fourth year undergraduate would also be considered. In both cases the project could be combined with an M.Sc. thesis, if on a related topic.

Estimated starting date: November 2021

Applications: Continuously open.

Duration: Approx. 3 months

Interested candidates could apply directly, stating as project title "Research on Household Finance using data from the PHF-Study („Private Haushalte und ihre Finanzen") at [online application system](#)

Title: Bundesbank Online Panel on Household Expectations

Description of the project:

The Bundesbank is setting up an online panel to collect data on private individuals' expectations in Germany. The survey collects detailed information on expectations regarding inflation, house prices and general economic developments. The project started with three pilot waves in 2019, and will continue with additional waves in 2020. The data from the first three waves are available as a scientific use file. During the initial analysis of the data several questions were raised that require a more in-depth scientific analysis.

Task for the intern:

The intern will collaborate with members of the online survey team on the scientific analysis of the micro-data and/or on further development of the survey design. Besides the analysis directly related to understanding the formation process and impact of household expectations, methodological research regarding different question formulations, the advantages and disadvantages of online surveys or specific sample designs is also of interest. In general, we are also open for suggestions of topics from the prospective interns. The questionnaires of the first three wave are available under the following webpage <https://www.bundesbank.de/en/bundesbank/research/pilot-survey-on-consumer-expectations>

Necessary skills:

Experience with the analysis of micro-data on households or individuals. Stata or R skills would be beneficial. Working proficiency in German would be beneficial but is not required.

Benefits for the intern:

You will get in-depth insight into an interesting scientific project and the workings of the Bundesbank research centre. You will be able to learn how to conduct a large scale online survey and improve your analytical skills while working on the dataset with members of the project team. Suggestions for own research project based on newly collected datasets are also welcome.

Estimated starting date: November 2021

Duration: Approx. 3 months

Supervisor of the project:

Tobias Schmidt, phone: +49 69 9566 3730, E-Mail: Tobias.Schmidt@bundesbank.de

Further information:

Project Website: <https://www.bundesbank.de/en/bundesbank/research/pilot-survey-on-consumer-expectations/bundesbank-online-pilot-survey-on-consumer-expectations-794568>

Monthly bulletin article with results from the pilot waves:

<https://www.bundesbank.de/resource/blob/818958/372f4c2ddadc1e72f9e7437f554624e5/mL/2019-12-erwartungsbefragung-data.pdf>

Research Centre Research Program: http://www.bundesbank.de/research_programme

Title:

Visualisation of the firm-level and regional data from the Bundesbank Online Panel of Firms using modern data visualization techniques

Description of the project:

The Bundesbank Online Panel Firms (BOP-F) is a survey of small, medium and large businesses located in Germany. The Research Centre of the Deutsche Bundesbank conducts the survey at a monthly frequency in cooperation with an external research institute, forsa. Results from the BOP-F survey help researchers and economists across the Bundesbank to monitor developments in the German economy and to track businesses' expectations and uncertainties surrounding them. To increase the profile of the survey and make the aggregate data from the survey more accessible internally the BOP-F team is planning to use modern data visualization techniques. The intern will play a key role in driving these changes.

Task for the intern:

Data processing for further data visualisations
Developing concepts for data dashboards
Visualising data using modern data visualisation techniques

Necessary skills:

Ideally programming skills in Stata and solid knowledge of data visualisation software.
Knowledge of German

Benefits for the intern:

Work in an international team
Contributing to one of the largest business surveys in Germany
Stimulating work environment

Begin:

From November 2021 onwards

Duration:

3-6 months

Supervisor of the project:

Dr. Pawel Smietanka

Further information:

We are happy to answer candidates' questions ahead of submitting an application. Please contact Dr. Pawel Smietanka (Tel. 069 9566-11445), if you have any questions about the project.

Title: Internship in Bundesbank's Research Centre

We are constantly looking for interns for

various projects on a variety of topics in the fields of monetary macroeconomics, banking and finance, microeconomics and econometrics.

Necessary skills:

- Master- or PhD-students in Economics, Finance or Econometrics interested in quantitative and empirical methods.
- Knowledge of standard software packages like Stata and/or Matlab
- Experience with research projects is an advantage

Estimated starting date: November 2021

Duration: Usually three months, up to six months, depending on the project

Further information:

http://www.bundesbank.de/research_programme

[Research centre](#)

Contact person for further questions:

christine.thaler@bundesbank.de